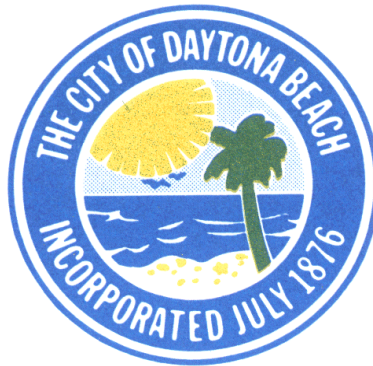


THE CITY OF DAYTONA BEACH
SWEETHEART TRAIL - BEACH STREET (WILDER BLVD TO SHADY PLACE)

INVITATION TO BID No. 0318-2260
CONTRACT NO. 2016-007
SUN TRAIL PROJECT NO. 439866-1-58-01
PROJECT SPECIFIC CONSTRUCTION SERVICES
NIGP COMMODITY CODE 91226



THE CITY OF DAYTONA BEACH
PUBLIC WORKS – TECHNICAL SERVICES
P.O. BOX 2451
DAYTONA BEACH, FLA. 32115

ISSUE DATE: July 5, 2018

INVITATION TO BID – PROJECT SPECIFIC CONSTRUCTION SERVICES

The City of Daytona Beach will receive bids for the “SWEETHEART TRAIL - BEACH STREET (WILDER BLVD TO SHADY PLACE)”, Invitation to Bid No. 0318-2260, at the City of Daytona Beach Purchasing Division, City Hall Room 146, 301 S. Ridgewood Ave., Daytona Beach, Florida 32114, until **2:00 p.m., on August 14, 2018**, at which time bids will be opened publicly and read aloud. Bids received after said time will be returned unopened.

Sealed bids must be addressed to:

Joanne Flick, Purchasing Agent
The City of Daytona Beach Purchasing Division
301 S. Ridgewood Ave., Room 146
Daytona Beach, Fl., 32114

with “Sealed Bid for SWEETHEART TRAIL - BEACH STREET (WILDER BLVD TO SHADY PLACE) , ITB No. 0318-2260” plainly written on the outside of the envelope.

The work generally consists of constructing 2,324 feet (0.440 miles) of concrete shared use path within the City of Daytona Beach. The proposed shared use path extends from the intersection of Wilder Boulevard and Palmetto Avenue, easterly along Wilder Boulevard for 300ft, and then northerly 2024ft along South Beach Street to the intersection of South Beach Street and Shady Place. This project also includes a reduction in the paved roadway width of South Beach Street, which includes 2085 feet (0.395 miles) of new pavement construction, milling and resurfacing, and curb and gutter construction. Other project elements include driveway reconstruction, minor drainage improvements associated with the trail project, roadway lighting, landscaping, and minor utility adjustments. All proposed improvements will be constructed entirely within existing right-of-way.

Bid Documents may be obtained as pdf files on-line at <http://purchasing.codb.us>. There is no charge for downloading Bid Documents. The Bid Documents and all other Contract Documents, including Drawings and Technical Specifications if applicable, are also on file at the Daytona Beach Purchasing Division, 301 S. Ridgewood Avenue, Room 146, Daytona Beach, Florida, 32114. A complete set of these Documents may be obtained upon payment of \$75, NON-REFUNDABLE. Checks must be made payable to the City of Daytona Beach, Florida. All inquiries and checks pertaining to this project which are mailed should be directed to Post Office Box 2451, Daytona Beach, Florida 32115-2451.

Each bid must be accompanied by **Bid Security** in an amount not less than 10% of the total bid.

A NON-MANDATORY PRE-PROPOSAL CONFERENCE will be held at the Daytona Beach Public Works Conference Room, 950 Bellevue Avenue, Daytona Beach, Florida 32114, on July 12, 2018 at 2:00 PM. Interested contractors are *urged* to attend.

The successful contractor will be required to furnish separate 100% Performance and Payment Bonds unless the Contract price is less than \$100,000.

The City reserves the right to reject any and all bids, or any portion of any bid, or to waive any informalities in the bidding.

Bids may be held by the City for a period not to exceed 60 days from the date of opening of bids for the purpose of reviewing the bid and investigating the qualifications of bidders prior to awarding the contract.

By: KIRK ZIMMERMAN, BUYER
CITY OF DAYTONA BEACH
Issue Date: July 5, 2018

SECTION 00-452
CONTRACTOR'S STATEMENT OF
FDOT PRE-QUALIFICATION

1. To be eligible to bid on this project, Bidder must be certified by the Florida Department of Transportation (FDOT) as a Pre-Qualified firm for the type of work in this project.

a. http://www.fdot.gov/contracts/PreQual_Info/prequalified.shtm

2. Owner will rely only on FDOT's determination of the status of a Bidder's eligibility for Pre-Qualification or any equivalent alternate certification by FDOT.

3. Bidder shall include with their bid a copy of the certificate issued by FDOT to Bidder fixing the type of work and the aggregate amount of work that the FDOT allows the Pre-Qualified bidder to have under contract at any one time.

4. All Pre-Qualified Contractors bidding on any Contract must certify their total dollar amount of Work Underway and submit a completed copy of FDOT Form 375-020-39 with their bid. This information must be equal to that submitted to FDOT during the month the bid is due. Submittal to FDOT is via the "Work Underway" link in the Contractor Pre-Qualification System website.

INSTRUCTIONS TO BIDDERS – PROJECT SPECIFIC CONSTRUCTION SERVICES

THESE INSTRUCTIONS ARE STANDARD FOR ALL BID SOLICITATIONS FOR PROJECT SPECIFIC CONSTRUCTION SERVICES ISSUED BY THE CITY OF DAYTONA BEACH. THE CITY MAY DELETE, SUPERSEDE, OR MODIFY ANY OF THESE STANDARD INSTRUCTIONS FOR A PARTICULAR SOLICITATION BY USE OF SPECIAL INSTRUCTION SHEETS.

1. BID DOCUMENTS. The Bid Documents consist of the Invitation to Bid; these Instructions; Special Instructions, if any; the Bid Proposal Letter, the Bid Schedule and all other Forms to be completed, signed, and submitted by the Bidder; and all additional documents required to be completed and submitted by the Bidder as part of the Bid.

In making copies of Bid Documents available, the City does so only for the purpose of obtaining Bids and does not confer a license or grant to use the Bid Documents for any other purpose.

2. COMPLETING THE BID. In order for the Bid to be considered complete:

A. The Bid Proposal Letter, the Bid Schedule, and all other required Forms must be completed. All blank spaces must be filled with dark ink or via typing. All corrections and erasures must be initialed by the party submitting the Bid on behalf of the Bidder.

B. All information/documentation that is required to be submitted by this solicitation must be provided in the manner indicated.

C. The Bidder is requested to submit only the Bid Proposal Letter and other Forms, documents, and information specifically required. Any extraneous documents or information submitted by the Bidder will be discarded. The Bidder be asked to sign a written contract only if the City awards a contract to Bidder.

D. Unless Special Instructions are included in this solicitation specifically allowing for partial or lot-by-lot bids where the Bid Schedule only calls for unit prices, the Bidder must provide quotes for all unit prices and extended unit prices (if any) as set forth in the Bid Schedule. If this solicitation allows for partial or lot-by-lot bids, the Bidder must comply with the Special Instructions in completing filling out the unit prices and extended unit prices set forth in the Bid Schedule.

E. The Bid Price (including unit prices and extended prices if applicable), must be stated in numerals.

F. If this solicitation requires unit prices and there is a conflict between the unit prices and the extended totals, the unit price will take precedence. Likewise, discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

G. The Bidder must not submit alternative bids unless this solicitation specifically authorizes alternate bids. If this solicitation specifically allows the submission of alternate bids, the Bidder must submit the standard and the alternative bid in order to be considered responsive.

H. The Bid may not contain qualifications or exceptions of any kinds.

I. All other submittal requirements stated herein must be met.

3. SIGNING THE BID. The Bid Proposal Letter, the Bid Schedule and all other Forms and documents requiring Bidder's signature must contain the original signature of an individual authorized to bind the Bidder. The signature must be located in the space(s) marked for the Bidder's signature. In addition, the person signing the Bid must also sign all of the other Forms to be submitted.

Electronic signatures will not be accepted.

4. REQUESTS FOR INTERPRETATIONS. If the Bidder is in doubt as to the meaning of any of the Bid Documents or other Contract Documents included in this solicitation, the Bidder may submit a written request to the City for an interpretation, care of the Purchasing Agent at the address set forth in the Invitation for delivery of the completed bid. Such requests must be received 10 days prior to bid opening in order to be considered. The City is not obligated to respond to such requests. Any clarification or interpretation issued by the City in the form of a written addendum will be deemed to be a part of the Bid Documents.

No oral clarification or interpretation will be binding.

5. ADDENDA TO BID DOCUMENTS. Prior to bid opening, the City may on the City's own initiative or in response to a request for clarification, furnish addenda for additions or alterations to these Instructions, the Bid Documents, and to any or any Drawings, Specifications, or other Contract Documents previously supplied by the City. In addition, the City may by addenda extend the date scheduled for Bid Opening.

The Purchasing Agent will make reasonable efforts to notify all potential bidders of the issuance of an Addendum. The Purchasing Agent will also post Addenda on the Purchasing Division's web page, <http://www.codb.us/index.aspx?nid=841>

However, the Bidder is solely responsible for ensuring that the Bid submitted reflects all such Addenda.

6. BID SECURITY. The Bidder must submit Bid Security equal to 10% of the Bid. The Bid Security will be in the form of a bid bond; or any of the following alternate forms: cashier's check, certified check, money order, notes at par value, U.S. Currency, or U.S. Government Bond. Any Bid Security provided must be in original form; copies are unacceptable. The City has the right to retain the bid security as liquidated damages should the Successful Bidder fail to comply with the terms of the bid. The City will return the bid security to unsuccessful Bidders after the contract award.

Any bid bond provided must be in a form approved or provided by the City, and must be accompanied by sufficient evidence of the issuing agent's authority. The surety company executing the bond must be authorized to do business in the State of Florida. If the bid bond is in an amount greater than \$5,000.00 the surety company executing the bond is listed by the United States Treasury Department as being approved for writing bonds for federal projects on its current list in an amount not less than the required bond amount.

7. BID ENVELOPE. The Bid, including the Bid Proposal Letter, all other required Bid documents, and required bid security, must be returned in an opaque, sealed envelope. The envelope must display the name and address of the Bidder, the bid number and name of the bid/contract as set forth on the Invitation to Bid, and the date and time scheduled for bid opening. The envelope must be addressed to:

Purchasing Agent
City of Daytona Beach
Room 146
301 S. Ridgewood Avenue
Daytona Beach, FL 32114

8. SUBMISSION OF BID. The Bidder must submit the Bid by mail or hand delivery at or prior to the time fixed for bid opening in the Invitation for Bids. A bid submitted after the time fixed for bid opening will not be accepted. The Bid must be delivered to the Purchasing Agent at the address above. A bid submitted to any other location will not be considered. Telephonic, electronic, and faxed bids will not be considered.

9. AMENDMENT AND WITHDRAWAL OF BID. The Bidder may amend or withdraw the Bid at any time prior to bid opening, but only with prior written notice to the Purchasing Agent, submitted in the same manner as the Bid. The notice must be signed by a properly authorized agent of the Bidder.

Mere negligence on the part of the Bidder in preparing the Bid does not constitute a right to withdraw the Bid subsequent to bid opening.

Amendments may be made only through the submission of a complete Bid along with a written statement, signed by the same person who signed the Bid, that the submission is intended to fully replace the Bidder's earlier submission. The City is not required to honor an amendment that fails to comply with this Paragraph 9.

10. DISQUALIFICATION OF BIDDERS.

A. **Only One Bid Permitted:** The Bidder may submit only one Bid. If the Bidder submits more than one bid for the work involved, all bid proposals submitted from the Bidder will be rejected.

B. **Collusion:** If the City determines that collusion exists among bidders, the City will reject the bids of all participants in the collusion.

C. **Scrutinized Companies List:** If the Bidder is found to have submitted a false certification as provided by F.S. Section 238.175(5), or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the City will have the option to immediately terminate this Contract.

11. BID OPENING. Bid opening will be scheduled at the location and on the date and time specified by the Invitation for Bid, or by any applicable Bid Addenda that the City may issue. At bid opening, the City will open and record the Bid so long as it is proper and has been timely submitted. In recording the Bid the City will state the name of the Bidder and the Bid Price.

The Bidder is solely responsible to ensure that the Bid is time and date stamped by the Purchasing Agent prior to bid opening. Late bids will be rejected and returned unopened.

The Bidder may be present at bid opening but is not required to be present.

12. BID AS OFFER; FIRM PRICING; NO GUARANTEES AS TO QUANTITIES ORDERED. In submitting the Bid, the Bidder certifies that the Bidder is making a firm offer that will remain open for 60 days following Bid Opening unless properly and timely withdrawn by the Bidder prior to Bid Opening in conformance with these Instructions unless the City, in the City's sole discretion, rejects the Bid after Bid Opening. Extensions of time beyond the 60 day-period will only be by agreement of the City, the Successful Bidder, and the surety for the Successful Bidder.

In addition, if this solicitation requests submission of unit prices: (i) all unit prices will be deemed to be held firm for the duration of the Contract, including any extension thereof, unless specifically authorized by the Contract Documents; and (ii) quantities stated are an estimate only and no guarantee is given or implied as to quantities that will actually be required during the contract period.

13. FEDERAL TAXES. The bid price will be exclusive of all federal taxes. If the Bidder believes that certain other taxes are properly payable by the City, the Bidder may list such taxes separately in each case directly below the respective item bid price. Tax exemption certificates will be furnished upon request.

14. BID PRICE INCLUSIVE OF COSTS. The Bid Price is inclusive of all of the Bidder's direct and indirect costs of performing the Work.

15. BIDS AND PUBLIC RECORDS. Sealed bids received by the City pursuant to this solicitation will be temporarily exempt from disclosure in accordance with Florida's Public Records Laws. Thereafter, bids will be open for inspection by any person pursuant to Public Records Law.

If the Bidder believes that the Bid or any portion thereof is permanently exempt from disclosure under the public records laws, the Bidder must state the grounds for this position in CAPITAL LETTERS on a cover sheet accompanying the sealed bid. The Bidder will be contacted prior to the opening of the Bid and a determination will be made as to whether or not it is exempt prior to opening. If a determination is made that it is not exempt from disclosure, the Bidder may in writing request the return of the sealed bid.

16. BID OPENING RESULTS. The Bidder may secure information pertaining to bid opening results on the Purchasing Division webpage under the "Closed Solicitations" link, by visiting the Purchasing Division Office Monday through Friday between 8:00 am and 3:00 pm, or by emailing a request to purchasing@codb.us. Copies of bid tabulation sheets will be furnished upon request and receipt of a valid email address or self-addressed stamped envelope.

17. BIDDER CAPABILITY/REFERENCES. Prior to contract award, the City may require Bidder to show that Bidder has the necessary facilities, equipment, ability, and financial resources to perform the work specified in a satisfactory manner and within the time specified.

In addition, the City may require Bidder to demonstrate that Bidder has experience in work of the same or similar nature as the work required herein, and to provide references satisfactory to the City.

18. REVIEW; BASIS OF AWARD. Bids will be reviewed in accordance with the procedures set forth in these Instructions to Bidders and the applicable provisions of the Purchasing Code, Chapter 30 of the Daytona Beach Code of Ordinances. Any contract awarded pursuant to this solicitation will be made on the basis of the criteria for award of bids provided in the Purchasing Code.

19. RESERVED

20. IDENTICAL TIE BIDS. If there are two or more low responsive bids from responsible bidders that are identical in price and other evaluation criteria, the tie will be awarded to the following in order of preference: a) the bidder in compliance with the drug free workplace certification requirements set forth in Florida Statutes 287.087; or b) the most responsible bidder as defined under the City Code 30-82 (9)(c).

21. RIGHT TO ACCEPT OR REJECT BIDS. The City will reject bids which contain modifications, qualifications, or exceptions, or which are incomplete, unbalanced, conditional, obscure, or which contain additions not requested, or irregularities of any kind, or which do not comply in every respect with these Instructions to Bidders and the Contract Documents, unless the City in its sole discretion determines that the non-compliance is minor.

The City does not bind itself to accept the minimum bid stated herein, but reserves the right to accept any bid, which in the judgment of the City will best serve the needs and interests of the City.

22. RESERVED

23. CITY'S PROJECT-SPECIFIC CONSTRUCTION CONTRACT FORM. The City's contract form for project specific construction projects, which is included in this solicitation, contains additional terms and conditions, including indemnification and insurance requirements, completion deadlines, and liquidated damages, that the Bidder should review prior to submitting the Bid. The City reserves the right to make minor changes to the form contract prior to execution by the successful bidder to correct errors, make other minor formatting changes, or for legal sufficiency. The City will provide the successful bidder the final contract for execution.

24. LICENSES. At time of Bid submittal, the Bidder must hold the required licensure to be the prime contractor for all work to be performed under this solicitation. Any subcontractors or sub-consultants whom the Bidder proposes to use to perform work under this solicitation must also hold the required licensure at the time of Bid submittal. Required licensure must be maintained in full force and effect during the contract term.

25. BIDDER RESPONSIBILITY FOR PREPARATION COSTS. Neither the City nor the City's officers or agents will be liable for the costs incurred by the Bidder in reviewing or responding to this solicitation.

26. POST-AWARD SUBMITTAL REQUIREMENTS. Within 15 business days after the City's issuance of a notice of award, the Successful Bidder must submit each of the following:

A. A fully-executed contract, using the form provided with or referenced by the notice of intent to award.

B. Proof of insurance, in accordance with the requirements of the Contract. See the Contract form for more information regarding insurance requirements.

C. Performance Security, as further described below, in an amount equal to 100% of the Contract Price.

The award is subject to cancellation and the bid security subject to forfeiture if this deadline is not met.

27. PERFORMANCE SECURITY. Performance Security is required unless contract is less than \$100,000.00. Payment and performance bonds may be submitted; or an alternative form of security as specified in Florida Statutes § 255.05(7) may be provided upon the City's prior written approval.

If the Successful Bidder elects to use payment and performance bonds for required Performance Security, the Successful Bidder will use forms provided by the City. Copies of the City's current form bonds will be provided with the Notice of Award. Completed bonds must be originals, not copies, with raised corporate seals included where applicable. The bonds must be accompanied by sufficient evidence of the authority of the issuing agent, including a certified copy of the power of attorney of the person signing the bond on the surety's behalf. The surety company executing the bonds must be must be rated "A" or better by A.M. Best Key Rating Guide, authorized to do business in the State of Florida, and must be listed by the United States Treasury Department Treasury Fiscal Service, Bureau of Government Financial Operations, Federal Register, Part V, latest revision, entitled: "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," as being approved for writing bonds for federal projects on its current list in an amount not less than the required bond amount.

END OF INSTRUCTIONS TO BIDDERS SECTION

SPECIAL INSTRUCTIONS

SI 1 PAYMENT AND PERFORMANCE BONDS. The successful bidder will not be required to provide payment and performance bonds as a condition of contract approval. However, the successful bidder will be required to provide such bonds for any specific work authorization, the cost of which equals or exceeds \$100,000. In each instance, these bonds will equal 100% of the cost of the work referenced in the work authorization.

The surety company executing the bonds must be authorized to do business in the State of Florida, and must be listed by the United States Treasury Department as being approved for writing bonds for federal projects on its current list in an amount not less than the required bond amount. The form of the bond must be approved by the City and must be accompanied by sufficient evidence of the authority of the issuing agent. The bonds must otherwise comply with the requirements of F.S. § 255.05.

In lieu of the required bonds, the successful bidder may provide an alternative form of security as specified in F.S. § 255.05(7) upon the City's approval.

Any bonds used to comply with this Section must be in the form provided by the City; and prior to commencing construction pursuant to a specific work authorization the successful bidder must have the bonds fully executed and recorded and provide the City certified copies must of the recorded documents.

SI 2. LOCAL PREFERENCE RETRACTED. Due to FDOT Funding, the City's local preference policy has been retracted for this project.

SI 3 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.

SI 4 LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE THE WORK.

Amount of Liquidated Damages: Applicable liquidated damages are the amounts established in the following schedule:

Original Contract Amount	Daily Charge Per Calendar Day
\$50,000 and under	\$956
Over \$50,000 but less than \$250,000.....	\$964
\$250,000 but less than \$500,000.....	\$1,241
\$500,000 but less than \$2,500,000.....	\$1,665
\$2,500,000 but less than \$5,000,000.....	\$2,712
\$5,000,000 but less than \$10,000,000.....	\$3,447
\$10,000,000 but less than \$15,000,000.....	\$4,866
\$15,000,000 but less than \$20,000,000.....	\$5,818

SI 5 ESTIMATED PROJECT MAGNITUDE

The estimated project magnitude is between \$888,000 - \$1,086,000.

SUBMITTAL CHECKLIST

The following items will be submitted with the Bid Proposal Letter. Each blank on the form will be filled out. Use NA (not applicable) rather than leaving blank.

Item(s) Required with Submittal	
	BID PROPOSAL LETTER
	BID SCHEDULE
	NONCOLLUSION AFFIDAVIT OF PRIME BIDDER
	DRUG-FREE WORKPLACE CERTIFICATION
	AFFIDAVIT ON PUBLIC ENTITY CRIMES
	MINORITY AND WOMEN OWNED BUSINESS ENTERPRISES CERTIFICATION FORM
	MINORITY AND WOMEN OWNED BUSINESS ENTERPRISE OFFICER CERTIFICATION FORM
	Bid Security (10% for all construction bids)
Label the outer most package with the following:	
	Bid Number
	Date of the Opening
	Contractor Name and Address
Item(s) Required after Bid Submittal	
	<u>Certificate of Insurance</u> indicating the coverages outlined in this solicitation, including naming the City as additional insured <i>(requested when Notice of Intent to Award is Issued)</i>
	Contract signed by Authorized Representative of the Vendor <i>(completed contract sent with Notice of Intent to Award)</i>
	Payment & Performance Bonds to be returned as instructed within 15 days after the Notice of Award is issued <i>(P & P Bonds acceptable to the City will be sent with Notice of Award)</i>

BID PROPOSAL LETTER - ITB NO.: 0318-2260

TO THE MAYOR AND COMMISSIONERS
THE CITY OF DAYTONA BEACH, A FLORIDA MUNICIPAL CORPORATION

Dear Mayor and Commissioners:

This Bid is submitted by _____
(insert Bidder's full legal name; include D/B/A if applicable)

Business Address: _____
(include P.O. Box/street address, city, state and zip code)

Business Phone: _____ Business Fax: _____
(include area code) (include area code)

Business Email: _____
(leave blank if n/a)

The undersigned, as BIDDER or BIDDER's authorized representative, hereby declares and affirms each of the following:

1. That BIDDER has had the opportunity to examine the project site(s) and is fully informed in regard to all conditions pertaining to the site(s).
2. That BIDDER is fully informed regarding local conditions where the work will be required.
3. That BIDDER has thoroughly examined all Contract Documents, including Plans and Specifications as applicable, relative to the work to be performed, and that BIDDER is sufficiently knowledgeable of the work to be performed.
4. That BIDDER hereby agrees to furnish all labor, materials, and equipment to do the work in strict accordance with the Contract Documents for the price(s) stated in the attached Bid Schedule.
5. That, subject to the terms and conditions stated in the Contract Documents, BIDDER will perform the work in accordance with the completion date(s) specified in the Contract Documents, and will pay liquidated damages in the amounts specified in the Contract Documents for BIDDER's failure to comply with the completion date(s).
6. That BIDDER agrees to indemnify and hold harmless the CITY any other interests as set forth in the Contract Documents.
7. That insofar as the attached Bid Schedule includes extended unit prices, the use of extended unit quantities will not be construed to be a guarantee that the CITY will purchase such quantities if a contract is awarded; and that, subject to the terms and conditions of the Contract, BIDDER will be entitled to payment only based on the units constructed, installed, or otherwise placed in service.

BID PROPOSAL LETTER -- ITB No.: 0318-2260, cont.

8. That BIDDER has received the following Addenda (*leave blank if inapplicable*):

No. _____ Dated: _____ No. _____ Dated: _____

No. _____ Dated: _____ No. _____ Dated: _____

(*list any additional Addenda by number and date*): _____

9. That, if within the time period specified in the bid solicitation, BIDDER fails to execute the form Contract, provide proof of insurance, and submit (if required) Performance Security, the bid award will be subject to cancellation and the Bid Security provided with this Bid will be subject to forfeiture.

10. That all information provided by BIDDER as part of this Proposal is truthful to the best of BIDDER's knowledge.

11. That BIDDER is (*mark the appropriate box and include the additional information, as applicable*):

An individual person/sole proprietor

A Florida corporation/ limited liability company

A foreign corporation/limited liability company authorized to do business in Florida*
_____ (*specify state of incorporation/formation*)

A Florida limited partnership

A foreign limited partnership authorized to do business in Florida*
_____ (*specify state of incorporation / formation*)

A general partnership**

A joint venture***

Other _____ (*specify, including type of entity*)

* *Attach proof of formation/registry from State of Florida.*

** *Provide on separate, signed sheets(s) of paper, full legal name and address of the partnership; and names of all general partners.*

*** *Provide on separate signed sheet(s) of paper the full legal names of all persons/firms comprising the joint venture.*

BID PROPOSAL LETTER -- ITB NO.: 0318-2260, CONT.

12. That BIDDER has completed and attached all required attachments with this Bid Proposal, including Bid Schedule, Non-Collusion Affidavit, Drug Free Workplace Certification, MWBE Certifications, and Public Entity Crimes Affidavit.

In signing below, I certify that I am the above-named BIDDER or a person duly authorized by BIDDER to bind BIDDER to these terms and conditions.

By: _____
(Signature)

Printed Name: _____

Title: _____

Date signed: _____

Email: _____

**BID SCHEDULE - ITB NO. 0318-2260
SWEETHEART TRAIL - BEACH STREET (WILDER BLVD TO SHADY PLACE)**

SCHEDULE OF UNIT PRICES					
ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	BID UNIT PRICE	BID PRICE
I. BASE BID					
101-1	MOBILIZATION	1	LS	\$	\$
102-1	MAINTENANCE OF TRAFFIC	1	LS	\$	\$
104-10-3	SEDIMENT BARRIER (F&I)	7476	LF	\$	\$
104-11	FLOATING TURBIDITY BARRIER (F&I)	104	LF	\$	\$
104-18	INLET PROTECTION SYSTEM (F&I)	26	EA	\$	\$
110-1-1	CLEARING AND GRUBBING	1.750	AC	\$	\$
110-4	REMOVAL OF EXISTING CONCRETE	1948	SY	\$	\$
120-1	REGULAR EXCAVATION	837	CY	\$	\$
120-6	EMBANKMENT	149	CY	\$	\$
160-4	TYPE B STABILIZATION	1888	SY	\$	\$
285-7-04	OPTIONAL BASE, BASE GROUP 04	1833	SY	\$	\$
327-70-1	MILL EXISTING ASPHALT PAVEMENT (1" AVG. DEPTH)	4500	SY	\$	\$
334-1-12	SUPERPAVE ASPHALTIC CONC. TRAFFIC B	691	TN	\$	\$
400-1-2	CONC. CLASS I, ENDWALLS	1	CY	\$	\$
425-5-1	MANHOLE, ADJUST	4	EA	\$	\$
425-6	VALVE BOX, ADJUST	7	EA	\$	\$
425-1211	INLETS, CURB, TYPE 10, <10' (F&I)	1	EA	\$	\$
425-1521	INLETS, DT BOT, TYPE C, <10' (F&I)	2	EA	\$	\$
425-1541	INLETS, DT BOT, TYPE D, <10' (F&I)	14	EA	\$	\$
425-1543	INLETS, DT BOT, TYPE D, J BOTTOM, <10' (F&I)	4	EA	\$	\$
425-2-41	MANHOLE, P-7, <10' (F&I)	3	EA	\$	\$
425-2-91	MANHOLES, J-8, <10' (F&I)	2	EA	\$	\$
430-174-115	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 15" (F&I)	598	LF	\$	\$
430-174-118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" (F&I)	211	LF	\$	\$
430-174-136	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 36" (F&I)	14	LF	\$	\$
520-1-10	CONCRETE CURB & GUTTER, TYPE F	6935	LF	\$	\$
520-3	VALLEY GUTTER - CONCRETE	515	LF	\$	\$
522-1	CONCRETE SIDEWALK, 4" THICK, 2500 PSI (INCLUDES ADA RAMPS AND CAST-IN-PLACE DETECTABLE WARNING SURFACES)	2801	SY	\$	\$
522-2	CONCRETE DRIVEWAYS, 6" THICK, 2500 PSI	61	SY	\$	\$
570-1-2	PERFORMANCE TURF, SOD (F&I)	5594	SY	\$	\$
700-1-11	SINGLE POST SIGN, F&I, GROUND MOUNT, UP TO 12SF (F&I)	35	AS	\$	\$
700-1-60	SINGLE POST SIGN, REMOVE	16	AS	\$	\$
706-3	RETRO-REFLECTIVE PAVEMENT MARKER	197	EA	\$	\$
0710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.728	GM	\$	\$
0710-11-123	PAINTED PAVT MARK,STD,WHITE,SOLID, 12"	568	LF	\$	\$

0710-11-124	PAINTED PAVT MARK,STD,WHITE,SOLID, 18"	294	LF	\$	\$
0710-11-125	PAINTED PAVT MARK,STD,WHITE,SOLID,24"	168	LF	\$	\$
0710-11-201	PAINTED PAVT MARK,STD,YELLOW,SOLID,6"	0.758	GM	\$	\$
0710-11-224	PAINTED PAVT MARK,STD,YELLOW,SOLID,18"	17	LF	\$	\$
711-11-123	THERMOPLASTIC,STANDARD,WHITE,SOLID,12"	568	LF	\$	\$
711-11-124	THERMOPLASTIC,STANDARD,WHITE,SOLID,18"	294	LF	\$	\$
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24"	168	LF	\$	\$
711-11-224	THERMOPLASTIC, STD, YELLOW, SOLID, 18"	17	LF	\$	\$
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.728	NM	\$	\$
711-11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18"	17	LF	\$	\$
711-16-201	THERMOPLASTIC, STD-OTH, YELLOW, SOLID, 6"	0.758	NM	\$	\$
711-17	THERMOPLASTIC, REMOVE EXISTING THERMOPLASTIC PAVEMENT MARKINGS	250	SF	\$	\$
1644-800	FIRE HYDRANT, RELOCATE	3	EA	\$	\$

TOTAL BASE BID PRICE \$ _____

II. ALTERNATE BID 1					
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK, 3400 PSI (INCLUDES ADA RAMPS AND CAST-IN-PLACE DETECTABLE WARNING SURFACES)	2862	SY	\$	\$

TOTAL ALTERNATE BID 1 PRICE \$ _____

III. ALTERNATE BID 2					
101-1	ADDITIONAL MOBILIZATION FOR ALTERNATE BID 2 ACTIVITIES	1	LS	\$	\$
102-1	ADDITIONAL MAINTENANCE OF TRAFFIC FOR ALTERNATE BID 2 ACTIVITIES	1	LS	\$	\$
630-2-11	CONDUIT, F&I, OPEN TRENCH	1985	LF	\$	\$
630-2-12	CONDUIT, F&I, DIRECTIONAL BORE	446	LF	\$	\$
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" (F&I)	39	EA	\$	\$
715-4-11	DECORATIVE PEDESTRIAN LED LIGHT POLE COMPLETE, FURNISH & INSTALL DECORATIVE POLE STANDARD FOUNDATION, 14' MOUNTING HEIGHT	36	EA	\$	\$
DB-002	SITESCAPES AVONDALE BACKED BENCH, MODEL AV1-1011 (F&I)	2	EA	\$	\$
DB-006	LANDSCAPE- TREES, LIVE OAK QUERCUS VIRGINIANA, 11-14' OVERALL HEIGHT (F&I)	20	EA	\$	\$

TOTAL ALTERNATE BID 2 PRICE \$ _____

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF _____)
COUNTY OF _____)

_____, being first duly sworn deposes and says that:

- (1) He is _____ of _____, the Bidder that has submitted the attached Bid;
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham bid;
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Daytona Beach, FL (Local Public Agency) or any person interested in the proposed Contract;
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

By: _____
(Signature)
Name Typed: _____
Title: _____
Bidder: _____

Subscribed and sworn to before me

This _____ day of _____, 20____

(Signature of Notary Public)
My commission expires: _____

DRUG-FREE WORKPLACE CERTIFICATION

IDENTICAL TIE BIDS: - If there are two or more low responsive bids from responsible bidders that are identical in price and other evaluation criteria, the tie will be awarded to the following in order of preference: a) the bidder in compliance with the drug free workplace certification requirements set forth in Florida Statutes 287.087; or c) the most responsible bidder as defined under the City Code 30-82 (9)(c).

In order to have a drug-free workplace program, a business will:

(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 violation.

(3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in section (1), above.

(4) In the statement specified in section (1), above, notify the employees that, as a condition of working on the commodities or contractual services that are underbid, 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 occurring in the workplace no later than five days after such conviction.

(5) Impose 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.

By: _____
(Signature)

Title: _____
(leave blank if sole proprietor)

Date: _____

AFFIDAVIT ON PUBLIC ENTITY CRIMES

(SWORN STATEMENT PURSUANT TO SECTION 287.133(3) (a), FLORIDA STATUTES)

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

This sworn statement is submitted to the City of Daytona Beach

by _____
(insert individual's printed name and title)

for _____ whose business address
(insert name of Bidder)

is _____

- I. I understand that a “public entity crime” as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
- II. I understand that “convicted” or “conviction” as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.
- III. I understand that an “affiliate” as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
 - 1. A predecessor or successor of a person convicted of a public entity crime; or
 - 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm’s length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
- IV. I understand that a “person” as defined in Paragraph 287.133(1)(e), **Florida Statutes**, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term “person” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

V. Based on information and belief, THE STATEMENT WHICH I HAVE MARKED BELOW is true in relation to the entity submitting this sworn statement (*Place initial of check mark next to applicable statement*):

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

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (Attach a copy of the final order)

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

(Signature) (Date)

STATE OF _____)
COUNTY OF _____)

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

_____ who, after first being sworn by me, affixed his/her signature
(Name of individual signing)

in the space provided above on this _____ day of _____, 20_____.

Attest: _____
(Notary Public)

My commission expires: _____

(Notary Seal)

**MINORITY AND WOMEN OWNED BUSINESS ENTERPRISES
CERTIFICATION FORM**

The Bidder hereby certifies that in accordance with applicable provisions of the Daytona Beach Purchasing Code, Chapter 30, Daytona Beach Code of Ordinances, a good faith effort has been made to contact the following minority and women owned business enterprises:

(Use separate sheet if additional space is needed. If separate sheet is used, include a reference to this form, and sign and date the sheet).

SIGNATURE: _____

NAME TYPED: _____

TITLE: _____

The Bidder further certifies that of the minority and women owned business enterprises contacted, he was unable through a good faith effort to obtain any minority or women owned business enterprise to work on this project.

SIGNATURE: _____

NAME TYPED: _____

TITLE: _____

**MINORITY AND WOMEN OWNED BUSINESS ENTERPRISE OFFICER
CERTIFICATION FORM**

I, _____,
Name of Executive Officer
certify that _____
Name of MBE Officer

has been named Minority and Women Owned Business Enterprise Officer for

Company

Corporation

Date: _____

By: _____

Name Typed: _____

Title: _____

Address: _____

DRAFT
PROJECT-SPECIFIC CONSTRUCTION CONTRACT
ITB 0318-2260

THE PARTIES TO THIS CONTRACT are the City of Daytona Beach, a Florida municipal corporation, hereinafter the "CITY" or "OWNER," and >, a >, hereinafter the "CONTRACTOR."

WITNESSETH, that the CONTRACTOR and the CITY agree as follows, for the mutual valuable consideration provided herein:

ARTICLE I. SCOPE OF WORK

The CONTRACTOR will, at its sole cost and expense, provide, perform, and complete the construction project commonly known as "SWEETHEART TRAIL - BEACH STREET (WILDER BLVD TO SHADY PLACE)" and more fully described in the Contract Documents, hereinafter the "Work".

ARTICLE II. CONTRACT DOCUMENTS

The Contract Documents are further described in the General Conditions, and if applicable the Supplemental General Conditions. In addition, the Plans, dated > and referenced herein are the plans or drawings prepared by > (the "Engineer/Architect" or "E/A"), provided or made available with the CITY's Invitation to Bid, as amended by any addenda to the bid documents, are a part of the Contract Documents. These Plans are not physically attached hereto but are incorporated herein by reference. CONTRACTOR acknowledges receipt of all such Plans.

The Contract Documents are intended to include all information necessary for CONTRACTOR's proper prosecution and timely completion of the Work. CONTRACTOR will prosecute the Work as necessary to produce the results indicated by the Contract Documents. The Contract Documents are complementary, and what is required by one will be as binding as if required by all.

ARTICLE III. COMMENCEMENT AND COMPLETION

The CITY and the CONTRACTOR mutually agree that time is of the essence with respect to the dates and times set forth in the Contract Documents. To that end, the CONTRACTOR will commence the Work not later than the Commencement Date set forth in the General Conditions, and will diligently and continuously prosecute the Work at such a rate, and with sufficient forces as will allow the CONTRACTOR to achieve Substantial Completion within **240** days after the Commencement Date and Final Completion within **30** days after Substantial Completion, subject only to any adjustments in the Contract Time that may be authorized by Change Orders properly issued in accordance with the Contract Documents. In executing this Contract, CONTRACTOR affirms that the time set for completion is reasonable.

The CITY will suffer financial loss if Final Completion of the Work is not achieved within the Contract Time. Accordingly, and in lieu of actual damages or proof thereof, if CONTRACTOR fails to meet these deadlines, CONTRACTOR will be liable to the CITY for liquidated damages as follows:

In the amount of **\$1665** for each and every day of unexcused delay in achieving Substantial Completion; and

In the amount of **\$832.50** for each and every day of unexcused delay from the date that Substantial Completion is achieved until Final Completion is achieved.

The CITY will have the right to offset such liquidated damages against any remaining portion of the Contract Price due CONTRACTOR, but will not be limited to the offset if it is insufficient. If the unpaid balance of the Contract Price is less than the amount of the Liquidated Damages, the CONTRACTOR or its Surety must pay the deficiency to the CITY upon demand.

ARTICLE IV. CONTRACT PRICE

Subject to any adjustments that may be authorized pursuant to this Contract, the Contract Price due the CONTRACTOR is \$>_____ for work completed and accepted in accordance with the Contract Documents. The Contract Price represents the CONTRACTOR's sole compensation from the CITY for prosecution of the Work. The Contract Price will be paid in a series of Progress Payments and a Final Payment, and is subject to retainage, as further described in the Contract Documents.

ARTICLE V. PERFORMANCE SECURITY

CONTRACTOR must provide a payment bond and a performance bond, or alternate form of Performance Security in an amount equal to 100% of the Contract Price if the contract price exceeds \$100,000.00.

Additional requirements associated with the provision of Performance Security, including requirements to increase the amount provided, are set forth in the General Conditions and, if applicable, the Supplemental General Conditions.

ARTICLE VI. INDEMNIFICATION

A. CONTRACTOR hereby indemnifies and holds harmless the CITY from and against all liabilities, damages, losses, and costs, including but not limited to reasonable attorneys' fees, arising out of or resulting from the Work provided that the liabilities, damages, losses, and costs are caused in whole or in part by any negligence, recklessness, or intentional wrongful misconduct of CONTRACTOR, any subcontractor, anyone directly or indirectly employed by any one of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. This indemnification agreement is separate and apart from, and in no way limited by, any insurance provided pursuant to this agreement or otherwise.

B. CONTRACTOR indemnifies the CITY against any claim of supplier's or subcontractor's lien (in cases where such payment is not already guaranteed by payment bond). If any claim or lien remains unsatisfied after all payments are made, CONTRACTOR must refund to the CITY all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

C. For purposes of the obligations stated in this Article, references to the CITY include the CITY's officers, employees, and agents.

D. CONTRACTOR's obligations under this Article are made without regard to the availability of insurance of the CITY or the Engineer/Architect.

ARTICLE VII. INSURANCE

A. Required Insurance.

CONTRACTOR will purchase and maintain, at its own expense, the following types and amounts of insurance, primary and non-contributory with the CITY's own insurance, in form and companies satisfactory to the CITY:

1. **Workers' Compensation Insurance** – As required by Florida Statutes, Chapter 440, Workers' Compensation Insurance, for all employees of CONTRACTOR employed at the project site or in any way connected with the Work.

The insurance required by this provision will comply fully with the Florida Workers' Compensation Law and include Employers' Liability Insurance with limits of not less than \$500,000 per accident. Any associated or subsidiary company involved in the service must be named in the Workers' Compensation coverage.

2. **Liability insurance – Including Commercial General Liability coverage** for operations, independent contractors, products-completed operations, broad form property damage, collapse and underground, and personal injury on an "occurrence" basis, insuring the CONTRACTOR and any other interests, including but not limited to any associated or subsidiary companies involved in the Work; and **Automobile Liability coverage** insuring claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle used by CONTRACTOR at the project site or in any way connected with the Work.

THE COMMERCIAL GENERAL LIABILITY INSURANCE POLICY WILL NAME THE CITY AS AN ADDITIONAL INSURED. Contractor's Commercial General Liability insurance policy shall provide coverage to Contractor, and City when required to be named as an additional insured either by endorsement or pursuant to a blanket additional insured endorsement, for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01) without the attachment of any endorsements excluding or limiting coverage for Products/Completed Operations, Independent Contractors, Property of City in Contractor's Care, Custody or Control or Property of City on which contracted operations are being performed, Explosion, Collapse or Underground hazards (XCU Coverage, Contractual Liability or Separation of Insureds). When City is added as additional insured by endorsement, ISO Endorsements CG 20 10 and CG 20 37 or their equivalent shall be used to provide such Additional Insured status.

The limit of liability will be a combined single limit for bodily injury and property damage of no less than \$1,000,000 per occurrence. If insurance is provided with a general aggregate, the aggregate will be in an amount of no less than \$2,000,000. The Risk Manager may authorize lower liability limits for the automobile policy only, at the Risk Manager's sole discretion.

Unless specifically waived hereafter in writing by the Risk Manager, CONTRACTOR agrees that the insurer will waive its rights of subrogation, if any, against the CITY on each of the foregoing types of required insurance coverage.

B. Subcontractors' Insurance. Each of CONTRACTOR's subcontractors will be required to provide insurance in substantially similar form to the insurance required of CONTRACTOR above based on the services they will provide to the project.

C. Proof of Insurance. CONTRACTOR will furnish proof of insurance acceptable to the CITY prior to or at the time of execution of this Contract. CONTRACTOR will not commence Work until all required insurance has been approved by the CITY. CONTRACTOR will furnish evidence of all required insurance in the form of certificates of insurance which will clearly outline all hazards covered as itemized above, the amounts of insurance applicable to each hazard and the expiration dates.

Upon request of the Risk Manager, CONTRACTOR will also provide the CITY copies of the insurance contracts referenced by the certificates.

D. Cancellation and Replacement. CONTRACTOR will file replacement certificates 30 days prior to expiration or termination of any required insurance occurring prior to expiration or termination of this Contract. If such insurance terminates without CONTRACTOR's prior knowledge, immediately upon becoming aware of such termination CONTRACTOR will provide notice to the City's Risk Manager at P.O. Box 2451, Daytona Beach, Florida 32115-2451.

The CITY reserves the right to suspend any or all of the Work until such insurance has been replaced, or to obtain replacement insurance at CONTRACTOR's sole cost.

E. Termination of Insurance. CONTRACTOR will not cancel any required insurance coverage until the work is completed, accepted by the CITY and CONTRACTOR has received written notification from the Risk Manager that CONTRACTOR is authorized to cancel the insurance and the effective date of such authorization. The Risk Manager will provide such written notification at the request of CONTRACTOR if the request is made no earlier than two weeks before the work is to be completed.

The liabilities of CONTRACTOR under this Contract will survive and not be terminated, reduced, or otherwise limited by any expiration, limitation, exclusion or termination of insurance coverage. Neither approval nor failure to disapprove insurance furnished by the contractor will relieve the CONTRACTOR or its sub-contractors from responsibility to provide insurance as required by the contract.

ARTICLE VIII. NOTICES

A. Where the Contract Documents authorize or require the CITY to provide notice to CONTRACTOR, notice may be provided by delivery by hand to CONTRACTOR's designated Superintendent at the Project Site, or in the absence or unavailability of the Superintendent to any other person on the Project Site who holds himself or herself out as managing the Work on behalf of CONTRACTOR, or in lieu of either of these, by written notice to the address provided below.

B. Where the Contract Documents authorize or require CONTRACTOR to provide notice to the CITY, notice may be provided only by written notice to the address provided below.

C. Written notice is valid only if sent by certified United States mail, return receipt requested, facsimile with confirmation receipt required, or by recognized courier such as Federal Express

with confirmation receipt requested. All such notices will be deemed to have been duly given and provided on (i) the date of receipt, (ii) upon receipt or refusal of delivery if transmitted by registered or certified mail, return receipt requested, or (iii) the first business day after the date of deposit, if transmitted by reputable overnight courier service, whichever occurs first. Written notices will be sent to the following persons:

If to the CITY:	If to the CONTRACTOR:
Attn: Michelle Martin, Project Manager	Attn: >
The City of Daytona Beach	>
950 Bellevue Avenue	>
Daytona Beach, FL 32114	>
Fax: 386-671-8620	Fax:

provided, however, that either Party may by written notice change the address designated for receipt of written and faxed notices.

ARTICLE IX. DISPUTE RESOLUTION

If a dispute exists concerning this Contract, the Parties agree to use the following procedure prior to pursuing any judicial remedies.

A. **Negotiations Required.** A Party will request in writing that a meeting be held between representatives of each Party within 14 days of the request or such later date that the Parties may agree to. Each Party will attend and will include, at a minimum, a senior level decision maker (an owner, officer, or employee of each organization) empowered to negotiate on behalf of their organization. The purpose of this meeting is to negotiate the matters constituting the dispute in good faith. The Parties may mutually agree in writing to waive this step and proceed directly to mediation as described below.

B. **Non-Binding Mediation.** Mediation is a forum in which an impartial person, the mediator, facilitates communication between parties to promote reconciliation, settlement, or understanding among them. Within 30 days after the procedure described above proves unsuccessful or the Parties mutually waive the procedure, the Parties will submit to a non-binding mediation. The mediation, at a minimum, will provide for (i) conducting an on-site investigation, if appropriate, by the mediator for fact gathering purposes, (ii) a meeting of all Parties for the exchange of points of view and (iii) separate meetings between the mediator and each Party to the dispute for the formulation of resolution alternatives. The Parties will select a mediator trained in mediation skills and certified to mediate by the Florida Bar, to assist with resolution of the dispute. The Parties will act in good faith in the selection of the mediator and give consideration to qualified individuals nominated to act as mediator. Nothing in this Contract prevents the Parties from relying on the skills of a person who also is trained in the subject matter of the dispute or a contract interpretation expert. Each Party will attend will include, at a minimum, a senior level decision maker (an owner, officer, or employee of each organization) empowered to negotiate on behalf of their organization.

If the Parties fail to reach a resolution of the dispute through mediation, then the Parties are released to pursue any judicial remedies available to them.

ARTICLE X. GENERAL PROVISIONS

A. This Contract will be governed by the laws of the state of Florida without regard to any choice of law principles that could result in application of the laws of any other jurisdiction. Venue

for any legal action or proceeding arising out of this Contract is exclusively in the federal or state courts in and for Volusia County, Florida. The Parties hereby waive any right to stay or dismiss any action or proceeding brought under or in connection with this Contract that is brought before the above-referenced courts on the basis of *forum non-conveniens*.

B. In case of litigation arising out of this Contract where the meaning of one or more provisions is at issue, the CITY will not be penalized by virtue of its having drafted this Contract. CONTRACTOR has carefully reviewed and had the opportunity to seek advice of legal counsel prior to executing this Contract.

C. The CITY and CONTRACTOR agree that they have knowingly waived the right to trial by jury and have instead agreed that, in the event of any litigation arising out of or connected to this Contract, to proceed with a trial before the court, unless both parties subsequently agree otherwise in writing.

D. In performing the services provided for herein, CONTRACTOR is an independent contractor and not an employee of the CITY.

E. The waiver of any provision of this Contract will not be deemed to be a waiver of any other provision of this Contract. No waiver of any provision of this Contract will be deemed to constitute a continuing waiver unless expressly provided in writing, nor will a waiver of any default be deemed a waiver of any subsequent defaults of the same type. The failure at any time to enforce this Contract, whether the default is known or not, does not constitute a waiver or estoppel of the right to do so.

F. All terms and conditions of this Contract which contemplate a period of time beyond completion or termination, will survive such completion or termination and not be merged therein or otherwise terminated.

G. If any word, phrase, clause, sentence or provision of the Contract, or the application of same to any person or set of circumstances is for any reason held to be unconstitutional, invalid or unenforceable, that finding will only effect such word, phrase, clause, sentence or provision, and such finding will not affect the remaining portions of this Contract; this being the intent of the Parties in entering into the Contract; and all provisions of the Contract are declared to be severable for this purpose.

H. The undersigned representative of CONTRACTOR affirms that in executing this Contract on behalf of CONTRACTOR, he or she is fully authorized to bind CONTRACTOR to the terms and conditions herein set forth.

I. No CITY officer, employee, or independent consultant who is involved in the development, evaluation, or decision-making process of the performance of any solicitation will have a financial interest, direct or indirect, in the Contract resulting from that solicitation. Any violation of this provision, with the knowledge, expressed or implied, of CONTRACTOR will render the Contract voidable by the CITY.

J. This Contract represents the entire and integrated agreement between the CITY and CONTRACTOR with respect to the subject matter hereof and supersedes all prior negotiations, representations or agreements, either written or oral.

IN WITNESS WHEREOF, the Parties have executed this Contract on the dates written below.

THE CITY OF DAYTONA BEACH

CONTRACTOR

By: _____
Derrick L. Henry, Mayor

By: _____
Printed Name: _____
Title: _____

Attest: _____
Letitia LaMagna, City Clerk

Date: _____

Date: _____

Approved as to legal form:

By: _____
Robert Jagger, City Attorney

DRAFT

GENERAL CONDITIONS

ARTICLE 1 – DEFINITIONS AND TERMS

1.1 Defined Terms.

Whenever used in the Contract the following terms have the meanings indicated, which are applicable to both the singular and plural thereof

“50-Percent Completion” means the point at which the OWNER has expended 50% of the Adjusted Contract Price.

“Adjusted Contract Price” means the Contract Price as set forth in the Contract, as previously adjusted by valid Change Order.

“Bid” means the offer of the Bidder.

“Bid Schedule” means the Bid Schedule submitted by CONTRACTOR with the Bid; unless CONTRACTOR was the sole responsive bidder and the Parties have negotiated final pricing as part of the bid solicitation process pursuant to the Purchasing Code, in which instance the term means the Revised Bid Schedule included within the Contract Documents.

“Change Instrument” means a Field Directive or a Change Order.

“Change Order” means a written directive issued by the OWNER authorizing an adjustment in the Contract Price, the Contract Time, the scope of Work, or any other material term or condition of the Contract. When approved by the City Commission, a change order may be in the form of a formal amendment to this Contract.

“City Code” means the City of Daytona Beach Code of Ordinances.

“City Commission” or *“Commission”* means the City of Daytona Beach City Commission.

“City Manager” means the City Manager for the City.

“Commencement Date” means the date established in the Notice to Proceed upon which the Contract Time begins to run; or if no such date is provided in the Notice to Proceed, the date of the Notice to Proceed.

“Construction Contract form” means that part of the titled as “Project-Specific Construction Contract” or something similar, and signed by the Parties.

“Contract” includes all Contract Documents.

“Contract Administrator” means the individual specifically authorized to administer the Contract on the OWNER’s behalf; provided, however that in all instances the City Manager may act as the Contract Administrator.

“Contract Price” means the total compensation due to CONTRACTOR for the Work to be performed under the contract, subject only to those adjustments provided in the Contract Documents.

“Contract Time” means the total period of time stated in the Contract between the Commencement Date and the deadline for Final Completion, subject only to those adjustments provided in the Contract Documents.

“Critical Path” means the longest series of tasks that runs consecutively from the beginning to the end of the Project, as determined by duration and workflow sequence. This longest path sets the managerial standard for how quickly the Project can be completed, given appropriate resources.

“Day” or “Days” means calendar days unless otherwise specifically noted in the Contract Documents.

“Defective Work” or “Nonconforming Work” means Work that:

- (i) Does not conform to the requirements of the Contract;
- (ii) Does not meet the requirements of any inspection, test, or approval as referred to in the Contract or as required by law;
- (iii) Contains defects;
- (iv) Represents a substitute for that required by the Technical Provisions, unless properly approved and authorized as provided in the Contract; or
- (v) Has been damaged or destroyed prior to Final Completion.

“Effective Date” means the date on which this Contract is approved by City Commission.

“E/A” (also, “Engineer/Architect”, “Architect, or “Engineer” as applicable) generally means the professional licensed architect or engineer who develops the criteria and concept for the Project, performs the analysis, and is responsible for the preparation of the Technical Provisions and Plans. The E/A may be the OWNER’s in-house staff or a consultant retained by the OWNER. No contractual relationship is created by this Contract between CONTRACTOR and the E/A.

“Equipment” means the machinery and equipment, together with the necessary supplies for upkeep and maintenance thereof, and all other tools and apparatus necessary for the construction and acceptable completion of the Work.

“Field Directive” means a written order prepared and signed by the OWNER, not involving a change in Contract Price or Contract Time, directing a minor change in the Work where a Change Order is not required.

“Final Completion” means acceptance of the Work by the OWNER as evidenced by its signature upon the Certificate of Final Completion.

“Force Account” means a method for payment of additional Work that is based on CONTRACTOR’s labor, equipment and materials costs with consideration for overhead and profit.

“Force Majeure Event” means conditions or other circumstances, such as acts of God, that: (i) were not foreseen, and could not have been reasonably foreseen, by CONTRACTOR or the OWNER, (ii) are beyond the control of CONTRACTOR and the OWNER, and (iii) materially hinder or interfere with the ability of CONTRACTOR to prosecute the Work; provided, however, that no such condition or circumstance will be a Force Majeure event if it is the result of CONTRACTOR’s fault, negligence, or material breach of this Contract. Examples of Force Majeure events include wars, floods, strikes and labor disputes, unusual delay in transportation, epidemics abroad, earthquakes, and severe adverse weather conditions not reasonably anticipated.

“Hazardous Materials” has the meaning as provided by law.

“Legal Requirements” means, collectively, all applicable federal, state, and local laws, codes, ordinances, rules, regulations, orders and decrees of any government or quasi-government entity having jurisdiction over the Project or Site, the practices involved in the Project or Site, or any Work. The term includes the City Code and other CITY ordinances and regulations.

“Materials” means goods or substances to be incorporated in the Work under the Contract.

“Milestone” means a significant event specified in the Contract Documents relating to an intermediate completion date or time prior to Final Completion of the Work.

“OWNER” means the City of Daytona Beach; or, if the form Contract so provides, the Community Redevelopment Agency for the CITY. All references within the Technical Provisions to the “CITY” (whether or not capitalized) are intended to refer to the “OWNER” unless logic dictates otherwise.

“Plans” means the plan documents prepared by the E/A and identified in the Table of Contents or otherwise incorporated into the Contract, including reproductions thereof, showing the location, character, dimensions, and details of the Work. The term may also be referred to herein as “drawings,” “contract drawings,” “contract plans,” or similar terms; but not “shop drawings.”

“Project” means the subject of the Work and its intended result.

“Project Site” or “Site” means the land or premises on which the Project is located, and in addition any land and areas identified in and permitted for use by CONTRACTOR by the Contract, subject to conditions that may apply such as for rights-of-way, permits, and easements.

“The Prompt Payment Act” means the Local Government Prompt Payment Act, F.S. § 218.70 et seq. (2014), as hereafter amended.

“Purchasing Code” means the provisions of Chapter 30 of the City Code.

“Referenced Standards” includes standards, standard details, specifications, manuals, regulations or codes of any technical society, organization or association, or of any governmental or quasi-governmental authority referred to in the Contract to describe the nature or quality of any of the Work, whether such reference be specific or by implication, and means the latest standard, standard detail, specification, manual, regulation or code in effect at the time of Bid opening, except as may be otherwise specifically stated in the Contract.

“Resident Project Representative” means, where the E/A is a private firm or person under contract with the CITY to act as the E/A, the authorized representative of E/A assigned to the Project Site; and in all other instances, the Contract Administrator.

“Risk Manager” means the Risk Manager for the CITY or designee; provided however, that the City Manager may act on behalf of the Risk Manager.

“Schedule of Values” means the written breakdown of the Contract Price by Construction Specification Institute divisions or by other format acceptable to the OWNER, prepared by CONTRACTOR for OWNER’s review and approval.

“Shop Drawings” means all drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR as required by this Contract.

“Site-Related Reports” means any environmental, geotechnical, subsoil, and related reports relating to conditions at the Project Site which were used or made available for the OWNER’s or E/A’s use in creating the Plans.

“Specifications” means the Technical Provisions and Plans.

“Stored Materials” means delivered materials or equipment that are located at the Project Site, or with the OWNER’s approval at another location, and that have not yet been incorporated into the Work.

“Subcontractor” means a person or firm that under a direct contract with CONTRACTOR to perform a portion of the Work, and also unless logic dictates otherwise, sub-subcontractors and persons or firms doing work through such sub-subcontractors.

“Substantial Completion” means the completion of the Work, or an agreed upon portion of the Work, so as to allow the OWNER to occupy and use the Project or a portion thereof for its intended purposes.

“*Sub-subcontractor*” means a person or firm who has a direct or indirect contract at any tier with a subcontractor to perform a portion of the Work.

“*Supplemental General Conditions*” means that part of the Contract labeled as such and identified in the Table of Contents or otherwise incorporated into the Contract, that amends and supplements these General Conditions.

“*Supplier*” means a person or firm having a contract with CONTRACTOR or with any subcontractor of any tier to furnish materials to be incorporated in the Work.

“*Technical Provisions*” means those provisions of the Contract containing or referencing required technical specifications and standards. The term includes all such technical specifications and standards of other governmental jurisdictions, or professional association where referenced in the Contract, including any exceptions thereto regardless of whether these are attached to or enumerated within the Contract.

Whenever this Contract refers to but does not include a specific Technical Provision, the reference will be deemed to be to the version of the referenced Technical Provision included in the applicable CITY engineering or utility standard unless logic dictates otherwise.

“*Unilateral Change Instrument*” means a Change Instrument issued by the OWNER and not executed by CONTRACTOR.

“*Unit Price Schedule*” means the Bid Schedule.

“*Working Hours*” means 7:00 am through 6:00 pm, Monday through Friday excluding holidays designated by the CITY.

1.2 Abbreviations. The following abbreviations, when used in the Contract, represent the full text shown.

AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGC	The Associated General Contractors of America, Inc.
AGMA	American Gear Manufacturers Association
AIA	American Institute of Architects.
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute, Inc.
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
DIPRA	Ductile Iron Pipe Research Association
EASA	Electrical Apparatus Service Association
EPA	Environmental Protection Agency of the United States Government
FDHR	Florida Division of Historical Resources
FEMA	Federal Emergency Management Agency
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FSS	Federal Specifications and Standards

IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IFAS	Institute of Food and Agricultural Sciences
IMSA	International Municipal Signal Association
IPCEA	Insulated Power Cable Engineers Association
ISA	International Society of Arboriculture
ISO	International Organization for Standards
MPO	Volusia County Metropolitan Planning Organization
MSTCSD	Minimum Specifications for Traffic Control Signals and Devices
MUTCD	Manual on Uniform Traffic Control Devices
NACE	National Association of Corrosion Engineers
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NIST	National Institute for Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NSPE	National Society of Professional Engineers
OSHA	Occupational Safety and Health Administration
SAE	Society of Automotive Engineers
SJWRMD	St. Johns River Water Management District
SI	International System of Units
SSPC	Society of Protective Coatings
UL	Underwriters' Laboratories
USACOE	United States Army Corps of Engineers
USGS	United States Geological Service

Each of the above abbreviations, when followed by a number or letter designation, or combination of numbers and letters, designates a specification, test method, or other code or recommendation of the particular authority or organization shown. Where the above-referenced abbreviations refer to a written standard, specifications, test method, or other code, the reference will be deemed to be the edition of the code promulgated at the time of Bid opening.

1.3 Use of Terms.

1.3.1 Singular and Plural. The OWNER, E/A, CONTRACTOR, subcontractor, sub-subcontractor, supplier, other contractors, surety, insurer and others may be referred to in the Contract Documents as if singular in number. In the event that more than one person or entity occupies the position referred to and unless otherwise indicated, the term is interpreted to include all such persons or entities.

1.3.2 Technical Terms and Trade Usage. Terms in the Contract which have well-known technical or construction industry meanings and are not otherwise defined are used in accordance with such recognized meanings unless the context clearly indicates otherwise.

ARTICLE 2 –ORGANIZATION AND INTENT OF CONTRACT

2.1 Interpreting the Contract.

2.1.1 Order of Precedence. In cases of conflict or discrepancy among Contract Documents, interpretations will generally be based on the following order of precedence, ranked from highest to lowest priority:

- .1 Change Orders;
- .2 The Construction Contract form;
- .3 Supplemental General Conditions, if any;
- .4 General Conditions;

- .5 Technical Provisions;
- .6 Plans (figured dimensions will govern over scaled dimensions);
- .7 The Invitation to Bid and General and Supplemental Instructions to Bidders, including Addenda thereto;
- .8 The Bid Schedule;
- .9 All other documents required to be submitted and submitted as part of CONTRACTOR's Bid Proposal; and
- .10 All other Contract Documents that are neither listed above nor expressly incorporated into one of the foregoing Contract Documents;

with the understanding that a common sense approach will be used as necessary so that the Contract Documents produce the intended response.

2.1.2 Contract Documents Complementary. The Contract Documents are complementary, and what is required by one is as binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, are of like effect as if shown or mentioned in both.

2.1.3 Intent to Require Completed Project. The intent of the Contract Documents is to require that CONTRACTOR provide all materials and labor, including tools, equipment and supervision, necessary for the proper execution and completion of the Work as a functioning whole or required for a completed Project.

2.1.4 Work Required if Reasonably Inferable. Performance by CONTRACTOR is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. Where no explicit quality or standards for materials or workmanship are established for the Work, the Work is to be of good quality for the intended use and consistent with the quality of surrounding Work which conforms to the requirements of the Contract Documents and to the standards for construction of the Project generally.

2.1.5 Organization of Drawings and Specifications. Organization of the Drawings around professional disciplines such as civil, architectural, structural, plumbing, mechanical, and electrical, and of the Specifications into divisions, sections, and articles, does not control CONTRACTOR in dividing the Work among sub-contractors or in establishing the extent of Work to be performed by any trade or excuse CONTRACTOR of its obligation to properly allocate and provide for the performance of all Work under the Contract.

2.1.6 Documents Excluded from the Contract. The Contract Documents do not include the Site-Related Reports referenced herein or other documents issued or provided to CONTRACTOR for the information of CONTRACTOR or for reference purposes and which are not specifically incorporated in the Contract Documents.

2.1.7 Titles, Headings, and Capitalization. The titles and headings of the various sections and subsections of these General Conditions and other Contract Documents are intended only as a matter of reference and convenience and in no way define, limit, or prescribe the scope or intent of the Contract Documents. The use, or inadvertent failure to use, capitalization of terms used in the Contract Documents is not intended to define or limit the meaning of the term.

1.1.8 Other Interpretive Rules.

2.1.8.1 Provisions of the Contract Documents that use the active voice-imperative mood writing style are directions to CONTRACTOR and are intended as commands. In such instance, the subject "the Bidder" or "CONTRACTOR" is understood.

2.1.8.2 Provisions of the Contract Documents that use the passive voice writing style are also directions to CONTRACTOR and intended as commands unless logic clearly dictates otherwise.

2.1.8.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

2.2 Referenced Standards.

2.2.1 Standards Incorporated. All Referenced Standards are incorporated into the Contract as fully as if printed and bound with the Specifications, but only to the limited extent that such standards are applicable to the Work.

2.2.2 Availability of Referenced Standards. CONTRACTOR is responsible for obtaining and having available at the Project Site a copy of each Referenced Standard insofar as it is applicable to the Work.

2.2.3 Precedence of Contract Documents Over Referenced Standards. No provision of a Referenced Standard is effective to change (i) the procedures established in the Contract Documents or by any applicable laws or regulations, or (ii) the duties and responsibilities of the OWNER, E/A or CONTRACTOR from those set forth in the Contract Documents; nor is any provision of a Referenced Standard effective to assign to the OWNER or the E/A any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the Contract.

ARTICLE 3 - PRELIMINARY MATTERS

3.1 Pre-Contract Submittals. The OWNER reserves the right to require certain Submittals before executing the Contract. Submittals required before execution of the Contract include, but are not limited to Insurance certificates acceptable to the OWNER as provided in the Contract and any other submittals required by the Bid Documents.

3.2 Project Information. Within ten days after the Effective Date, the OWNER will furnish CONTRACTOR free of charge, two signed, sealed, hard copies and one electronic copy of the Plans in AutoCAD and the Technical Provisions in PDF format, and one copy of each of the Site Related Reports, if any. All Site Related Reports are given to CONTRACTOR for information only, are not warranted as to accuracy, and are not a part of the Contract Documents. CONTRACTOR will not be entitled to rely on the accuracy or the completeness of any information contained in these Reports in performing the Work required herein, or in seeking claims for Contract Price or Contract Time adjustments. It is the CONTRACTOR's responsibility to determine and verify all information provided by OWNER including, but not limited to grades and elevations.

3.3 CONTRACTOR's Review of Contract Documents and Site Related Reports. Before undertaking a project, CONTRACTOR will carefully study the Contract Documents and any Site Related Reports provided by OWNER, to check and verify pertinent figures shown thereon compares accurately to all applicable field measurements. CONTRACTOR will promptly report in writing to the Contract Administrator any conflict, error, ambiguity, or discrepancy that CONTRACTOR discovers and will obtain a written interpretation or clarification from the Contract Administrator before proceeding with any Work affected thereby. CONTRACTOR will be liable to the OWNER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents or Site Related Reports of which CONTRACTOR knew or reasonably should have known.

3.4 Pre-Construction Submittals.

3.4.1 CONTRACTOR will prepare and submit all required pre-construction submittals within 15 Days after the Effective Date, except where the Contract Administrator extends time for submittal in writing. The submittals will include each of the following:

3.4.1.1 A proposed Progress Schedule, developed using Microsoft Project software unless otherwise approved by the Contract Administrator. The Progress Schedule will (i) indicate the times (number of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract, (ii) identify the Critical Path for completing the Work, (iii) identify when all subcontractors will be utilized,

and (iv) take into consideration any Working Hours limitations. The Progress Schedule will contain sufficient detail to indicate that CONTRACTOR has identified all required Work elements and tasks, has provided for a sufficient and proper workforce and integration of subcontractor, has provided sufficient resources and has considered the proper sequencing of the Work required to result in a successful Project that can be completed in accordance with any Milestones and within required completion deadlines.

3.4.1.2 A proposed Schedule of Values, except where the Contract Price is based solely on Unit Prices set forth in the Bid Schedule. The Schedule of Values will be prepared in such a manner that each item of Work is shown as one or more line items on AIA Document G703, Continuation Sheet (latest ed.) or such other form as the OWNER may prescribe, and will contain such detail and be supported by such data as to allow the OWNER and the E/A to substantiate accuracy. Upon approval by the OWNER, the Schedule of Values will be used as the basis for reviewing progress payment requests. After the OWNER has approved the initial Schedule, CONTRACTOR will revise and resubmit for the OWNER's approval, amended Schedules of Values as necessary to reflect adjustments in the Contract Price resulting from approved Change Orders. A schedule of values may be required if a substantial portion of the contract price is a lump sum bid item.

3.4.1.3 An organizational chart showing the principals and management personnel who will be involved with the Work, including each one's responsibilities for the Work.

3.4.1.4 Preliminary Shop Drawings. Shop Drawings will be neat, legible, and drawn to scale. CONTRACTOR will specifically identify any proposed deviations from dimensions, details, and other requirements as provided by the Plans and specifications. When submitting Shop Drawings, CONTRACTOR will also provide a written narrative explanation itemizing each proposed deviation from the Specifications or other Contract requirements. No such deviations will be deemed to be accepted unless they are specifically approved in accordance with the procedures for substitutes and Change Orders.

3.4.1.5 To the extent not set forth in the Contract, a letter designating the Superintendent and, if such designation is required by the Supplemental General Conditions, the Project Manager.

3.4.1.6 A letter designating CONTRACTOR's safety representative, who will be responsible for general safety and excavation safety measures along with certifications or other documentation of the safety representative's qualifications.

3.4.1.7 If applicable, an excavation safety system plan.

3.4.1.8 If applicable, a plan illustrating proposed locations of temporary facilities.

3.4.1.9 A completed Non-Use of Asbestos Affidavit (prior to construction).

3.4.1.10 A map of proposed "haul routes" for delivery of materials and transportation of equipment to the Project Site.

3.4.1.11 A letter designating the Florida Registered Professional Land Surveyor for layout of the Work, if the Work requires the services of a surveyor.

3.4.1.12 Any other documents as required by the OWNER, consistent with the terms of the Contract.

The Supplemental General Conditions (if any) or the Technical Provisions may amplify, waive, or otherwise amend requirements for the above-referenced submittals.

3.4.2 The OWNER will have the right to accept or reject each of the required submittals. The OWNER will provide CONTRACTOR written notice as to any submittals that are rejected, in which instance CONTRACTOR will promptly resubmit them. Alternatively in such instance, the OWNER will have the right but not the obligation to schedule a preconstruction meeting; provided that the preconstruction meeting is scheduled no later than 30 days

after the Effective Date, and the OWNER may delay issuance of the Notice to Proceed until the OWNER and CONTRACTOR have held the meeting.

3.4.3 The OWNER's acceptance of the above-referenced submittals will be deemed to be general only relating solely to their sufficiency and compliance with the intent of the Contract. Such acceptance does not constitute the OWNER's adoption, affirmation, or direction of CONTRACTOR's means and methods, and does not constitute a Change Instrument. OWNER's acceptance of the Progress Schedule will not impose on the OWNER, responsibility or liability for the sequencing, scheduling, or progress of the Work, and will not relieve CONTRACTOR from CONTRACTOR's responsibility for complying with the terms and conditions of this Contract. CONTRACTOR will at all times remain responsible for the factual accuracy of all such submittals.

3.5 Notice to Proceed. No work will proceed until the OWNER has issued a written notice to proceed. The OWNER will issue a Notice to Proceed within 60 days after the Effective Date, provided that CONTRACTOR has submitted all required documents, including insurance and, where applicable Performance Security. The OWNER in its sole discretion may delay issuing the Notice if CONTRACTOR has not completed its preconstruction submittals within that time; or with CONTRACTOR's written concurrence for any other or no reason.

3.6 Limitations on Custody and Use of Plans. CONTRACTOR will not re-use the Plans and Technical Provisions, including modifications thereto, on any other project or for any other client. CONTRACTOR may not own or claim a copyright in the Site-Related Reports, or the Plans or any other Contract Documents. With the exception of the signed Contract Documents, all sets of the above-referenced documents are the property of the OWNER, and will be returned to the OWNER on request or at the completion of the Work prior to issuance of Final Payment.

3.7 Availability of Lands. The OWNER will provide access to the Project Site, secure any easements necessary therefore, and notify CONTRACTOR of any restrictions in such access. The OWNER may identify in the Contract Documents encumbrances or restrictions not of general application which are known by the OWNER and specifically related to use of the Site, but which are not of public record. CONTRACTOR will comply with such encumbrances and restrictions in performing the Work. Permanent easements for the completed facility or for changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise provided in the Contract Documents.

ARTICLE 4 – OWNER'S RESPONSIBILITIES

4.1 Contract Administrator. The Contract Administrator is authorized to administer the Contract on behalf of the OWNER, commencing on the Effective Date and terminating on the date CONTRACTOR performance is completed (including final payment) or terminated.

4.1.1 The Contract Administrator's authority is limited as follows:

- .1 Provide direction to CONTRACTOR to ensure satisfactory and complete performance;
- .2 Issue Field Directives;
- .3 Monitor and inspect CONTRACTOR performance to ensure acceptable timeliness and quality;
- .4 Maintain necessary documentation and records regarding CONTRACTOR performance and other pertinent matters;
- .5 Furnish timely written notice of CONTRACTOR performance failures to the City Manager and to the City Attorney, as appropriate;
- .6 Determine acceptance or rejection of CONTRACTOR's performance;
- .7 Approve or reject applications for payment, other than application for final payment;
- .8 Furnish necessary reports to the City Manager;
- .9 Recommend Change Instruments or stop work orders to the City Manager; and

- .10 Recommend termination of Contract or work authorizations for default or convenience to the City Manager.

4.1.2 The authority of the Contract Administrator is limited to the functions set forth above. In particular, the Contract Administrator is NOT authorized to make determinations (as opposed to recommendations) that:

- .1 Alter or modify Contracts;
- .2 Terminate or cancel Contracts;
- .3 Approve, as opposed to recommend, Change Orders or Contract Amendments;
- .4 **Except as expressly provided herein**, interpret ambiguities in Contract language; or
- .5 Approve final applications for payment; or
- .6 Waive the OWNER's contract rights.

4.2 **City Manager.** The City Manager has all of the authority of the Contract Administrator. The City Manager has authority to approve final applications for payment except where approval also requires approval of a change order that is not within the City Manager's authority, below. In addition, the City Manager is authorized to issue (i) Change Orders increasing Contract Price or Contract Time as provided in the Purchasing Code or as specifically authorized by the City Commission; (ii) Change Orders reducing Contract Price or Contract Time; and (iii) stop work orders where reasonably necessary to preserve property or prevent injury.

4.3 **Authority Reserved in City Commission.** All administrative authority not specifically conferred upon the Contract Administrator or City Manager is reserved to the City Commission. Modifications to the Contract required to be approved by the Commission may be in the form of Change Orders or formal amendments, as appropriate.

4.4 **General Obligation to Avoid Delays.** Information or services under the OWNER's control will be furnished by the OWNER with reasonable promptness to avoid delay in orderly progress of the Work. The OWNER will have a reasonable amount of time to investigate site conditions, review submittals, analyze requests for changes, and to make other decisions in the orderly administration of the Contract. CONTRACTOR will notify the OWNER in writing, if the time for the investigation, review, analysis of any submittals, required for changes or otherwise required for the OWNER's decision, impacts in any way the Critical Path of the current approved Progress Schedule.

4.5 **Owner-Provided Inspectors.** The OWNER will provide persons to perform OWNER-required inspections.

ARTICLE 5 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS

CONTRACTOR will obtain any additional temporary construction facilities, stockpiling or storage sites not otherwise provided. CONTRACTOR will be responsible for providing at his own expense and without liability to the OWNER, any additional land and access thereto that may be required for temporary construction facilities, or for storage of materials. CONTRACTOR will be required to obtain approval of any private property owner for such additional lands and access unless specifically provided otherwise in the Contract Documents.

5.1 Subsurface and Physical Conditions.

5.1.1 CONTRACTOR affirms that CONTRACTOR has carefully examined the Plans and the Site-Related Reports, if any. CONTRACTOR acknowledges that the Site-Related Reports are **not** a guarantee of specific site conditions which may vary between boring locations, and that the Project Site is unwarranted.

5.1.2 CONTRACTOR affirms that prior to executing this Contract, CONTRACTOR has had the opportunity to become familiar with the Project Site and the local conditions under which the Project is to be constructed and operated, and to undertake its own geotechnical studies to the extent that CONTRACTOR deems appropriate. CONTRACTOR will not be entitled to any additional time or compensation as a result of any conditions at the Project Site which would have been disclosed to CONTRACTOR by a site visit or by undertaking its own geotechnical studies.

5.1.3 CONTRACTOR will provide the OWNER written notice as soon as reasonably possible, but no later than three days, if unforeseen conditions are encountered at the Project Site which are subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature that differ materially from those normally encountered in the type of work being performed under this Contract. CONTRACTOR may not disturb the conditions until the OWNER conducts an investigation. The OWNER will promptly investigate such conditions.

5.1.3.1 If it is determined that such conditions differ materially and cause an increase or decrease in CONTRACTOR's cost of or time required for performance of any part of the Work, the Contract Administrator will recommend an equitable adjustment in the Contract Price or Contract Time, or both. If it is determined that such conditions are not materially different from those indicated in the Contract Documents, the Contract Administrator will notify CONTRACTOR in writing of such findings and the Contract will not be adjusted.

5.1.3.2 CONTRACTOR will be liable to the OWNER for failure to report any such conflict, error, ambiguity, or discrepancy of which CONTRACTOR knew or reasonably should have known, and for CONTRACTOR's failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents within said three-day period, and for any increases in Project costs, or damages accruing, in association with CONTRACTOR's disturbance of the conditions pending OWNER's investigation.

5.1.4 Notwithstanding any other provision of this Contract, CONTRACTOR is solely responsible for the location and protection of any and all public utility lines and utility customer service lines in the Work area. "Public utility lines" means the utility distribution and supply system, and "utility customer service lines" means the utility lines connecting customers to the utility distribution and collection system. Generally, existing utility customer service line connections are not shown on the Plans. CONTRACTOR will notify "One Call" and exercise due care to locate, mark, uncover and otherwise protect all such lines in the construction zone and any of CONTRACTOR's work or storage areas. CONTRACTOR's responsibility for the location and protection of utilities is primary and non-delegable. CONTRACTOR will indemnify or reimburse such expenses or costs (including fines that may be levied against the OWNER) that may result from unauthorized or accidental damage to all public lines and utility customer service lines in the work area. The OWNER reserves the right to repair any damage CONTRACTOR causes to such utilities at CONTRACTOR's expense. If a public or customer service line is damaged by CONTRACTOR, CONTRACTOR will give verbal notice within one hour and written notice within 24 hours, to the OWNER and to the utility representatives identified on the Plans.

5.1.5 CONTRACTOR will take reasonable precaution to avoid disturbing primitive records and antiquities of archaeological, paleontological or historical significance. No objects of this nature will be disturbed without written permission of the OWNER and the FDHR. When such objects are uncovered unexpectedly, CONTRACTOR will stop all Work in close proximity and notify the OWNER and the FDHR of their presence and will not disturb them until written permission and permit to do so is granted. All primitive rights and antiquities uncovered on the OWNER's property will remain property of FDHR conforming to applicable provisions of Florida Statutes. If the OWNER, in consultation with the FDHR, determines that exploration or excavation of primitive records or antiquities on Project Site is necessary to avoid loss, CONTRACTOR will perform salvage work attendant to preservation. If the Work stoppage or salvage work causes an increase in CONTRACTOR's cost of, or time required for, performance of the Work, the Contract Price or Contract Time will be equitably adjusted subject to compliance with the provisions herein for Changes and Delays.

5.2 Protection of Reference Points. Unless otherwise specified, the OWNER will furnish a base line and a suitable number of bench marks adjacent to the work. From the information provided by the OWNER, CONTRACTOR will develop and make all detailed surveys, stakes, lines, and elevations, as CONTRACTOR deems necessary. CONTRACTOR will carefully protect and preserve benchmarks, reference points, and stakes. If these benchmarks, reference points, or stakes are disturbed or destroyed due to CONTRACTOR's failure to comply with the above-referenced requirement, CONTRACTOR will bear the cost of expenses of relocating and replacing them, including the costs of a Registered Professional Land Surveyor if the OWNER determines the same to be necessary.

5.3 Hazardous Materials.

5.3.1 To the extent provided by applicable law, the OWNER will be responsible for any pre-existing hazardous material uncovered or revealed at the Project Site which was not shown, indicated or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work.

5.3.1.1 CONTRACTOR will immediately stop Work in the affected area and will take all necessary precautions to avoid further disturbance of the materials. CONTRACTOR will also will immediately notify the OWNER and, if required by applicable law or regulations, all government or quasi-government entities with jurisdiction over the Project or Project Site.

5.3.1.2 Upon receiving notice of the presence of suspected Hazardous Materials, the OWNER will take the necessary measures required to ensure that the Hazardous Materials are remediated or rendered harmless. Such necessary measures will include the OWNER retaining qualified independent experts to (i) ascertain whether Hazardous Materials have actually been encountered, and, if they have been encountered, (ii) prescribe the remedial measures that the OWNER will take either to remove the Hazardous Materials or render the Hazardous Materials harmless.

5.3.1.3 CONTRACTOR will be obligated to resume Work at the affected area of the Project only after the OWNER provides written certification that (i) the Hazardous Materials have been removed or rendered harmless and (ii) all necessary approvals have been obtained from all government and quasi-government entities having jurisdiction over the Project or Site. CONTRACTOR will be responsible for continuing the Work in the unaffected portion of the Project and the Project Site.

5.3.1.4 CONTRACTOR will be entitled, in accordance with these General Conditions, to an adjustment in its Contract Price or Contract Time(s) to the extent CONTRACTOR's cost or time of performance have been adversely impacted by the presence of Hazardous Materials.

5.3.2 CONTRACTOR will maintain at the Project Site, available to the OWNER, appropriate information pertaining to all Hazardous Materials brought to the Project Site by CONTRACTOR or any subcontractor, and as may be required by the Supplemental General Conditions, if any. CONTRACTOR will ensure that all such materials are properly labeled or identified, and will properly store, handle and use them at all times. In accordance with federal Hazard Communication Standard (29 CFR § 1910.1200) and all other applicable Legal Requirements, manufacturers and distributors are required to label each Hazardous Material or chemical container, and to provide Material Safety Data sheets to the purchaser. CONTRACTOR will comply with these laws and will provide the OWNER with copies of all relevant documents, including Material Safety Data sheets prior to performance or services or contemporaneous with delivery of goods. CONTRACTOR will provide and designate appropriate and secure areas for their storage and will notify the OWNER of their presence and location at Project Site. CONTRACTOR will not store Hazardous Materials at the Project Site in excess of those reasonably needed for CONTRACTOR's prosecution of the Work, and will properly remove or dispose of all Hazardous Materials, including combustible waste, as soon as possible after completion of the operations in which they are utilized.

5.3.3 No asbestos-containing materials will be incorporated into the Work or brought on Project Site without prior approval of the OWNER. CONTRACTOR will not knowingly use, specify, request or approve for use any asbestos containing materials or lead-based paint without the OWNER's written approval. When a specific product is specified, CONTRACTOR will endeavor to verify that the product does not include asbestos containing material.

5.3.4 CONTRACTOR will be solely responsible for use, storage and remediation of any Hazardous Materials brought to Project Site by CONTRACTOR, subcontractors, sub-subcontractors, suppliers, and anyone else for whom CONTRACTOR is responsible. CONTRACTOR will indemnify, defend and hold harmless the OWNER and the OWNER's officers, directors, employees and agents from and against all claims, losses, damages, liabilities and expenses, including attorneys' fees and expenses, arising out of or resulting from those Hazardous Materials introduced to Project Site by CONTRACTOR, subcontractors, sub-subcontractors, suppliers, or anyone for whose acts they may be liable.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 General Responsibilities.

6.1.1 Scope of Work. CONTRACTOR will provide, perform, and complete all necessary work, labor, services, transportation, equipment, materials, apparatus, machinery, tools, fuels, gas, electric, water, waste disposal, information, data and other means and items necessary to accomplish the Project at the Work Site, including measures for sediment control, storm water management, and waste disposal, in compliance with this Contract. CONTRACTOR is required to perform all Work specified in the Contract Documents and reasonably inferable from these Documents as being necessary to produce the intended results.

6.1.2 Quality. All materials and Work will be of good quality for the intended use and consistent with the quality of surrounding Work, and will conform to the requirements of the Contract Documents and to the standards for construction of the Project generally. All materials will be new.

6.1.3 Construction Means and Methods. CONTRACTOR will provide continuous on-site supervision and direction of the Work using CONTRACTOR's best efforts. CONTRACTOR will have control over construction means, methods, techniques, sequences, and procedures, unless the Contract Documents give other specific instructions concerning these matters, and is solely responsible therefore.

6.1.4 Discipline at the Project Site. CONTRACTOR will enforce strict discipline and good order among CONTRACTOR's employees and other persons for whose Work CONTRACTOR is responsible, including CONTRACTOR's employees, subcontractors, sub-subcontractors, and suppliers, and the agents and employees of any of them.

6.1.5 Responsibility for Subordinates. CONTRACTOR is responsible for the acts and omissions of all persons performing portions of the Work at the Project Site, including but not limited to CONTRACTOR's employees, subcontractors, sub-subcontractors, and suppliers, and the agents and employees of any of them.

6.1.6 Assignment, Scheduling and Coordination. CONTRACTOR is solely responsible for and has control over assigning, scheduling and coordinating all portions of the work under the Contract performed by CONTRACTOR's own forces and by its subcontractors, sub-subcontractors, and suppliers, in accordance with the approved Progress Schedule, unless the Contract Documents give other specific instructions concerning these matters.

6.1.7 Obligations Not Relieved. CONTRACTOR is not relieved of its obligations to perform the Work in accordance with the Contract Documents, by the activities or duties of the OWNER or the E/A in the administration of the Contract or of construction, or by tests, inspections, or approvals required or performed by persons other than CONTRACTOR.

6.1.8 Ongoing Duty to Report Problems with Contract Documents. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between any Contract Document and any Legal Requirement or of any such standard, specification, manual, or code or instructions of any manufacturer or supplier, CONTRACTOR will within three days of such discovery report it to the OWNER in writing, and CONTRACTOR will not proceed with the Work affected thereby until a Change Order has been issued. CONTRACTOR will be liable to the OWNER for failure to report any such conflict, error, ambiguity, or discrepancy of which CONTRACTOR knew or reasonably should have known. CONTRACTOR will be liable to the OWNER for CONTRACTOR's failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents within said three-day period.

6.1.9 Inspection of Work. CONTRACTOR will make frequent inspections during the progress of the Work to confirm that work previously performed by CONTRACTOR is in compliance with the requirements of this Contract, and that any portion of Work previously performed by CONTRACTOR or by others is in proper condition to receive subsequent Work.

6.2 Diligent Prosecution. CONTRACTOR will at all times be responsible for the diligent prosecution of the Work so as to complete the Work within the Contract Time.

6.2.1 CONTRACTOR will have an affirmative obligation to rearrange Milestones, notwithstanding the manner in which they are scheduled in the current approved Progress Schedule, as circumstances may require. If in order to meet this obligation CONTRACTOR rearranges the order of Work in a manner that materially departs from the current approved Progress Schedule, CONTRACTOR will within 3 days thereafter provide notice to the OWNER, who may require CONTRACTOR to submit a revised Progress Schedule reflecting the rearrangement. No revised Progress Schedule extending the Contract Time will be approved without the issuance of a Change Order in compliance with the Contract Documents.

6.2.2 CONTRACTOR will carry on the Work and adhere to the current approved Progress Schedule, including during all disputes or disagreements with the OWNER. No Work will be delayed or postponed pending resolution of any disputes or disagreements, except as the OWNER and CONTRACTOR may otherwise agree through a Change Order or Contract amendment.

6.3 Supervision and Superintendence.

6.3.1 CONTRACTOR will supervise the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

6.3.2 CONTRACTOR will have an English-speaking, competent Superintendent on the Work at all times that work is in progress. The Superintendent will be CONTRACTOR's representative on the Work and will have the authority to act on the behalf of CONTRACTOR. All communications given to the Superintendent will be as binding as if given to CONTRACTOR, even where written notice is otherwise required. Either CONTRACTOR or the Superintendent will provide a cellular telephone number and an emergency and home telephone number at which one or the other may be reached if necessary when Work is not in progress. The Superintendent will be an employee of CONTRACTOR, unless waived in writing by the OWNER. If CONTRACTOR proposes a management structure with a Project Manager supervising, directing, and managing construction of the work in addition to or in substitution of a Superintendent, the requirements of these Construction Documents with respect to the Superintendent will likewise apply to any such Project Manager.

6.3.2.1 CONTRACTOR will present the resume of the proposed Superintendent to the OWNER showing evidence of experience and successful superintendence and direction of work of a similar scale and complexity. The OWNER may reject the proposed Superintendent if the OWNER determines that the proposed Superintendent does not have sufficient experience in line with the Work, in which instance CONTRACTOR will propose a different Superintendent for OWNER approval.

6.3.2.2 CONTRACTOR will not replace the Superintendent without written notice to the OWNER. If CONTRACTOR deems it necessary to replace the Superintendent, CONTRACTOR will provide the necessary information for approval, as stated above, on the proposed new Superintendent.

6.3.2.3 CONTRACTOR may designate a qualified substitute Superintendent if the designated Superintendent is temporarily away from the Work, subject to OWNER approval.

6.3.2.4 CONTRACTOR will replace the Superintendent upon the OWNER's request, if the Superintendent is unable to perform to the OWNER's satisfaction.

6.4 Labor, Materials, and Equipment.

6.4.1 CONTRACTOR will employ only orderly and competent workers, skillful in performance of the type of Work required under this Contract. CONTRACTOR will prohibit the use and possess any alcoholic or other intoxicating beverages, illegal drugs, or controlled substances while on the job or on the OWNER's property. Subject to the applicable provisions of Florida law, neither CONTRACTOR, nor subcontractors, suppliers, or other agents of CONTRACTOR, may use or possess any firearms or other weapons while on the job or on the OWNER's property. If the OWNER notifies CONTRACTOR that any officer, employee, subcontractor, supplier, or other agent

is incompetent, disorderly, abusive, or disobedient, has knowingly or repeatedly violated safety regulations, has possessed any firearms in contravention of the applicable provisions of Florida law, or has possessed or was under the influence of alcohol or drugs on the job, CONTRACTOR will immediately remove that person from performing Contract Work, and may not employ that person again on the Work without the OWNER's prior written consent. CONTRACTOR will at all times maintain good discipline and order on- and off-Project Site in all matters pertaining to the Project. CONTRACTOR will pay workers no less than the wage rates established by law, and maintain weekly payroll reports as evidence thereof.

6.4.2 CONTRACTOR will not use any preexisting facilities of the OWNER without the specific written consent of the OWNER, except as indicated in the Contract Documents. CONTRACTOR is solely responsible for temporary facilities and services provided or utilized by CONTRACTOR and will remove those not required to remain at the completion of the Work or any portion thereof, will promptly correct any damage caused by the erection, use or removal of temporary facilities; and will restore the Project Site and any adjacent areas to their original condition or that required by the Contract Documents upon completion of the Work.

6.4.3 CONTRACTOR will store, handle, install, and test all materials in accordance with the manufacturer's or suppliers' most recent instructions and recommendations. CONTRACTOR will promptly notify the OWNER if these instructions and recommendations are in conflict with any provision of the Contract Documents.

6.4.4 All materials and equipment will be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with instructions of the applicable manufacturer and supplier, except as otherwise provided in the Contract Documents. The Contract Administrator or E/A may require CONTRACTOR to furnish one or more of the following:

6.4.4.1 Satisfactory evidence (i.e., reports of required tests, manufacturer's certificates of compliance with material requirements, mill reports, etc.) as to the kind and quality of materials and equipment.

6.4.4.2 Samples of required equipment and materials prior to having such equipment and materials delivered to the Project Site. Each sample submitted by CONTRACTOR will carry a label giving the name of CONTRACTOR, the Project, and the name of the producer. The accompanying certificate or letter from CONTRACTOR will state that the sample complies with the contract requirements, will give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the OWNER in reviewing the sample promptly. It will also include the statement that all materials or equipment furnished for use in the Project will comply with the samples or certified statements. In addition, the accompanying certificate will include a written narrative explanation itemizing the extent to which the sample deviates from the Specifications or other Contract requirements.

6.4.5 The OWNER will not be required to consider delays in the Work caused by delivery of non-complying materials or equipment, or by late or improper submission test reports or manufacturer's certificates for OWNER approval, as just cause for an extension of the Contract Time. The OWNER's acceptance of any test report, certificate, or sample will be general only and will not constitute a waiver of the OWNER's right to demand full compliance with Contract requirements, nor relieve CONTRACTOR from ensuring full compliance with the Contract.

6.4.6 CONTRACTOR will assign to the OWNER, any rights CONTRACTOR may have to bring antitrust suits against suppliers for overcharges on materials incorporated in the Project growing out of illegal price fixing agreements. CONTRACTOR will cooperate with the OWNER should the OWNER wish to prosecute suits against suppliers for illegal price fixing.

6.4.7. Upon CONTRACTOR's request and the Contract Administrator's written approval, CONTRACTOR may locate stored materials off-site, so long as they are in a bonded and insured facility, accessible to the OWNER, and are clearly marked as OWNER's property.

6.4.8 Title to materials delivered to the Project Site or stored off-site will not be deemed to pass to the OWNER until the OWNER accepts such title by paying for same. The OWNER will be entitled but is not required to request title documentation. Risk of loss will not pass to the OWNER until title passes.

6.5 Concerning Subcontractors, Suppliers, and Others.

6.5.1 CONTRACTOR will retain direct control of and give direct attention to the fulfillment of this Contract. CONTRACTOR agrees not to assign this Contract, by power of attorney or otherwise, without the OWNER's prior written consent.

6.5.2 Unless the Supplemental General Conditions provide otherwise, CONTRACTOR will not subcontract the performance of the entire Project or the supervision and direction of the Work without the OWNER's prior written consent. CONTRACTOR will not employ any subcontractor or other person or organization, whether initially or as a substitute, against whom the OWNER may have reasonable objection. The OWNER will communicate such objections by written notice. CONTRACTOR will not substitute any subcontractor that has been accepted by the OWNER, unless the OWNER first accepts the substitute in writing.

6.5.3 CONTRACTOR will enter into written agreements with all subcontractors and suppliers which specifically bind the subcontractors and suppliers to the applicable terms and conditions of the Contract Documents for the OWNER's benefit. The OWNER reserves the right to specify that certain requirements will be adhered to by all subcontractors and sub-subcontractors as indicated in other portions of the Contract Documents, in which instance these requirements will be made a part of the written agreement between CONTRACTOR and each subcontractor. CONTRACTOR's standard subcontract form is subject to the OWNER's review and approval. Within five working days of the OWNER's request for subcontractor contract documents, CONTRACTOR will provide them to the OWNER.

6.5.4 CONTRACTOR will be fully responsible to the OWNER for all acts and omissions of the subcontractors, suppliers, and other persons and organizations performing or furnishing any of the Work under contract with CONTRACTOR and under contract with CONTRACTOR's subcontractors or suppliers, just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents will create for the benefit of any such subcontractor or other person or organization any contractual relationship between the OWNER and any such subcontractor or other person or organization, nor will it create any obligation on the part of the OWNER or E/A to pay or to see to the payment of any moneys due any such subcontractor or other person or organization except as may otherwise be required by Legal Requirements.

6.5.5 CONTRACTOR will be solely responsible for efficiently scheduling and coordinating the Work of subcontractors and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR in order to avoid any delays or inefficiencies in the prosecution of the Work. CONTRACTOR will require all subcontractors and such other persons and organizations performing or furnishing any of the Work to communicate with the OWNER through CONTRACTOR.

6.5.6 The divisions and sections of the Technical Provisions and the identification of any Plans will not control CONTRACTOR in dividing or delineating the Work to be performed by any specific trade.

6.5.7 CONTRACTOR will pay each subcontractor their appropriate share of payments made to CONTRACTOR not later than ten days of CONTRACTOR's receipt of payment from the OWNER.

6.5.8 To the extent allowed by Florida law, the OWNER will be deemed to be a third party beneficiary to each subcontract and may, if the OWNER elects, following a termination of CONTRACTOR, require that the subcontractor(s) perform all or a portion of unperformed duties and obligations under its subcontract(s) for the benefit of the OWNER, rather than CONTRACTOR; however, if the OWNER requires any such performance by a subcontractor for the OWNER's direct benefit, then the OWNER will be bound and obligated to pay such subcontractor the reasonable value for all Work performed by such subcontractor to the date of the termination of CONTRACTOR, less previous payments, and for all Work performed thereafter. If the OWNER elects to invoke the OWNER's right under this Section, the OWNER will provide notice of such election to CONTRACTOR and the affected subcontractor(s).

6.6 Patent Fees and Royalties.

6.6.1 CONTRACTOR will be responsible at all times for compliance with applicable patents and copyrights encompassing, in whole or in part, any design, device, material, or process utilized, directly or indirectly, in the performance of the Work or the formulation or presentation of its Bid.

6.6.2 CONTRACTOR will pay all royalties and license fees and will provide, prior to commencement of Work hereunder and at all times during the performance of same, for lawful use of any design, device, material or process covered by letters, patent or copyright by suitable legal agreement with the patentee, copyright holder, or their duly authorized representative whether or not the OWNER specifies a particular design, device, material, or process.

6.6.3 CONTRACTOR will defend all suits or claims for infringement of any patent or copyright and will save the OWNER harmless from any loss or liability, direct or indirect, arising with respect to CONTRACTOR's process in the formulation of its Bid or the performance of the Work or otherwise arising in connection therewith. The OWNER reserves the right to provide its own defense to any suit or claim of infringement of any patent or copyright in which event CONTRACTOR will indemnify and save harmless the OWNER from all costs and expenses of such defense as well as satisfaction of all judgments entered against the OWNER.

6.6.4 The OWNER will have the right to stop the Work or terminate this Contract at any time if CONTRACTOR fails to disclose to the OWNER that CONTRACTOR's work methodology includes the use of any infringing design, device, material, or process.

6.7 Permits, Fees. CONTRACTOR will secure and pay for at CONTRACTOR's expense, all permits and licenses of a temporary nature that are required for the prosecution of the Work; provided, however, that the OWNER will reimburse CONTRACTOR for any CITY-required permits unless specified otherwise in the Supplemental General Conditions.

Unless the Supplemental General Conditions provide otherwise, the OWNER will obtain licenses and easements for permanent structures and or permanent changes in existing facilities.

6.8 Construction Operations.

6.8.1 CONTRACTOR will confine operations at the Project Site to those areas permitted by all Legal Requirements, and will not unreasonably encumber the Project Site with materials and equipment. CONTRACTOR will assume full responsibility for any damage to any portion of the Project Site, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. If an adjacent property owner or occupant files a claim because of or in connection with the performance of the Work, CONTRACTOR will promptly settle the claim by negotiation or as otherwise provided by law. CONTRACTOR will indemnify, defend and hold harmless the OWNER and anyone directly or indirectly employed by the OWNER, from and against all claims, costs, losses, and damages (including court costs and reasonable attorney's fees) arising out of or resulting from any claim or action, legal or equitable, brought by any such the owner or occupant against the OWNER, E/A or any other party indemnified hereunder to the extent caused by or based upon performance of the Work or failure to perform the Work.

6.8.2 CONTRACTOR will establish the exterior lines and elevations of all buildings and structures to be erected on the Project Site, and lines and grades of site work such as roads, utilities, and site grading, based on reference points, the location of existing structures and improvements, or benchmarks identified in the site surveys provided by the OWNER. CONTRACTOR will provide a professional certification by a professional engineer or land surveyor as to the actual location of building lines prior to constructing any foundations. CONTRACTOR will establish the building grades, lines, and levels, and column, wall, and partition lines required by subcontractors in laying out the Work. At the completion of the Work, CONTRACTOR will provide another professional certification by a registered engineer or land surveyor as to the location of completed improvements in relation to property lines, building lines, easements, and other boundaries.

6.8.3 CONTRACTOR will not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor will CONTRACTOR subject any part of the Work, the Project Site, or adjacent property to stresses or pressures that will endanger it.

6.8.4 All Work will be performed solely during Working Hours, unless (i) more restrictive hours are required by CITY ordinances or other Legal Requirements governing CONTRACTOR's performance of the Work, or (ii) the Contract Administrator approves expanded Working Hours in writing, such as in the event of emergencies, in which instance the Contract Administrator's approval may be terminated at any time and for any reason without recourse to CONTRACTOR. The OWNER has the right to impose further restrictions on working hours reasonably related to the use of occupied facilities. No delays resulting from compliance with applicable Legal Requirements may form the basis for any claim by CONTRACTOR for delay damages or additional compensation or for any extensions of the Contract Time; any delays arising from restrictions related to the use of occupied facilities are non-compensable and any claims for extensions of the Contract Time relating to them will be filed in accord with Article 11 or the same will be conclusively deemed to have been waived. CONTRACTOR will not permit Work outside of Working Hours without the written consent of the OWNER; such consent, if given, may be conditioned upon payment by CONTRACTOR of the OWNER's additional costs and fees incurred in monitoring such off-hours Work. CONTRACTOR will notify the OWNER as soon as possible if Work will be performed outside such times in the interest of the safety and protection of persons or property at the Project Site or adjacent thereto, or in the event of an emergency. In no event will CONTRACTOR permit Work to be performed at the Project Site without the presence of CONTRACTOR's Superintendent and person responsible for the protection of persons and property at the Project Site and compliance with all Legal Requirements, if different from the Superintendent.

6.8.5 Temporary Utilities. CONTRACTOR, at its own expense, will:

6.8.5.1 Furnish all temporary heat, cooling ventilation, and humidity control including all required apparatus and fuel as may be necessary to protect the Work fully, both during its execution and until Final Completion and acceptance. CONTRACTOR will not use any method of heating, cooling, ventilation, or humidity control of the building unless approved by the OWNER in advance.

6.8.5.2 Provide all temporary on-Site water service required to perform the Work, to assure safety at the Site, and as otherwise required. All temporary services will be removed by CONTRACTOR.

6.8.5.3 Furnish all temporary electric service required to perform the Work, to assure safety at the Site, and as otherwise required.

6.8.5.4 CONTRACTOR will provide and maintain in a neat, sanitary condition such accommodations for the use of CONTRACTOR's employees, subcontractors, and others for whom CONTRACTOR may be responsible, as may be necessary to comply with Legal Requirements, and will commit no public nuisance.

6.8.6 Site Maintenance. During the progress of the Work and on a daily basis, CONTRACTOR will keep the Project Site free from accumulation of waste materials, rubbish, and other debris resulting from the Work. If CONTRACTOR fails to do so in a manner reasonably satisfactory to the OWNER within 48 hours after notice or as otherwise required by the Contract Documents, the OWNER may clean the Project Site and back charge CONTRACTOR for all costs associated with the cleaning. At Substantial Completion, CONTRACTOR will leave the Project Site clean, including but not limited to the cleaning of manholes, inlets, and gravity underground piping systems, and ready for the OWNER's occupancy, and will at this point also remove all temporary buildings, waste, trash, debris, and surplus materials. At Final Completion, CONTRACTOR will remove all tools, appliances, construction equipment, and machinery, in addition to the above-referenced materials, and leave the Project Site clean and ready for OWNER's occupancy. This requirement will not apply to property used for permanent disposal of rubbish or waste materials in accordance with permission for such disposal granted to CONTRACTOR by the OWNER. CONTRACTOR will, at a minimum, restore to original condition all property not designated for alteration by the Contract Documents. If CONTRACTOR fails to clean up at the completion of the Work, the OWNER may do so and the cost thereof will be charged against CONTRACTOR.

6.8.7 Risk of Performance. If CONTRACTOR performs any work involving an apparent error, inconsistency, ambiguity, construction impracticality, omission, or violation of Legal Requirements in the Contract Documents of which CONTRACTOR is aware, or which could reasonably have been discovered by the review required by CONTRACTOR by this Contract, without prompt written notice to the OWNER and the E/A and request

for correction, clarification or additional information, as appropriate, CONTRACTOR does so at its own risk and expense and all claims relating thereafter are specifically waived.

6.9 Legal Requirements.

6.9.1 CONTRACTOR will diligently and promptly call for locates required, in accordance with Sunshine State One Call of Florida requirements.

6.9.2 CONTRACTOR will give all other notices and comply with all other Legal Requirements, including arranging for and obtaining any required inspections, tests, approvals or certifications from any public body having jurisdiction over the Work or any part thereof. Except where these Legal Requirements provide otherwise, neither the OWNER nor the E/A will be responsible for monitoring CONTRACTOR's compliance with any Legal Requirements.

6.9.3 Maintaining clean water, air, and earth or improving thereon will be regarded as of prime importance. CONTRACTOR will plan and execute its operations in compliance with all applicable Legal Requirements concerning control and abatement of water pollution and prevention and control of air pollution, including where applicable the terms and conditions of the CITY's current National Pollutant Discharge Elimination System (NPDES) permit.

6.10 Taxes.

6.10.1 CONTRACTOR will pay only those sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the laws and regulations of the State of Florida in the performance of this Contract.

6.10.2 The OWNER is an exempt organization as defined by Florida Statutes and is therefore exempt from payment of sales and use taxes.

6.11 Maintenance of Records and Documents.

6.11.1 CONTRACTOR will maintain at the Site, available to the OWNER for reference during the progress of the Work, a copy of the current approved Progress Schedule and any approved revisions thereto. CONTRACTOR will keep current records of and mark on a copy of the current approved Progress Schedule the actual commencement date, progress, and completion date of each scheduled activity indicated on the Progress Schedule.

6.11.2 CONTRACTOR will maintain in a safe place at the Project Site, or other location acceptable to the OWNER, one record copy of all Drawings, Specifications, Addenda, Change Instruments and written interpretations and clarifications issued pursuant to this Contract (collectively, "Record Documents") in good order and annotated to show all changes made during construction. The Record Documents and all final samples and final Shop Drawings will be available to the OWNER and E/A for reference during performance of the Work. Upon Substantial Completion of the Work, CONTRACTOR will deliver these Record Documents, and final samples and Shop Drawings, to the OWNER.

6.11.3 To the extent applicable, CONTRACTOR will comply with the requirements of Florida Statutes Section 119.0701, which include the following:

6.11.3.1 Keeping and maintaining public records that the CITY requires for performance of the service provided herein.

6.11.3.2 Upon the request of the City Clerk of the CITY, (i) providing the City Clerk with a copy of requested public records or (ii) allowing inspection or copying of the records, within a reasonable time after receipt of the CITY Clerk's request, at a cost that does not exceed the cost provided in Ch. 119, Florida Statutes, or as otherwise provided by law.

6.11.3.3 Ensuring that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law until completion of this Contract, and following such completion if CONTRACTOR fails to transfer such records to the CITY.

6.11.3.4 Upon completion of this Contract, keep and maintain public records required by the CITY to perform the service. CONTRACTOR will meet all applicable requirements for retaining public records. All records stored electronically must be provide to the CITY upon request from the CITY Clerk, in a format that is compatible with the CITY's information technology systems.

6.11.3.5 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, CONTRACTOR MUST CONTACT THE CITY CLERK, WHOSE CONTACT INFORMATION IS AS FOLLOWS:

(Phone)	386 671-8023
(Email)	clerk@codb.us
(Address)	301 S. Ridgewood Avenue Daytona Beach, FL 32114

6.11.4 Nothing herein will be deemed to waive CONTRACTOR's obligation to comply with Section 119.0701(3)(a), Florida Statutes, as amended by Chapter 2016-20, Laws of Florida (2016).

6.12 Safety and Protection.

6.12.1 CONTRACTOR will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Upon request, and prior to installation of measures, CONTRACTOR will submit a site security plan to the OWNER. By reviewing the plan or making recommendations or comments, the OWNER will not assume liability nor will CONTRACTOR be relieved of liability for damage, injury, or loss. CONTRACTOR will take all necessary precautions for the safety of and will provide the necessary protection to prevent damage, injury, and loss to:

6.12.1.1 The public;

6.12.1.2 All persons on the Project Site or who may be affected by the Work;

6.12.1.3 All the Work and materials and equipment to be incorporated therein, whether in storage on or off Project Site; and

6.12.1.4 Other personal property, fixtures and other items at the Project Site or adjacent thereto, including, but not limited to, trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction.

6.12.2 CONTRACTOR will comply with the Occupational Safety and Health Administration's (OSHA) Excavation Safety Standard, 29 U.S.C § 651 et seq., 29 C.F.R. 1926.650 Sub Part P., and the Trench Safety Act, Section 553.60 et seq. In addition CONTRACTOR will comply with all other applicable laws and regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss, and will erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR will notify owners of adjacent property and of underground facilities, and utility owners when prosecution of the Work may affect them, and will cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in Subparagraphs 6.12.1.3 and 6.12.1.4, above, caused, directly or indirectly, in whole or in part, by CONTRACTOR, any subcontractor, or any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, will be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or

Specifications or to the acts or omissions of the OWNER, or E/A, or anyone employed by any of them or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the faults or negligence of CONTRACTOR or any subcontractor, supplier or other person or organization directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and protection of the Work will continue until such time as all the Work is completed and the OWNER has issued a Certificate of Final Completion (except as otherwise expressly provided in connection with Substantial Completion). Without limitation, CONTRACTOR will comply with the following specific provisions:

6.12.3 CONTRACTOR will designate in writing a qualified and experienced safety representative at Project Site whose duties and responsibilities will be the prevention of accidents and the maintaining and supervising of safety precautions and programs. Upon request of the OWNER, CONTRACTOR will provide certifications or other documentation of the safety representative's qualifications.

6.12.4 CONTRACTOR will be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at Project Site in accordance with Legal Requirements.

6.12.5 CONTRACTOR will comply with the following requirements in emergencies:

6.12.5.1 In emergencies affecting the safety or protection of persons or the Work at Project Site or adjacent thereto, CONTRACTOR, without special instruction or authorization from the OWNER or E/A, is obligated to act reasonably to prevent threatened damage, injury or loss and to mitigate damage or loss to the Work. CONTRACTOR will give the OWNER telephone notification as soon as reasonably practical and a prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the express provisions of this Contract Documents have been caused thereby. If the OWNER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Change Order will be issued; otherwise the OWNER will not be responsible for CONTRACTOR's emergency action.

6.12.5.2 Authorized agents of CONTRACTOR will respond immediately to call-out at any time of any day or night when circumstances warrant the presence on Project Site of CONTRACTOR or his agent to protect the Work or adjacent property from damage, restriction or limitation or to take such action or measures pertaining to the Work as may be necessary to provide for the safety of the public. Should CONTRACTOR or CONTRACTOR's agent fail to respond and take action to alleviate such an emergency situation, the OWNER may direct other forces to take action as necessary to remedy the emergency condition, and the OWNER will deduct any cost of such remedial action from the funds due CONTRACTOR under this Contract.

6.12.5.3 If there is an accident involving injury to any individual or damage to any property on or near the Work, CONTRACTOR will provide to the Contract Administrator verbal notification within one hour and written notification within 24 hours of the event and will be responsible for recording the location of the event and the circumstances surrounding the event through photographs, interviewing witnesses, obtaining medical reports, police accident reports and other documentation that describes the event. CONTRACTOR will provide the OWNER copies of such documentation within 48 hours of the event.

6.12.5.4 CONTRACTOR will cooperate with the OWNER in any investigation of any such incident. CONTRACTOR will immediately report such incidents to any other governmental or quasi-governmental authorities having jurisdiction over safety-related matters as may be required by law.

6.13 Indemnification.

6.13.1 Any obligation of CONTRACTOR to indemnify or hold harmless under this Contract will not be limited in any way by any limitation on the amount or type of damages, or compensation or benefits payable by or for CONTRACTOR or any such subcontractor, supplier, or other person or organization for whom CONTRACTOR may be responsible under workers' compensation acts, disability benefit acts, or other employee benefit acts.

6.13.2 Any obligation of CONTRACTOR to indemnify and hold harmless under this Contract, will not extend to the liability of the OWNER, E/A, E/A's consultants, and their officers, directors, partners, employees or

agents, when caused primarily by negligent preparation of maps, drawings, surveys, designs or specifications upon which is placed the applicable state-authorized design professional seal of the OWNER, E/A, or OWNER's or E/A's consultant's, officers, directors, partners, employees or agents.

6.13.3 If CONTRACTOR fails to follow the OWNER's directives concerning use of Project Site, scheduling or course of construction, or engages in other conduct which proximately causes damage to property based on inverse condemnation or otherwise, then and in that event, CONTRACTOR will indemnify the OWNER against all costs resulting from such claims.

6.13.4 If CONTRACTOR unreasonably delays progress of the Work being done by others on Project Site so as to cause loss for which the OWNER becomes liable, then CONTRACTOR will indemnify the OWNER from and reimburse the OWNER for such loss.

6.14 Survival of Obligations. All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with this Contract, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Contract.

6.15 Losses from Natural Causes. Unless otherwise specified, all loss or damage to CONTRACTOR arising out of the nature of the Work to be done or from action of the elements, floods or from unforeseeable circumstances in prosecution of the Work or from unusual obstructions or difficulties which may be encountered in prosecution of the Work, will be sustained and borne by CONTRACTOR at its own cost and expense.

6.16. Notice of Claim. Should CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of OWNER or of any of OWNER's employees or agents or others for whose acts OWNER is liable, CONTRACTOR must file a claim within 30 calendar days of the event giving rise to such injury or damage. The provisions of this Section will not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or statute of repose.

6.17 Financial Records.

6.17.1 For purposes of this Section 6.17, "financial records" means all records generated by or on behalf of CONTRACTOR and each Subcontractor and supplier of CONTRACTOR, whether paper, electronic, or other media, which are in any way related to performance of or compliance with this Contract, including, without limitation:

- .1 Accounting records;
- .2 Written policies and procedures;
- .3 Subcontract files (including proposals of successful and unsuccessful Bidders, Bid recaps, etc.);
- .4 Original estimates and estimating work sheets;
- .5 Correspondence;
- .6 Change Order files (including documentation covering negotiated settlements);
- .7 Back charge logs and supporting documentation;
- .8 General ledger entries detailing cash and trade discounts earned, insurance rebates and dividends;
- .9 Lump sum agreements between CONTRACTOR and any Subcontractor or supplier;
- .10 Records necessary to evaluate: Contract compliance, Change Order pricing, and any Claim submitted by CONTRACTOR or any of its payees; and
- .11 Any other CONTRACTOR record that may substantiate any charge related to this Contract.

6.17.2 CONTRACTOR will allow the OWNER, and the OWNER's authorized representatives, to inspect, audit, and reproduce all Records generated by or on behalf of CONTRACTOR and each subcontractor and supplier, upon the OWNER's written request. Further, CONTRACTOR will allow the OWNER, and the OWNER's authorized representatives, to interview any of CONTRACTOR's employees, all Subcontractors, all suppliers, and all of their respective employees.

6.17.3 CONTRACTOR will retain all its Records, and require all its subcontractors and suppliers to retain their respective Records, during this Contract and for three years after final payment, until all audit and litigation matters that the OWNER has brought to the attention of CONTRACTOR are resolved, or as otherwise required by law, whichever is longer. The OWNER's right to inspect, audit, or reproduce Records, or interview employees of CONTRACTOR or its respective subcontractors or suppliers, exists during this Contract, and for three years after final payment, until all audit and litigation matters that the OWNER has brought to CONTRACTOR's attention are resolved, or as otherwise required by law, whichever is longer, and at no cost to the OWNER, either from CONTRACTOR or any of its subcontractors or suppliers that may furnish Records or make employees available for interviewing.

6.17.4 CONTRACTOR must provide sufficient and accessible facilities during its normal business hours for the OWNER to inspect, audit, or reproduce Records, or all three, and to interview any person about the Records.

6.17.5 CONTRACTOR must insert these requirements in each written contract between CONTRACTOR and any subcontractor or supplier and require each subcontractor and supplier to comply with these provisions.

ARTICLE 7 - OTHER WORK

7.1 Coordinating Other Work. The OWNER may perform other work related to the Project at Project Site by the OWNER's own forces, or let other contracts for the Project or Project Site, or have other work performed by utility owners. CONTRACTOR and the OWNER agree to and will use best efforts to cooperate and coordinate the Work with others performing work and other work related to the Project in order to avoid conflicts and delays in the Work. If CONTRACTOR believes that delay or additional cost is involved because of such action by the OWNER, CONTRACTOR may make a Claim as provided in Article 11.

7.2 Proper and Safe Access by Other Contractors. CONTRACTOR will afford other contractors and each utility owner (and the OWNER, if the OWNER is performing the additional work with the OWNER's employees) proper and safe access to the Project Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and will properly connect and coordinate the Work with theirs. CONTRACTOR will do all cutting, fitting, patching, and finishing of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR will not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the OWNER and the other contractors whose work will be affected. CONTRACTOR will promptly remedy damage wrongfully caused by CONTRACTOR to completed or partially completed construction or to property of the OWNER or separate contractors.

7.3 CONTRACTOR's Inspection and Reports. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR will inspect such other work and promptly report to the OWNER in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent or non-apparent defects and deficiencies in such other work.

7.4 Progress Schedules. The OWNER will provide for coordination of the activities of the OWNER's own forces, of each separate CITY contractor, and of any other utility owners performing work in relation to the Work of CONTRACTOR, who will cooperate with them. CONTRACTOR will participate with the OWNER any other contractors retained by the OWNER, in reviewing their construction progress schedules when directed to do so. On the basis of such review, CONTRACTOR will make any revisions to the current approved Progress Schedule deemed necessary after a joint review and mutual agreement. The agreed-upon progress schedules will then

constitute the progress schedules to be used by CONTRACTOR, the OWNER, and any other contractor retained by the OWNER until subsequently revised.

7.5 Improper Timing or Delays. Costs caused by delays or by improperly timed activities or defective construction will be borne by the party responsible therefore.

ARTICLE 8 – WARRANTIES

8.1 General Warranty.

CONTRACTOR warrants that the Work and all of its components will be free from defects and flaws in design, workmanship, and materials for the duration of the General Warranty Period described below; will strictly conform to the requirements of the Contract; and will be fit, sufficient and suitable for the purposes expressed in, or reasonably inferred from, the Contract. This general warranty is in addition to any other warranties expressed or implied by law, which are hereby reserved unto the OWNER.

8.1.1 General Warranty Period. The General Warranty Period will be one year from Substantial Completion, except for those items of equipment or those aspects of work placed in service or approved by the OWNER after Substantial Completion, in which instance the warranty for the particular equipment or aspect of work will be one year from the date of OWNER approval; provided, however, that the General Warranty Period for particular equipment placed in continuous service before Substantial Completion may start to run from an earlier date, if expressly provided in this Contract.

8.1.2 Duty to Correct. CONTRACTOR will correct any and all defects that defects in material or workmanship which may appear during the General Warranty Period, even if discovered after the General Warranty Period, by repairing (or replacing with new items or new materials, if necessary) any such defect at no cost to the OWNER, within a reasonable period of time, and to the OWNER's satisfaction.

8.1.3 General Warranty is Absolute. The only exceptions to the General Warranty will be defects or damage caused by abuse, modification or improper maintenance or operation by persons other than CONTRACTOR or CONTRACTOR's subcontractors, sub-subcontractors or suppliers; or normal wear and tear under normal usage. In all other respects the General Warranty will be absolute.

8.2 Special Warranties. CONTRACTOR will furnish all additional special warranties required by this Contract no later than Substantial Completion. The OWNER may require special warranties in connection with the approval of accepted equals and other substitute materials, equipment, methods, and procedures, and in connection with Work which is defective or nonconforming.

8.3. Limitation as to Certain Equipment. As to any equipment which the OWNER has reserved the sole right to have installed, the Warranties under this Article 8 will extend to ensure that the equipment is installed according to the Plans and Technical Provisions, and that any manufacturer or product warranties are conveyed to the OWNER; but in such instance CONTRACTOR will not be held liable for the operating performance of such equipment.

8.4 Relation to Specific Correction Provisions and Other Remedies. CONTRACTOR's general warranty and any additional or special warranties are not limited by CONTRACTOR's obligations to specifically correct Defective/Nonconforming Work, nor are they limited by any other remedies provided in the Contract Documents. CONTRACTOR will also be liable for any damage to property or persons (including death), including consequential and direct damages, relating to any breach of the General Warranty or any additional or special warranties required.

8.5 Third Party Warranties. CONTRACTOR will obtain and assign or transfer to the OWNER, all product warranties available from manufacturers or suppliers of materials to be used in the Project. CONTRACTOR will also obtain and assign or transfer to OWNER, any additional third party warranties as to materials or methods as specified in the Contract Documents. The OWNER's acceptance of any assigned warranties or guaranties will be a precondition to final payment and will not relieve CONTRACTOR of any of CONTRACTOR's guaranty or warranty obligations under this Contract.

ARTICLE 9 – E/A’S STATUS DURING CONSTRUCTION

9.1 Applicability. The provisions of this Article will apply only where the Contract Documents specifically authorize a consultant of the OWNER to act as the E/A to review and modify Technical Provisions, Plans, and other technical specifications associated with the Work. In all instances in which there is no such specific authorization, the provisions of this Article will have no effect, and any authorization or delegation within the Contract Documents to the E/A, will be deemed to be to the Contract Administrator. In addition, where the Contract Documents contain language specifically authorizing a consultant of the OWNER to act as E/A, the OWNER retains the right to assign or assume such authority upon written notice to CONTRACTOR.

9.2 The OWNER’s Sole Benefit. The assignment, if any, of any authority, duties or responsibilities to the E/A under this Contract, or under any agreement between the OWNER and the E/A, or any undertaking, exercise or performance thereof by the E/A, is intended to be for the sole and exclusive benefit of the OWNER and not for the benefit of CONTRACTOR, subcontractor, supplier, or any other person or organization, or for any surety or employee or agent of any of them.

9.3. CONTRACTOR Remains Responsible. The E/A will not supervise, direct, control or have authority over or be responsible for CONTRACTOR’s means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto. The E/A is not responsible for any failure of CONTRACTOR to comply with laws and regulations applicable to the furnishing or performing the Work. The E/A is not responsible for CONTRACTOR’s failure to perform or furnish the Work in accordance with this Contract. Failure or omission of the E/A to discover, or object to or condemn any defective Work or material will not release CONTRACTOR from the obligation to properly and fully perform the Contract.

9.3.1 The E/A is not responsible for the acts or omissions of CONTRACTOR, or of any subcontractor, any supplier, or of any other person or organization performing or furnishing any of the Work.

9.3.2 If the OWNER and E/A agree, the E/A will review each Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests and approvals and other documentation required to be delivered, but only to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests and approvals that the results certified indicate compliance with, this Contract.

9.4 Applicability to E/A’s Agents. The limitations upon authority and responsibility set forth in this Article 9 will also apply to the E/A’s consultants, Resident Project Representative and assistants.

9.5 Visits to Project Site. If the OWNER and E/A agree, the E/A will make visits to the Project Site at intervals appropriate to the various stages of construction as E/A deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR’s executed Work. Based on information obtained during such visits and observations, the E/A will endeavor for the benefit of the OWNER to determine, in general, if the Work is proceeding in accordance with this Contract. The E/A will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The E/A’s efforts will be directed toward providing for the OWNER a greater degree of confidence that the completed Work will conform generally to this Contract. On the basis of such visits and on-site observations, E/A will keep the OWNER informed of the progress of the Work and will endeavor to guard the OWNER against Defective Work. The E/A’s visits and on-site observations are subject to all the limitations on the E/A’s authority and responsibility set forth in this Article 9.

9.6 Resident Project Representative. If the OWNER and E/A agree, E/A will furnish a Resident Project Representative to assist the E/A in providing more continuous observation of the Work. The responsibilities and authority and limitations of any such Resident Project Representative and assistants will be as provided in this Article 9 and in the Supplemental General Conditions. The OWNER may designate another representative or agent to represent the OWNER at Project Site who is not the E/A, E/A’s consultant, agent or employee.

9.7 Clarifications and Interpretations. The E/A may determine that written clarifications or interpretations of the requirements of the Technical Provisions (in the form of drawings or otherwise) are necessary. Such written clarifications or interpretations will be consistent with the intent of and reasonably inferable from the Contract Documents, will be issued with reasonable promptness by the OWNER and will be binding on the OWNER and CONTRACTOR. If the OWNER or CONTRACTOR believes that a written clarification or interpretation justifies an adjustment in the Contract Price or the Contract Times, the OWNER or CONTRACTOR may make a Claim therefore as provided in these General Conditions.

9.8 Recommendations as to Defective Work. The E/A will recommend that the OWNER disapprove or reject Work which the E/A believes to be defective, or believes will not produce a completed Project that conforms to this Contract or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by this Contract.

ARTICLE 10 – ACCEPTED EQUALS AND SUBSTITUTIONS

10.1 Accepted Equals. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item, the specification or description is intended to require the item named, unless the Contract Documents, in specifying the name, specifically authorize the use of functionally equivalent item through the use of terms such as “as equal,” “or equal,” or “equivalent.” For purposes herein, an item is only “functionally equivalent” if it is available at the same or lower cost, and if it is sufficiently similar to the item specified, including as to durability, warranty, acquisition time, and availability, so that no change in related Work will be required, and no change in the useful life, maintenance, repair cost, or quality of the completed work is anticipated.

10.2 CONTRACTOR May Propose Substitutions. CONTRACTOR may propose a substitution for any item of material or equipment, and for any means, method, technique, sequence, or procedure of construction, specified in the Contract Documents. CONTRACTOR’s will propose such substitutes at CONTRACTOR’s sole cost and expense, and at CONTRACTOR’s sole risk as to disruptions to the Critical Path of the current approved Progress Schedule. CONTRACTOR will provide OWNER sufficient data and documentation to allow the OWNER to review the proposal.

10.3 OWNER’s Evaluation. The OWNER will be allowed a reasonable time within which to evaluate each proposal made by CONTRACTOR pursuant to this Section. The OWNER will be the sole judge of acceptability. No accepted equal or substitute will be ordered, installed, or utilized until the OWNER’s review is complete, which will be evidenced by a Change Instrument. The OWNER may require CONTRACTOR to furnish at CONTRACTOR’s expense a special performance guarantee or other surety bond with respect to any accepted equal or substitution or for any other delay or disruption to the Critical Path of the Project Schedule attributable to any such substitution. The OWNER will not be responsible for any delay due to review time for any proposed substitution, unless such an extension is due to CONTRACTOR, consistent with the requirements of this Contract for changes and delays. The OWNER will not be responsible for increased costs associated with the review or approval of a proposed substitution, unless the increase is required as provided in association with changes and delays. In any event, no such extension or increase will be deemed provided unless specified in the Change Instrument approving the substitution.

10.4 CONTRACTOR to Remain Responsible. The OWNER’s acceptance of a substitution will not relieve CONTRACTOR from primary responsibility and liability for the suitability and performance of any proposed substitute item or substituted method or procedure, and will not relieve CONTRACTOR from its primary responsibility and liability for curing Defective Work and performing warranty work, which CONTRACTOR will cure and perform, regardless of any claim CONTRACTOR may choose to advance against the OWNER or manufacturer.

ARTICLE 11 – DELAYS AND ADJUSTMENTS TO CONTRACT TIME AND CONTRACT PRICE

11.1 Delay. Delays are classified in one of the following categories:

11.1.1 An excusable delay is a delay caused by a Force Majeure event. An excusable delay may entitle CONTRACTOR to an extension of Contract Time but not an increase in Contract Price.

11.1.2 A compensable delay is a delay which is caused solely and exclusively by acts or omissions of the OWNER, excepting actions taken by the OWNER to protect the public health or safety or to conform to law. A compensable delay may entitle CONTRACTOR to both an extension of Contract Time and an increase in Contract Price.

11.1.3 An unexcused delay is any delay other than an excusable or compensable delay. An unexcused delay entitles CONTRACTOR to no adjustment to Contract Time or Contract Price.

11.2 Events Not Constituting a Delay. The following events will not be considered an excusable delay of any kind even though they are not anticipated by CONTRACTOR, not within CONTRACTOR's control, and are not reasonably foreseeable:

11.2.1 Events that pose no delay to items of Work on the Critical Path of the current approved Progress Schedule.

11.2.2 Events that would not prevent CONTRACTOR from achieving Final Completion before the expiration of the Contract Time, where CONTRACTOR may otherwise accelerate other items of Work without undue expense.

11.2.3 Weather, unless the weather is more severe than the adverse weather normally anticipated for the Project Site for the month in question, based on a generally accepted source of data such as the National Weather Service.

11.2.4 Events, including actions of the OWNER, that impact Critical Path activity, because the activity was previously delayed due to unexcused delays.

11.3 Notice of Delay Required. CONTRACTOR will provide written notice of any actual or prospective delay promptly, and in no event later than ten days after the occurrence of the event giving rise to such delay. CONTRACTOR will give the notice to both the E/A and the Contract Administrator within the specified time. In the case of a continuing delay, CONTRACTOR will provide an initial notice and a further notice at each progress meeting throughout the duration of the delay. The notice will contain all of the specific information required in the following Subsection.

11.4 Contents/Supporting Documents. CONTRACTOR's notice of delay will identify those portions of the current approved Progress Schedule affected by the delay and will include an estimate of the cost and probable effect of the delay, if any, on the progress of the Work. Supporting documentation will include, but is not limited to:

11.4.1 A written detailed statement of the reasons and causes for the delay;

11.4.2 Inclusive dates of the delay;

11.4.3 Specific trades and portions of the Work affected by the delay;

11.4.4 Status of Work affected before commencement of the delay;

11.4.5 Effect of the delay on available "float" time;

11.4.6 A Critical Path Method (CPM) analysis demonstrating that the delay has affected an activity then on the Critical Path at the time of the occurrence of the delay as shown on the most current approved Progress Schedule; and

11.4.7 If CONTRACTOR claims that the delay is an excusable delay or compensable delay, evidence that the delay was unforeseeable, beyond CONTRACTOR's control, and without the fault or negligence of CONTRACTOR or the negligence of anyone for whose acts CONTRACTOR is responsible including any subcontractor, sub-subcontractor or supplier; and in the case of a compensable delay, was caused solely and

exclusively by the acts or omissions of the OWNER (excepting actions taken by the OWNER to protect the public health or safety or to conform to law) or anyone for whose acts the OWNER is responsible, and which are unreasonable under the circumstances involved and not reasonably within the contemplation of the parties.

11.5 Failure to Comply with Notice Requirements. The notice required by this Article 11 operates as a condition precedent to the assertion of any claim for extension of Contract Time, increase in Contract Price, or damages by CONTRACTOR. If CONTRACTOR fails to give the OWNER timely written notice of a claim as required by this Article 11, CONTRACTOR will be deemed to have waived the claim, and the OWNER will have no further liability respecting the claim.

11.6 Review and Adjustment of Schedules. Upon receipt of a notice from CONTRACTOR of the occurrence of a delay complying with the requirements of this Article, the OWNER will review the current approved Progress Schedule to determine (i) whether the delay is in fact an excusable or compensable delay, and (ii) whether any adverse effects of the delay can be overcome by an adjustment in the Progress Schedule, including the application of any unused "float" time available in the Schedule. The OWNER may require CONTRACTOR to submit a more detailed Progress Schedule than previously required in order to permit the OWNER to evaluate the delay. Based on such review, CONTRACTOR will, if required by the OWNER, submit for the OWNER's approval a revised Progress Schedule, which minimizes the adverse effects of the delay.

11.7 Limitation on Adjustments Due to Delays Generally. No extension of the Contract Time or increase in the Contract Price will be allowed for an unexcused delay. No extension of the Contract Time or increase in the Contract Price will be made to the extent that performance is, was or would have been suspended, delayed or interrupted by another cause for which CONTRACTOR is responsible. No increase in the Contract Price will be made to the extent performance was or would have been suspended, delayed or interrupted by another cause for which the OWNER is not solely and exclusively responsible.

11.8 Additional Limitations on Adjustments to Contract Time Due to Delays. No extension of Contract Time will be provided where, notwithstanding a Force Majeure event or other claimed delay, CONTRACTOR may achieve Final Completion within the Contract Time through adjustments to the current approved Progress Schedule.

11.9 Additional Limitations on Adjustments to Contract Price Due to Delays. Any obligation on the part of the OWNER to pay CONTRACTOR for compensable delay is solely intended to reimburse CONTRACTOR for actual expense arising out of the compensable delay. No consequential damages will be allowed to CONTRACTOR in connection with any claimed delays. Damages for compensable delay will be determined by the Force Account method set forth in Subsection 13.3.2.

11.9.1 Standby equipment costs will not be allowed during periods when the equipment would have otherwise been idle. Standby equipment time will not exceed more than eight hours per day, 40 hours per week, and 176 hours per month. Standby equipment costs will be paid at 50 percent of the applicable Rental Rate Blue Book rates and calculated by dividing the monthly rate by 176, multiplying the result by the number of standby hours and multiplying that number by the regional adjustment factor and the rate adjustment factor contained in the Blue Book. Operating costs will not be allowed.

11.10 Liquidated Damages Due to CONTRACTOR's Delays. Liquidated Damages, if any, are set forth in the Contract form.

11.11 No Damages are Due to CONTRACTOR for Prevention of Early Completion. CONTRACTOR represents that its Bid includes all costs, overhead and profit which may be incurred throughout the Contract Time, including the period between Substantial and Final Completion. Accordingly, CONTRACTOR may not make any claim for delay damages based in whole or in part on the premise that CONTRACTOR would have completed the Work prior to the expiration of the Contract Time but for any claimed delay.

11.12 Acceleration to Avoid Delays. If CONTRACTOR's progress is not maintained in accordance with the current approved Progress Schedule, or the OWNER determines that CONTRACTOR is not diligently proceeding with the Work or has evidence reasonably indicating that CONTRACTOR will not be able to conform to the current approved Progress Schedule, CONTRACTOR will, promptly and at no additional cost to the OWNER, take all

measures necessary to accelerate its progress to overcome the delay and ensure that there will be no further delay in the progress of the Work and notify the OWNER thereof. Any extension of working hours requires approval of the OWNER, which will not be unreasonably withheld but may be subject to reasonable conditions including payment for additional or overtime services of the OWNER the Architect/Engineer and any other applicable consultants, testing or regulatory agency costs.

ARTICLE 12 – CHANGES

12.1 Materially Different Site Conditions. For purposes herein, “materially different site conditions” means conditions that are different from those indicated in the Contract Documents, that are unknown to CONTRACTOR, and that could not be reasonably anticipated based upon on the following: (i) typical soil or subsurface conditions for the area in which the Project Site is located; (ii) site visits CONTRACTOR made, or was encouraged or permitted to make by the Bid Documents, prior to Bid submission; or (iii) a careful review of any Site-Related Reports.

12.1.1 CONTRACTOR may be entitled to an increase in Contract Time for materially differing site conditions as an excusable delay as provided in Article 11, subject to the exclusions and conditions of that article including notice requirements.

12.1.2 CONTRACTOR may also be entitled to an increase in Contract Price for materially different site conditions, where these conditions will require additional labor or materials, or both, exceeding the amount estimated in the Schedule of Values or Bid Schedule, as applicable, by 5% or more, provided, that CONTRACTOR complies with the notice requirements in Section 12.3. In such instance, the basis for adjusting Contract Price is set forth in Section 13.3.

12.2 Materially Different Structural Conditions (Remodeling or Renovation Contracts). If this is a Contract for a remodeling or renovation of an existing structure and CONTRACTOR encounters materially different conditions in the structure (not as to the Site or subsurface conditions) from those indicated in the Contract Documents provided by the OWNER as part of the Bid or Proposal Documents, CONTRACTOR will give written notice thereof to the OWNER and the E/A promptly before conditions are disturbed and in no event later than ten days after first observing such conditions. Failure of CONTRACTOR either (i) to provide notice before disturbing the existing conditions or (ii) failure to give notice within ten days of first observing such conditions is conclusively deemed a waiver of any claim relating to such conditions.

12.2.1 Investigation and Determination. The E/A will promptly investigate any alleged differing conditions as to the structure (but not as to the Site or subsurface conditions) and provide a written report of its findings to the OWNER. If the OWNER finds that the conditions of the structure differ materially and require a change in the Work and cause an increase or decrease in CONTRACTOR’s cost of, or time required for, performance of any part of the Work, the OWNER may make an adjustment in the amount payable to CONTRACTOR or the Contract Time, as applicable. If the OWNER determines that the conditions of the structure are not materially different or that no change in the terms of the Contract is justified, the OWNER will so notify CONTRACTOR in writing.

12.3 Constructive Changes and Disputed Adjustments.

12.3.1 Notice to the OWNER and E/A. CONTRACTOR will advise the OWNER and the E/A in writing promptly and in no event later than ten days after (i) issuance of any interpretation, clarification, instruction, direction or order whether orally or in writing from either the OWNER or the E/A, or (ii) the occurrence of any event or discovery of any condition (including any condition as provided in Section 12.1 and if applicable, 12.2), which CONTRACTOR believes or has reason to believe entitles CONTRACTOR to an increase in the amount payable to CONTRACTOR or an extension of the Contract Time; and except in the case of an emergency involving possible loss of life or bodily injury or significant property damage, the required written notice will be provided prior to proceeding with the Work. Failure of CONTRACTOR to provide such notice constitutes an acceptance of the interpretation, clarification, instruction, direction, order, event, or condition without adjustment to the Contract Price or the Contract Time and a conclusive waiver of any claim relating to the same. In order to be valid, a claim for an adjustment of Contract Price or Contract Time must contain the specific adjustment requested and must be supported by a detailed explanation of the basis for the claim. In addition to be valid, a claim for increase in

Contract Time must be supported by the documentation specified in Subsection 11.4, and a claim for an increase in the Contract Price must be documented and calculated as specified in Subsection 13.3.2. Failure of CONTRACTOR to object as and when specified in this Subsection is deemed an acceptance of interpretation, clarification, instruction, direction or order as issued and a waiver of any claim by CONTRACTOR to any adjustment to the Contract Price or the Contract Time.

12.3.2 Disputed Adjustments. All disputed adjustments under this Contract will be determined in accordance with the Contract, Article IX if, as conditions precedent thereto, CONTRACTOR has timely provided all notices and objections required under the terms of the Contract.

ARTICLE 13 - CHANGE INSTRUMENTS

13.1 Introduction.

13.1.1 The OWNER may issue a Change Instrument to require changes in the Work without invalidating the Contract.

13.1.1.1 A Field Directive may be issued to require minor changes in the Work that, in the OWNER's view, do not change the Scope of Work, present a delay, or require an adjustment to Contract Time or Contract Price. Examples of such situations where Field Directives may be appropriate are unanticipated field conditions or unavailability of specified materials and equipment.

13.1.1.2 All other changes to the Work will require the issuance of a Change Order issued in conformance with these General Conditions.

13.2 Change Order Required for Contract Time and Contract Price Adjustments. Adjustments to Contract Time or Contract Price will be granted only through a properly-issued Change Order.

13.3 Change Orders Adjusting Contract Price. All Change Orders adjusting Contract Price will be invalid unless approved in accordance with the authority provided by the Purchasing Code.

13.3.1 Basis for Contract Price Adjustment. Subject to any federal procurement standards that may apply if the Project is a federally funded project, in which case the standards will govern to the extent of conflict, a Change Order may provide for an adjustment in the Contract Price based only on one of the following methods:

13.3.1.1 Unit Prices as stated in the Bid Schedule.

13.3.1.2 A fixed not-to-exceed or lump sum agreed to by the OWNER and CONTRACTOR and stated in the Change Order, properly itemized and supported by sufficient substantiating data to permit evaluation which will be limited to estimated costs of labor, materials, supplies and equipment, rental cost of machinery and equipment, additional bond cost, plus a fixed fee for profit and overhead (which includes office overhead and site-specific overhead and general conditions) of 10% if the Work is performed by CONTRACTOR, or 5% if the Work is performed by a subcontractor or sub-subcontractor. The subcontractors' or sub-subcontractors' overhead and profit in turn will not exceed 10%. The total percentage of overhead and profit payable by the OWNER (to both CONTRACTOR and all sub tier subcontractors), regardless of the sub-tier which performs the work, will not exceed 15%.

13.3.3.3 Actual costs, properly itemized, plus a profit factor, using the Force Account method set forth in Section 13.3.2.

13.3.3.4 In the absence of an agreement between the OWNER and CONTRACTOR, the OWNER will determine the amount of the Contract Price Adjustment using any of the methods outlined in Subsections 13.3.1.1 – 13.3.1.3, above, whichever will result in the lowest cost to the OWNER.

13.3.3.5 No cost will be included in a Change Order for time spent preparing the Change Order, nor will costs be included for an estimate of time to negotiate the Change Order costs for machinery, tools, or equipment.

13.3.2 Force Account Method for Contract Price Increases. Before using the Force Account method provided for herein, the OWNER and CONTRACTOR agree to negotiate a Change Order using the other methods identified in Subsection 13.3.1, above, as appropriate, to determine the adjustment in the Contract Price. If neither of these methods can be agreed upon before a change in the Work is commenced which will result in an adjustment in the Contract Price, then the change in the Work will be performed by a Change Order using the Force Account method, and payment will be made as follows:

13.3.2.1 For all personnel, CONTRACTOR will receive actual field cost wage rates for each hour that said personnel are actually engaged in such Work, as substantiated by its certified payroll, to which will be added an amount equal to 15% of the sum thereof as compensation for CONTRACTOR's and any effected subcontractor's total overhead and profit. No separate charge will be made by CONTRACTOR or its subcontractor(s) for organization or overhead expenses. CONTRACTOR will also receive an amount equal to 55% of the wages paid personnel, excluding the 15% compensation provided above, for CONTRACTOR's and any effected subcontractor's cost of premiums on liability insurance, workers' compensation insurance, social security and unemployment insurance. The actual cost of CONTRACTOR's bond(s) on the extra Work will be paid based on invoices from surety. No charge for superintendence will be made unless considered necessary and ordered by the OWNER.

13.3.2.2 CONTRACTOR will receive the actual cost, including freight charges, of the materials used and installed on such Work, to which costs will be added a sum equal to 20% thereof as compensation for CONTRACTOR's and any effected subcontractor's total overhead and profit. In case material invoices indicate a discount may be taken, the actual cost will be the invoice price minus the discount.

13.3.2.3 For machinery, trucks, power tools, or other similar equipment (the "equipment") agreed to be necessary by the OWNER and CONTRACTOR, the OWNER will allow CONTRACTOR the applicable daily, weekly or monthly rate as given in the latest edition of the "Rental Rate Blue Book" as published by EquipmentWatch (1-800-669-3282) for each hour that said equipment is in use on such work, which rate includes the cost of fuel, lubricants and repairs. The established equipment rates will be paid for each hour that the equipment is utilized in the Work. If the equipment is used intermittently during the Work, full payment for an eight-hour day will be made if the equipment is not idle more than four hours of the day. If the equipment is idle more than four hours in a day, then payment will be made only for the actual hours worked. No additional compensation will be allowed on the equipment for CONTRACTOR's or any affected subcontractor's overhead and profit. The OWNER may accept an actual rental invoice in lieu of the method of calculation set forth in this Paragraph for equipment rented exclusively for Force Account Work or for equipment not included in the Rental Rate Blue Book.

13.3.2.4 The compensation provided for herein, will be received by as payment in full for work done pursuant to the Change Order and will include use of small tools, and total overhead expense and profit. CONTRACTOR and the OWNER will compare records of work done by Change Order at the end of each day. Copies of these records will be made upon forms provided for this purpose by the OWNER and signed by both the OWNER and CONTRACTOR, with one copy being retained by the OWNER and one by CONTRACTOR. Refusal by CONTRACTOR to sign these records within two working days of presentation does not invalidate the accuracy of the record.

13.3.3 Additional Performance Security in Conjunction with Change Order. The CITY may require CONTRACTOR to increase or supplement previously-provided Performance Security to cover any additional costs of performing services required under a Change Order that increases Contract Price, commensurate with such additional cost. In such instance, any compensation due CONTRACTOR for CONTRACTOR's cost of providing such increase or supplement will be reflected in the Change Order or otherwise borne by CONTRACTOR.

13.4 Payment for Work Covered by Change Order. Additional monies due CONTRACTOR pursuant to a valid Change Order providing for an adjustment to the Contract Price, will be paid for in accordance with the

Progress Payment schedule established by the Contract, in which case payment will be subject to retainage requirements set forth in the Contract; or at the time of Final Payment.

13.5 Absence of Proposed Adjustments. If a Change Instrument is silent as to any adjustment to the Contract Price or the Contract Time, it will be conclusively presumed that none is intended and none will be allowed unless CONTRACTOR files an objection as and when specified in the following Subsection.

13.6 Action upon Receipt of Change Instrument. Upon receipt of a Change Instrument, CONTRACTOR will promptly proceed with the change in the Work involved.

13.6.1 CONTRACTOR will advise the OWNER in writing, promptly and in any event no later than ten days after issuance of the Unilateral Change Instrument, of CONTRACTOR's objection (i) to the amount or method, if any, provided for in the Change Instrument for adjustment to Contract Price or Contract Time, or (ii) to the absence of any adjustment to the Contract Price or Contract Time. In order to be valid, a claim for an adjustment of Contract Price or Contract Time, must contain the specific adjustment requested, must be supported by a detailed explanation of the basis for the claim. In addition, to be valid a claim for increase in Contract Time must be supported by the documentation specified in Subsection 11.4, and a claim for an increase in the Contract Price must be documented and calculated as specified in Subsection 13.3.1. Failure of CONTRACTOR to object as and when specified in this Subsection is deemed an acceptance of the Unilateral Change Order as issued and a waiver of any claim by CONTRACTOR to any adjustment to the Contract Price or the Contract Time.

13.7 Waiver of Claim. Except for emergencies involving possible loss of life or bodily injury or significant property damage, CONTRACTOR's commencement of the Work that is subject to a Change Instrument will constitute a complete waiver by CONTRACTOR as to such claim regardless of whether CONTRACTOR has within the ten-day period notified the OWNER of a claim consistent with the requirements of Subsection 13.6.1.

13.8 OWNER's Right to Use Third Parties for Additional Work. If the OWNER and CONTRACTOR are unable to negotiate the terms of a Change Order for the performance of additional Work, the OWNER may, at its election, perform such additional Work with its own forces or with another CONTRACTOR and such work will be considered "Other Work."

13.9 OWNER's Right to Accelerate Schedule. The OWNER reserves the right to issue a Change Instrument to accelerate the Work which may be subject to an appropriate adjustment, if any, in the Contract Price. If the OWNER requires an acceleration of the Project Schedule and no adjustment is made in the Contract Price, or if CONTRACTOR disagrees with any adjustment made, any claim an adjustment must comply with the requirements of Subsection 13.6.1 or be deemed to be conclusively waived.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTIONS, REMOVAL AND ACCEPTANCE OF DEFECTIVE WORK

14.1 Access to Work. The OWNER, including the Contract Administrator and other employees and agents, including E/A and E/A's consultants, independent testing laboratories, and governmental agencies having jurisdiction, will each have access to the Work at reasonable times for observing, inspecting and testing. CONTRACTOR will provide them proper and safe conditions for such access, and advise them of CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.

14.2 Tests and Inspections.

14.2.1 CONTRACTOR will give timely notice of readiness of the Work for all required inspections, tests or approvals, and will cooperate with inspection and testing personnel to facilitate required inspections or tests. All testing will be performed by the CONTRACTOR. Only verification testing will be performed by the CITY. CONTRACTOR is not required to enter test results into MAC.

14.2.2 The OWNER will employ and pay for services of an independent testing laboratory to perform all inspections, tests or approvals required by the Contract Documents except:

- .1 For inspections, tests or approvals covered by Paragraph 14.2.3 below;
- .2 That costs incurred with tests or inspections conducted pursuant to Paragraph 14.3.3 below will be paid as provided in Paragraph 14.3.3;
- .3 For re-inspecting or re-testing Defective Work; and
- .4 As otherwise specifically provided in the Contract Documents. All testing laboratories will meet the requirements of ASTM E-329.

14.2.3 If Legal Requirements specifically require any Work (or part thereof) to be inspected, tested, or approved by an employee or other representative of a governmental or related authority, CONTRACTOR will assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay all costs in connection therewith and furnish the OWNER the required certificates of inspection or approval.

14.2.4 CONTRACTOR will also be responsible for arranging and obtaining and will pay all costs in connection with any inspections, tests or approvals required for the OWNER's and E/A's review of materials or equipment to be incorporated in the Work, or of materials, mix designs or equipment submitted for review prior to CONTRACTOR's purchase thereof for incorporation in the Work.

14.3 Uncovering Work.

14.3.1 If any Work (or the work of others) that is to be inspected, tested or approved is covered by CONTRACTOR without written concurrence of the Contract Administrator, or if any Work is covered contrary to the written request of the Contract Administrator, it will, if requested by the Contract Administrator, be uncovered and recovered at CONTRACTOR's expense.

14.3.2 Uncovering Work as provided in Paragraph 14.3.1 above, will be at CONTRACTOR's expense unless CONTRACTOR has given the OWNER timely notice of CONTRACTOR's intention to cover the same and the OWNER has not acted within five working days to such notice.

14.3.3 If the OWNER considers it necessary or advisable that covered Work be observed, inspected or tested, CONTRACTOR will uncover, expose or otherwise make available for observation, inspection or testing that portion of the Work in question, furnishing all necessary labor, material and equipment. If the OWNER determines that such Work is defective, CONTRACTOR will pay all claims, costs, losses and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and the OWNER will be entitled to an appropriate decrease in the Contract Price, and may make a Claim therefore as provided in these General Conditions. However, if such Work is not found to be defective, CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement and reconstruction; and CONTRACTOR may make a Claim therefore as provided in these General Conditions.

14.4 The OWNER May Stop the Work.

14.4.1 If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to this Contract, the OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the OWNER to stop the Work will not give rise to any duty on the part of the OWNER to exercise this right for the benefit of CONTRACTOR or any surety or other party.

14.4.2 If CONTRACTOR fails to correct Defective Work or submit a satisfactory plan to take corrective action, with procedure and time schedule, the OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until cause for such order has been eliminated, or take any other action permitted by this Contract. A notice to stop the Work, based on defects, will not stop calendar or Working Days charged to the Project.

14.5 Correction or Removal of Defective Work. If required by the OWNER, CONTRACTOR will promptly, as directed, either correct all Defective Work, whether or not fabricated, installed or completed, or, if the Work has

been rejected by the OWNER, remove it from Project Site and replace it with Work that is not defective. CONTRACTOR will correct or remove and replace Defective Work, or submit a plan of action detailing how the deficiency will be corrected, within the time frame identified in the notice of Defective Work. CONTRACTOR will pay all claims, costs, losses and damages caused by or resulting from such correction or removal (including but not limited to all costs of repair or replacement of work of others).

14.6 Correction Required. If within the Warranty Period, or such longer period of time as may be prescribed by Legal Requirements or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work, including Work performed after the Substantial Completion date, is found to be defective, CONTRACTOR will promptly, without cost to the OWNER and in accordance with the OWNER's written instructions:

14.6.1 Correct such Defective Work, or, if it has been rejected by the OWNER, remove it from Project Site and replace it with Work that is not defective, and

14.6.2 Satisfactorily correct or remove and replace any damage to other Work or the work of others resulting from the Defective Work.

If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the OWNER may have the Defective Work corrected or the rejected Work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR. The warranty period will be deemed to be renewed and recommenced in connection with the completed items of Work requiring correction.

14.7 Coordination with OWNER. If correction of Defective Work will affect the function or use of the facility, CONTRACTOR will not proceed with correction of Defective Work without prior coordination and approval of the OWNER.

14.8 Acceptance of Defective Work. If, instead of requiring correction or removal and replacement of Defective Work, the OWNER decides to accept it, the OWNER may do so. CONTRACTOR will pay all claims, costs, losses and damages attributable to the OWNER's evaluation of and determination to accept such Defective Work. For purposes of this Section, the OWNER's acceptance of sample materials or equipment will not be deemed to be acceptance of Defective Work. If any such acceptance occurs prior to recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents and compensating the OWNER for the diminished value of the Defective Work. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to the OWNER after a calculation by the OWNER of the diminution in value of the Defective Work.

14.9 The OWNER May Correct Defective Work. If CONTRACTOR fails within a reasonable time after written notice of the OWNER to correct Defective Work, or to remove and replace rejected Work, or if CONTRACTOR fails to perform the Work in accordance with this Contract, or if CONTRACTOR fails to comply with any other provision of this Contract, the OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. If, in the opinion of the Contract Administrator, significant progress has not been made during this seven-day period to correct the deficiency, the OWNER may exercise any actions necessary to remedy the deficiency. In exercising the rights and remedies under this paragraph, the OWNER will proceed expeditiously. In connection with such corrective and remedial action, the OWNER may exclude CONTRACTOR from all or part of Project Site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, and incorporate in the Work all materials and equipment stored at Project Site or for which the OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR will allow the OWNER, its agents and employees, the OWNER's other contractors, E/A and E/A's consultants access to Project Site to enable the OWNER to exercise the rights and remedies under this paragraph. All claims, costs, losses and damages incurred or sustained by the OWNER in exercising such rights and remedies will be charged against CONTRACTOR and a Change Order will be issued incorporating the necessary revisions to this Contract with respect to the Work. Such claims, costs, losses and damages will include but not be limited to all costs of repair or replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's Defective Work. CONTRACTOR will not be allowed an

extension of the Contract Times (or Milestones), or claims of damage because of any delay in the performance of the Work attributable to the exercise by the OWNER of the OWNER's rights and remedies hereunder.

14.10 Testing and Inspections Outside of Working Hours. This Contract contemplates that all testing and inspections will be done during Working Hours as defined herein. Whenever the OWNER is required to test or inspect outside of Working Hours, on weekends, or during Holidays observed by the OWNER, the OWNER will be entitled to a reduction in the Contract Price to the extent of any overtime costs incurred by the OWNER, unless such testing or inspection is required to be performed at that time due to:

14.10.1 Emergency conditions that are not the fault of CONTRACTOR, and subcontractors, sub-subcontractors, suppliers, or other persons for whom CONTRACTOR is responsible;

14.10.2 A Force Majeure event, the OWNER's disruption, or other events which, pursuant to this Contract, would otherwise require an extension of the Contract Time.

14.11 CONTRACTOR Remains Responsible for the Work. The following will not be deemed to be a release of CONTRACTOR's obligation to perform the Work in accordance with this Contract:

14.11.1 Observations by the E/A;

14.11.2 The issuance of a Certificate of Substantial Completion or any payment by the OWNER to CONTRACTOR under this Contract;

14.11.3 Partial use or occupancy of the Work or any part thereof by the OWNER;

14.11.4 Any acceptance by the OWNER or any failure to do so;

14.11.5 Any review of a Shop Drawing or sample submittal;

14.11.6 Any inspection, test or approval by others; or

14.11.7 Any correction of Defective Work by the OWNER.

ARTICLE 15 – PROGRESS PAYMENTS, PARTIAL UTILIZATION AND FINAL COMPLETION

15.1 General Method of Payment. Payment of the Contract Price will be made in a series of Progress Payments and after Final Completion, a Final Payment, in accordance with this Article.

15.1.1 If CONTRACTOR has provided Payment and Performance Bonds, no payment will be made unless and until CONTRACTOR records the bonds and provides the OWNER certified copies of the recorded bonds in accordance with Florida Statutes Section 205.05(b).

15.2 Application for Payment. CONTRACTOR may submit to the OWNER, no more than once a month and no sooner than 30 days following commencement of the Work, an application for payment for those portions of the Work completed as of the date of the application. The OWNER may, by notice, designate a specific day of each month for submission of the application for payment. Each application for payment will be in a form acceptable to the OWNER, and will include the following documentation and information:

15.2.1 The current approved Progress Schedule;

15.2.2 If applicable, the Schedule of Values;

15.2.3 Unless CONTRACTOR has provided payment and performance bonds and recorded them in the public records as provided in Florida Statutes Section 205.05, releases of liens from subcontractors or suppliers;

15.2.4 CONTRACTOR's written certification (i) as to the value of the Work completed, (ii) that partial or final waivers of lien have been received covering all such Work, (iii) and that all prior Progress Payments have been properly applied to the payment or reimbursement of the costs with respect to which they were paid;

15.2.5 If payment is requested on the basis of materials or equipment not incorporated in the Work but delivered and suitably stored at Project Site or at another location agreed to in writing, the application for payment by such bills of sale, data, and other procedures satisfactory to the OWNER substantiating the OWNER's title to such materials or equipment or otherwise protecting the OWNER's interest;

15.2.6 A completed Minority and Women-Owned Business Enterprise (MBE/WBE) Usage Report, using forms provided by the OWNER. CONTRACTOR will complete all blank spaces shown on these Report forms. If no amounts have been paid to MBE/WBE subcontractors, the completed form will so indicate; and

15.2.7 The consent of the surety, if any, to the requested payment.

Each application for payment will be deemed to be a warranty and guarantee by CONTRACTOR that title to all Work, materials and equipment covered by the application, whether incorporated in the Project or not, will pass to the OWNER free and clear of all liens no later than the time of payment to CONTRACTOR.

15.3 Review of Application for Payment. As soon as practicable after receipt of an application for Payment, and within the 20-day period following receipt of the application as provided by the Prompt Payment Act, the OWNER will approve, partially approve, or reject the application. The OWNER will provide written notice if payment is rejected or partially rejected, specifying the deficiency in the application for payment and the action necessary to make the request proper. In addition to rejecting payment of all or a portion of the application for failure to comply with submittal requirements referenced above, the OWNER will have the right to reject all or a portion of the application for any of the following reasons:

15.3.1 Defective Work not remedied;

15.3.2 Third party Claims filed or reasonable evidence indicating probable filing of such Claims;

15.3.3 Unless CONTRACTOR has provided payment and performance bonds and complied procedurally with Florida Statutes Section 205.05, failure of CONTRACTOR to make payments properly to subcontractor or for labor, materials or equipment;

15.3.4 Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;

15.3.5 Damage to the OWNER or another CONTRACTOR;

15.3.6 Reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

15.3.7 Failure of CONTRACTOR to submit a Schedule of Values in accordance with the Contract Documents, if one is required;

15.3.8 Failure of CONTRACTOR to submit a submittal schedule in accordance with the Contract Documents;

15.3.9 Failure of CONTRACTOR to submit and update a Progress Schedule in accordance with the Contract Documents;

15.3.10 Failure of CONTRACTOR to maintain a record of changes on drawings and documents;

15.3.11 Failure of CONTRACTOR to maintain weekly payroll reports and, as applicable, provide copies of reports in a timely manner upon request of the OWNER;

15.3.12 CONTRACTOR's neglect or unsatisfactory prosecution of the Work, including failure to clean up;
or

15.3.13 CONTRACTOR's failure to comply with the submittal requirements of Section 15.2, above, or with any other provision of this Contract.

If any portion of the application is rejected the OWNER will provide CONTRACTOR a written notice as to the reasons for rejection, within the time frame provided in the Prompt Payment Act. CONTRACTOR will then make the necessary corrections and re-submit the application or portion of application rejected.

15.4 Progress Payments. The OWNER will make payment on an approved or partially approved application, less amounts set aside for retainage within the deadlines provided by the Prompt Payment Act. If CONTRACTOR and the OWNER disagree on the basis or amount of the payment, or if CONTRACTOR is unwilling to make the necessary corrections or modifications and re-submit the Request as to those items rejected by the OWNER, then the OWNER may approve and process the Request by making such adjustments thereto as the OWNER deems appropriate so that CONTRACTOR receives without delay, payment of the amount determined by the OWNER to have been earned and owing to CONTRACTOR.

15.5 Amounts Withheld from Progress Payments. The OWNER will withhold an amount from each such approved progress payment, as follows:

15.5.1 If the Contract Price is \$200,000 or more, the amount of retainage will be determined by the Prompt Payment Act, which as of the Effective Date provides for a 10% retainage until 50-Percent Completion, and a 5% retainage thereafter.

15.5.2 In all other instances, the amount of retainage will be ten percent for each progress payment.

Subject to any limitations that may be imposed by the Prompt Payment Act if applicable, the OWNER will hold all retainage until Final Payment. However, if the Work is near Substantial or Final Completion and delay occurs due to no fault or neglect of CONTRACTOR, the OWNER may pay a portion of the retained amount to CONTRACTOR. CONTRACTOR, at the OWNER's option, may be relieved of the obligation to complete the Work and thereupon, CONTRACTOR will receive payment of the balance due for the work completed and accepted, subject to the conditions applicable to OWNER's termination of work without cause.

15.6 Delayed Payments. Should the OWNER fail to make payment to CONTRACTOR of the amount approved for any application for payment within the time frames provided in the Prompt Payment Act, the OWNER will pay to CONTRACTOR, in addition to amount approved, interest thereon at the rate specified in the Act, from date due until fully paid, which will fully liquidate any injury to CONTRACTOR growing out of such delay in payment.

15.7 Substantial Completion.

15.7.1 When CONTRACTOR considers that the Work, or a portion thereof which the OWNER agrees to accept separately, is substantially complete, CONTRACTOR will notify the OWNER and request a determination as to whether the Work or designated portion thereof is substantially complete. If the OWNER does not consider the Work substantially complete, the OWNER will notify CONTRACTOR giving reasons therefore. After performing any required Work, CONTRACTOR will then submit another request for the OWNER to determine Substantial Completion. If the OWNER considers the Work substantially complete, the OWNER will prepare and deliver a certificate of Substantial Completion which will establish the date of Substantial Completion, will include a punch list of items to be completed or corrected before Final Payment, will establish the time within which CONTRACTOR will finish the punch list, and will establish responsibilities of the OWNER and CONTRACTOR for security, maintenance, heat, utilities, damage to the Work, warranty and insurance. Failure to include an item on the punch list does not alter the responsibility of CONTRACTOR to complete all Work in accordance with this Contract. The Work will not be deemed to be substantially or finally complete until any certificates of occupancy required to occupy the Project are issued. The OWNER and CONTRACTOR will both sign the certificate of Substantial Completion, to evince acceptance of the responsibilities assigned to them in such certificate.

15.8 Partial Utilization. The OWNER will have the option to use any portion of the Work prior to Substantial Completion of the Project where:

15.8.1 The Contract Documents specifically provide for such portion to be partially utilized prior to Substantial Completion; or

15.8.2 Upon the OWNER's request, if CONTRACTOR agrees and, upon joint inspection, the parties agree that the portion of the Work in question is Substantially Complete. In such instance, the OWNER will issue a certificate of Substantial Completion, attaching thereto a punch list of items to be completed or corrected before Final Payment and fixing the responsibility between the OWNER and CONTRACTOR for maintenance, heat and utilities as to that part of the Work.

The OWNER will have the right to exclude CONTRACTOR from any part of the Work which is so certified to be Substantially Complete but the OWNER will allow CONTRACTOR reasonable access to complete or correct items on the punch list.

15.9 Final Inspection and Final Completion. CONTRACTOR will provide the OWNER the Notice of Completion sufficiently in advance of the Completion Date to allow for scheduling of the final inspection and for completion or correction of all Punch List Work before the Completion Date. Upon receipt of CONTRACTOR's Notice of Completion, the OWNER will make a review of the Work and notify CONTRACTOR in writing of all Punch List Work, if any, to be completed or corrected. Following CONTRACTOR's completion or correction of all Punch List Work, the OWNER again review the Work and prepare and deliver to CONTRACTOR either a written notice of additional Punch List Work to be completed or corrected or a written Certificate of Final Completion, signifying final acceptance of the Work.

15.9.1 If the sole remaining unfinished item to complete the Work is the reestablishment of vegetation, at the OWNER's option the OWNER may issue a Certificate of Final Completion on the condition that CONTRACTOR executes a re-vegetation letter, with letter of credit or other guarantee in form and amount satisfactory to the OWNER, to ensure completion of this item. This Work will be accomplished within 120 days of the date of Final Completion of the Work. When permanent erosion control has been established, the OWNER will initiate an inspection for final acceptance of the erosion controls. If the re-vegetation is not completed within the 120 days, the OWNER, at its option, may complete the Work using the posted guarantee.

15.9.2 In all other instances, the OWNER will only be obligated to issue a Certificate of Final Completion accepting the Work as finally complete, when the whole and all parts thereof will have been completed to the satisfaction of the OWNER in full compliance with this Contract.

15.10 Final Application for Payment. As soon as practical after the OWNER's issuance of the Certificate of Final Completion, CONTRACTOR will submit to the OWNER a properly completed application for Final Payment in the form approved or provided by the OWNER. The application will include or attach the following:

15.10.1 Three complete manuals containing all maintenance and operating instructions, warranties, and other associated documents for equipment or other materials that have been installed or otherwise included in the Work;

15.10.2 Record documents (as provided in Paragraph 6.11.2 of these General Conditions);

15.10.3 Unless CONTRACTOR has provided payment and performance bonds and procedurally complied with Florida Statutes, Section 205.05:

15.10.3.1 Legally effective final releases or waivers of liens from CONTRACTOR, and from all subcontractors and sub-subcontractors which performed services for CONTRACTOR and all suppliers of material or equipment to CONTRACTOR;

15.10.3.2 An affidavit that all of CONTRACTOR's debts, and claims, including from all subcontractors, subcontractors, and suppliers in connection with the Work, have been paid or otherwise satisfied;

15.10.4 Complete and legally effective releases or waivers satisfactory to the OWNER of all claims other than claims of subcontractors, Sub-subcontractors, and suppliers, filed in association with the Work;

15.10.5 The consent of the surety, if any, to final payment;

15.10.6 Non-Use of Asbestos Affidavit (After Construction);

15.10.7 Certificate evidencing that required insurance will remain in force after final payment and through the warranty period; and

15.10.8 Any other documentation required pursuant to this Contract.

15.11 If Final Application is Rejected. If the OWNER rejects the request for Final Payment, the OWNER will provide CONTRACTOR written notice stating the reasons therefore within the time required by the Prompt Payment Act.

15.12 Final Payment; Waiver of Claims. Final Payment will be deemed to have taken place when CONTRACTOR or any of its representatives negotiates the OWNER's final payment check, whether labeled final or not, for cash or deposits check in any financial institution for its monetary return. The making and acceptance of Final Payment will constitute:

15.12.1 A waiver of claims by the OWNER against CONTRACTOR, except claims arising from unsettled claims, from Defective Work appearing after final inspection, from failure to comply with this Contract or the terms of any warranty specified therein, or from CONTRACTOR's continuing obligations under this Contract; and

15.12.2 A waiver of all claims by CONTRACTOR against the OWNER other than those which were made in writing through the date that the check for final payment was issued and which are unsettled.

15.13 Partial Final Payment in Extenuating Circumstances. If the OWNER determines that after CONTRACTOR has achieved Substantial Completion, Final Completion is materially delayed through no fault of CONTRACTOR, the OWNER may without terminating this Contract, make payment of balance due for that portion of the Work fully completed and accepted. Such payment will be made under the terms and conditions governing Final Payment, except that it will not constitute a waiver of claims by the OWNER, and will not cause a transfer of title or relieve CONTRACTOR for responsibility for the Substantially Completed Work.

ARTICLE 16 - SUSPENSION OF WORK AND TERMINATION

16.1 The OWNER May Suspend Work Without Cause. At any time and without cause, the OWNER may suspend the Work or any portion thereof for a period of not more than 90 days by written notice to CONTRACTOR which will fix the date on which the Work will be resumed. CONTRACTOR will resume the Work on the date so fixed. CONTRACTOR will be allowed an adjustment in the Contract Price or an extension of the Contract Time, or both, directly attributable to any such suspension if CONTRACTOR makes an approved Claim for such an adjustment as provided herein.

16.2 The OWNER May Terminate Without Cause. Upon seven days' notice to CONTRACTOR, the OWNER may, without cause and without prejudice to any right or remedy of the OWNER, elect to terminate the Contract. In such case, CONTRACTOR will be paid for completed and acceptable Work executed in accordance with this Contract prior to the date of termination, and if the Contract Price is **NOT** based on unit prices, the following:

16.2.1.1 Reasonable demobilization costs;

16.2.1.2 Reasonable anticipated profits on completed and accepted Work not previously paid and not included in separate pay items calculated to date of termination but not for anticipated profit on the entire Contract not previously paid, unabsorbed overhead, or lost opportunity; and

16.2.1.3 All claims incurred in settlement of terminated contracts with subcontractor and others, including for anticipated profits on completed and accepted Work not previously paid and not included in separate pay items calculated to date of termination but not for anticipated profit on the entire Contract not previously paid, unabsorbed overhead, or lost opportunity. CONTRACTOR agrees to negotiate in good faith with subcontractors and others to mitigate the OWNER's cost.

16.3 The OWNER May Terminate With Cause.

16.3.1 A Upon the occurrence of any one or more of the following events:

- .1 If CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents
- .2 If CONTRACTOR disregards or fails to comply with Legal Requirements;
- .3 If CONTRACTOR disregards the authority of the Contract Administrator or the City Manager;
- .4 If CONTRACTOR makes fraudulent statements;
- .5 If CONTRACTOR fails to maintain a work force adequate to accomplish the Work within the Contract Time;
- .6 If CONTRACTOR fails to make adequate progress and endangers successful completion of the Contract; or
- .7 If CONTRACTOR otherwise materially breaches the Contract;

The OWNER may, after giving CONTRACTOR (and the surety, if any) seven days' notice terminate the Contract. The OWNER, at its option, may proceed with negotiation with surety for completion of the Work. Alternatively, the OWNER may under these circumstances exclude CONTRACTOR from the Project Site and take possession of the Work (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at Project Site or for which the OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as the OWNER may deem expedient. In such case CONTRACTOR will not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses and damages sustained by the OWNER arising out of or resulting from completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses and damage exceed such unpaid balance, CONTRACTOR or surety will pay the difference to the OWNER. If a termination for cause is found to be wrongful, the termination will be converted to a termination without cause, and CONTRACTOR's remedy for wrongful termination is limited to the recovery of the payments permitted for termination without cause.

16.3.2 Where CONTRACTOR's services have been so terminated by the OWNER, the termination will not affect any rights or remedies of the OWNER against CONTRACTOR and surety then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by the OWNER will not release CONTRACTOR from liability.

16.4 CONTRACTOR May Stop Work or Terminate. If through no act or fault of CONTRACTOR, the Work is suspended for a period of more than 90 days by the OWNER or under an order of court or other public authority, or (except during disputes) the Contract Administrator fails to forward for processing any mutually acceptable Application for Payment within 30 days after it is submitted, or (except during disputes) the OWNER fails for 60 days after it is submitted to pay CONTRACTOR any sum finally determined by the OWNER to be due, then CONTRACTOR may, upon seven days' written notice to the OWNER, and provided the OWNER does not remedy such suspension or failure within that time, terminate the Agreement and recover from the OWNER payment on the same terms as if OWNER terminated without cause pursuant to this Contract. In lieu of terminating the Agreement and without prejudice to any other right or remedy, if (except during disputes) the Contract Administrator has failed to forward for processing any mutually acceptable Application for Payment within 30 days after it is submitted, or (except during disputes) the OWNER has failed for 60 days after it is submitted to pay CONTRACTOR any sum finally determined by the OWNER to be due, CONTRACTOR may upon seven days' written notice to the OWNER stop the Work until payment of all such amounts due CONTRACTOR, including interest thereon. The provisions of

this Section are not intended to preclude CONTRACTOR from making a Claim for an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping Work as permitted by this Section.

16.5 Discretionary Notice to Cure. In its complete discretion, the OWNER may, but is not required to, provide a Notice to Cure to CONTRACTOR and its surety to cure any of the conditions constituting a breach of Contract or an anticipatory breach of contract and, if required by the OWNER, to attend a meeting with the OWNER, regarding the Notice to Cure, the event of default or the anticipatory breach of contract. The Notice to Cure will set forth the time limit in which the cure is to be completed or commenced and diligently prosecuted. Upon receipt of any Notice to Cure, CONTRACTOR will prepare a report describing its program and measures to affect the cure of the event of default or anticipatory breach of contract within the time required by the Notice to Cure. The CONTRACTOR's report will be delivered to the OWNER at least three days prior to any requested meeting with the OWNER and surety.

16.6 Bankruptcy. If CONTRACTOR declares bankruptcy or is adjudged bankrupt or makes an assignment for the benefit of creditors or if a receiver is appointed for the benefit of creditors or if a receiver is appointed by reason of CONTRACTOR's insolvency, CONTRACTOR may be unable to perform this Contract in accordance with the Contract requirements. In such an event, the OWNER may demand CONTRACTOR or its successor in interest provide the OWNER with adequate assurance of CONTRACTOR's future performance in accordance with the terms and conditions of the Contract. If CONTRACTOR fails to provide adequate assurance of future performance to the OWNER's reasonable satisfaction within ten days of such a request, the OWNER may terminate the Contract for cause or without cause, as set forth above. If CONTRACTOR fails to provide timely adequate assurance of its performance and actual performance, the OWNER may prosecute the Work with its own forces or with other contractors on a time and material or other appropriate basis and the cost of which will be charged against the balance of the Contract Price otherwise due to CONTRACTOR.

16.7 Duty to Mitigate. If the OWNER terminates this Contract or suspends CONTRACTOR's work, CONTRACTOR agrees to and will take all reasonable actions to mitigate its damages and any and all claims which may be asserted against the OWNER.

16.8 Responsibility during Demobilization. While demobilizing, CONTRACTOR will take all necessary and reasonable actions to preserve and protect the Work, the Project Site and other property of the OWNER or others at the Project Site.

16.9 CONTRACTOR to Remove Equipment. In the case of termination of this Contract before completion for any cause whatsoever, CONTRACTOR, if notified to do so by the OWNER, will promptly remove any part or all of his equipment or supplies from the property of the OWNER; failing to, the OWNER will have the right to remove such equipment and supplies at the expense of CONTRACTOR.

16.10 CONTRACTOR to Clean Up Project Site. If either OWNER or CONTRACTOR terminates the Contract before Substantial or Final Completion, CONTRACTOR will leave the Project Site in a clean condition as if Final Completion had been achieved, unless OWNER directs otherwise; and if CONTRACTOR fails to comply clean up the Project Site as required, the OWNER may do so and the cost thereof will be charged against CONTRACTOR.

END OF GENERAL CONDITIONS SECTION

SUPPLEMENTAL GENERAL CONDITIONS

SGC1. ADDITIONAL NPDES REQUIREMENTS.

- A. CONTRACTOR will at all times ensure certification and licensing from the Florida Department of Agriculture and Consumer Services (FDACS) of all of CONTRACTOR's personnel and subcontractors who apply pesticides or herbicides on City property or public right-of-way pursuant to the Contract. All such personnel and subcontractors who apply fertilizer will be trained and certified through the "Green Industry BMP Program" and FDACS; and will have a limited certification for urban landscape commercial fertilizer application under Section 482.1562, F.S
- B. All commercial applicators of fertilizer will have and carry in their possession at all time when applying fertilizer, evidence of certifications by the Florida Department of Agricultural and Consumer Services and a Commercial Fertilizer Applicator License as per 5E-14.117(18) FAC.
- C. All Contractors shall comply with the minimum requirements of the Urban Turf Fertilizer Rule RE-1.003(2) FAC.
- D. Fertilizer used will meet Florida-friendly fertilizer requirements pursuant to Section 403.9337 F.S.
- E. Fertilizer and Pesticide application must meet minimum requirements of the most recent edition of the Florida Friendly Best Management Practices for Protection of Water Resources by the Green Industries, 2008.
- F. Fertilizer should not be applied within 10 feet of any inlet, curb and gutter, public street, pond, stream watercourse, lake, canal, or wetland as defined by the FDEP Chapter 62-340 FAC. Fertilizer may be applied within 3 ft. of a water body only if the applicator is equipped with a spreader deflector.
- G. A 10-foot wide Low Maintenance Zone is required from any pond, stream, watercourse, canal, ditch, lakes wetland or from the top of a seawall. No mowed or cut vegetative material may be deposited in any water body. Care must be taken to prevent erosion of the surface soils in this Zone. Contractor shall set mechanical mowers to prevent the exposing of bare soil on pond slopes, ditches, wetlands, stream and lakes. This Zone shall be suitably vegetated at all times to ensure soil stability.
- H. Fertilizers applied to turf shall be formulated and applied in accordance with requirements and direction provided by Rule 5E-1.003(2) FAC, Labeling for Urban Turf Fertilizers.
- I. In no case shall grass clipping, vegetative material, and /or vegetative debris be washed, swept or blown off into stormwater drains, curbs and gutters, ditches, conveyance, water bodies, wetlands or sidewalks or roadway. Any material that is accidentally so deposited shall be immediately removed to the maximum extent practicable.
- J. The monthly invoices shall include
 - (1) A summary of the type and amount of fertilizer used at each location.
 - (2) A summary of the type and amount of any chemicals and /or pesticides used at each pond, ditch, roadway or park location.

DIVISION 1
GENERAL REQUIREMENTS

SECTION 01010
SUMMARY OF WORK

PART 1 – GENERAL REQUIREMENTS

1.1 SUMMARY

- A. Work under the Contract for Sweetheart Trail – Beach St (Wilder Blvd to Shady Place) shall include furnishing all coordination, labor, materials and construction services to complete the project work unless otherwise noted in the Drawings. The primary work shall include constructing 2,324 feet of concrete shared use path within the City of Daytona Beach. The proposed shared use path extends from the intersection of Wilder Boulevard and Palmetto Avenue, easterly along Wilder Boulevard for 300ft, and then northerly 2024ft along South Beach Street to the intersection of South Beach Street and Shady Place. This project also includes a reduction in the paved roadway width of South Beach Street, which includes 2085 feet of new pavement construction, milling and resurfacing, and curb and gutter construction. Other project elements include driveway reconstruction, minor drainage improvements associated with the trail project, roadway lighting, landscaping, and minor utility adjustments. All proposed improvements will be constructed entirely within existing right-of-way.

1.2 REQUIRED NOTICES TO AGENCIES AND PUBLIC

- A. The CONTRACTOR shall adequately inform, at least two (2) weeks in advance, the affected businesses, property owners, and utility customers of the start of construction and scheduled temporary utility service disruptions and changes in access. However, access to businesses and residences must be maintained at all times.

1.3 SALVAGED MATERIALS

- A. In the absence of special provisions to the Contract, materials, equipment or supplies that occur will become the property of the CONTRACTOR and shall be removed from the project and disposed of by the CONTRACTOR in areas provided by the CONTRACTOR.
- B. Excess suitable soils not required for the completion of the Work shall belong to the CITY. The CONTRACTOR shall contact the CITY's Technical Services Project Manager at 386/671-8632 to coordinate where excess material will be stockpiled at least five (5) working days in advance of moving the material.

PART 2 RESERVED

PART 3 EXECUTION

The CONTRACTOR shall be responsible for reviewing the site conditions, reviewing the Bid Documents, verifying the Summary of Quantities and Bid Schedule and the inclusion of all items and costs necessary to complete the work prior to preparing and submitting a balanced and responsive bid.

END OF SECTION

SECTION 01014
MAINTENANCE OF OPERATIONS

PART 1 – GENERAL REQUIREMENTS

1.1 GENERAL

- A. The intent of these specifications is to have the CONTRACTOR schedule and perform the Work in a manner such that the OWNER can keep existing facilities in continuous dependable operation. It is required as a part of this Contract that the CONTRACTOR adhere to the constraints listed in this Section.

- B. The CONTRACTOR shall:
 - 1. Keep existing facilities in operation unless otherwise specifically permitted in these specifications or approved by the OWNER in writing.
 - 2. Coordinate any system shutdowns with the OWNER and limit the shutdown periods to acceptable times.

1.2 GENERAL CONSTRAINTS

- A. Any temporary work, facilities, roads, walks, protection of existing structures, piping, blind flanges, valves, equipment, etc. that may be required within the CONTRACTOR'S work limits to maintain continuous and dependable operation of existing systems shall be furnished by the CONTRACTOR at no extra cost to the OWNER.

- B. The CONTRACTOR shall schedule the Work in such a manner so that all existing systems are maintained in continuous operation. All short-term system or partial system shutdowns shall be approved in writing by the OWNER. If, in the opinion of the ENGINEER or OWNER, a shutdown is not required in order for the CONTRACTOR to perform the Work, the CONTRACTOR shall utilize alternative methods to accomplish the Work. All shutdowns shall be coordinated with and scheduled at times suitable to the OWNER. OWNER shall be provided a minimum of one-week notice of CONTRACTOR'S need for any system shutdown.

- C. Required shutdowns shall not begin until all materials are on-hand, pre-assembled, as possible, and ready for installation. At a time approved by the OWNER, the shutdown period will commence and the CONTRACTOR shall proceed with the Work continuously, start to finish, until the Work is completed and the system is tested, cleared for service, and ready for operation. If the CONTRACTOR completes all required Work before the specified shutdown period has ended the OWNER may immediately place the system back in service.

- D. The OWNER shall have the authority to order Work stopped or prohibited which would, in his opinion, unreasonably result in stopping or inhibiting the necessary functions of existing utilities.
- E. The OWNER reserves the right to cancel scheduled shutdowns if conditions warrant. Delays to the CONTRACTOR caused by cancellations will be considered in evaluating requests for time extension.
- F. All facilities shall be tested and in operating condition before final tie-ins are made.

1.3 SUBMITTALS

- A. Submit detailed schedule of proposed testing.

1.4 WORK SEQUENCE

- A. The CONTRACTOR shall submit a proposed work sequence two weeks prior to the preconstruction meeting. See section 1310, Construction Schedules for detail of the schedule.

END OF SECTION

SECTION 01026
SCHEDULE OF VALUES

PART 1 - GENERAL REQUIREMENTS

1.1 SUMMARY

- A. This Section specifies administrative and procedural support requirements necessary to prepare an acceptable Schedule of Values assignment, if pertinent for processing Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Application for Payment forms with Continuation Sheets, Submittals Schedule and Contractor's Construction Schedule.
 2. Submit the Schedule of Values to Owner's Architect and/ or Engineer for approval at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment. Delete subparagraph below if phasing is not required. See Evaluations in Division 1 Section "Summary."
 3. Subschedules: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Bid Form as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of owner/Architect/Engineer.
 - c. Owner's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Submit draft of AIA Document G703 Continuation Sheets.
 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Bid Form. Provide several line items for principal subcontract amounts, where appropriate. Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training.
 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit
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cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

8. Each item in the Schedule of Values and Applications for Payment shall be complete and shall include the total cost for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.
10. Owner will supply to Contractor an accounting code number corresponding to each item number in the bid form. Contractors shall include Owner's accounting number in a column adjacent to the bid item numbering on the Schedule of Values in the Payment application.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect/ Engineer and paid for by Owner.
 1. Contractor to prepare Pay Application after confirming quantities or percent complete work with Owner's construction field representative.
- B. Payment Application Times: Progress payments shall be submitted to Owner at a maximum frequency of one per thirty day period.
- C. Payment Application Forms: Use AIA Document G702/CMa and AIA Document G703 Continuation Sheets as form for Applications for Payment.

- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Owner will return incomplete applications without action.
1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit four (4) signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application to include City's Minority and Women Owned Business Enterprise Usage form Page BID -12 with each application.
- F. Consent of Surety to Partial Payment: With each Application for Payment, submit a Consent of Surety to Partial Payment, which shall follow the parameters found in HB 897.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Schedule of unit prices.
 5. Submittals Schedule (preliminary if not final).
 6. List of Contractor's principal consultants.
 7. Copies of building permits.
 8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 9. Initial progress report.
- H. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
 3. Application shall follow criteria contained within the General Conditions.

- I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Updated final statement, accounting for final changes to the Contract Sum.
 3. Evidence that claims have been settled.
 4. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 5. Final, liquidated damages settlement statement.
 6. Application shall follow criteria contained within the General Conditions.

END OF SECTION

SECTION 01040
COORDINATION

PART 1 – GENERAL

1.1 PROJECT COORDINATION

- A. The CONTRACTOR shall provide for the complete coordination of the construction efforts. This shall include, but not necessarily be limited to, coordination of the following:
1. The work of subcontractors.
 2. The flow of material and equipment from suppliers.
 3. The effort of equipment manufacturers during test and checkout.
 4. Interrelated work with public or private utilities companies.
 5. The interrelated work with the OWNER where tie-ins to existing facilities are required.
 6. The effort of independent testing agencies.
 7. Maintain operation of the existing facilities during tie-ins to piping/equipment.
 8. Maintaining access to business and residences.
 9. Work affecting private property.

1.2 UTILITIES

- A. Prior to construction, the CONTRACTOR shall familiarize himself with the location of all existing utilities and facilities within the Project Site and with the applicable provisions of the General Conditions.

The CONTRACTOR shall notify utility companies at least two weeks, excluding Saturdays, Sundays, and legal holidays, prior to excavation. Utility companies shall be contacted by calling the utility notification center "Sunshine" at 1-800-432-4770. The CITY will furnish to the CONTRACTOR the available records of CITY utilities. The CONTRACTOR shall locate and mark all CITY utilities for his reference and for use by utility companies. The CONTRACTOR shall act as the CITY's agent for locating and marking CITY underground utilities within the Project limits, in accordance with the Florida Underground Facilities Damage Prevention and Safety Act (FS556).

In all cases where existing utility lines may be interfered with by the Work, the CONTRACTOR shall give a minimum of two weeks' notice to the owners of such utilities to permit them to relocate the lines prior to construction. Existing utilities have been shown on the Plans insofar as information is reasonably available. However, it will be the CONTRACTOR's responsibility to preserve all existing utilities whether shown on the Plans or not.

Contractor is required to regularly update and coordinate with the franchise utilities a minimum of once per month.

Contractor is solely responsible for franchise utility coordination.

1.3 DEWATERING AND INSPECTION SURVEY/PLAN

- A. Prior to starting fieldwork and within seven calendar days after the Notice to Proceed date, the CONTRACTOR'S Project Coordinator shall provide the City's Project Manager with the Dewatering and Inspection/Survey Plan. The Plan shall include, but not be limited to, the sequence of dewatering, entry/exit ports to be used for pipe marking and field evaluation, the direction that the pipeline will be inspected/surveyed, the locations where ventilation will be introduced, and dates and times in which field work will be performed. This Plan shall also include the names of the inspection/surveying crew and the company that they work for, the projected start and finish dates, times and progression of each inspection/survey, the number of persons involved in each inspection/survey, and the entry/exit ports that will be used by each inspection/survey crew. The CONTRACTOR shall coordinate his field activities with the City's Project Manager to ensure efficient and coordinated progress.

1.4 REFERENCE

- A. Section 02240: Dewatering (During Construction)

Contractor is required to regularly update and coordinate with the franchise utilities a minimum of once per month.

Contractor is solely responsible for franchise utility coordination.

END OF SECTION

SECTION 01050
FIELD ENGINEERING

PART 1 - GENERAL REQUIREMENTS

1.1 DESCRIPTION OF WORK

- A. CONTRACTOR shall provide and pay for all field engineering service required for the project. Such work shall include survey work to establish lines and levels and to locate and lay out site improvements, structures, and controlling lines and levels required for the construction of the work. Also included are such Engineering services as are specified or required to execute CONTRACTOR'S construction methods. Engineers and Surveyors shall be licensed professionals under the laws of the state where the project is located.

1.2 GRADES, LINES AND LEVELS

- A. Existing basic horizontal and vertical control points for the project are those designated on the DRAWINGS. CONTRACTOR shall locate and protect control points prior to starting site work and shall preserve all permanent reference points during construction. In working near any permanent property corners or reference markers, CONTRACTOR shall use care not to remove or disturb any such markers. In the event that markers must be removed or are disturbed due to proximity of the construction work, CONTRACTOR shall have them referenced and reset by a Land Surveyor qualified under the laws of the state of the project.

1.3 LAYOUT DATA

- A. CONTRACTOR shall lay out the work at the location and to the lines and grades shown on the DRAWINGS. Survey notes indicating the information and measurements used in establishing locations and grades shall be kept in notebooks and furnished to ENGINEER with the record drawings for the project.
- B. For all pipelines which have grades or elevations required, for all pipelines which are indicated to be installed to clear future construction and for all pipelines for which profile elevations are shown, CONTRACTOR shall prepare cut sheets and lay out lines at the locations shown or as directed. He shall verify lengths between junction points shown on the DRAWINGS, and verify the location and elevations of possible conflicts.

END OF SECTION

SECTION 01065
PERMITS AND FEES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope of Work: Obtain and pay for all permits and licenses including, but not limited to, all construction and Right-of-Way utilization permits.
- B. Permits by CONTRACTOR: CONTRACTOR will apply for and CITY will pay for the following permits:
 - 1. City of Daytona Beach Building Permit and/or Right-of-Way Permit (if applicable)
- C. Permits by CONTRACTOR: CONTRACTOR will apply for and CONTRACTOR will pay for the following permits:
 - 1. NPDES Construction Permit (through FDEP)
- D. Permits by OWNER: The CITY has applied and paid for the following permits:
 - 1. Volusia County Department of Health (potable water)
 - 2. Florida Dept. of Environmental Protection Construction Permit
 - 3. Florida Dept. of Environmental Protection Environmental Resource Permit
 - 4. St. John's River Water Management District (Stormwater Management System)
- E. Copies of the permits obtained by the OWNER will be distributed at the Pre-Construction Conference.

END OF SECTION

SECTION 01150

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 Scope of Work

- A. The following explanation of the Measurement and Payment of the bid form items is made for information and guidance. The omission of reference to any item in this description shall not, however, alter the intent of the bid form or relieve the Contractor of the necessity of furnishing such as a part of the contract.
- B. 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 quantities of any class or portion of the work during the progress of construction in accordance with the terms of the Contract.

1.02 Engineer's Estimate of Quantities

- A. The Engineer's estimated quantities for unit bid prices, as listed in the Bid Form, are approximate only and are included solely for the purpose of comparison of bids. The Owner does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond therewith and reserves the right to increase or decrease any quantity or to eliminate any quantity as Owner may deem necessary. Contractor will not be entitled to any adjustment in a unit bid price as a result of any change in an estimated quantity and agrees to accept the aforesaid unit bid prices as complete and total compensation for any additions or deductions caused by a variation in quantities as a result of more accurate measurement, or by any changes or alterations in the Work ordered by the Owner, and for use in the computation of the value of the work performed for progress payments.

PART 2 PAY ITEMS

BASE BID:

2.01 Mobilization (Item 101-1)

A. Measurement and Payment

- 1. Payment for mobilization/demobilization will be made on a Lump Sum (LS) basis prorated throughout the duration of the project. Twenty five percent (25%) of the lump sum amount will be paid for Contractor mobilization in the first payment request and ten percent (10%) of the lump sum amount will be paid for Contractor demobilization in the final payment request. The remainder of the lump sum amount will be paid in equal increments through the scheduled duration of the project. Such payment shall be full compensation for selling and delivering to the Owner all necessary materials, equipment, and supplies including installation of all materials, equipment, supplies, and all other labor, excavating, filling, permit fees, taxes, mobilization, demobilization, performance and payment bond premiums, insurance, general and administration and other miscellaneous costs, overhead
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and profit for the project complete except for those costs specifically included in other bid items listed in the Schedule of Bid Items.

2.02 Maintenance of Traffic (Item 102-1)

A. Measurement and Payment

1. Measurement and payment for Maintenance of Traffic (MOT) will be made on a Lump Sum (LS) basis prorated throughout the duration of the project. Twenty five percent (25%) of the lump sum amount will be paid for Contractor mobilization in the first payment request and ten percent (10%) of the lump sum amount will be paid for Contractor demobilization in the final payment request. The remainder of the lump sum amount will be paid in equal increments through the scheduled duration of the project. Such payments shall be full compensation for including but not limited to the construction and maintenance of all essential detour facilities; to provide, install, inspect, and maintain the traffic control and safety devices (including removal of signage and roadway markings, installation of temporary signage and roadway markings) during construction; conduct daily inspections and as well as nighttime inspections of all traffic control devices; all devices found out of compliance shall be rectified immediately, to accommodate adequate facilities for access to all residences and businesses along the project corridor; provide dust control measures and any additional means needed to provide safe movement of vehicular and pedestrian traffic; reconfiguring control devices as needed to facilitate dispatched emergency vehicles. The MOT shall conform to the requirements set forth by the FDOT and the Owner.

2.03 Sediment Barrier (Item 104-10-3)

A. Measurement and Payment

1. Measurement and payment for Sediment Barrier will be made on a Linear Foot (LF) basis. To be used in accordance with the Erosion and Sediment Control Manual to protect against downstream accumulation of sediment. Includes synthetic bales, silt fence, and other similar materials shown in the manual. Work includes but not limited to the preparation and implementation of stormwater pollution prevention control plan; the plan shall consist of monitoring, inspecting, reporting, and providing erosion and sediment control measures, and during an inspection if a deficiency is discovered such deficiency should be corrected immediately; preparing and filing required EPA NPDES NOI and NOT forms and providing associated contractor certifications.

2.04 Floating Turbidity Barrier (Item 104-11)

A. Measurement and Payment

1. Measurement and payment for Floating Turbidity Barrier will be made on a Linear Foot (LF) basis. To be used in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (E&SC Manual). Common uses include areas where dredging, filling or other construction activities may cause turbidity in water. Permit requirements may be applicable.

2.05 Inlet Protection System (Item 104-18)

A. Measurement and Payment

1. Measurement and payment for Inlet Protection System will be made on a Per Each (EA) basis. This item is to be used in accordance with the Plans, Standards, and/or Erosion and Sediment Control Manual for the protection of EXISTING inlets. Includes all work and materials for a complete system. Curb Inlet filters, curb insert protection systems, pipe end cap filters, ditch bottom inlet protection systems ("caps", barriers, and other materials), are included in this pay item.

2.06 Clearing and Grubbing (Item 110-1-1)

A. Measurement and Payment

1. Measurement and payment for Clearing and Grubbing will be made on an Acreage (AC) basis. Consists of complete removal and disposal of all vegetation, debris, drainage structures, flexible pavement, rock and cemented coquina excavation and disposal, excavation and removal of unsuitable soils and unsuitable materials of any nature, buildings or any other obstructions in all areas where excavation is to be done, or where embankments or structures will be constructed. This includes roadway area, ditch area, borrow and material pits, and areas where culverts or pipe lines will be constructed. Also includes shrubs and tree root pruning for required horizontal or vertical clearance, tree removal, tree protection (for any tree that is to remain within 50' of construction activities), and removal of existing fencing and railing.

2.07 Removal of Existing Concrete (Item 110-4)

A. Measurement and Payment

1. Measurement and payment for Removal of Existing Concrete will be made on a Square Yard (SY) basis. Consists of removing and disposing of existing concrete pavement, concrete sidewalks, slope pavement, ditch pavement and curb and gutter, where required because of construction operations, where the work is NOT included in other operations. Specifically excludes retaining walls and drainage structures.

2.08 Regular Excavation (Item 120-1)

A. Measurement and Payment

1. Measurement and payment for Regular Excavation will be made on a Cubic Yards (CY) basis. Regular Excavation may include roadway, pond and ditch excavation and consists of the net volume of material excavated between the original ground line and the finished grading template of the roadway.

2.09 Embankment (Item 120-6)

A. Measurement and Payment

1. Measurement and payment for Embankment will be made on a Cubic Yards (CY) basis. This item includes placing material above the original ground line, or above the lower limits of removal of organic and/or plastic material to the finished grading template.

2.10 Type B Stabilization (Item 160-4)

A. Measurement and Payment

1. Measurement and payment for Type B Stabilization will be made on a Square Yard (SY) basis. Consists of stabilizing designated portions of the roadbed to provide a firm and unyielding subgrade. Stabilizing material can be obtained from existing base material, or from commercial and local materials.

2.11 Optional Base, Base Group 04 (Item 285-7-04)

A. Measurement and Payment

1. Measurement and payment for Optional Base, Base Group 04 will be made on a Square Yard (SY) basis. Consists of base construction including a 4" overhang. Refer to FDOT Index 514.

2.12 Mill Existing Asphalt Pavement (1" AVG Depth) (Item 327-70-1)

A. Measurement and Payment

1. Measurement and payment for Mill Existing Asphalt Pavement (1" AVG Depth) will be made on a Square Yard (SY) basis. Consists of removing existing AC pavement to improve the rideability of the finished pavement, to lower the finished grade adjacent to existing curb prior to resurfacing, or to completely remove existing pavement. Includes transporting the milled material to the asphalt plant site, and stockpiling the material. Also includes removal of existing Reflective Pavement Markers.

2.13 Superpave Asphaltic Concrete Traffic Level B (Item 334-1-12)

A. Measurement and Payment

1. Measurement and payment for Superpave Asphaltic Concrete Traffic Level B will be made on a Per Ton (TN) basis. Consists of using SUPERPAVE asphalt mixture design and analysis test equipment and procedures, Gyrotory Compactor to better simulate actual pavement loadings (five different traffic levels available) to provide for a better rut-resistant mix design.

Layer Thicknesses - Fine Mixes: The allowable layer thicknesses for fine Type SP Asphalt Concrete mixtures are as follows:

Type SP-9.5.....	1 to 1-1/2 inches
Type SP-12.5.....	1-1/2 to 2-1/2 inches
Type SP-19.0.....	2 to 4 inches

2.14 Concrete Class I, Endwalls (Item 400-1-2)

A. Measurement and Payment

1. Measurement and payment for Concrete Class I, Endwalls will be made on a Cubic Yards (CY) basis. Includes all costs associated with installing forms, reinforcing steel, deck scuppers, poured expansion joints, deck control joints, preformed anchor bolt holes, plain neoprene bearing pads, etc.
-

2.15 Manhole, Adjust (Item 425-5-1)

A. Measurement and Payment

1. Measurement and payment for Manhole, Adjust will be made on a Per Each (EA) basis. Consists of changing the vertical placement of an existing manhole so that it will conform to the finished grade as designated in the plans.

2.16 Valve Box, Adjust (Item 425-6)

A. Measurement and Payment

1. Measurement and payment for Valve Box, Adjust will be made on a Per Each (EA) basis. Consists of changing the vertical placement of an existing valve box so that it will conform to the finished grade as designated in the plans.

2.17 Inlets, Curb, Type 10, <10' (Item 425-1-211)

A. Measurement and Payment

1. Measurement and payment for Inlets, Curb, Type 10, <10' will be made on a Per Each (EA) basis. Consists of installing precast or cast-in-place inlet structures. Includes all costs associated with installing forms, reinforcing steel, adding weirs, notches, skimmers, etc.

2.18 Inlets, DT Bot, Type C, <10' (Item 425-1521)

A. Measurement and Payment

1. Measurement and payment for Inlets, DT Bot, Type C, <10' will be made on a Per Each (EA) basis. Consists of installing precast or cast-in-place inlet structures. Includes all costs associated with installing forms, reinforcing steel, adding weirs, notches, skimmers, etc.

2.19 Inlets, DT Bot, Type D, <10' (Item 425-1541)

A. Measurement and Payment

1. Measurement and payment for Inlets, DT Bot, Type D, <10' will be made on a Per Each (EA) basis. Consists of installing precast or cast-in-place inlet structures. Includes all costs associated with installing forms, reinforcing steel, adding weirs, notches, skimmers, etc.

2.20 Inlets, DT Bot, Type D, J Bottom, <10' (Item 425-1543)

A. Measurement and Payment

1. Measurement and payment for Inlets, DT Bot, Type D, J Bottom, <10' will be made on a Per Each (EA) basis. Consists of installing precast or cast-in-place inlet structures.

Includes all costs associated with installing forms, reinforcing steel, adding weirs, notches, skimmers, etc.

2.21 Manhole, P-7, <10' (Item 425-2-41)

A. Measurement and Payment

1. Measurement and payment for Manhole, P-7, <10' will be made on a Per Each (EA) basis. Consists of installing precast or cast-in-place inlet structures. Includes all costs associated with installing forms, reinforcing steel, adding weirs, notches, skimmers, etc.

2.22 Manhole, J-8, <10' (Item 425-2-91)

A. Measurement and Payment

1. Measurement and payment for Manhole, J-8, <10' will be made on a Per Each (EA) basis. Consists of installing precast or cast-in-place inlet structures. Includes all costs associated with installing forms, reinforcing steel, adding weirs, notches, skimmers, etc.

2.23 Pipe Culvert, Optional Material, Round, 15" (Item 430-174-115)

A. Measurement and Payment

1. Measurement and payment for Pipe Culvert, Optional Material, Round, 15" will be made on a Per Linear Foot (LF) basis. Includes all costs associated with the installation of the pipe, end treatments, filter fabric jackets, connections to structures, plugs, No. 4 coarse aggregate, trenching, backfilling, compacting, etc.

2.24 Pipe Culvert, Optional Material, Round, 18" (Item 430-174-118)

A. Measurement and Payment

1. Measurement and payment for Pipe Culvert, Optional Material, Round, 18" will be made on a Per Linear Foot (LF) basis. Includes all costs associated with the installation of the pipe, end treatments, filter fabric jackets, connections to structures, plugs, No. 4 coarse aggregate, trenching, backfilling, compacting, etc.

2.25 Pipe Culvert, Optional Material, Round, 36" (Item 430-174-136)

A. Measurement and Payment

1. Measurement and payment for Pipe Culvert, Optional Material, Round, 36" will be made on a Per Linear Foot (LF) basis. Includes all costs associated with the installation of the pipe, end treatments, filter fabric jackets, connections to structures, plugs, No. 4 coarse aggregate, trenching, backfilling, compacting, etc.

2.26 Concrete Curb & Gutter, Type F (Item 520-1-10)

A. Measurement and Payment

1. Measurement and payment for Concrete Curb & Gutter, Type F will be made on a Per Linear Foot (LF) basis as measured along the face of the completed and accepted concrete curb. Includes all costs associated with the forming, contraction joint forming, expansion joint construction, steel reinforcement, finishing and backfilling and compaction.

2.27 Valley Gutter, Concrete (Item 520-3)

A. Measurement and Payment

1. Measurement and payment for Valley Gutter, Concrete will be made on a Per Linear Foot (LF) basis as measured along the center of the completed and accepted concrete valley gutter. Includes all costs associated with the forming, contraction joint forming, expansion joint construction, steel reinforcement, finishing and backfilling and compaction.

2.28 Concrete Sidewalk, 4" Thick, 2500 PSI (Includes ADA Ramps and Cast-In-Place Detectable Warning Surfaces) (Item 522-1)

A. Measurement and Payment

1. Measurement and payment for Concrete Sidewalk, 4" Thick, 2500 PSI will be made on a Square Yard (SY) basis. Includes all costs for materials, foundation preparation, joint forming (or sawing), placing, finishing and curing, ADA Ramps, cast-in-place Detectable Warning Surfaces, reinforcing steel, and concrete edge beam support for pedestrian railings (Index 852/862), etc.

2.29 Concrete Driveways, 6" Thick, 2500 PSI (Item 522-2)

A. Measurement and Payment

1. Measurement and payment for Concrete Driveways, 6" Thick, 2500 PSI will be made on a Square Yard (SY) basis. Includes all costs for materials, foundation preparation, joint forming (or sawing), placing, finishing and curing, reinforcing steel, etc.

2.30 Performance Turf, Sod (Item 570-1-2)

A. Measurement and Payment

1. Measurement and payment for Performance Turf, Sod will be made on a Square Yard (SY) basis. Includes all costs for establishing a stand of grass on slopes, shoulders, or other areas by seeding (includes seeding, seeding & mulching, hydroseeding, bonded fiber matrix, or any combination), or sodding, soil preparation, sod placement, and maintenance (fertilization, watering, mowing, and litter removal - during construction activities). It should be noted the Sodding quantity is based on the limits of the construction areas and if the Contractor impacts additional areas outside the areas of construction for his convenience, the Contractor will be responsible for the restoration of such areas to their pre-construction condition at their own expense.

2.31 Single Post Sign, Ground Mount, Up To 12 SF (Item 700-1-11)

A. Measurement and Payment

1. Measurement and payment for Single Post Sign, Ground Mount, Up To 12 SF will be made on a Per Assembly (AS) basis. Includes all costs associated with procuring and installing all sign panel(s), post(s) and foundation for a complete assembly.
- 2.32 Single Post Sign, Remove (Item 700-1-60)
- A. Measurement and Payment
 1. Measurement and payment for Single Post Sign, Remove will be made on a Per Assembly (AS) basis.
- 2.33 Retro-Reflective Pavement Markers (Item 706-3)
- A. Measurement and Payment
 1. Measurement and payment for Retro-Reflective Pavement Markers will be made on a Per Each (EA) basis.
- 2.34 Painted Pavement Mark, STD, White, Solid, 6" (Items 710-11-101)
- A. Measurement and Payment
 1. Measurement and payment for Painted Pavement Mark, STD, White, Solid, 6" will be made on a Gross Mile (GM) basis. Such payments shall be full compensation for installing the paint and glass beads.
- 2.35 Painted Pavement Mark, STD, White, Solid, 12" (Items 710-11-123)
- A. Measurement and Payment
 1. Measurement and payment for Painted Pavement Mark, STD, White, Solid, 12" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the paint and glass beads.
- 2.36 Painted Pavement Mark, STD, White, Solid, 18" (Items 710-11-124)
- A. Measurement and Payment
 1. Measurement and payment for Painted Pavement Mark, STD, White, Solid, 18" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the paint and glass beads.
- 2.37 Painted Pavement Mark, STD, White, Solid, 24" (Items 710-11-125)
- A. Measurement and Payment
 1. Measurement and payment for Painted Pavement Mark, STD, White, Solid, 24" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the paint and glass beads.
-

2.38 Painted Pavement Mark, STD, Yellow, Solid, 6" (Items 710-11-201)

A. Measurement and Payment

1. Measurement and payment for Painted Pavement Mark, STD, Yellow, Solid, 6" will be made on a Gross Mile (GM) basis. Such payments shall be full compensation for installing the paint and glass beads.

2.39 Painted Pavement Mark, STD, Yellow, Solid, 18" (Items 710-11-224)

A. Measurement and Payment

1. Measurement and payment for Painted Pavement Mark, STD, Yellow, Solid, 18" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the paint and glass beads.

2.40 Thermoplastic, STD, White, Solid, 12" (Item 711-11-123)

A. Measurement

1. Measurement and payment for Thermoplastic, STD, White, Solid, 12" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the thermoplastic striping and glass beads.

2.41 Thermoplastic, STD, White, Solid, 18" (Item 711-11-124)

A. Measurement

1. Measurement and payment for Thermoplastic, STD, White, Solid, 18" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the thermoplastic striping and glass beads.

2.42 Thermoplastic, STD, White, Solid, 24" (Item 711-11-125)

A. Measurement

1. Measurement and payment for Thermoplastic, STD, White, Solid, 24" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the thermoplastic striping and glass beads.

2.43 Thermoplastic, STD, Yellow, Solid, 18" (Item 711-11-224)

A. Measurement

1. Measurement and payment for Thermoplastic, STD, Yellow, Solid, 18" will be made on a Linear Foot (LF) basis. Such payments shall be full compensation for installing the thermoplastic striping and glass beads.
-

2.44 Thermoplastic, STD-OTH, White, Solid, 6" (Item 711-16-101)

A. Measurement

1. Measurement and payment for Thermoplastic, STD-OTH, White, Solid, 6" will be made on a Net Mile (NM) basis. Such payments shall be full compensation for installing the thermoplastic striping and glass beads.

2.45 Thermoplastic, STD-OTH, Yellow, Solid, 6" (Item 711-16-201)

A. Measurement

1. Measurement and payment for Thermoplastic, STD-OTH, Yellow, Solid, 6" will be made on a Net Mile (NM) basis. Such payments shall be full compensation for installing the thermoplastic striping and glass beads.

2.46 Thermoplastic, Remove Existing Thermoplastic Pavement Markings (Item 711-17)

A. Measurement

1. Measurement and payment for Thermoplastic, Remove Existing Thermoplastic Pavement Markings will be made on a Square Foot (SF) basis. Such payments shall be full compensation to remove existing pavement markings, such that scars or traces of removed markings will not conflict with new pavement markings, by a method approved by the Project Manager.

2.47 Fire Hydrant, Relocate (Item 1644-800)

A. Measurement

1. Measurement and payment for Fire Hydrant, Relocate will be made on a Per Each (EA) basis. Such payments shall be full compensation for labor and materials to relocate fire hydrants.

ALTERNATE BID 1:

2.48 Concrete Sidewalk and Driveways, 6" Thick, 3400 PSI (Includes ADA Ramps and Cast-In-Place Detectable Warning Surfaces) (Item 522-2)

A. Measurement

1. Measurement and payment for Concrete Sidewalk and Driveways, 6" Thick, 3400 PSI will be made on a Square Yard (SY) basis. Includes all costs for materials, foundation preparation, joint forming (or sawing), placing, finishing and curing, ADA Ramps, cast-in-place Detectable Warning Surfaces, reinforcing steel, and concrete edge beam support for pedestrian railings (Index 852/862), etc.

ALTERNATE BID 2:

2.49 Additional Mobilization for ALTERNATE BID 2 Activities (Item 101-1)

B. Measurement and Payment

1. Payment for mobilization/demobilization will be made on a Lump Sum (LS) basis prorated throughout the duration of the project. Twenty five percent (25%) of the lump sum amount will be paid for Contractor mobilization in the first payment request and ten percent (10%) of the lump sum amount will be paid for Contractor demobilization in the final payment request. The remainder of the lump sum amount will be paid in equal increments through the scheduled duration of the project. Such payment shall be full compensation for selling and delivering to the Owner all necessary materials, equipment, and supplies including installation of all materials, equipment, supplies, and all other labor, excavating, filling, permit fees, taxes, mobilization, demobilization, performance and payment bond premiums, insurance, general and administration and other miscellaneous costs, overhead and profit for the project complete except for those costs specifically included in other bid items listed in the Schedule of Bid Items.

2.50 Additional Maintenance of Traffic for ALTERNATE BID 2 Activities (Item 102-1)

A. Measurement and Payment

1. Measurement and payment for Maintenance of Traffic (MOT) will be made on Lump Sum (LS) basis prorated throughout the duration of the project. Twenty five percent (25%) of the lump sum amount will be paid for Contractor mobilization in the first payment request and ten percent (10%) of the lump sum amount will be paid for Contractor demobilization in the final payment request. The remainder of the lump sum amount will be paid in equal increments through the scheduled duration of the project. Such payments shall be full compensation for including but not limited to the construction and maintenance of all essential detour facilities; to provide, install, inspect, and maintain the traffic control and safety devices (including removal of signage and roadway markings, installation of temporary signage and roadway markings) during construction; conduct daily inspections and as well as nighttime inspections of all traffic control devices; all devices found out of compliance shall be rectified immediately, to accommodate adequate facilities for access to all residences and businesses along the project corridor; provide dust control measures and any additional means needed to provide safe movement of vehicular and pedestrian traffic; reconfiguring control devices as needed to facilitate dispatched emergency vehicles. The MOT shall conform to the requirements set forth by the FDOT and the Owner

2.51 Conduit, Open Trench (Item 630-2-11)

A. Measurement and Payment

1. Measurement and payment for Conduit, Open Trench will be made on a Per Linear Foot (LF) basis for the straight line HORIZONTAL DISTANCE of the trench or bore, from pull box to pull box, with no allowance for sweeps or vertical distance. No additional payment will be made for multiple runs of conduit within a trench or bore.

2.52 Conduit, Directional Bore (Item 630-2-12)

A. Measurement and Payment

1. Measurement and payment for Conduit, Directional Bore Trench will be made on a Per Linear Foot (LF) basis for the straight line HORIZONTAL DISTANCE of the trench or bore, from pull box to pull box, with no allowance for sweeps or vertical distance. No additional payment will be made for multiple runs of conduit within a trench or bore.

2.53 Pull & Splice Box, 13"x24" (Item 635-2-11)

A. Measurement and Payment

1. Measurement and payment for Pull & Splice Box, 13"x24" will be made on a Per Each (EA) basis. Such payments shall be full compensation for to furnish and install new pull boxes.

2.54 Decorative Pedestrian LED Light Pole Complete, Furnish & Install Decorative Pole Standard Foundation, 14' Mounting Height (Item 715-4-11)

A. Measurement and Payment

1. Measurement and payment for Decorative Pedestrian LED Light Pole Complete, Furnish & Install Decorative Pole Standard Foundation, 14' Mounting Height will be made on a Per Each (EA) basis. Such payments shall be full compensation for all wiring necessary for a complete wiring necessary for a complete installation of a 14' mounted decorative pedestrian lighting pole and luminaire per details shown on Sheet 65 – LIGHTING PLAN – DETAILS, utilizing a standard foundation.

2.55 SITESCAPES Avondale Backed Bench, Model AV1-1011 (Item DB-002)

A. Measurement and Payment

1. Measurement and payment for SITESCAPES Avondale Backed Bench, Model AV1-1011 will be made on a Per Each (EA) basis for the furnishing and installation of the bench per MFG Specs. See detail D-2 on Sheet 44 – CONSTRUCTION DETAILS.

2.56 Landscape – Trees, Live Oak Quercus Virginiana, 11'-14' Overall Height (Item DB-006)

A. Measurement and Payment

1. Measurement and payment for Landscape – Trees, Live Oak Quercus Virginiana, 11'-14' Overall Height will be made on a Per Each (EA) basis to furnish and install the tree and mulch including all costs for watering and maintenance until such time it is established and the project has been Final Accepted.

END OF SECTION

SECTION 01200
PROJECT MEETINGS

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION OF WORK

- A. Project meetings shall be scheduled as needed throughout the progress of the work. ENGINEER shall be responsible for scheduling the meetings, preparing the agenda, distributing written notice of each meeting not less than four days in advance of the meeting date, making physical arrangements for the meeting, presiding at the meeting, recording the minutes (including all significant proceedings and decisions), and reproducing and distributing copies of the minutes to all participants and all parties affected by decisions made.
- B. Representatives attending the meetings shall be qualified and authorized to act on behalf of the entity that they represent.

1.2 PRE-CONSTRUCTION CONFERENCE

- A. A pre-construction conference will be held prior to beginning any work under the Contract. ENGINEER will schedule the conference in consultation with OWNER and CONTRACTOR.
- B. CONTRACTOR shall be ready to submit his anticipated progress schedule, a preliminary schedule of shop drawing submissions, and a preliminary schedule of values of work.
- C. The pre-construction conference will be attended by representatives of OWNER, ENGINEER, utility companies who will be affected by the work, and such of CONTRACTOR'S subcontractors as he wishes to attend.

1.3 PROGRESS MEETINGS

- A. Regular progress meetings shall be held during the construction period. At these meetings the CONTRACTOR shall submit any updated progress schedules, advise OWNER and ENGINEER of any anticipated delays or problems in the progress of the work, and discuss any problems or events which affect the progress.

END OF SECTION

SECTION 01300
SUBMITTALS

PART 1 - GENERAL REQUIREMENTS

1.1 DESCRIPTION OF REQUIREMENTS

A. The type of submittal requirements specified in this section include but are not limited to the following:

1. Progress Schedules and Reports
2. Material and Equipment
3. Shop Drawings
4. Manufacturer's Data
5. Samples
6. General Submittal Requirements
7. Shop Drawings Required
8. Certificate of Compliance
9. Network Analysis

Submittals shall be clear and legible, printed or typed. Submittals received that are not so, shall be returned to be resubmitted when in legible form.

1.2 PROGRESS SCHEDULES AND REPORTS

Progress schedules as required by Article 3.4.1.1 of the General Conditions shall be prepared in the form of a horizontal bar chart unless other format or use of a network analysis system is required. A separate horizontal bar shall be provided for each trade or operation. The first work day of each week shall be identified on the horizontal time scale. Scale and spacing will be such as to allow space for notations and revisions.

Schedules shall show the complete sequence of construction by activity with dates for the beginning and completion of each major element of construction. Projected percentage of completion for each item as of the first day of each month shall be shown.

Revised schedules shall be submitted periodically as changes become apparent.

Progress Reports. The CONTRACTOR shall prepare and submit a monthly progress report. The report shall indicate the progress at the date of submission of each activity shown on his progress schedule. It shall show changes occurring since previous submissions, activities modified since previous submissions, and revised projections of progress and completion. The submittal shall include a narrative report to define: problem areas, anticipated delays, and the impact on the schedule, and corrective action recommended and its effect.

1.3 MATERIALS AND EQUIPMENT DATA (Shop Drawings, Manufacturer's Data and Samples)

Schedules of Shop Drawing submittals shall note any items which require critical timing for maintaining delivery or construction schedules.

Material and equipment data submitted for substitutions shall be handled as specified in Section 01640 - Substitutions and Product Options.

Definitions. Work-related submittals of this section are categorized for convenience as follows:

Shop drawings include specially-prepared technical data for this project, including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form for general application to several projects.

Material and Equipment data includes standard printed information on materials, equipment and systems; not specially-prepared for this project, other than the designation of selections from among available choices printed in the information.

Samples include both fabricated and unfabricated physical examples of materials, equipment and units of work; both as complete units and as smaller portions of units of work; either for limited visual inspection or, where indicated, for more detailed testing and analysis.

Mock-ups are a special form of samples, which are too large or otherwise inconvenient for handling in specified manner for transmittal of sample submittals.

Miscellaneous submittals related directly to the work (non-administrative) include warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, quality testing and certifying reports, copies of industry standard, record drawings, field measurement data, operating and maintenance materials, overrun stock, and similar information, devices and materials applicable to the work and not processed as shop drawings, product data or samples.

1.4 GENERAL SUBMITTAL REQUIREMENTS

Where stated in individual sections, CONTRACTOR shall submit seven copies of Shop Drawings which are to be reviewed by ENGINEER. Upon completion of ENGINEER's review, two copies will be returned to CONTRACTOR.

In all other Sections where Shop Drawings are requested, CONTRACTOR shall submit five copies of Shop Drawings which are to be used by ENGINEER in observing installation of materials or equipment and for Record purposes.

Certificates of compliance shall be provided with Shop Drawing submittal where requested.

Shop Drawings Required. Shop Drawings shall be submitted for only those items listed in the individual Sections of the Specifications. Shop Drawings not required by the Specifications or not having been completely reviewed and corrected by CONTRACTOR will be returned without review or comment.

Certificates of Compliance. Certificate of Compliance required to be furnished by CONTRACTOR or Supplier shall be in the form of an affidavit attesting that the materials, equipment or Work covered by the Certificate conform to the specified requirements, that all tests specified or required have been performed and that all test requirements have been met. Certificates shall be subscribed to and executed before a person authorized to administer oaths.

1.05 NETWORK ANALYSIS

The Critical Path Method (CPM) or other analysis system satisfactory to the ENGINEER shall be used to control the time fixed for completion of the project. The project shall be done in accordance with CPM planning and scheduling. After award of the contract, the CONTRACTOR shall develop a comprehensive network diagram covering the major portions of the work and trades. The diagram shall indicate the priority and inter-dependence of all segments of the work. Each segment shall be reviewed with the ENGINEER to insure reasonably accurate time durations. Time units shall be in days and one day shall be the smallest time unit shown. It shall be the CONTRACTOR's responsibility to insure that all of the work is described and that the diagram correctly represents the sequence in which he plans to do his work and the time in which he expects to do it. Upon completion of this network diagrams, the CONTRACTOR shall have his data processed as required to establish the critical work path and forecast the duration of the work.

During the project, the effect of any change orders shall be evaluated and compared with the original plan and schedule to establish the effect of such changes on the scheduled project completion time.

No later than 30 days after the Notice to Proceed is issued, the CONTRACTOR shall submit his preliminary diagram covering the entire project for review by the ENGINEER.

END OF SECTION

SECTION 01310
CONSTRUCTION SCHEDULES

PART 1 – GENERAL REQUIREMENTS

1.1 GENERAL

- A. Provide construction schedule which conforms to the requirements below, unless otherwise approved by ENGINEER.
- B. Update schedules every month unless otherwise specified or directed by ENGINEER.

1.2 CONTENT

- A. Shop Drawing submittal dates and required approval dates. B.
Product delivery dates.
- C. Factory and field testing dates.
- D. Dates for beginning and completing each phase of the Work by activity and by trades.

1.3 FORMAT

- A. Type: Horizontal bar chart.
- B. Sheet Size: 8 1/2-inches by 11-inches.
- C. Time Scale: Indicate first date in each work week. D.
Organization:
 - 1. Group Shop Drawing submittals and reviews into a separate sub-schedule.
 - 2. Group product deliveries into a separate subschedule.
 - 3. Group construction work into a separate subschedule by activity.
 - 4. Group critical activities which dictate the rate of progress into a separate sub-schedule.
 - 5. Organize each sub-schedule by Specification Section number.
- E. Activity Designations: Show title and related Specification Section number.

1.4 SUBMITTALS

- A. Submit initial schedule at least 20 days prior to submitting first application for a progress payment but no later than 30 days after date of execution of Agreement.
- B. Submit updated schedules at progress meetings. If a schedule remains unchanged from one period to the next, submit a written notice to that effect.
- C. Make submittals to ENGINEER.
- D. Unless otherwise specified, submit two copies of each schedule. One copy will be reviewed by the ENGINEER and returned. The other copy will be retained by the ENGINEER.
- E. Attach a letter of transmittal to each submittal and include the following information in the letter:
 - 1. A listing of items which have changed since the last submittal.
 - 2. Discussion of problems causing delays, anticipated length of delays, and proposed countermeasures.

END OF SECTION

SECTION 01340
SHOP DRAWING PROCEDURES

PART 1 – GENERAL REQUIREMENTS

1.1 GENERAL

- A. Shop Drawing procedures shall conform to requirements of General Conditions, Section 01300, and as described in this Section.

1.2 PROCEDURE

- A. Submit Shop Drawings to: Engineer or Architect of Record as indicated on the Plans.
- B. A letter of transmittal shall accompany each submittal. If data for more than one Section of the Specifications is submitted, a separate transmittal letter shall accompany the data submitted for each Section.
- C. At the beginning of each letter of transmittal provide a reference heading indicating the following:
 - 1. OWNER'S Name
 - 2. Project Name
 - 3. Contract Number
 - 4. Transmittal Number
 - 5. Section Number
- D. If a Shop Drawing deviates from the requirements of the Contract Documents, CONTRACTOR shall specifically note each variation in his letter of transmittal.
- E. All Shop Drawings submitted for approval shall have a title block with complete identifying information satisfactory to ENGINEER.
- F. All Shop Drawings submitted shall bear the stamp of approval and signature of CONTRACTOR as evidence that they have been reviewed by CONTRACTOR. Submittals without this stamp of approval will not be reviewed by ENGINEER and will be returned to CONTRACTOR. CONTRACTOR'S stamp shall contain the following minimum information:

Project Name/ CODB Contract No.: _____

CONTRACTOR'S Name: _____

Date: _____

----- Reference -----

Item: _____

Specifications: _____

Section: _____

Page No.: _____

Paragraph No.: _____

Drawing No.: _____ of _____

Location: _____

Submittal No.: _____

Approved By: _____

- G. A number shall be assigned to each submittal by CONTRACTOR starting with No. 1 and thence numbered consecutively. Re-submittals shall be identified by the original submittal number followed by the suffix "A" for the first re-submittal, the suffix "B" for the second re-submittal, etc.
- H. CONTRACTOR shall initially submit to ENGINEER a minimum of six (6) copies of all submittals that are on 11-inch by 17-inch or smaller sheets (no less than 8 1/2-inch x 11-inch), and one unfolded sepia and 2 prints made from that sepia for all submittals on sheets larger than 11-inch by 17-inch.
- I. After ENGINEER completes his review, Shop Drawings will be marked with one of the following notations:
 - 1. Approved
 - 2. Approved as Corrected
 - 3. Revise and Resubmit
 - 4. Not Approved

- J. If a submittal is acceptable, it will be marked "Approved" or "Approved as Corrected". Three (3) prints or copies of the submittal will be returned to CONTRACTOR.
- K. Upon return of a submittal marked "Approved" or "Approved as Corrected", CONTRACTOR may order, ship or fabricate the materials included on the submittal, provided it is in accordance with the corrections indicated.
- L. If a Shop Drawing marked "Approved as Corrected" has extensive corrections or corrections affecting other drawings or Work, ENGINEER may require that CONTRACTOR make the corrections indicated thereon and resubmit the Shop Drawings for record purposes. Such drawings will have the notation, "Approved as Corrected - Resubmit."
- M. If a submittal is unacceptable, three (3) copies will be returned to CONTRACTOR with one of the following notations:
 - 1. "Revise and Resubmit"
 - 2. "Not Approved"
- N. Upon return of a submittal marked "Revise and Resubmit", CONTRACTOR shall make the corrections indicated and repeat the initial approval procedure. The "Not Approved" notation is used to indicate material or equipment that is not acceptable. Upon return of a submittal so marked, CONTRACTOR shall repeat the initial approval procedure utilizing acceptable material or equipment.
- O. Any related Work performed or equipment installed without an "Approved" or "Approved as Corrected" Shop Drawing will be at the sole responsibility of the CONTRACTOR.
- P. Shop Drawings shall be submitted well in advance of the need for the material or equipment for construction and with ample allowance for the time required to make delivery of material or equipment after data covering such is approved. CONTRACTOR shall assume the risk for all materials or equipment which are fabricated or delivered prior to the approval of Shop Drawings. Materials or equipment will not be included in periodic progress payments until approval thereof has been obtained in the specified manner.
- Q. ENGINEER will review and process all submittals promptly, but a reasonable time should be allowed for this, for the Shop Drawings being revised and resubmitted, and for time required to return the approved Shop Drawings to CONTRACTOR.

- R. It is CONTRACTOR'S responsibility to review submittals made by his suppliers and SUBCONTRACTORS before transmitting them to ENGINEER to assure proper coordination of the Work and to determine that each submittal is in accordance with his desires and that there is sufficient information about materials and equipment for ENGINEER to determine compliance with the Contract Documents. Incomplete or inadequate submittals will be returned for revision without review.
- S. CONTRACTOR shall furnish required submittals with complete information and accuracy in order to achieve required approval of an item within three submittals. All costs to ENGINEER involved with subsequent submittals of Shop Drawings, Samples or other items requiring approval, will be back charged to CONTRACTOR, at the rate of 3.0 times direct technical labor cost, by deducting such costs from payments due CONTRACTOR for Work completed. In the event that CONTRACTOR requests a substitution for a previously approved item, all of ENGINEER'S costs in the reviewing and approval of the substitution will be back charged to CONTRACTOR unless the need for such substitution is beyond the control of CONTRACTOR.
- T. Close Out Submittals: Refer to Section 1700 for specific general requirements on the submittal of closeout information, materials, tools, and similar items.
- U. The Shop Drawing Stamp states the following:

“REVIEW IS FOR GENERAL ARRANGEMENT ONLY AND DOES NOT RELEASE THE CONTRACTOR FROM THE RESPONSIBILITY FOR QUANTITIES, DIMENSIONS, PERFORMANCE OR OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS.”

END OF SECTION

SECTION 01390
COLOR AUDIO-VIDEO PRE-CONSTRUCTION RECORD

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope of Work: Prior to commencing the Work, the CONTRACTOR shall have a continuous color audio-video digital recording taken (1) along the entire length of the Project to serve as a record of pre-construction conditions.

1.2 APPROVAL

- A. No construction shall begin prior to review and approval of the audio-video DVD recording covering the Project by the CITY. The CITY shall have the authority to reject all or any portion of the audio-video DVD recordings not conforming to specifications and order that it be redone at no additional charge.
- B. The CONTRACTOR shall reschedule unacceptable coverage within five (5) days after being notified. The CITY shall designate those areas, if any, to be omitted from or added to the audio-video coverage.
- C. The DVD recordings shall not be made more than thirty (30) days prior to construction in any area. All DVD's and written records shall become property of the CITY.

1.3 SUBMITTALS

- A. A copy of the preconstruction video shall be submitted with the first application for payment.

1.4 PROFESSIONAL VIDEOGRAPHERS

- A. The CONTRACTOR shall engage the services of a professional videographer. The color audio-video recording shall be prepared by a responsible commercial firm known to be skilled and regularly engaged in the business of pre-construction color audio-video documentation.
- B. The videographer shall furnish to the CITY, a list of all equipment to be used for the audio-video recording, i.e., manufacturer's name, model number, specifications and other pertinent information.
- C. The videographer shall furnish the CITY with additional information including the names and addresses of two references that the videographer has performed color audio-video recordings for projects of a similar nature within the last twelve (12) months.

PART 2 – PRODUCTS

2.1 DVD's

- A. Audio-video DVD's shall be new. The DVD used for the recordings shall be professional quality 12 cm color DVD media that conforms to either DVD-R or DVD+R recording standards using high quality DVD video and audio bitrates. Reprocessed disks will not be acceptable. The recorded DVD's shall be compatible for playback with any standard DVD-R or DVD+R player.

PART 3 – EXECUTION

3.1 EQUIPMENT

- A. All equipment, accessories, materials, and labor to perform this service shall be furnished by the CONTRACTOR or professional videographer.
- B. The total audio-video recording system and the procedures employed in its use shall be such as to produce a finished product that will fulfill the technical requirements of the Project as well as those more subjective requirements of high quality audio and video production. The video portion of the recording shall reproduce bright, sharp, clear pictures with accurate colors and shall be free from distortion, or any other form of picture imperfection. The audio portion of the recording shall reproduce the commentary of the camera operator with proper volume, clarity and be free from distortion.
- C. When conventional wheeled vehicles are used, the distance from the camera lens to the ground shall not be more than ten feet (10'). In some instances, audio-video recording coverage may be required in areas not accessible by conventional wheeled vehicles. Such coverage shall be obtained by walking or special conveyance approved by the CITY.
- D. The color video camera used in the recording system shall record the color signal with a minimum horizontal resolution of 350 lines, a luminesce signal to noise ratio of 45 dB, and a minimum illumination requirement of 25-foot candles.

3.2 RECORDED INFORMATION - AUDIO

- A. Each DVD shall begin with the current date, project name and be followed by the general location, i.e., viewing side and direction of progress. The audio tract shall consist of an original live recording. The recording shall contain the narrative commentary of the videographer, recorded simultaneously with its fixed elevation video record of the zone of influence of construction.
- B. The CITY reserves the right to supplement the audio portion of the recording as deemed necessary. A representative of the CITY shall be selected to provide such narrative.

3.3 RECORDED INFORMATION - VIDEO

- A. All video recordings shall, by electronic means, display on the screen the time of day, the month, day and year of the recording. This time and date information must be continuously and simultaneously generated with the actual recording.
- B. All DVD's and their storage cases shall be identified by DVD index number, project title, and general project location. Each DVD shall have a log of that recording's contents displayed on the storage case of each DVD. The log shall describe the various segments of coverage contained on that DVD in terms of the names of streets or easements, coverage beginning and end, directions of coverage, video unit counter numbers, engineering stationing numbers and the date.

3.4 LIGHTING

- A. All recordings shall be done during times of good visibility. No recording shall be done during precipitation, mist or fog. The recording shall only be done when sufficient sunlight is present to properly illuminate the subjects of recording and to produce bright, sharp video recordings of those subjects.

3.5 SPEED OF TRAVEL

- A. The rate of speed in the general direction of travel of the vehicle used during taping shall not exceed 440 feet per minute (5 mph). Panning, zoom-in and zoom-out rates shall be sufficiently controlled to maintain a clear view of the object.

3.6 AREA OF COVERAGE

- A. Recordings shall include all surface features located within the zone of influence of construction supported by appropriate audio coverage. Such coverage shall include, but not be limited to, existing driveways, sidewalks, curbs, pavements, ditches, mailboxes, landscaping, culverts, buildings, vaults, concrete pads, fences, signs, and headwalls within the area covered.

END OF SECTION

SECTION 01400
GENERAL QUALITY CONTROL

PART 1 - GENERAL REQUIREMENTS

1.1. SUMMARY

Specific quality control requirements for the work are indicated throughout the contract documents. The requirements of this section are primarily related to the performance of the work beyond the furnishing of manufactured products. The term "Quality Control" includes, but is not necessarily limited to inspection and testing and associated requirements. This section does not specify or modify the CITY's duties relating to quality review and Contract surveillance.

1.2 TESTING LABORATORY SERVICES

1. Arrangements for testing laboratory services will be made by CONTRACTOR. Payment for testing to show compliance with specified requirements will be paid for by CONTRACTOR. CONTRACTOR shall provide and pay for all primary Quality Control per Spec 105 of the July 2018 FDOT Standard Specifications for Road and Bridge Construction. OWNER will provide and pay for all Verification Testing." The cost of retesting when materials and workmanship fail to meet specified requirements will be deducted from monies due CONTRACTOR.

1.3 LABORATORY STANDARDS

Testing laboratories shall conform to the applicable requirements of ASTM E329-77 (Latest Edition) STANDARD RECOMMENDED PRACTICE FOR INSPECTION AND TESTING AGENCIES FOR CONCRETE, STEEL AND BITUMINOUS MATERIALS AS USED IN CONSTRUCTION and shall be inspected and approved by the ELF/FC&PA Joint Technical Committee, Inc., or by an equivalent recognized national authority.

Agents of testing laboratories performing field sampling and field testing of concrete shall be certified by the American Concrete Institute as Concrete Field Testing Technicians Grade 1 or by an equivalent recognized national authority for an equivalent level of competence, or shall be licensed Professional Engineers.

1.4 ACCESS FOR INSPECTION

OWNER, ENGINEER and their authorized representatives shall be permitted free access to every reasonable facility for the inspection of all Work, materials and equipment. OWNER and his authorized representatives shall also be permitted to inspect payrolls, invoices for materials and equipment and other relevant data and records.

Authorized representatives of Federal, State or local agencies shall be permitted access to inspect for compliance with applicable laws, regulations and permit requirements.

On projects where Federal or State agency funding is used, authorized representatives of those agencies shall be permitted to inspect all work, materials, equipment, payrolls, records of personnel, invoices for materials and equipment and other relevant data and records.

1.5 INSPECTION OF WORK AWAY FROM SITE

When work to be done away from the construction site is to be inspected on behalf of OWNER during its fabrication, manufacture or testing or before shipment, CONTRACTOR shall give notice to ENGINEER of the time and place where such fabrication, manufacturing, testing or shipping is to be done. Such notice shall be in writing and delivered to ENGINEER in ample time so that the necessary arrangements for the inspection can be made.

1.6 RESPONSIBILITY FOR INSPECTIONS AND TESTS

- A. The CONTRACTOR will employ and pay for the services of independent testing laboratories to perform required onsite inspections, sampling and tests to include but not be limited to soil density, asphalt density and / or stability, road base and sub grade compaction, stability, etc.
- B. No failure of test agencies, whether engaged by the CITY or CONTRACTOR, to perform adequate inspections of tests or to properly analyze or report results, shall relieve the CONTRACTOR of responsibility for the fulfillment of the requirements of the contract documents. It is recognized that the required inspection and testing program is intended to assist the CONTRACTOR, CITY and governing authorities in the determination of probable compliance with requirements for certain crucial elements of work. The program is not intended to limit the CONTRACTOR in his regular quality control program, as needed for general assurance of compliance.
- C. The CONTRACTOR is responsible for providing all data required by the CITY to ensure that the construction materials and equipment used are in compliance with the contract bid documents and subsequent changes.

1.7 QUALITY ASSURANCE

General Workmanship Standards: It is a requirement that each category of management, tradesman or installer performing the work be prequalified, to the extent of being familiar with the applicable and recognized quality standards for his category of work, and being capable of workmanship complying with those standards. All errors, omissions or

ambiguities that will materially affect the work shall be brought to the CITY's attention as soon as they are discovered.

PART 2 – PRODUCTS

(Not Applicable—see General Conditions)

PART 3 - EXECUTION

3.1 SUBMITTALS - (Not Applicable—see General Conditions)

3.2 LABORATORY STANDARDS

- A. Testing laboratories shall conform to the applicable requirements of ASTM E329-77 (Latest Edition) STANDARD RECOMMENDED PRACTICE FOR INSPECTION AND TESTING AGENCIES FOR CONCRETE, STEEL AND BITUMINOUS MATERIALS AS USED IN CONSTRUCTION and shall be inspected and approved by the ELF/FC&PA Joint Technical Committee, Inc., or by an equivalent recognized national authority.
- B. Agents of testing laboratories performing field sampling and field testing of concrete shall be certified by the American Concrete Institute as Concrete Field Testing Technicians Grade 1 or by an equivalent recognized national authority, or shall be licensed Professional Engineer.

3.3 ACCESS FOR INSPECTION

CITY/ ENGINEER and their authorized representatives shall be permitted free access and every reasonable facility for the inspection of all work, materials and equipment. CITY and his authorized representatives shall also be permitted to inspect payrolls, invoices for materials and equipment. CITY and authorized representatives shall also be permitted to inspect payrolls, invoices for materials and equipment and other relevant data and records. Authorized representatives of Federal, State or local agencies shall be permitted access to inspect for compliance with applicable laws, regulations and permit requirements. On projects where Federal or State agency funding is used, authorized representatives of those agencies shall be permitted to inspect all work, materials, equipment, payrolls, records of personnel, invoices for materials and equipment and other relevant data and records.

3.4 PRODUCT DELIVERY-STORAGE HANDLING

CONTRACTOR shall handle, store and protect new and salvaged project materials and products, including fabricated components, by methods and means which will prevent damage, deterioration and losses (and resulting delays), thereby ensuring highest quality results as the performance of the work progresses. Control delivery schedules so as to minimize unnecessary long-term storage at the project site prior to installation.

3.5 PREPARATION FOR INSTALLATION

- A. Pre-Installation Conferences: Well in advance of the installation of every major unit of work which requires coordination with other work, meet at the project site with installers and representatives of manufacturers and fabricators, utility owners and facility owners who are involved in or affected by the unit of work, and in its coordination or integration with other work which has preceded or will follow. Advise the CITY of scheduled meeting dates. At each meeting review the progress of other work and preparations for the particular work under consideration, including the requirements of the contract documents, options, related change orders, purchases, deliveries, shop drawings, product data, quality control samples, possible conflicts, compatibility problems, time schedules, weather limitations, temporary facilities, space and access limitations, structural limitations, governing regulations, safety, inspection and testing requirements, required performance results, recording requirements, and protection. Record the significant discussions of each conference, and the agreements and disagreements, along with the final plan of action. Distribute record of meeting promptly to everyone concerned, including the CITY.
- B. Do not proceed with the work if the associated pre-installation conference cannot be concluded successfully, investigate actions to resolve impediments to the performance of the work, and reconvene the conference at the earliest date feasible.
- C. Installer's Inspection of Conditions; Require the Installer of each major unit of work to inspect the substrate to receive the work, and the conditions under which the work will be performed, and to report (in writing to the CONTRACTOR and CITY) unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.6 COORDINATION OF TEST AGENCY WORK

- A. Afford access and reasonable time in the construction sequence for CITY's inspections and tests to be performed. Cooperate with agencies and provide incidental labor and services needed for the removal and delivery of test samples, and for inspections and taking measurements. Provide patching and restoration services where test samples have been removed. Test agencies, regardless of whether engaged by the CITY or CONTRACTOR, are not authorized to change or negate the requirements of the contract documents. Each agency shall coordinate its assigned work with the construction schedule as maintained by the CONTRACTOR, and shall perform its work promptly so as not to delay the work avoidably. observances (by agencies) having a bearing on the work shall be

reported to the CITY, in the most expeditious way possible, and shall be recorded in writing by the agency. Test agency personnel shall not interfere with or assume the duties of the CONTRACTOR.

3.7 INSTALLATION QUALITY CONTROL

- A. Manufacturer's Instructions: Where installations include manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in the contract documents.
- B. Inspect each item of materials or equipment immediately prior to installation, and reject damaged and defective items.
- C. Recheck measurements and dimensions of work, as an integral step of starting each installation.
- D. Install work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure the best possible results for each unit of work, in coordination with the entire work. Isolate each unit of work from non-compatible work, as required to prevent deterioration.

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL REQUIREMENTS

1.1 DESCRIPTION OF REQUIREMENTS

This section specifies the minimum requirements for temporary facilities, utilities to be brought to the site, and control required to enable the construction of the project to progress adequately. The providing of adequate facilities at every stage of performing the work is the CONTRACTOR'S sole responsibility, and is not limited by the requirements of this section.

Except as otherwise indicated, the CONTRACTOR may, at his option, provide stand-alone utility plants to provide needed services, in lieu of connected services from available public utilities, provided such stand-alone plant facilities comply with governing regulations. Prior to availability of temporary utility services, provide trucked-in/trucked-out containerized or unitized services for start-up of construction operations at the site.

Except as otherwise indicated, the costs of providing and using temporary utility services shall be included in the Contract Sum.

1.2 TEMPORARY FACILITIES

The types of utility services required for general temporary use at the project site include the following (other specific services may be required for specific construction methods or operations):

- Electrical Power Service
- Water Service (potable for certain uses)
- Sanitary
- Storm Sewer or Open Drainage/Run-off Control
- Gas (fuel) Service
- Telephone Service

Temporary Electricity. The CONTRACTOR shall provide for a temporary power source for his use during construction and arrange for modification of the permanent power supply by the power company as required. The permanent power supply service will remain as the Owner's account throughout the project.

Temporary Water. The CONTRACTOR shall make all necessary application and arrangements, and pay all fees and charges for water necessary for the proper completion of the project up to the time of final acceptance. The CONTRACTOR shall provide and pay for any temporary piping and connections.

Temporary Sanitary Facilities. The CONTRACTOR shall provide adequate sanitary facilities for the use of those employed on the work. Such facilities shall be made available when the first employees arrive on the site of the work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the work in suitable numbers and at such points and in such manner as may be required or approved.

The CONTRACTOR shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the work, on the lands of the OWNER, or on adjacent property.

Termination and Removal. At the time the need for temporary utility service or a substantial portion thereof has ended, or when its service has been replaced by use of permanent services, or not later than the time of substantial completion, promptly remove the installation unless requested by the ENGINEER to retain it for a longer period. Complete and restore work, which may have been delayed or affected by the installation and use of the temporary utility, including repairs to construction and grades and restoration and cleaning of exposed surfaces. Replace work damaged beyond acceptable restoration.

1.3 TEMPORARY CONTROLS

Noise Control. The CONTRACTOR shall provide adequate protection against objectionable noise levels caused by the operation of construction equipment.

Dust Control. The CONTRACTOR shall provide for adequate protection against raising objectionable dust clouds caused by moving construction equipment, high winds or any other cause.

Water Control. The CONTRACTOR shall provide for satisfactory disposal of surplus water and shall submit a plan to the ENGINEER for his review prior to initiation and implementation of the plan. Prior approval shall be obtained from the proper authorities for the use of public or private lands or facilities for such disposal. CONTRACTOR shall be responsible for obtaining and complying with the requirements of any dewatering or consumptive use permits required by regulatory authorities.

Pollution Control. The CONTRACTOR shall provide for adequate protection against polluting any public or private lands, lakes, ponds, rivers, streams, creeks, and other such areas, by the disposal of surplus material in the form of solids, liquids, or gases or from any other cause.

The CONTRACTOR shall evaluate and assess the impact of any adverse effects on the natural environment which may result from construction operations and shall operate to minimize pollution of air, ground or surface waters vegetation, and afford the neighboring

community the maximum protection during and up to completion of the construction project.

The CONTRACTOR shall take sufficient precautions to prevent pollution of streams, lakes and reservoirs with fuels, oils, bitumens, calcium chloride or other harmful materials. He shall conduct and schedule his operations so as to avoid or otherwise prevent pollution of siltation of streams, lakes and reservoirs and to avoid interference with movement of migratory fish.

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

Erosion Control. The CONTRACTOR shall not expose, by construction operations, a larger area of erosive land at any one time than the minimum necessary for efficient construction operations, and the duration of exposure of the uncompleted construction to the elements shall be as short as practicable.

Erosion control features shall be constructed concurrently with other work and at the earliest practicable time.

Paint Splatter Control. The CONTRACTOR shall take precautions necessary to prevent paint splatter and wind-blown splatter from falling on adjacent buildings, vehicles and vehicular traffic and shall be solely responsible for any damage resulting from the work.

Sandblasting, Dust & Debris Control. The CONTRACTOR shall provide for adequate protection of the work area to prevent nuisance and damage to adjacent properties and vehicular traffic from cleaning and sandblasting debris and shall be solely responsible for any damage therefrom.

1.4 STORAGE FACILITIES

All products, materials and equipment shall be stored in accordance with the manufacturer's instructions, with seals and labels intact and legible. Products subject to damage by the elements shall be stored in weathertight enclosures. Temperature and humidity shall be maintained within the ranges required by the manufacturer's instructions. Fabricated products shall be stored above the ground on blocking or skids. Products, which are subject to deterioration, shall be covered with impervious coatings with adequate ventilation to avoid condensation. Loose granular materials shall be stored in a well-drained area on solid surfaces to prevent mixing with foreign matter. Any products, which will come in contact with potable water, shall be stored off the ground so as to prevent contamination.

The City will refuse to accept, or sample for testing, materials, supplies or equipment that have been improperly stored, as determined by the City. Materials found unfit for use shall not be incorporated in the work and shall immediately be removed from the construction or storage site. Delivered materials shall be stored in a manner acceptable to the City before any payment for same will be made.

Storage shall be arranged in such a manner to provide easy access for inspection. Periodic inspections shall be made of all stored products to assure that they are maintained under specified conditions, and free from damage or deterioration.

After installation, CONTRACTOR shall provide substantial coverings as necessary to installed products to protect from damage from traffic and subsequent construction operations. Coverings shall be removed when no longer needed.

1.5 QUALITY ASSURANCE:

Regulations: Comply with governing regulations and utility company regulations and recommendations for the construction of temporary utility services; including (but not necessarily limited to) code compliance, permits, inspections, testing, and health and safety compliance.

Comply with pollution and environmental protection regulations for the use of water and other services, and for the discharge of wastes and stormwater drainage from the project site. Comply with whatever "Environmental Impact" commitments may have been made by the owner or previous owners of the site in securing approval to proceed with the construction of the project.

Contractor must control turbidity in rivers or canals so that it does not exceed established background turbidity by more than 50 Jackson Units at a distance greater than 100 feet from the point of work. This shall be done by the use of a "diaper" or screen suspended by floats or other methods approved by the Project Representative.

Standards: Comply with the "Manual of Accident Prevention in Construction" by AGC. Comply with NFPA Code 241 "Building Construction and Demolition Operations".

1.6 OPERATIONS AND TERMINATIONS:

Inspections: Prior to placing temporary utility services into use, inspect and test each service and arrange for governing authorities required inspection and tests, and obtain required certifications and permits for use thereof.

Supervision: Enforce strict discipline in the use of utility services. Limit availability to essential uses, so as to minimize wastes. Do not allow the installations to be abused or endangered.

Protection: Prevent water-filled piping from freezing, by ground cover or insulation or by keeping drained, or by temporary heating. Maintain distinct markers for underground lines, and protect from damage during excavating operations.

The Contractor shall provide adequate signs, barricades, flashing lights, flagmen and watchmen and take all necessary precautions for the protection of the work and the safety of the public. Traffic control warning signs and barricades shall be in strict accordance with the provisions of the Florida Department of Transportation, Manual on Traffic Controls and Safe Practices for Street and Highway Construction, Maintenance and Utility operations, latest revision. All barricades and obstructions shall be protected at night by flashing signal lights which shall be kept burning from sunset to sunrise. Barricades shall be of substantial construction and suitable for night visibility. Suitable warning signs shall be so placed and illuminated at night as to show in advance where construction, barricades, or detours exist.

The Contractor shall at all times so conduct his work as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work, and to insure the protection of persons and property, in a manner satisfactory to the City. No road or street shall be closed to the public, except with the permission of the City and proper governmental authority. Fire hydrants on or adjacent to the work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to insure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches, and irrigation ditches.

Preservation: Preserve from damage all property along the line of the work, or which is in the vicinity of or is in any way affected by the work, the removal or destruction of which is not called for by the plans. Wherever such property is damaged due to the activities of the Contractor, it shall be immediately restored to its original condition by the Contractor at no cost to the Owner.

In case of failure on the part of the Contractor to restore such property, or make good such damage or injury, the owner may, after 48 hours notice to the Contractor, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary, and the cost thereof will be deducted from any moneys due or which may become due the Contractor under this Contract.

The Contractor shall be responsible for the protection of property, in the areas in the vicinity of the project; and for the protection of his equipment, supplies, materials and work, against any damage resulting from the elements, such as flooding, by rainstorm, wind damage, or other elemental cause resulting from the project configuration. The Contractor shall take all precautions against any such damage occurrence, and shall be responsible for damage resulting from same. The Contractor shall provide adequate drainage facilities, tie-downs, or other protection, throughout the Contract period, for the protection of his, the owner's and other properties from such damage.

Termination and Removal: At the time the need for a temporary utility service or a substantial portion thereof has ended, or when its service has been replaced by use of permanent services, or not later than the time of substantial completion, promptly remove the installation unless requested by the City to retain it for a longer period. Complete and restore work, which may have been delayed or affected by the installation and use of the temporary utility, including repairs to construction and grades and restoration and cleaning of exposed surfaces. Replace work damaged beyond acceptable restoration.

1.7 PRESERVATION OF PROPERTY

Preserve from damage all property along the line of the work, or which is in the vicinity of or in any wise affected by the work, the removal or destruction of which is not called for by the plans. Wherever such property is damaged due to the activities of the CONTRACTOR, it shall be immediately restored to its original condition by the CONTRACTOR at no cost to the OWNER.

In case of failure on the part of the CONTRACTOR to restore such property, or make good such damage or injury, the OWNER may, after 48 hours' notice to the CONTRACTOR, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary and the cost thereof will be deducted from any monies due or which may become due the CONTRACTOR under this Contract.

The CONTRACTOR shall be responsible for the protection of property, in the areas in the vicinity of the project; and for the protection of his equipment, supplies, materials and work, against any damage resulting from the elements, such as flooding, by rainstorm, wind damage, or other elemental cause resulting from the project configuration. The CONTRACTOR shall take all precautions against any such damage occurrence, and shall be responsible for damage resulting from same. The CONTRACTOR shall provide adequate drainage facilities, tie-downs, or other protection, throughout the Contract period, for the protection of his, the OWNER'S, and other properties from such damage.

1.8 TRAFFIC REGULATION

Signs, marking barricades and procedures shall conform to the requirements of the Florida Department of Transportation Manual on Traffic Controls and Safe Practices for Street and Highway Construction, Maintenance and Utility Operations.

The CONTRACTOR shall provide and maintain adequate barricades, construction signs, torches, flashers, guards and flagmen as required in pedestrian and vehicular traffic areas. Regulations of local authorities shall be complied with.

The CONTRACTOR shall provide suitable crossings at street intersections and driveways, and supply such aid as may be required for pedestrians and motorists, including delivery vehicles, to safely negotiate the construction areas. "Street Closed to Through Traffic" signs

and "Detour" routes shall be indicated and maintained by the CONTRACTOR when the job is located in a public or private street or way.

The CONTRACTOR shall carry on the work in a manner that will cause the least interruption in traffic. Closing to through travel of more than two consecutive blocks, including the cross street intersected will not be permitted without specific authorization of the local street department. Where traffic must cross open trenches, the CONTRACTOR shall provide suitable bridges at street intersections and driveways and provide adequate ingress and egress to dwellings, business facilities, utilities and services. At any time that streets are required to be closed, the CONTRACTOR shall notify law enforcement agencies, fire departments, and parties operating emergency vehicles before the street is closed and again as soon as it is opened. Access to fire hydrants and other fire extinguishing equipment shall be provided and maintained at all times.

On completion of work, the CONTRACTOR shall remove all debris, excess materials, barricades and temporary work leaving walkways and road clear of obstructions.

Detour routes for the diverting of traffic from the Work Area are limited in the Project Area. The Project Area may be marked "ROAD CLOSED AHEAD - LOCAL TRAFFIC ONLY" to discourage through traffic from using the route. Short areas where work is underway may be closed to traffic, provided detour routes are marked to guide the public around the work area. Where detour routes are not available, flagmen shall be provided to direct one-way traffic through the construction area.

END OF SECTION

SECTION 01541
PROTECTION OF THE WORK AND PROPERTY PART

1 – GENERAL REQUIREMENTS

1.1 GENERAL

- A. CONTRACTOR shall be responsible for taking all precautions, providing all programs, and taking all actions necessary to protect the Work and all public and private property and facilities from damage as specified in the General Conditions and herein.
- B. In order to prevent damage, injury or loss, CONTRACTOR'S actions shall include, but not be limited to, the following:
 - 1. Store apparatus, materials, supplies, and equipment in an orderly, safe manner that will not unduly interfere with the progress of the Work or the Work of any other CONTRACTOR or utility service company.
 - 2. Provide suitable storage facilities for all materials which are subject to injury by exposure to weather, theft, breakage, or otherwise.
 - 3. Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.
 - 4. Clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the Work shall present a safe, orderly and workmanlike appearance.
 - 5. Provide barricades and guard rails around openings, for scaffolding, for temporary stairs and ramps, around excavations, elevated walkways and other hazardous areas.
- C. CONTRACTOR shall not, except after written consent from proper parties, enter or occupy privately-owned land with men, tools, materials or equipment, except on easements provided herein.
- D. CONTRACTOR shall assume full responsibility for the preservation of all public and private property or facility on or adjacent to the site. If any direct or indirect damage is done by or on account of any act, omission, neglect or misconduct in the execution of the Work by the CONTRACTOR, it shall be restored by the CONTRACTOR, at his expense, to a condition equal to that existing before the damage was done.

1.2 BARRICADES AND WARNING SIGNALS

- A. Where Work is performed on or adjacent to any roadway, right-of- way, or public place, CONTRACTOR shall provide barricades, fences, lights, warning signs, danger signals, watchmen, and shall take other precautionary measures for the protection of persons or property and of the Work. Barricades shall be painted to be visible at night.

From sunset to sunrise, CONTRACTOR shall furnish and maintain at least one light at each barricade. Sufficient barricades shall be erected to keep vehicles from being driven on or into Work under construction. CONTRACTOR shall furnish watchmen in sufficient numbers to protect the Work. CONTRACTOR'S responsibility for the maintenance of barricades, signs, lights, and for providing watchmen shall continue until the Project is accepted by OWNER.

1.3 TREE AND PLANT PROTECTION

- A. CONTRACTOR shall protect existing trees, shrubs and plants on or adjacent to the site that are shown or designated to remain in place against unnecessary cutting, breaking or skinning of trunk, branches, bark or roots.
- B. Materials or equipment shall not be stored or parked within the drip line.
- C. Temporary fences or barricades shall be installed to protect trees and plants in areas subject to traffic.
- D. Fires shall not be permitted under or adjacent to trees and plants.
- E. Within the limits of the Work, water trees and plants that are to remain, in order to maintain their health during construction operations.
- F. Cover all exposed roots with burlap that shall be kept continuously wet. Cover all exposed roots with earth as soon as possible. Protect root systems from mechanical damage and damage by erosion, flooding, run-off or noxious materials in solution.
- G. If branches or trunks are damaged, prune branches immediately and protect the cut or damaged areas with emulsified asphalt compounded specifically for horticultural use in a manner approved by the ENGINEER.
- H. All damaged trees and plants that die or suffer permanent injury shall be removed when ordered by the ENGINEER and replaced by a specimen of equal or better quality.
- I. Coordinate Work in this Section with requirements of other sections herein.

1.4 PROTECTION OF EXISTING STRUCTURES

- A. Underground Structures:
 - 1. Underground structures are defined to include, but not be limited to, all sewer, water, gas, and other piping, and manholes, chambers, electrical conduits, tunnels and other existing subsurface work located within or adjacent to the limits of the Work.

2. All underground structures known to ENGINEER except water, sewer, electric, and telephone service connections are shown. This information is shown for the assistance of CONTRACTOR in accordance with the best information available, but is not guaranteed to be correct or complete.
3. CONTRACTOR shall explore ahead of his trenching and excavation Work and shall uncover all obstructing underground structures sufficiently to determine their location, to prevent damage to them and to prevent interruption to the services which such structures provide. If CONTRACTOR damages an underground structure, he shall restore it to original condition at his expense.
4. Necessary changes in the location of the Work may be made by ENGINEER, to avoid unanticipated underground structures.
5. If permanent relocation of an underground structure or other subsurface facility is required and is not otherwise provided for in the Contract Documents, ENGINEER will direct CONTRACTOR in writing to perform the Work, which shall be paid for under the provisions of Article 11 of the General Conditions.

B. Surface Structures:

1. Surface structures are defined as all existing buildings, structures and other facilities above the ground surface. Included with such structures are their foundations or any extension below the surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks and all other facilities that are visible above the ground surface.

C. Protection of Underground and Surface Structures:

1. CONTRACTOR shall sustain in their places and protect from direct or indirect injury all underground and surface structures located within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure. Before proceeding with the work of sustaining and supporting such structure, CONTRACTOR shall satisfy the ENGINEER that the methods and procedures to be used have been approved by the party owning same.
2. CONTRACTOR shall assume all risks attending the presence or proximity of all underground and surface structures within or adjacent to the limits of the Work. CONTRACTOR shall be responsible for all damage and expense for direct or indirect injury caused by his Work to any structure. CONTRACTOR shall repair immediately all damage caused by his work, to the satisfaction of the OWNER of the damaged structure.

- D. All other existing surface facilities, including but not limited to, guard rails, posts, guard cables, signs, poles, markers, and curbs which are temporarily removed to

facilitate installation of the Work shall be replaced and restored to their original condition at CONTRACTOR'S expense.

1.5 PROTECTION OF FLOORS AND ROOFS

- A. CONTRACTOR shall protect floors and roofs during entire construction period.
- B. Proper protective covering shall be used when moving heavy equipment, handling materials or other loads, when painting, handling mortar and grout and when cleaning walls and ceilings.
- C. Use metal pans to collect all oil and cuttings from pipe, conduit, or rod threading machines and under all metal cutting machines.
- D. Concrete floors less than 28 days old shall not be loaded without written permission of the ENGINEER. No floor, roof or slab shall be loaded in excess of its design loading.
- E. Roofs shall not be loaded without written permission of the ENGINEER.
- F. CONTRACTOR shall restrict access to roofs and keep clear of existing roofs except as required by the new Work.
- G. If access to roofs is required, roofing, parapets, openings and all other construction on or adjacent to roof shall be protected with suitable plywood or other approved means.

1.6 PROTECTION OF INSTALLED PRODUCTS AND LANDSCAPING

- A. Provide protection of installed products to prevent damage from subsequent operations. Remove protection facilities when no longer needed, prior to completion of Work.
- B. Control traffic to prevent damage to equipment, materials and surfaces.
- C. Provide coverings to protect equipment and materials from damage.
 - 1. Cover projections, wall corners, and jambs, sills and soffits of openings, in areas used for traffic and for passage of products in subsequent work.

1.7 PROTECTION OF INSTALLED IMPROVEMENTS

- A. Provide protection of installed improvements to prevent damage. Remove protection when no longer needed, with CITY concurrence, prior to completion of work.
- B. Control construction traffic to prevent damage to equipment, materials and surfaces.

1.8 PROTECTION AGAINST VADALISM

- A. CONTRACTOR shall protect against vandalism and repair, or remove and replace, any vandalized property as required by the CITY.

END OF SECTION

SECTION 01568
EROSION AND SEDIMENTATION CONTROL

PART 1 – GENERAL REQUIREMENTS

1.1 SUMMARY

- A. This Section sets forth the requirements for the control and containment and general prevention of pollution by erosion and sediment resulting from the project work in compliance with environmental regulations of the City, County, Department of Environmental Protection and United States Environmental Protection Agency.
- B. It shall be the CONTRACTOR's responsibility to provide, construct and maintain all sediment and erosion control devices. The CITY shall not be tasked with advising the CONTRACTOR of compliance. However, should the CITY believe the Erosion and Sedimentation Control Plan proposed or installed by the CONTRACTOR to be inadequate, the CITY will send a certified letter to the CONTRACTOR warning the CONTRACTOR of potential environmental concerns. Should the Department of Environmental Protection conduct a field inspection and the CITY be put on notice regarding sediment and erosion controls or pollution condition caused by the project work the CITY will order the project closed until the condition is remediated and sediment and erosion controls are functioning properly.

1.2 SUBMITTALS

- A. CONTRACTOR shall upon request at the Pre-construction meeting submit evidence of an Erosion and Sedimentation Control Plan in accordance with NPDES criteria, prepared by an FDEP certified Stormwater Management Inspector, to the CITY for record prior to beginning work. Each month a record of erosion control measures in place during the previous month will be provided.
 - 1. Should the CITY receive a warning letter from the Department of Environmental Protection, the CITY/ENGINEER will move to issue a Stop Work Order until the Department of Environmental Protection representative has re-inspected the work conditions and given a statement that the project now appears to be in compliance with Chapter 373 of the Florida Statutes and no additional work days will be allowed.
 - 2. The CONTRACTOR shall submit to the CITY in writing the plan of action to prevent erosion and sedimentation problems cited during the project duration.

PART 2 – PRODUCTS

(Not Applicable, See General Conditions)

PART 3 – EXECUTION

3.1 GENERAL

- A. CONTRACTOR shall not start work until erosion and sediment control measures are fully in place to prevent pollution of air, water and adjacent property. It shall be the CONTRACTOR's responsibility to provide, construct and maintain all sediment and erosion control devices. The CONTRACTOR shall have an FDEP Certified Stormwater Management Inspector onsite to supervise installation and maintenance of all erosion and sedimentation controls. Best Management Practices shall be used where directed by the CITY.
- B. The CITY shall not be tasked with advising the CONTRACTOR of compliance, but should the CITY believe the Erosion and Sedimentation Control Plan proposed or installed by the CONTRACTOR to be inadequate the CITY will send a certified letter to the CONTRACTOR warning the CONTRACTOR of potential environmental concern. Should the Department of Environmental Protection conduct a field inspection and the CITY be put on notice, the CITY will order the project closed until the erosion and sedimentation control devices are all in place and functioning properly.
- C. Two (2) primary types of silt barriers may be installed in accordance with an action plan prepared by the CONTRACTOR and as noted on the plans; silt barriers installed on the ground, and floating silt-barriers.
- D. Silt barriers (filter fabric) shall be synthetic and contain ultraviolet ray inhibitors and stabilizers.
- E. Hay bales shall not be used for silt barriers, unless maintained during rain events. F. Silt barriers shall be maintained in place until all risk of erosion has passed.
- G. Sandbagging shall consist of furnishing and placing sandbags in a configuration that prevents or contains erosion.
- H. Sediment basins shall be constructed as necessary to prevent erosion from leaving the project limits.
- I. Berms may be constructed to divert the flow of water from causing erosion.
- J. Temporary grassing, chemical soil stabilizers or non-erodible coverings will be required to prevent erosion from soil surfaces with an anticipated unprotected exposure to sun and wind of more than 30 days.

3.2 CONTROL OF CONTRACTOR'S OPERATIONS

- A. In the event that it is necessary that the construction operations be suspended due to major storm events, the CONTRACTOR shall use due care secure the construction zone and do everything possible to prevent erosion at the same time preventing flooding of adjacent properties. Should such preventative measures fail, CONTRACTOR shall immediately take all action as necessary to effectively remediate erosion and sedimentation damage. Should the CITY be ordered by the Department of Environmental Protection to upgrade erosion control immediately after the major storm event the CONTRACTOR shall contact the CITY for further consideration of available options.

END OF SECTION

SECTION 01570
TRAFFIC CONTROL

PART 1 – GENERAL REQUIREMENTS

1.1 SUMMARY

- A. The work in this section includes the coordination, implementation and operation of a maintenance of traffic plan, in accordance with the construction plans and permits, that provides for the safe execution of the work and the safety of the public while maintaining property access and an effective flow of pedestrian and vehicular traffic.

1.2 SUBMITTALS

- A. The CONTRACTOR shall submit three maintenance of traffic plan sets complying with the M.U.T.C.D., Part IV and the Florida Department of Transportation (FDOT) Roadway and Traffic Design Standards, latest edition, Index No. 600 series as a Pre-Construction Submittal. The Plan must provide for the maintenance of vehicular and pedestrian traffic, including public safety and driveway access to properties on all roads and streets during the prosecution of the Work. The CITY shall have the right at any time to require revisions to the Plan and to require CONTRACTOR to take additional steps not reflected on the approved Plan, in order to ensure maintenance of vehicular and pedestrian flow and provide protection against damage to access routes and haul routes.

PART 2 – PRODUCTS

(Not Applicable, See General Conditions)

PART 3 – EXECUTION

3.1 TRAFFIC CONTROL

- A. The CONTRACTOR shall be responsible for the implementation of the maintenance of traffic plan. Vehicular and pedestrian traffic including access to businesses and other properties shall be maintained on all roads and streets.
- B. The CONTRACTOR shall coordinate with the CITY's Project Manager and Traffic Operations Manager in preparing the maintenance of traffic plan.
- C. The CONTRACTOR shall provide a Worksite Traffic Supervisor for the duration of the project, to supervise the implementation of the plan. The Supervisor must be trained and certified by a Florida Department of Transportation approved

traffic safety education provider. Contact information shall be provided at the Pre-Construction meeting.

- D. It shall be the CONTRACTOR's responsibility to restore work site access routes and material haul routes to their pre-construction condition when damages result from the CONTRACTOR's activities.
- E. The CONTRACTOR shall comply with the requirements and permits of the respective right of way owners while working within their right of ways.

END OF SECTION

SECTION 01600
MATERIALS AND EQUIPMENT PART

1 - GENERAL REQUIREMENTS

1.1 DESCRIPTION OF REQUIREMENTS

Materials and equipment furnished by CONTRACTOR shall be new and shall not have been in service at any other installation unless otherwise provided. Materials and equipment shall conform to applicable specifications and standards and comply with the size, make, type and quality specified, or as specifically approved in writing by ENGINEER.

Manufactured and fabricated items shall be designed, fabricated and assembled in accordance with the best engineering and shop practices. Like parts of duplicate units shall be manufactured to standard sizes and gages to be interchangeable.

Two or more things of the same kind shall be identical, by the same manufacturer. Materials and equipment shall be suitable for service conditions shown or specified. Equipment which requires auxiliary devices or equipment in order to operate properly shall have such auxiliary devices or equipment included as a part of its system.

Equipment sizes, capacities and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.

Materials and equipment shall not be used for any purpose other than that for which it is designed or is specified.

Where existing materials or equipment is specifically shown or specified to be reused in the work, special care shall be used in removal, handling, storage, and reinstallation, to assure proper function in the completed work.

CONTRACTOR shall arrange for transportation, storage and handling of products which require off-site storage, restoration or renovation.

Manufacturer's Instructions. The installation of all work shall comply with manufacturer's written instructions. CONTRACTOR shall obtain and distribute copies of such instructions to parties involved in the installation including two copies to ENGINEER.

One complete set of instructions shall be maintained at the job site during installation and until completion. All products and equipment shall be handled, installed, connected, cleaned, conditioned and adjusted in accordance with the manufacturer's instructions and specified requirements. Should job conditions or specified requirements conflict with manufacturer's instructions, such conflicts shall be called to ENGINEER'S attention for resolution and revised instructions.

Equipment Guarantee. All mechanical and electrical equipment, together with devices of whatever nature and all components, which are furnished and/or installed by CONTRACTOR shall be guaranteed. The guarantee shall be against manufacturing and/or design inadequacies, materials and workmanship, improper assembly, hidden damage, failure of devices and/or components, excessive leakage or other circumstances which would cause the equipment to fail under normal design and/or specific operating conditions for a period of one year or such longer period as may be shown and/or specified from and after the date of acceptance of the equipment by OWNER. Each piece of equipment, device or component which shall fail within the above specified term shall be replaced with reasonable promptness by CONTRACTOR without cost to OWNER.

Operating Characteristics. Rotating machinery shall be designed and fabricated to provide satisfactory operation without excessive wear and without excessive maintenance during its operating life. Rotating parts shall be statically and dynamically balanced and shall operate without excessive vibration.

Lubrication System. The minimum design criteria for lubrication of moving parts of the equipment shall include one week of continuous operation during which no lubricants shall be added to the system. The system shall also be designed to receive lubricants whether in operation or shut down, and shall not leak or waste lubricants under either condition. The manufacturer's recommendations of grade and quality and a supply of the lubricants so recommended in quantities sufficient to conduct startup and testing operations shall be furnished with the equipment.

Safety Requirements. Screens, guards or cages shall be provided for all exposed, rotating or moving parts in accordance with accepted practices of applicable governmental agencies.

Nameplates. Each major component of equipment shall have the manufacturer's name, catalog and/or model number, serial number and applicable performance requirements and characteristics embossed, stamped, or engraved on a stainless steel plate securely attached to the item of equipment.

Anchor Bolts. The manufacturer shall provide stainless steel anchor bolts for each piece of equipment furnished.

1.02 TRANSPORTATION AND HANDLING

Materials and equipment shall be loaded and unloaded by methods affording adequate protection against damage. Every precaution shall be taken to prevent injury to the materials or equipment during transportation and handling. Suitable power equipment will be used and the materials or equipment shall be under control at all times. Under no condition shall the materials or equipment be dropped, bumped or dragged. When a crane is used, a suitable hook or lift sling shall be used. The crane shall be so placed that all lifting is done in a vertical plane. Materials or equipment skid loaded, palletized or handled on skidways shall not be skidded or rolled against materials or equipment already unloaded.

Materials and equipment shall be delivered to the job site by means that will adequately support it and not subject it to undue stresses. Contractor shall promptly inspect the products for damage and defects and conformance with the specification. Materials and equipment damaged or injured in the process of transportation, unloading or handling will be rejected and shall be immediately removed from the site.

END OF SECTION

SECTION 01640
SUBSTITUTIONS AND PRODUCT OPTIONS

PART 1 – GENERAL REQUIREMENTS

1.1 REQUESTS FOR REVIEW

- A. Requests to review substitute items of material and equipment will not be accepted by the ENGINEER from anyone other than the CONTRACTOR. If the CONTRACTOR wishes to furnish or use a substitute or equivalent items of material or equipment, the CONTRACTOR shall make written application to the ENGINEER for acceptance, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equivalent substance to that specified and be suited to the same use and capable of performing the same function as that specified. The application will state whether or not acceptance of the substitute for use in the work will require a change in Drawings or Specifications to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the ENGINEER in evaluating the proposed substitute. The ENGINEER may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute. The ENGINEER will be the sole judge of acceptability, and no substitute will be ordered or installed without the ENGINEER's prior written acceptance. The CITY may require the CONTRACTOR to furnish at the CONTRACTOR's expense, a special performance guarantee of other surety with respect to any substitute.

1.2 SUBSTITUTION AFTER EXECUTION OF AGREEMENT

- A. After execution of the Agreement, substitution of materials or equipment from Suppliers other than those listed or included in the Agreement will be considered only if it is demonstrated by CONTRACTOR that:
1. The material or equipment proposed for substitution is superior in design, construction and/or efficiency to that of the listed manufacturer or supplier;
 2. The material proposed for substitution is in every way equal to that of the listed supplier, and that availability and/or delivery of listed materials within the time frame scheduled cannot be met; or
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3. The material proposed for substitution is in every way equal to that of the listed supplier and is available at a lower cost. In the event such a substitution is allowed, CONTRACTOR shall accept and execute a Change Order reducing the Contract Price by an amount equal to the cost differential.

1.3 ENGINEERS' CHARGES

- A. The Engineers will record time required by the ENGINEER and the ENGINEER'S consultants in evaluating substitutions proposed by the CONTRACTOR and in making changes in the Drawings or Specifications occasioned by the substitution. Whether or not the ENGINEER accepts a proposed substitute, the CONTRACTOR shall reimburse the CITY for the charges of the ENGINEER and the ENGINEER'S consultants for evaluating any proposed substitute.

1.4 EQUIPMENT REQUIRING VARIATION IN SPACE

- A. It is intended that the CONTRACTOR shall furnish equipment which may be installed and shall operate properly in the structures as shown. Should the CONTRACTOR select alternate equipment resulting in an alteration to, addition to, enlargement of, or any other changes from the lines, dimensions, and grades shown, the CONTRACTOR shall make such changes or alterations as are required and no additional payment will be made by the CITY for changes in structures occasioned by the selection of alternate equipment. All such variations shall be subject to review and acceptance by ENGINEER.
- B. Equipment requiring supplemental services in addition to those shown or specified in order to fulfill the operating objectives and including additional mechanisms, operating steps and/or controls as compared with specified equipment will not be acceptable.

END OF SECTION

SECTION 01700
RECORD DOCUMENTS & CLOSEOUT PROCEDURES

PART 1 - GENERAL REQUIREMENTS

1.1 DESCRIPTION OF REQUIREMENTS

Definition. Closeout is defined to include general requirements near end of Contract Time, in preparation for final acceptance, final payment, normal termination of contract, occupancy by OWNER and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in sections of Divisions 2 through 16. Time of closeout is directly related to "Substantial Completion", and therefore may be either a single time period for entire work or a series of time periods for individual parts of the work that have been certified as substantially complete at different dates. That time variation (if any) shall be applicable to other provisions of this section.

1.2 CLOSEOUT SUBMITTALS

When the ENGINEER finds that the work is acceptable under the Contract Documents, he shall request the CONTRACTOR to make closeout submittals.

The CONTRACTOR's closeout submittals shall include:

1. Evidence of compliance with requirements of governing authorities.
2. Project Record Documents. The documents shall be submitted as one set of permanent drawings on mylar base material, and one copy of Autocad drawing files.
3. Tests and Balance Reports
4. Operating and Maintenance Data, Instructions to Owner's Personnel.
5. Warranties and Bonds.
6. Keys and Keying Schedule.
7. Spare Parts and Maintenance Materials.
8. Evidence of Payment and Release of Liens.
9. Certificate of Insurance for Products and Completed Operations.

1.3 RECORD DOCUMENTS

General: The general submittal requirements are indicated in Section 01300. Do not use record documents for construction purposes; protect from deterioration and loss in a secure fire-resistive location; provide access to record documents for the City's inspection during normal working hours.

Record Drawings: Final record drawings are to be prepared and sealed by a registered Land Surveyor and shall comply with this specification and Fla. Administrative Code, Chapter 61G17, "Minimum Technical Standards". The CONTRACTOR is to maintain a record of

new information which is recognized to be of importance to the Owner, but was for some reason not shown on either the contract drawings or shop drawings. Give particular attention to concealed work, which would be difficult to measure and record at a later date. Note related change order numbers where applicable. This information is to be provided to the surveyor for incorporation into the final set of as-built drawings. Record drawings shall be provided in their final form on mylar sheets with electronic disc copy of final record in AutoCadd format version deemed acceptable by The City.

Information to be shown for water mains or re-use mains shall include the location of valves, tees, bends and crosses dimensioned to the baseline survey or monument, including the station and offset. Elevations to top of pipe shall be provided every 100'. For situations where the main is being adjusted to avoid conflicts with other utilities (less than 100' in total length), then elevations shall be provided at the beginning of the deflection (i.e. the first bend), middle of the deflection (i.e. the point where the conflict would have occurred with the utility), and the end of the deflection (i.e. the last bend).

Information to be shown for sanitary sewer wyes shall include the distance to the nearest manhole, length of service line, elevation to the top of the service lateral at the right-of-way, and building number served.

Information to be shown for sanitary sewer force mains shall include the location of valves, tees, bends and crosses dimensioned to the baseline survey or monument, including the station and offset. Elevations to top of pipe shall be provided every 100' minimum. For situations where the force main is being adjusted to avoid conflicts with other utilities (less than 100' in total length), then elevations shall be provided at the beginning of the deflection (i.e. the first bend), middle of the deflection (i.e. the point where the conflict would have occurred with the utility), and the end of the deflection (i.e. the last bend).

The CONTRACTOR will be held responsible for the accuracy of such data and shall bear any costs incurred in finding utilities as a result of incorrect data furnished by the CONTRACTOR.

Documents and samples shall be stored in the CONTRACTOR's field office apart from documents used for construction. The CONTRACTOR shall provide files and racks for storage of documents, and a locked cabinet or secure storage space for storage of samples.

Documents shall be maintained in a clean, dry, legible condition and in good order. Record documents shall not be used for construction purposes.

Each document shall be labeled "PROJECT RECORD" in neat, large printed letters. Information shall be recorded concurrently with construction progress.

No work shall be concealed until required information is recorded.

Specifications and Addenda shall have each section legibly marked to record: manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed; and changes made by Field Order or by Change Order.

At contract closeout Record Documents shall be delivered to the ENGINEER for the OWNER. The submittal shall be accompanied with a transmittal letter in duplicate, containing:

1. Date
2. Project title and number
3. CONTRACTOR's name and address
4. Title and number of each Record Document
5. Signature of CONTRACTOR or his authorized representative

1.4 OPERATION AND MAINTENANCE

Operating and Maintenance Data. The CONTRACTOR shall compile product data and related information appropriate for Owner's maintenance and operation of items furnished under the Contract. He shall instruct Owner's personnel in the maintenance and operation of equipment and systems.

Prior to the installation of any item of equipment, operation and maintenance data shall be submitted. Submittal shall be in seven copies in addition to any copies the CONTRACTOR desires returned to him and shall be in addition to the shop drawing submittals.

The submittals shall include but not necessarily be limited to:

1. Manufacturer's specifications.
2. Directions and instructions relating to assembly, installation, operation and maintenance.
3. Control and instrumentation system schematic drawings.
4. Parts list with catalog numbers and other data necessary for ordering replacements.

Operation and maintenance data shall be submitted for each item of equipment, instrumentation and controls for which shop drawing submittals are required.

Spare Parts and Maintenance Materials. The CONTRACTOR shall submit as specified in the individual sections all spare parts and maintenance materials. Such items shall be neatly and safely packaged and conspicuously labeled, in neat, large printed letters as to each packages' content.

In specification sections where various equipment components require different or multiple spare parts, these spare parts shall be packaged separately and labeled accordingly.

1.5 WARRANTIES AND BONDS

The CONTRACTOR shall compile and submit to the ENGINEER in duplicate, for review and transmittal to the OWNER, warranties, bonds, service and maintenance contracts as specified in the respective sections of Specifications. Submittal shall be made within ten days after Substantial Completion and prior to final request for payment.

1.6 FINAL STATEMENT OF ACCOUNTING

The CONTRACTOR shall submit a final statement of accounting to the ENGINEER. The statement shall reflect all adjustments to the Contract Sum:

1. The original Contract Sum
2. Additions and deductions resulting from:
 - a. Previous Change Orders
 - b. Allowances
 - c. Unit Prices
 - d. Deductions for uncorrected work
 - e. Deductions for liquidated damages
 - f. Deductions for reinspection payments g. Other adjustments
3. Total Contract Sum, as adjusted
4. Previous payments
5. Sum remaining due

1.7 FINAL CHANGE ORDER

The ENGINEER will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.8 FINAL APPLICATION FOR PAYMENT

The CONTRACTOR shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

1.9 FINAL CLEANING:

General: Provide final cleaning of the work, at the time indicated, consisting of cleaning each surface or unit of work to the normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturers' instructions for cleaning operations. The following are examples, but not by way of limitation, of the cleaning levels required.

Remove labels which are not required as permanent labels.

Wipe surfaces of mechanical and electrical equipment clean, remove excess lubrication and other substances.

Clean concrete floors in non-occupied spaces broom clean.

Clean project site (yard and grounds), including landscape, development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, petrochemical spills and other foreign deposits. Rake grounds that are neither planted nor paved, to a smooth even-textured surface.

1.10 REMOVAL OF PROTECTION:

Except as otherwise indicated or requested by the OWNER, remove temporary protection devices and facilities which were installed during the course of the work to protect previously completed work during the remainder of the construction period.

1.11 COMPLIANCY:

Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at the site, or bury debris or excess materials on the OWNER's property, or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from the site and dispose of in a lawful manner.

Where extra materials of value remaining after completion of the associated work have become the OWNER's property, dispose or store at the site as directed by the OWNER.

END OF SECTION

SECTION 01720
AS-BUILTS / RECORD DOCUMENTS

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. This Section sets forth the requirements for preparing as-built/record drawings and documents for verification of construction and archiving for future use. CONTRACTOR at his expense shall secure the services of a Florida licensed surveyor to collect data and prepare as-built/record drawings.

1.2 REFERENCE

- A. The preparation work shall be in accordance with this Section and supplementary details in the City of Daytona Beach Utilities Department Standard Details, latest edition.

1.3 AS-BUILT / RECORD DRAWINGS

- A. As-built/record drawings are required for all public facilities constructed. Prior to construction completion these as-built/record requirements will be reviewed to be certain the CONTRACTOR'S surveyor has a clear understanding of what is required for completion of this work.
- B. As a prerequisite for monthly progress payments, the CONTRACTOR shall present the currently updated "as-built" documents for review by the CITY.
- C. In order to ensure that the CITY'S project records are maintained to the highest standards and the information can easily be added to the CITY'S electronic records, the following information is required on all as-built/record drawings:
 - 1. Pavement and curb widths shall be verified and dimensioned for each street at each block (for subdivisions) and as appropriate to confirm paving limits (on site plans).
 - 2. All radii at intersections shall be verified and dimensioned. This information is to be clearly indicated on the as-built/record drawings.
 - 3. Roadway elevations shall be recorded at all grade changes, 100' intervals along roadway, and other intervals as needed along all streets. Street centerline and curb invert elevations shall be recorded as noted.
 - 4. The as-built centerline profile of all streets shall also be shown on the plan and profile so it may be compared to the design profile grade lines. In the event that the as-built centerline longitudinal grade does not meet the CITY minimum standards, additional longitudinal grades of the adjacent curbing and similar roadway cross-section surveys to verify the correct

cross slope, shall be required to verify that the system will function as originally designed.

5. Storm drainage structures shall be located and/or dimensioned from centerlines or lot lines as appropriate. Each structure shall be located by sub-meter GPS with latitude, longitude and elevation data.
 6. Storm drainage pipe invert and inlet elevations shall be recorded and clearly denoted as as-built information. Design elevations shall be crossed out and as-built information written next to it.
 7. Storm drainage pipe material, length, and size shall be measured and/or verified. This information is to be clearly indicated as being as-built information.
 8. All applicable topographic information pertinent to the on-site drainage system, such as ditches, swales, lakes, canals, etc. that are deemed necessary by the CITY to verify the functional performance of the storm water system, shall be noted. Normally, recording elevations every 100 feet at the top of bank and toe of slope will be required. Measurements shall be taken and recorded in order to accurately tie down these features to the roadway centerlines and to plat lines. Whenever possible, contour lines shall be utilized to graphically describe these topographic features.
 9. Retention areas shall have their top of bank and bottom elevations recorded. Actual measurements shall be taken and dimensions recorded of the size of all retention areas. Measurements shall be done from top of bank with side slopes indicated. Separate calculations shall be submitted to indicate required and provided retention volumes.
 10. Actual materials used and elevations and dimensions of overflow weir structures and skimmers shall be noted on the as-built.
 11. Storm drainage swale centerlines shall be located and elevations of flow line and top of bank shall be recorded every 100 feet. Side slopes shall also be indicated.
 12. Sanitary sewer manholes shall be verified and dimensioned from street centerlines or lot lines as appropriate. All rim and invert elevations shall be verified and recorded. This information shall be clearly indicated as being as-built information. Design elevations shall be crossed out and as-built information written next to it.
 13. For subdivisions, proposed design finish floor elevations shall appear on all subdivision lots on the appropriate plan and profile sheet as well as on the master drainage plan.
 14. Sanitary sewer line lengths, sizes, material, slope, etc., shall be verified and recorded, this information is to be clearly indicated as being as-built information.
 15. Sewer laterals shall be verified and recorded at their clean out locations, stationing and offset distances shall be measured from downstream manholes towards upstream manholes. Invert information at clean out shall be provided, and be located by sub-meter GPS with latitude, longitude and elevation data.
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16. Lift stations and force mains shall be verified and dimensioned from street centerlines or lot lines as appropriate. Force main depth and location including valves will be provided and tied to permanent above grade features. Dimensional and elevation information indicated on the approved plan shall be verified and recorded. This information shall be clearly indicated as being as-built information. Buried potable water lines and electrical service lines shall be clearly dimensioned, located, and labeled. Each lift station shall be located by sub-meter GPS with latitude, longitude and elevation data provided.
 17. Curb cuts or metal tabs, used to mark sewer laterals, water services and water valves, shall be verified for presence and accuracy of location.
 18. Potable and reclaimed water main lines shall be dimensioned off the baseline construction. Water main line material size, length and depth placed shall be noted. Locations of valves shall also be tied to baseline construction. This information shall be clearly indicated as being as-built information.
 19. Potable and reclaimed water valves, tees, bends, all services, and fire hydrants shall be located by tying them to baseline construction (Sta. & Offset). Similarly, force main valves, tees and bends shall be located in the same manner. Stationing and offset distances shall be measured from downstream manholes to upstream manholes. All valves and hydrants shall be located by sub-meter GPS with latitude, longitude and elevation data provided.
 20. For perpendicular crossings of storm water, sanitary sewer, potable water, or reclaimed water, the as-built plans shall clearly indicate which utilities are located over or under other utilities, as necessary.
 21. Any special features such as, concrete flumes, lake banks, walls, fencing, etc. which are a part of the approved construction drawings should also be located and dimensioned.
 22. If an approved subdivision plat or site plan shows a conservation easement, the project surveyor should provide the exact location of the specimen tree(s) from the right-of-way or property lines and proposed easement boundaries on the as-built drawing. The as-built location of these trees will help verify the sufficiency of the conservation easement prior to plat recording or certificate of occupancy.
 23. When storm water, potable water, reclaimed water, or sanitary sewer improvements are located within an easement, the as-built drawing will accurately depict the location of the easement itself as well as the exact locations of the improvements within the easement. This is required in order to verify that the improvements have been properly located and to ensure that future subsurface excavation to perform remedial repair can be accomplished without disturbance beyond the easement.
 24. As-built drawings are to be prepared by a Florida licensed surveyor and shall include a signed certification statement by the Florida licensed
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engineer of record. A Mylar set of as-built record drawings shall be provided with a digital copy in a compatible AutoCAD format.

25. Elevations shall be referenced to NGVD 1988 Data. As-built survey information shall be referenced to at least two Florida State Plane east coordinates NAD 83.
26. Benchmark datum utilized monumentation from the North American Vertical Datum of 1929 with elevations adjusted to NGVD 1988 data. Any NAVD 1929 monument within the limits of construction is to be protected.
27. For as-built purposes and this specification, all new utility mains will require standard as-built location that requires latitude and longitude but not sub-meter GPS. However, air release vaults, valve boxes, manholes and catch basins/inlets will require sub-meter GPS.

1.4 SUBMITTALS

- A. CONTRACTOR shall submit each month to CITY the Project Activity Summary that shows current construction activities and a copy of notices to agencies including the CITY regarding road closures as well as a record of events that will be needed in the future.
- B. CONTRACTOR shall submit to CITY as required the proposed shut-off schedule, capping, temporary service scheduling, record of notices to customers and proposed roadway closings.
- C. CONTRACTOR shall submit copies of published notices.
- D. CONTRACTOR shall submit Record Drawings on CD and Mylar. When the As-Builts are delivered for clearance of water lines (two paper copies), they will be scheduled for chlorination. CITY will not release the drinking water bacteriological laboratory report to Volusia County Health Department until the As-built information meets CITY requirements. CONTRACTOR will have 60 days from the time the bacteriological samples are collected to submit the as-built Mylar and CD to CITY. Send the two paper copies for approval before making the Mylar. If CONTRACTOR goes past the 60 days, re-chlorination will be required and pay for the bacteriological laboratory report will be required. Below are minimum detail samples of how the As-built drawing information will need to be presented.
- E. These are examples of how to display and label valves, fittings, and pipes on the Drawings (include a location arrow going to the identified object):

20" GATE VALVE STA.
22+33 (LT.55.0') LAT. =
29°12'53.009"N

LONG. = 81°04'03.355"w
TOP ELEV. = 27.50
FINISH GROUND ELEV. = 30.50

Pipe Example:

20" DIP WATER MAIN STA.
22+00 (RT.55.0') LAT. =
29°12'50.009"N LONG. =
81°04'26.355"W
TOP OF PIPE ELEV. = 27.50
FINISH GROUND ELEV. = 30.50

(All Bench Marks used must be shown on the Drawings)

Bench Mark Example:

BM#13
STA. 20+33 (LT. 85.5')
3/4" Iron Rod with Plastic Cap... N =
1,774,373.4058
E = 634,602.7566
LAT. = 29°04'53.355" W
LONG. = 81°04'53.355" W
ELEV. = 32.55

PART 2 – PRODUCTS

(Not Applicable, See General Conditions)

PART 3 – EXECUTION

3.1 GENERAL

- A. All drawings shall be prepared to True State Plane Coordinates. CONTRACTOR shall provide all materials, equipment, labor needed to prepare and submit accurate As-built/Record Drawings.
- B. It is acceptable to CITY if the surveyor utilizes an after the fact approach to collecting and verifying the location and depth by vertical PVC pipes placed by the CONTRACTOR as markers for this purpose. The surveyor shall verify to the accuracy defined in Florida Statutes the As-built conditions and certify the Record Drawings.
- C. CITY shall not be considered the best source of information for valve locations that may have been lost during final grading. The surveyor or CONTRACTOR shall excavate and properly mark all valve boxes and each valve shall have

a tag or color coded to define water, sewer or reuse water valves. The use of temporary PVC pipe markers color coded is acceptable so long as cross references are provided on the Record Drawings to prevent the tops from a water valve being placed on a sewer valve.

- D. THE CONTRACTOR SHALL PROVIDE THE UTILITIES DEPARTMENT ENGINEERING DIVISION THE FINAL AS-BUILT/RECORD DRAWINGS ON CD AND MYLARS. THE AS-BUILT RECORD DRAWINGS SHALL BE PREPARED USING AUTOCAD FORMAT 2010 OR LATER. IN MODEL SPACE THE DRAWING SHALL BE IN FL83-EF STATE PLANE COORDINATES AND SHALL BE ABLE TO BE INSERTED INTO THE CITY'S OVERALL GIS SYSTEM. THE RECORD DRAWINGS SHALL ALSO BE PRINTED ON MYLAR SIGNED AND SEALED AS ALLOWED BY STATE OF FLORIDA REGULATIONS. A DISCLAIMER MAY BE NOTED IN A TRANSMITTAL LETTER PLUS THE SURVEYOR MAY ADD A SPECIAL NOTICE ON EACH SHEET REGARDING THE LOCATION OF THE TRUE ORIGINAL RECORD DRAWINGS OR PLACE LIMITS ON RESPONSIBILITY SHOULD SOMEONE IN THE FUTURE NEED TO MODIFY THE MYLARS.
- E. Identify the source markers for the survey used for Record Drawings.

END OF SECTION

SECTION 01760
SPARE PARTS AND MAINTENANCE MATERIALS

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION OF REQUIREMENTS

- A. The CONTRACTOR shall be responsible for submitting all required spare parts and maintenance materials prior to the completion of the project.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The CONTRACTOR shall submit the required parts and materials that are described in the individual specification sections.

PART 3 – EXECUTION

3.1 PACKAGING

- A. All materials shall be submitted in separate containers/cartons which shall clearly indicate the specification section and the contents of the containers/cartons.

3.2 SUBMITTAL

- A. Submit to the CITY as soon as possible after receipt has been made by the CONTRACTOR. All spare parts shall be submitted to the CITY prior to the completion of the project.

END OF SECTION

DIVISION 2

SITE WORK

SECTION 02010
SUBSURFACE INVESTIGATION

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION

- A. A soils investigation report has not been prepared for the site of this work.

1.2 QUALITY ASSURANCE

- A. Bidders should visit the site and acquaint themselves with all existing conditions. Prior to bidding, bidders may make their own subsurface investigations to satisfy themselves as to site and subsurface conditions, but all such investigations shall be performed under time schedules and arrangements approved in advance by the CITY.

END OF SECTION

SECTION 02110
CLEARING AND GRUBBING

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION OF WORK

A. Traffic

1. Conduct site-clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction.

B. Protection:

1. Provide temporary fences, barricades, coverings, or other protection to preserve existing items indicated to remain and to prevent injury or damage to persons or property. Provide protection for adjacent properties as required.
2. Restore damaged work to condition existing prior to start of Work.
3. Protect existing trees and vegetation that are indicated to remain from physical damage. Do not store materials or equipment within tree drip line. Use licensed arborist for tree damage repair. Replace damaged trees that cannot be restored to full growth, as determined by arborist, unless otherwise acceptable to the CITY.

- C. Existing Services: Locations indicated are approximate; determine exact location before commencing Work. Coordinate with local utility service requirements and comply with their instructions.

PART 2 – PRODUCTS

(Not Applicable, See General Conditions)

PART 3 – EXECUTION

3.1 GENERAL

- A. Site Clearing: Remove trees, shrubs, grass, and other vegetation, improvements, or obstructions as indicated or that interfere with new construction. Removal includes digging out stumps and roots, together with subsequent off-site disposal.

- B. Strip and stockpile topsoil that will be reused in the Work.

- C. Remove existing improvements, both above-grade and below-grade, to extent indicated or as otherwise required to permit new construction.
- D. Salvable Items: Carefully remove items indicated to be salvaged and store on CITY's premises where indicated or directed.
- E. Control air pollution caused by dust and dirt; comply with governing regulations.
- F. Fill depressions and voids resulting from site-clearing operations. Using satisfactory soil materials, place in maximum 6-inch-deep horizontal layers and compact each layer to density of surrounding original ground.
- G. Grade ground surface to conform to required contours and to provide surface drainage.
- H. Dispose of waste materials, including trash and debris, off CITY's property.
- I. Refer to Section 01010: Summary of Work, Section 1.3B, for instructions on the disposal of excess suitable fill material.
- J. Burning waste materials on site is not permitted.

END OF SECTION

SECTION 02115
TREE PROTECTION

PART 1 – GENERAL

1.1 TREE BARICADES

- A. A protective barrier shall be placed around all protected trees and palms prior to land preparation or construction activities within or adjacent to the work zone, including all staging and/or lay down areas. Protective barriers shall be installed as follows:
1. At or greater than the full dripline of all species of Cabbage Palms.
 2. At or greater than the full dripline or all protected native pine trees and other conifer species.
 3. At or greater than two-thirds of the dripline of all other protected species.
 4. At or greater than the full dripline of trees within a specimen tree stand.
- B. Protective barriers shall be constructed using no less than two-inch lumber for upright posts. Upright posts shall be at least four feet in length with a minimum of one foot anchored in the ground. Upright posts shall be placed at a maximum distance of eight feet apart. Horizontal rails shall be constructed using no less than one inch by four-inch lumber and shall be securely attached to the top of the upright post. The project City's representative must approve any variation from the above requirements.
- C. Whenever a protective barrier is required, it shall be in place until all construction activity is terminated. The area within the barrier limits shall remain undisturbed by any activity during construction. Native ground cover and understory vegetation existing within the barriers shall remain throughout construction. Exotic plant species may only be removed by manual labor utilizing hand tools or by other means if authorized in writing by the City's representative.
- D. Prior to the erection of any required protective barrier, all surface foreign material, trash or debris shall be removed from the area enclosed by the barrier, and after erection of the barrier no such material or litter shall be permitted to remain within the protected area. No equipment, chemicals, soil deposits or construction materials shall be placed within such protective barriers.
- E. No signs, building permits, wires, or other attachments of any kind shall be attached to any protected tree or palm.
- F. At all times, due care shall be taken to protect the critical root zone of trees protected by this section, and root pruning requirements shall apply to such trees.

1.2 ROOT PRUNING

- A. Conduits installed under the dripline shall be directionally drilled with a minimum depth of three (3) feet.
- B. Sidewalks under the dripline shall be four (4) inches thick.
- C. If roots are present beyond the limits of the directional drill, the following shall apply:
 - 1. Where proposed construction improvements involve excavation, sidewalk construction, conduit installation and/or impacts to the critical root zone of protected trees, the Contractor shall be required to have an International Society of Arboriculture (ISA) certified arborist perform, or directly supervise root pruning to reduce the impacts of construction. The critical root zone is equivalent to the tree's dripline. Prior to any clearing, grubbing or excavation activities, the affected roots must be severed by clean pruning cuts at the point where grubbing or excavation impacts the root system. Roots can be pruned utilizing specified root pruning equipment designed for that purpose or by hand digging a trench and pruning roots with a pruning saw, chain saw or other equipment designed for tree pruning. Root pruning by trenching equipment or excavation equipment is strictly prohibited. Roots located in the critical root zone that will be impacted by construction activities shall be pruned to a minimum depth of 18 inches below existing grade or to the depth of the proposed impact if less than 18 inches from existing grade.
 - 2. Root pruning shall only be performed by or under the direct supervision of an International Society of Arboriculture (ISA) certified arborist.
 - 3. Root pruning shall be performed using a Doscofil Root Cutting Machine or equivalent. Alternate equipment or techniques must be approved by the City's representative, prior to any work adjacent to trees to be preserved.
 - 4. Tree roots shall not be exposed to drying out. Root ends shall be covered with native soil or burlap and kept moist until final backfill or final grades has been established.

1.3 PROPER TREE PRUNING

- A. All tree pruning and/or root pruning on existing trees to remain shall only be performed by or under the direct supervision of an International Society of Arboriculture (ISA) certified arborist. Furthermore, all tree work shall conform to the American National Standards Institute (ANSI) 2001, American National Standard for tree care operations – Tree, Shrub and other Woody Plant Maintenance – Standard practices (pruning) ANSI A-300.

- B. Proper pruning techniques for all lateral branches of protected trees are required. Flush cuts (pruning cuts that remove the branch collar) and stub cuts (cuts that leave a stub on the tree) are improper techniques. Any protected tree that has been improperly pruned will not be recognized as a tree left on the project in a healthy growing condition, and will require replacement consistent with the current City Codes and Ordinances.
- C. No protected tree shall have more than 30 percent of its foliage removed.
- D. No protected tree shall be topped, hat raked or lion-tailed. Any protected tree that has been improperly pruned will not be recognized as a tree left on the project in a healthy growing condition, and will require replacement consistent with the current City Codes and Ordinances.
- E. Tree trunks and limbs shall be protected. The use of tree spikes or other devices that damage trunk and bark tissue on protected trees shall be prohibited. Any protected tree that has been damaged in such a manner will not be recognized as a tree left on the project in a healthy growing condition, and will require replacement consistent with the current City Codes and Ordinances.

END OF SECTION

SECTION 02202
TRENCHING, BACKFILLING AND COMPACTING

PART 1 – GENERAL REQUIREMENTS

1.1 SUMMARY

- A. This Section includes the requirements for furnishing equipment, labor and materials, and performing all operations necessary and incidental to complete the required work.
- B. Payment for the work described in this Section shall be included in the unit prices for associated applicable items unless otherwise noted in the plans.

1.2 REFERENCES

- A. The requirements of the CITY Utility Department Standard Details, latest edition. B.
The Florida Department of Environmental Protection Stormwater Erosion and Sedimentation Control Inspector's Manual, latest edition. C.
Section 01568: Erosion and Sedimentation Control.
- D. Section 02240: Dewatering (During Construction).

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Earth for Fill and Backfill: Earth used for fill or backfill shall be of such gradation and moisture content that it will compact to the specified density and remain stable.
- B. Pipe Cover Material: Pipe cover material shall consist of durable particles ranging in size from fine to coarse (No. 200 to 1-inch) in size, in a substantially uniform combination. Unwashed bank run sand and crushed bank-run gravel will be considered generally acceptable. Bedding material may be used for cover material.
- C. Special Backfill: Special backfill shall be the following soils, classified by the Unified Soil Classification System, ASTM D-2487:

Group Symbols	Typical Name
GW	Well-graded gravels and gravel-sand mixtures, little or no fines
GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
SW	Well-graded sands and gravelly sands, little or no fines
SP	Poorly graded sands and gravelly sands, little or no fines

- D. Suitable Backfill: Suitable backfill shall be the following soils, classified by the Unified Soil Classification System, ASTM D-2487:

Group Symbols	Typical Name
GW	Well-graded gravels and gravel-sand mixtures, little or no fines
GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
GM	Silty gravels, gravel-sand-silt mixtures
GC	Clayey gravels, gravel-sand-clay mixtures
SW	Well-graded sands and gravelly sands, little or no fines
SP	Poorly graded sands and gravelly sands, little or no fines
SM	Silty sands, sand-silt mixtures
SC	Clayey sands, sand-clay mixtures
ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays

- E. Unsuitable Materials: Materials which are unsuitable for backfill include stones greater than 6-inches in their largest dimension, pavement, rubbish, debris, wood, metal, plastic, and the following soils, classified by the Unified Soil Classification System, ASTM D-2487:

Group Symbols	Typical Name
OL	Organic silts and organic silty clays of low plasticity
MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
CH	Inorganic clays of high plasticity, fat clays
OH	Organic clays of medium to high plasticity
PT	Peat, muck, and other highly organic soils

- F. Materials which are unsuitable for backfill will be determined by the ENGINEER or on-site inspector.

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. Clearing: The site of the work shall be cleared of all trees, shrubs, paving and objectionable material that interfere with the completion of the proposed work. The CONTRACTOR shall be responsible for the offsite disposal of all clearing debris. Trees and shrubs that will not interfere with construction shall be protected from damage.
- B. Excavation: Perform excavation of all soils and materials encountered to the dimensions and depths specified or shown on the Drawings as necessary to construct the associated applicable items of work. Undercutting will not be permitted, except when ordered by the CITY. Material suitable for backfill shall be stockpiled near the site. Rock and cemented coquina shall be the property of the CITY and be spoiled outside the area in a neat manner, as directed by the CITY. Other soils and materials unsuitable for backfill shall be disposed of by the CONTRACTOR in areas provided by him. Where it is necessary to cut roots projecting into an excavation or where it is necessary to trim branches for equipment clearance, all severed root ends or cuts to branches over 1/2" diameter shall be treated with an asphalt base pruning paint. Backfill over exposed roots as soon as possible.
- C. Rock and Cemented Coquina: Where rock and cemented coquina are encountered, the trench bed shall be excavated to a depth of 1/4 of the pipe diameter but in no case less than 4" below the bottom of the pipe. All undercut trench excavation

shall be backfilled with suitable materials and made firm and unyielding as specified in the following paragraphs under Unstable Soils and Materials.

D. Unsuitable Soils and Materials

1. In the event that unsuitable soils and material is encountered at or below the excavation depth specified or shown on the Drawings, the CITY shall be notified. Such material shall be removed, disposed of and replaced with suitable material. The CITY shall determine the methods and materials to be used, based upon the condition of the excavation, the pipe or structure to be supported, and the availability and character of stabilizing materials.
2. Methods and materials used for replacement shall be one of the following as directed by the CITY in writing:
 - a. Suitable earth or sand compacted in the trench. Materials shall be furnished and paid for as a part of the pipe or structure bid item.
 - b. Gravel or crushed limerock compacted in the trench. Materials shall be furnished and paid for as part of the pipe or structure bid item.
 - c. Existing materials, stabilized after removal and then replaced and compacted in the trench and paid for as part of the pipe or structure bid item.

E. Trenching:

1. Keep pipe laying operations as close to the excavation operation as possible during the prosecution of the work. The CITY reserves the right to stop the excavation-at any time when, in its opinion, the excavation is not properly safeguarded or is opened too far in advance of the pipe laying.
2. Pipe trenches shall be excavated to a depth that will insure a minimum of 36" of cover for all types of pipe, except service laterals. Trenches shall be only of sufficient width to provide a free working space on each side of the pipe. The maximum width of trench at the top of the pipe and at the bottom of the trench shall not be greater than two feet wider than the greatest exterior diameter of the pipe. If this maximum width is exceeded, it shall be the CONTRACTOR's responsibility to provide, at no additional cost to the CITY, such additional bedding or select backfill materials as the CITY may require. The excavation below the spring line shall be made to conform as near as possible to the shape of the lower third of the pipe. To protect the pipe lines from unusual stresses, all work shall be done in open trenches. Excavation shall be made for bells of all pipes and of sufficient depth to permit access to the joint for construction and

- inspections. In no case will the bells be used to support the body of the pipe.
3. In order to avoid existing utilities, at times it may be necessary for the pipe to be laid deeper than the minimum cover specified in the preceding paragraph. At such time, the CONTRACTOR will not be allowed extra compensation for additional excavation involved.
 4. In case excavation has been made deeper than necessary, a layer of concrete, fine gravel or other material satisfactory to the CITY shall be placed, at no extra cost, to secure a firm foundation for the lower third of each pipe. Where possible, excavated material shall be placed so as not to interfere with public travel. Bridging shall be provided for public travel and to afford necessary access to public or private premises. Bridging shall be considered as part of the excavation operation and shall be supplied at no additional cost to the CITY.

F. Structures Excavation: (For inlets, manholes, valve pits and similar structures)

1. Remove sufficient material to allow proper space for erecting and removing forms. The elevations of the bottoms of footings, if shown on the Drawings, shall be considered as approximate only, and the CITY may order, in writing, such changes in dimensions or elevations of footings as may be deemed necessary to secure a satisfactory foundation. Excavation for structures shall be sufficient to leave at least 12" in the clear between their outer surfaces and the embankment or timber that may be used to protect them. Backfill of earth under structures will not be permitted. Excess excavation for structures shall be filled with thoroughly compacted sand, gravel, or concrete at the expense of the CONTRACTOR.
2. After excavation for a structure is completed, the CONTRACTOR shall notify the CITY to that effect. No concrete or reinforcing steel shall be placed until the CITY has inspected the depth of the excavation and the character of the foundation material. Materials for roadways, road shoulders, alleys, or driveways, shall be compacted to a minimum of 98% of the maximum density as determined by AASHTO Method T-180.

G. Sheeting and Shoring:

1. The CONTRACTOR shall provide all trench and structural bracing, sheeting or shoring necessary to construct and protect the excavation, existing utilities, structures and private property of all types and as required for the safety of the employees. Sheeting shall be removed or cut off by the CONTRACTOR during backfilling operations as directed by the CITY.
2. Removal of shoring for structures shall be done in such a manner as not to disturb or mar finished masonry or concrete surfaces.

- H. Drainage: Grading shall be controlled in the vicinity of excavations so that the surface of the ground will be properly sloped to prevent water from running into trenches or other excavated areas. Any water that accumulates in the excavations shall be removed promptly by well point or by other means satisfactory to the CITY in such a manner as to not create a nuisance to adjacent property or public thoroughfare. Trenches shall be kept dry while pipe is being laid. Bridging of dewatering pipe shall be provided where necessary. Pumps and engines for well point systems shall be operated with mufflers, and at a minimum noise level suitable to a residential area. The CONTRACTOR will not be allowed to discharge water into the CITY's storm drainage system without the written approval of the CITY. Approval will be subject to the condition that the storm sewer be returned to its original conditions.
- I. Backfill:
1. Trenches shall be backfilled immediately after the pipe is laid unless other protection for the pipe line is provided. Clean earth, sand, crushed limerock, or other material approved by the CITY shall be used for backfill. Backfill material shall be selected, deposited and compacted so as to eliminate the possibility of lateral displacement of the pipe. Backfill material shall be solidly tamped around the pipes in six (6) inch layers up to a level at least one foot above the top of the pipe. Backfilling shall be carried out simultaneously on both sides of the pipe.
 2. The remainder of the backfill shall be deposited and compacted by puddling water, flooding or mechanical tampers except in areas where paving is to be placed over the backfilled trench. In these areas, the entire depth of backfill shall be deposited in six (6) inch layers and compacted by hand or mechanical tampers. Rollers are to be operated in Static Mode only. Compaction shall be carried out to achieve a density of at least 98% of the maximum density as determined by ASSHTO Method T-180. Under areas to be paved, puddling may be used for backfill consolidation after tamping to one foot over the pipe, as specified, provided the method is first approved by the CITY and the density requirements are met.
 3. In areas to be paved, density tests for determination of the specified compaction shall be made by a testing laboratory and spaced one in every 300 feet of trench cut. Density tests shall be considered a part of the backfill operation. It is the intent of this specification to secure a condition where no further settlement of trenches will occur. When backfilling is completed, the roadway base for pavement replacement may be placed immediately.
- J. Structures Backfill: After completion of foundation footings and walls and other construction below the elevation of the final grades, and prior to backfilling, all forms shall be removed, and the excavation shall be cleared of all trash and debris.

Material for backfilling shall consist of the excavated materials, borrow sand or other approved materials, and shall be free of trash, lumber or other debris. Backfill shall be placed in horizontal layers not to exceed a nine (9) inch thickness and have a moisture content such that a density may be obtained to prevent excessive settlement or shrinkage. Each layer shall be compacted by hand or approved machine tampers with extreme care being exerted not to damage pipe or structures. Backfill shall be placed and compacted evenly against the exposed surfaces to prevent undue stress on any surface.

K. Restorations of Areas Disturbed by Construction:

1. All improvements and natural systems on public or private property which have been damaged, altered or removed during construction, shall be restored in accordance with the respective owner's permit requirements or CITY requirements to conditions equal to or better than conditions existing prior to beginning work unless otherwise noted in the Drawings. Restoration of shoulders shall consist of stabilizing, grading and sodding as directed by the CITY. The cost of doing this work shall be included in the cost of the various applicable items unless otherwise directed in the Drawings. Snapshots as specified in Section 01200: Project Meetings and Video, will be used as an aid in determining conditions prior to construction.
2. Materials for roadways, road shoulders, alleys, or driveways, shall be compacted to a minimum of 98% of the maximum density as determined by ASSHTO Method T-180. The cost of this work and furnishing new materials shall be included in the cost of the applicable items of work as no separate payment will be made unless a separate bid item is provided.

L. Fine Grading:

1. The CONTRACTOR shall within a maximum of two (2) weeks from date of excavation, grade existing surfaces disturbed by construction to provide surfaces suitable for proper use of moving machines.
2. Finished areas around structures shall be graded smooth and hand raked and shall meet the elevations and contours shown on the drawings. Lumber, earth clods, rocks and other undesirable materials shall be removed from the site.

M. Disposal of Materials: Such portions of the excavated soils and materials as needed and as suitable shall be used for backfilling and grading around the completed work to the elevations as shown on the Drawings or as directed. Unsuitable soils and materials shall belong to the CONTRACTOR and be disposed of by the CONTRACTOR in areas provided by the CONTRACTOR.

Excess suitable soils shall belong to the CITY and shall be stockpiled at the location stated in Section 01010: Summary of Work.

- N. Sediment, Erosion and Dust Control: It shall be the responsibility of the CONTRACTOR to take all necessary steps to prevent soil from eroding onto all paved areas and into all natural watercourses, ditches, private properties and the public sewer systems. Streets and haul roads shall be swept by an automatic, self- contained mechanical sweeper. Prevent air and water pollution through dust and dirt control to the satisfaction of the CITY in the following areas:
1. Streets, sidewalks and drives within the limits of the contract and all construction material stockpile and field office site locations.
 2. Any haul roads leading to or away from the project that are used by the CONTRACTOR, his sub-contractors and his material suppliers.
- O. The CONTRACTOR shall comply with the above requirements on a daily basis. If the CONTRACTOR fails to perform the above work in a satisfactory manner, all work, except cleanup operations, will be stopped immediately until the CONTRACTOR has complied with the above requirements to the satisfaction of the CITY.
- P. Cleanup: Debris and waste materials shall be removed from the site as work progresses.

END OF SECTION

SECTION 02240
DEWATERING (DURING CONSTRUCTION)

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION

- A. Scope of Work: The work to be performed under this Section shall include the design and installation of a temporary wellpoint system to dewater subsurface waters as required. The system shall remain in place until completion of construction.

- B. Related Work Described Elsewhere:
 - 1. Section 01300: Submittals
 - 2. Section 01340: Shop Drawings Procedures
 - 3. Section 02202: Trenching, Backfilling and Compacting

1.2 QUALITY ASSURANCE

- A. Qualifications
 - 1. The temporary dewatering system shall be designed by a firm who regularly engages in the design of dewatering systems and who is fully experienced, reputable and qualified in the design of such dewatering systems. The firm shall have a successful record of operation for a minimum of five (5) years prior to bid date.
 - 2. In lieu of experience, the dewatering firm shall provide a performance and warranty bond for 1.5 times the total installed cost of the temporary dewatering system. This bond shall be executed prior to award and/or contract execution.

- B. Standards: The dewatering of any excavation areas and the disposal of water during construction shall be in strict accordance with all local and state government rules and regulations.

- C. Permits: CONTRACTOR shall be required to obtain and pay for all local and state permits required for installation and operation of the dewatering system and for disposal of water discharged from the dewatering system. CONTRACTOR shall obtain and pay for St. Johns River Water Management District (SJRWMD) permit for project, if required.

1.3 SUBMITTALS

- A. Materials and Shop Drawings: Shop drawings required to establish compliance with the specifications shall be submitted in accordance with the provisions of Section 01300: Submittals, and Section 01340: Shop Drawing Procedures. Submittals shall include at minimum the following:
 - 1. Design notes and drawings.
 - 2. Descriptive literature of the temporary dewatering system.
 - 3. Layout of all piping involved.
 - 4. Bill of materials.

1.4 CRITERIA

- A. The wellpoint system shall be developed to the point that is capable of dewatering such that pipe can be laid and compacted satisfactorily as shown on the Drawings. Each wellpoint system shall be capable of dewatering and maintaining groundwater levels at the respective structures.
- B. Groundwater shall be lowered to be a minimum of 30 inches below the bottom of the pipeline trench.

PART 2 – PRODUCTS

2.1 GENERAL

- A. The equipment specified herein shall be standard wellpoint dewatering equipment of proven ability as designed and manufactured by firms having experience in the design and production of such equipment. The equipment furnished shall be designed, constructed and installed in accordance with the best practices and methods and be sound attenuated for quiet performance.
- B. The use of wrapped underdrains or “socks” for dewatering shall not be allowed unless approval is obtained by the CITY.
- C. The CONTRACTOR shall monitor the performance of the dewatering system during the progress of the work and require such modifications as may be required to assure that the systems will perform satisfactorily. Dewatering system shall be designed in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils and to preserve the integrity of adjacent structures.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Dewatering: The CONTRACTOR shall install a temporary wellpoint dewatering system for the removal of subsurface water encountered during construction of the proposed structures and/or piping.

3.2 PROTECTION AND SITE CLEAN-UP

- A. At all times during the progress of the Work the CONTRACTOR shall use all reasonable precautions to prevent either tampering with the wellpoints or the entrance of foreign material.
- B. In the event that satisfactory dewatering cannot be accomplished due to subsurface conditions or where dewatering could damage existing structures, the CONTRACTOR shall obtain the CITY/ENGINEER'S approval of wet trench.
- C. Immediately upon completion of the wellpoint system, the CONTRACTOR shall remove all of his equipment, materials, and supplies from the site of the work, remove all surplus materials and debris, fill in all holes or excavations, and grade the site to elevations of the surface levels which existed before work started. The site shall be thoroughly cleaned and approved by the CITY/ENGINEER.

3.3 DISPOSAL

- A. Water pumped from the trench or other excavation shall be disposed of in storm sewers having adequate capacity, canals or suitable disposal pits, provided that the CONTRACTOR has permission to do so from the CITY of the system or the property.
- B. CONTRACTOR is responsible for acquiring all permits required to discharge the water and shall protect waterways from turbidity during the operation.
- C. In areas where adequate disposal sites are not available, partially backfilled trenches may be used for water disposal only when the CONTRACTOR'S plan for trench disposal is approved in writing by the CITY/ENGINEER. The CONTRACTOR'S plan shall include temporary culverts, barricades and other protective measures to prevent damage to property or injury to any person or persons.
- D. No flooding of streets, roadways, driveways or private property will be permitted. Engines driving dewatering pumps shall be equipped with residential type mufflers. Where practical and feasible, electrical "drops" should be used in lieu of portable generators.

END OF SECTION

SECTION 02500
PAVING

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION

- A. This Section provides paving requirements (by reference) and base and curbing requirements for the roadway resurfacing project.

1.2 QUALITY ASSURANCE

- A. CONTRACTOR shall employ an independent testing laboratory to prepare required design mixes and to monitor his quality control procedures. CONTRACTOR shall provide all asphalt plant testing.
- B. CONTRACTOR shall provide a certificate that all materials and workmanship provided by him conform to Contract Requirements.
- C. CITY will retain an independent testing laboratory to field verify quality of materials used in paving work.
- D. Where the “Standard Specifications” require that materials be from a source approved by the Department of Transportation, CONTRACTOR may provide proof of such source approval or he may employ an independent testing laboratory to perform necessary sampling and testing and to certify that all source meets requirements for Department approval.

1.3 REFERENCE STANDARDS

- A. The “Standard Specifications” referred to in this Section are the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction. Those paragraphs in the “Standard Specifications” referring to Measurement and Payment are not applicable to work under this contract.
- B. References to AASHTO shall mean the American Association of State Highway and Transportation Officials.

1.4 SUBMITTALS

- A. Submit Certificate of Compliance with specified requirements in duplicate for CITY’s and ENGINEER’s file.

- B. Design mixes, complete with back-up data, shall be submitted before paving begins in quadruplicate for use by CITY, ENGINEER, Quality Control Laboratory and field inspector.

1.5 JOB CONDITIONS

- A. Alignment and Elevations: Establish and maintain alignment and elevations as shown or specified.
- B. Weather Limitations: Conform to weather limitations specified for each component of the paving system.

PART 2 – PRODUCTS

2.1 STABILIZED SUBGRADE

- A. Materials for use in constructing the stabilized subgrade shall conform to the requirements of Section 160 of the “Standard Specifications”, latest Edition.

2.2 MATERIALS FOR FLOWABLE FILL

- A. Materials for flowable fill shall conform to the requirements of Section 121 of the “Standard Specifications”, latest Edition.

2.3 MATERIALS FOR LIMEROCK BASE COURSE

- A. Limerock materials for the construction of base courses shall conform to the requirements of Section 230 of the “Standard Specifications”, latest Edition.

2.4 MATERIALS FOR GRADED AGGREGATE BASE COURSE

- A. Materials for graded aggregate base (in the form of recycled concrete) shall conform to the requirements of Section 204 of the “Standard Specifications”, latest Edition.

2.5 MATERIALS FOR ASPHALT BASE COURSE

- A. Materials for Superpave asphalt base course shall conform to the requirements of Section 234 of the “Standard Specifications”, latest Edition.

2.6 MATERIALS FOR ASPHALTIC CONCRETE MIXTURES

- A. Materials for use in asphaltic concrete mixtures, Superpave 9.5, shall conform to the requirements listed in “Standard Specifications”, Section 334.

- B. The use of recycled asphaltic concrete will not be allowed for any purpose without written permission of the ENGINEER.
- C. CONTRACTOR shall employ an independent testing laboratory to test materials and prepare a design mix for the type of mix to be used on the project and to monitor plant asphalt production for quality control, as specified by OWNER.
- D. The asphaltic concrete manufacturing plant, used for the asphaltic concrete mixture, shall be a maximum of fifty (50) miles from the project site.

2.7 MATERIALS FOR PRIME AND TACK COATS FOR BASE COURSES

- A. Materials used for prime and tack coats shall conform to the requirements of Section 300 of the "Standard Specifications", latest Edition.

2.8 CONCRETE CURB AND CURB AND GUTTER

- A. Concrete for use in concrete curb and curb and gutter shall be non-structural concrete conforming to the requirements of Section 520 of the "Standard Specifications", latest Edition.

2.9 MILLING

- A. Milling of existing asphalt pavement shall comply with Section 327 of the "Standard Specifications", latest Edition.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Examine areas where pavements are to be constructed. Ensure that clearing and grubbing has been satisfactorily completed. Verify that subgrade has been constructed to proper elevations and that fill in embankment has been properly compacted.

3.2 STABILIZED SUBGRADE

- A. The stabilized subgrade shall be constructed in accordance with the requirements of Section 160 of the "Standard Specifications", latest Edition, for a Type B Stabilized Subgrade.
- B. At least 3 inches (loose measurement) of a suitable commercial or local stabilizing material, as described in the "Standard Specifications", Section 914, shall be mixed into the subgrade for stabilization in accordance with the "Standard Specifications", Sections 160-1, 3 and 8. The Limerock Bearing Ratio (LBR) shall

be 40. Density tests will be paid for by the CITY except that all retests required due to failure to meet specifications shall be paid for by the CONTRACTOR.

- C. After the subgrade has been prepared, it shall be kept free from ruts, depressions and any damage resulting from the hauling or handling of tools and equipment.

3.3 FLOWABLE FILL

- A. Flowable fill shall be constructed in accordance with the requirements shown in Section 121-5 of the "Standard Specifications", latest Edition.

3.4 LIMEROCK BASE COURSE

- A. Limerock base course shall be constructed in accordance with the requirements of and to the tolerances shown in Section 200-3 through 200-10 of the "Standard Specifications", latest Edition.

3.5 GRADED AGGREGATE BASE COURSE

- A. Graded aggregate base shall be constructed in accordance with the requirements shown in Section 204-5 through 204-10 of the "Standard Specifications", latest Edition.

3.6 MATERIALS FOR ASPHALT BASE COURSE

- A. Superpave asphalt base course (SP-12.5) shall be constructed in accordance with the requirements of the "Standard Specifications", latest Edition.

3.7 ASPHALTIC CONCRETE PAVING

- A. Asphaltic concrete mixtures for use in leveling and surface courses shall be prepared, placed, compacted and finished in compliance with Section 330 of the "Standard Specifications", latest Edition.

3.8 PRIME AND TACK COATS

- A. Equipment for application, preparation of surfaces, weather limitations, methods and rates of application shall conform to the requirements of section 300-3 through 300-7 of the "Standard Specifications", latest Edition.

3.9 CONCRETE CURB AND CURB AND GUTTER

- A. Concrete curb and curb and gutter shall be constructed in compliance with the requirements of Section 520 of the "Standard Specifications", latest Edition.

3.10 STREET RECONSTRUCTION

- A. Where street reconstruction is indicated on the Drawings it shall require complete removal of street surface and base and replacement with materials to the limits shown on the Drawings. If existing base and surface contain strips of concrete or asphaltic base used in prior street repairs, these materials shall be completely removed and disposed of by the CONTRACTOR. Where curb and gutter removal is called for on the Drawings, complete removal and disposal shall be accomplished by the CONTRACTOR.

- B. After removal of base material the subgrade shall be tested for bearing value as specified. If the subgrade does not have adequate bearing value it shall be stabilized in accordance with Section 160 of the "Standard Specifications", latest Edition.

END OF SECTION

SECTION 02580
ROADWAY AND PAVEMENT MARKING

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section includes roadway and parking marking as shown on the Drawings and as specified.

1.2 QUALITY ASSURANCE

A. Standards

- 1. Materials and workmanship shall conform to the requirements of the following:
 - a. Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, latest edition, hereinafter called the Standard Specifications.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Lane Marking Paint

- 1. Painted pavement markings in accordance with Section 710 of the Standard Specifications.
- 2. Thermoplastic traffic stripes in accordance with Section 711 of the Standard Specifications.
- 3. Color: White or Yellow as required.

- B. Reflective Paving Markers: Reflective pavement markers shall conform to the requirements of Section 706 of the Standard Specifications.

PART 3 – EXECUTION

3.1 MARKING TRAFFIC STRIPES

- A. Cleaning: Sweep and clean the surface to eliminate loose material and dust. B.

Application

- 1. Temporary Pavement: Apply paint in accordance with the Drawings and Section 710 of the Standard Specifications.
-

2. Final surface Course Pavement: Apply striping in accordance with the Drawings and Section 711 of the Standard Specifications.
 3. Stop Bars: Stop bars shall be provided at all "stop" intersections, as directed in the project manual. Replace all traffic striping to match existing stripes, including sidewalk crossing striping.
- C. Width of Stripe: Unless otherwise shown or directed by the ENGINEER, stripes shall be 6 inches wide; stop bars shall be 24 inches wide, and sidewalk striping shall match existing width.

3.2 REFLECTIVE PAVEMENT MARKERS

- A. Reflective pavement markers shall be installed in accordance with the plans and Section 706 of the Standard Specifications. Reflective markers shall be considered an integral part of Roadway Striping and no separate payment to the CONTRACTOR will be made.

END OF SECTION

SECTION 02605
MANHOLES

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section includes furnishing and installing manholes as shown on the Drawings and as specified.

1.2 QUALITY ASSURANCE

- A. All materials shall be tested for conformance with the specified standards. Reports of tests performed by the Manufacturer or by an independent laboratory shall be furnished with each shipment.
- B. Standards: Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, latest edition, hereafter called the Standard Specifications; City of Daytona Beach, Standard Details, latest edition.

PART 2 – PRODUCTS

2.1 MANHOLES

- A. Precast Concrete: Precast manholes shall be composed of precast reinforced concrete bases, risers, grade rings, and tops which have been designed and fabricated in accordance with the requirements of ASTM C 478, with the exception that wall thickness shall be eight (8) inches. Materials used in fabrication shall conform to the requirements of the Standard Specifications and the City of Daytona Beach Standard Details. Cement used in construction of precast manhole components shall be Type II Portland cement conforming to the requirements of ASTM C150.
- B. Joint Material:
 - 1. Joint material for use between precast manhole sections shall be cold adhesive preformed plastic gaskets conforming to the requirements of Section 942, Pipe Gaskets, of the Standard Specifications.
 - 2. Pipe manufacturer shall provide connection detail for connecting pipe to manhole. Materials for connection shall be provided with pipe. Pipe connection shall be "Kor-N-Seal" rubber boot type connection, or equal.

- C. Brick (for leveling courses): Brick for construction of manholes shall be solid conforming to the requirements of ASTM C-32, Grade MS or to the requirements of Federal Specification SS-B-656.
- D. Mortar:
 - 1. Mortar for manhole construction shall consist of one part Type II Portland cement and two parts of fine sand with water added for proper consistency. Lime shall not be used in mortar for manholes.
 - 2. Portland cement for use in mortar and grout shall conform to the requirements of ASTM C150, Type II.
 - 3. Sand for use in mortar and grout shall conform to the requirements of ASTM C144.
- E. Manhole Frames and Covers: Manhole frames and covers shall be gray iron castings conforming to the dimensions shown or equivalent foundry patterns. All mating surfaces shall be machined to prevent rocking or rattling of frames and covers. Castings shall be free of cracks, blow holes or swells and shall have a smooth and workmanlike finish. Castings shall conform to the requirements of ASTM A48. Manhole covers shall be of the concealed pickhole design and shall have the use of the line on which it is installed cast in the cover. Manhole frame and cover shall be U.S. Foundry No. 170, or equal.
- F. Coating Materials: Coatings shall follow the requirements stated in the detail Drawings.

PART 3 – EXECUTION

3.1 MANHOLE CONSTRUCTION

- A. Manholes Shall Be Precast Units
 - 1. Precast manholes shall consist of a base unit with opening for the sewer pipe, riser units of various lengths to build the manholes up to the required depth and either concentric cones or eccentric cones providing the support of the manhole ring and cover. The minimum length of the support riser shall be 12-inches. Any modifications necessary to adapt the units to conform to the locations and grades shown or required shall be made without additional compensation.
 - 2. For precast manholes, the base shall be set on a pad of #57 rock to the dimensions shown on the detail Drawings.
 - 3. The top of the cone shall be set between 2-1/2-inches and 12-inches below the bottom of the manhole cover frame so as to provide a minimum of 2-1/2-inches to accommodate future grade changes.

- B. Invert Channels: Invert channels shall be constructed smooth and semicircular in shape conforming to inside of adjacent sewer section. Changes in direction of flow shall be made in a smooth curve of as large a radius as practicable. Changes in size and grade of channels shall be made gradually and evenly. Invert channels shall be formed by one of the following methods: form directly into concrete manhole base, build-up with brick and mortar, lay half tile in concrete or lay full section of sewer pipe through manhole and break out top half. The manhole floor outside of channels shall be made smooth and sloped toward channels.
- C. Free Drop: Free drop in manholes from inlet pipe invert to top of floor outside the channels shall not exceed thirty inches, and standard drop inlets shall be constructed of commercial pipe, fittings and specials in accordance with the details shown wherever free drop exceeds thirty inches unless otherwise shown or directed.
- D. Manhole Frames and Covers: Manhole frames and covers shall be set in a full bed of mortar with the top of the cover flush with or higher than finished grade as directed. Covers shall be stamped "Sewer". Manhole covers shall comply with the City of Daytona Beach Standard Detail for manhole covers.
- E. Steps: Manhole steps shall not be provided. F.

Interior and Exterior Coatings:
 - 1. Interior surfaces of manholes shall be coated according to the detail Drawings.
 - 2. The exterior of manholes shall be coated according to the detail Drawings.
- G. Connections to Existing Manholes: Pipe connections to existing manholes shall be made so that finished work will conform as nearly as possible to essential requirements for new manhole construction as specified above.

END OF SECTION

SECTION 02611
REINFORCED CONCRETE PIPE FOR GRAVITY SERVICE PART 1-

GENERAL REQUIREMENTS

1.1 DESCRIPTION OF WORK

- A. This Section includes furnishing and installing Reinforced Concrete Pipe for gravity service as shown on the Drawings and as specified.

1.2 HANDLING AND STORAGE

- A. Pipe, fittings, and accessories shall be loaded and unloaded by lifting with hoists or skidding in order to avoid shock or damage. Under no circumstances shall such material be dropped. Pipe handled on skidways shall not be rolled or skidded against pipe on the ground. Slings, hooks or pipe tongs shall be padded and used in such a manner as to prevent damage to the exterior surface or internal lining of the pipes.
- B. Materials, if stored, shall be kept safe from damage. The interior of all pipe, fittings, and other appurtenances shall be kept free from dirt or foreign matter at all times.
- C. Gaskets for joints shall be placed in a cool location out of direct sunlight. Gaskets shall not come in contact with petroleum products. Gaskets shall be used on a first-in, first-out basis.
- D. Inspection: Pipe and appurtenances shall be inspected at the point of delivery. Material found to be defective due to manufacture or damage in shipment shall be rejected. Tests as specified in the applicable material standard may be performed to ensure conformance with the standard.

PART 2- MATERIALS AND EQUIPMENT

2.1 CIRCULAR PIPE

- A. Pipe shall be cast vibrated, machine-made or flatbed concrete pipe that is designed, manufactured, cured, tested and marked in accordance with the requirements of ASTM Designation C-76. Pipe shall be equivalent to Class III, IV or V, Wall B or C of the proper strength for the depth of cover required. Pipe shall be manufactured in lengths no longer than 16-feet or shorter than 8-feet, except that shorter lengths as required at closures or junctions of structures will be permitted. Pipe with elliptical reinforcing shall be adequately marked to prevent improper placement in the trench. Lift holes or eyes may be provided in each pipe for the purpose of handling.

- B. Joints shall be of either a bell and spigot or double spigot and sleeve design using round rubber gaskets. The joint shall be so designed and fabricated that when the pipe is laid it shall be self-centering, and when the joint is completed, the gasket will be enclosed on all four surfaces. The gasket shall not be required to support the weight of the pipe, but shall keep the joint tight under all normal conditions of service, including expansion, contraction and earth settlement.
- C. Joints and gaskets shall conform to the requirements of ASTM C443.

2.2 ELLIPTICAL PIPE

- A. Pipe shall be cast vibrated, machine made or flatbed elliptically shaped concrete pipe designed, manufactured, cured, tested and marked in accordance with ASTM C507.
- B. Pipe shall be of the proper strength for the depth of cover involved and shall be manufactured in lengths not longer than 16 feet nor shorter than 8 feet, except that shorter lengths as required at closures or junctions with structures will be permitted.
- C. Pipe designed for placement with the major axis horizontal shall be designated as "Vertical Elliptical" and shall be so marked.
- D. Joints for elliptical pipe shall be cold adhesive, preformed plastic gaskets conforming to Standard Specifications for Road and Bridge Construction of Florida Department of Transportation, Section 942, paragraph 942-2.

PART 3- EXECUTION

3.1 UNDERGROUND STRUCTURES AND CONFLICTS

- A. Prior to excavation, investigation shall be made to the extent necessary to determine the location of existing underground structures and conflicts. Care shall be exercised to avoid damage to existing structures. When obstructions that are not shown on the drawings are encountered during the progress of work and interfere so that an alteration of the plans is required, the CITY/ENGINEER will alter the drawings or order a deviation in line and grade or arrange for removal, relocation, or reconstruction of the obstructions.
- B. When crossing existing pipelines or other structure, alignment and grade shall be adjusted as necessary, with the approval of the CITY/ENGINEER to provide clearance as required by federal, state or local regulations or as deemed necessary by the CITY/ENGINEER to prevent future damage or contamination of either structure.

3.2 ALIGNMENT AND GRADE

- A. The pipelines shall be laid and maintained to the lines and grades established by the drawings and specifications, with manholes, service connections, fittings, and appurtenances at the required locations unless otherwise approved by the CITY/ENGINEER. All concrete pipe joints shall be wrapped with filter fabric.

3.3 TRENCH CONSTRUCTION

- A. The trench shall be excavated to the required alignment, depth, and width. Trench preparation shall proceed in advance of pipe installation for only as far as necessary to allow proper pipe installation. The width of the trench at the top of the pipe shall be ample to permit the pipe to be laid and joined properly and allow the backfill to be placed as specified. Trenches shall be of such extra width, when required, to permit the placement of timber supports, sheeting, bracing and appurtenances.
- B. Holes for the bells shall be provided at each joint but shall not be larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the trench bottom. Other than noted previously, the trench bottom shall be true and even in order to provide support for the full length of the pipe barrel, except that slight depression may be provided to allow withdrawal of pipe slings or other lifting tackle.
- C. When excavation of rock is encountered all rock shall be removed to provide a clearance of at least 6-inches below and on each side of all pipe for pipe sizes 24- inches or smaller, and 9-inches for pipe sizes 30-inches and larger. When excavation is completed, a bed of sand, crushed stone or earth that is free from stones, large clods, or frozen earth, shall be placed on the bottom of the trench to the previously mentioned depths, leveled, and tamped. These clearances and bedding procedures shall also be observed for pieces of concrete or masonry and other debris or subterranean structures, such as masonry walls, piers, or foundations that may be encountered during excavation. This installation procedure shall be followed when gravel formation containing loose boulders greater than 8-inches in diameter are encountered. In all cases, the specified clearances shall be maintained between the bottom of all pipe and appurtenances and any part, projection, or point or rock, boulder, and stones of sufficient size and placement which, in the opinion of the CITY/ENGINEER could cause a fulcrum point.
- D. Should the trench pass over a sewer or other previous excavation, the trench bottom shall be sufficiently compacted to provide support equal to that of the native soil or conform to other regulatory requirements in a manner that will prevent damage to the existing installation.

- E. When the subgrade is found to be unstable or to include ashes, cinders, refuse, organic material, or other unsuitable material, such material shall be removed, to a minimum of at least 3-inches, or to the depth ordered by the CITY/ENGINEER and replaced under the directions of the CITY/ENGINEER with clean, stable backfill material. The bedding shall be consolidated and leveled in order that the pipe may be installed as specified.
- F. When the bottom of the trench or the subgrade is found to consist of material that is unstable to such a degree that, in the judgment of the CITY/ENGINEER, it cannot be removed, a foundation for the pipe and/or appurtenance shall be constructed using piling, timber, concrete, or other materials at the direction of the CITY/ENGINEER.
- G. Pipe cutting for the insertion of fittings, or closure pieces shall be done in neat, workmanlike manner without creating damage to the pipe or lining.

3.4 TESTING

- A. After completion of installation, perform testing for gravity sewers in accordance with requirements of Section 02661: Pressure Testing of Piping.

END OF SECTION

SECTION 02645
FIRE HYDRANT ASSEMBLIES

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION OF WORK

- A. This Section includes furnishing and installing fire hydrant assemblies consisting of the fire hydrant, a mechanical joint gate valve with a valve box, restrained joint pipe for connecting the hydrant and valve to the branch in the main and gravel for drainage around the hydrant as shown on the Drawings and as specified.

1.2 QUALITY ASSURANCE

- A. Standards: Fire hydrants shall conform to the requirements of ANSI/AWWA C 502, AWWA Standard for Dry Barrel Fire Hydrants and conform to City Standards.
- B. Available Manufacturers: Subject to compliance with requirements, fire hydrant manufacturers offering products which may be incorporated in the work are limited to the following:
1. American Flow Control – B-84-B
 2. Kennedy – Guardian K-81-A (remove chains from hydrant caps)
 3. Mueller Company – A-423
 4. Clow Company – Medallion

PART 2 – PRODUCTS

2.1 FIRE HYDRANT

- A. A fire hydrant assembly shall consist of a fire hydrant, the ductile iron pipe connecting the hydrant to the water main, the gate valve and box between the hydrant and the water main, accessories, gravel and pipe joint restraints.
- B. Fire hydrants shall be of the breakaway traffic type construction with a 6" pipe connection, 5¼" valve opening, two 2½" and one 4½" steamer connections. Hydrants shall be designed for 150 psi testing pressure and shall conform to AWWA Specification C502-73. All working parts shall be bronze. All hose threads shall be National Standard threads. The 2½" outlets shall be V-threads, 7½" threads per inch and 3 1/6" outside diameter of the male thread. The 4½" steamer nozzle shall have four threads per inch and 5¾" outside diameter of the male threads. Fire hydrants shall be self draining. Design material and workmanship shall be of the latest stock pattern ordinarily produced by the Manufacturer.

- C. Hydrants shall be silver from the manufacturer and only be painted by CITY personnel after CITY accepts ownership. The CITY personnel will assign an ID number and record data on each hydrant for CITY records. No old fire hydrants will be accepted.
- D. Fire Hydrants shall be provided with a special lubricant sealed bonnet assembly to assure lubrication of operating parts and to seal operating thread from water when the hydrant is open.
- E. Opening hydrant shall be by turning the operating nut to the left (counter-clockwise).
- F. Bury length of hydrant shall be as such as to provide the required depth below the surface for the main and allow the clearance above finished grade shown for the hydrant nozzles.

2.2 CONNECTING PIPE AND FITTINGS

- A. Pipe for connections between the main, the auxiliary valve and the hydrant shall be 6-inch diameter ductile iron connecting pieces suitable for restraining joints from separation. Connecting pieces shall be provided with rotatable gland on one end. Fittings installed in the main for hydrant connections shall have a branch with rotatable ductile iron mechanical joint gland. Joint connections shall be made with standard mechanical joint bolts and gaskets.

2.3 GATE VALVES AND VALVE BOXES

- A. Gate valves for use in fire hydrant assemblies shall be six-inch gate valves with mechanical joint ends. Gate valves and boxes shall conform to the requirement specified in Section 15100.

2.4 GRAVEL

- A. Gravel for use around hydrant drains shall be size 5 gravel, stone or slag conforming to the requirements of Section 901, Coarse Aggregate of the Florida Department of Transportation Standard Specification for Road and Bridge Construction.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine hydrants for direction of opening, nozzle threading, operating-nut and cap-nut dimensions, tightness of pressure-containing bolting, cleanliness of inlet elbow, handling damage, and cracks. Reject defective hydrants.

3.2 INSTALLATION

- A. Install hydrants at locations shown as directed.
- B. Install all hydrants plumb and with nozzles parallel with, or at right angles to, the curb, and with the pumper nozzle facing the curb.
- C. Set hydrants to the established grade, with the centerline of the fire hose connection at least 18 to 21 inches above finish grade or as shown on the detail Drawings.
- D. When a hydrant is set in soil that is pervious, provide drainage at the base of the hydrant by placing coarse gravel or crushed stone mixed with coarse sand, from the bottom of the trench to at least 6-inches above the waste opening in the hydrant and to a distance of one-foot around the elbow.
- E. When a hydrant is set in clay or other impervious soil, a drainage pit 2 feet by 2 feet by 2 feet shall be excavated below each hydrant and filled with coarse gravel or crushed stone mixed with coarse sand, under and around the elbow of the hydrant and to a level of 6-inches and above the drain port.
- F. Place and compact backfill around hydrant from base to ground surface.

3.3 TESTING

- A. Test hydrant installation as part of piping system in which it is installed.

END OF SECTION

SECTION 02801
RESTORATION OF SURFACE IMPROVEMENTS

PART 1 – GENERAL REQUIREMENTS

1.1 DESCRIPTION OF WORK

- A. This Section includes the restoration of lawn areas, roadways, walks and any other existing improvement affected by the proposed work, as shown on the Drawings and as specified.

1.2 QUALITY ASSURANCE

A. Standards

- 1. Florida Grades and Standards for Nursery Plants, Part 1:
- 2. Florida Department of Transportation, Standard Specifications for Road and Bridge Construction (latest Edition), hereinafter called the Standard Specifications.

PART 2 – PRODUCTS

2.1 PLANTS

- A. Existing damaged plants shall be replaced by plants of equal type, quality and size whenever possible. All new plants shall be sound, healthy, vigorous and free from defects, decay, disfiguring, bark abrasions, plant diseases, insect pests, their eggs or larvae.
- B. Existing plants may be removed, preserved, and replaced at the CONTRACTOR'S option. Plants shall be handled by an approved nursery.
- C. Plants shall be watered and cared for until new growth appears. Dead and dying plants shall be immediately replaced. Plants used shall be in accordance with the "Grades and Standards", Florida No. 1 or better.
- D. Replace any material which dies within a year after contract completion with new material.
- E. Plants shall conform to the sizes indicated by the OWNER.

2.2 WATER

- A. The water used in the performance of this Contract shall be of drinking water quality, clean and free from injurious amounts of oil, acid, alkali, or organic matter.

2.3 PLANTING MIXTURE

- A. The planting mixture, when required, shall consist of a thorough mixture of 40% peat and 60% sand. The peat shall be Florihome peat or equivalent and the sand shall be clean and free from debris of any kind.

2.4 FERTILIZER

- A. Fertilizer shall be pelletized 8-8-8, or equivalent.

2.5 LIMEROCK BASE COURSE

- A. Limerock for base course construction shall conform to the requirements of Section 911 of the Standard Specifications.

2.6 ASPHALTIC CONCRETE STRUCTURAL COURSE AND SURFACE COURSE MATERIALS

- A. Asphaltic concrete for structural course and surface course applications shall be Type SP-9.5, conforming to the requirements of Section 334 of the Standard Specifications.

2.7 PORTLAND CEMENT CONCRETE

- A. Portland cement concrete used in the construction of sidewalks shall have a compressive strength of 3,400 psi at 28 days and shall conform to the requirements of Section 03300.

PART 3 – EXECUTION

3.1 LANDSCAPING RESTORATION

- A. Lawn Areas: Any lawn area affected by the required work shall be restored to a condition equal to or better than the conditions existing before the commencement of work. Grass areas disturbed by CONTRACTOR shall be restored with sod.

- B. Water: Water to be used during plant installation shall be furnished by the CONTRACTOR. The existing irrigation system, where damaged, shall be promptly repaired after the installation of the plants.

3.2 PAVEMENT, CURB AND SIDEWALK REMOVAL

- A. Pavement materials shall be removed and separated from other excavated materials. Prior to removal, asphaltic and Portland cement materials shall be saw cut to neat lines parallel to the trench and sufficiently remote from the edge of the trench to prevent settling or breaking off.

3.3 BASE COURSE CONSTRUCTION

- A. Limerock base shall follow the requirements of Section 200 of the Standard Specifications.

3.4 PAVEMENT, CURB AND SIDEWALK REPLACEMENT

- A. Prior to installation of pavement or sidewalks, the entire depth of backfill shall have been fully compacted and tested for conformance with the specified density requirements. Subgrades and base shall be compacted and tested and fully shaped to the necessary elevations and cross-sections to provide the required thickness of pavement.
- B. Asphaltic surfaces shall be prepared, placed, finished and compacted in accordance with the requirements of the Standard Specifications.
- C. Curbs and sidewalks shall be formed with standard forms conforming to the shape and thickness of the items to be replaced. Placing, finishing, protecting and curing shall conform to the requirements of the specified standard.

3.5 TESTS

- A. The CONTRACTOR shall furnish facilities for making all density tests and make such restorations as may be necessary due to test operations. All density tests on backfill or base replacement will be made by a commercial testing laboratory employed by the OWNER and at such locations as may be recommended by the ENGINEER. If the densities as determined by the specified tests fall below the required minimums, the CONTRACTOR shall pay for all retests.

END OF SECTION

DIVISION 3

CONCRETE

SECTION 03300
CONCRETE

PART 1 – GENERAL REQUIREMENTS

1.1 SUMMARY

- A. This Section sets forth the requirements for concrete, grout and related work required to furnish and install cast-in-place reinforced and unreinforced concrete.
- B. General
 - 1. Reinforced concrete shall be steel reinforced and includes:
 - a. Precast manholes and wet wells.
 - b. Driveways
 - c. Other reinforced concrete structures.
 - d. Encasements, etc.
 - 2. Steel Reinforcement: Includes bars, ties and supports.

1.2 QUALITY ASSURANCE

- A. Source Quality Control
 - 1. Concrete Testing Service
 - a. CONTRACTOR shall employ acceptable testing laboratory to perform materials evaluation, testing and design of concrete mixes.
 - b. CONTRACTOR's laboratory shall also evaluate concrete delivered to and placed at the site.
 - 2. Certificates, signed by concrete producer and CONTRACTOR may be submitted in lieu of material testing when acceptable to CITY and or Engineer of Record.
 - 3. Quality Control: Perform sampling and testing during concrete placement as follows:
 - a. Sampling: ASTM C 172.
 - b. Slump: ASTM C 143, one test for each load at point of discharge
Air Content: ASTM C 31, one for each set of compressive strength specimens.
 - c. Compressive Strength: ASTM C 39, one set for each 50 cubic yards or fraction thereof of concrete; 1 specimen tested at 7 days, 2 specimens tested at 28 days.

4. Report test results in writing to CITY and or Engineer of Record on same day tests are made.
- B. Reference Standards: Comply with the applicable provisions and recommendations of the following, except as otherwise shown or specified:
1. ACI 301, Specifications for Structural Concrete for Building (includes ASTM Standards referred to herein except for ASTM A 36).
 2. ACI 304, Guide for Measuring, Mixing, Transporting, and Placing Concrete.
 3. ACI 305, Hot Weather concreting.
 4. ACI 306, Cold Weather Concreting.
 5. ACI 315, Manual of Engineering and Placing Drawing for Reinforced Concrete Structures.
 6. ACI 318, Building Code Requirements for Reinforced Concrete.
 7. ACI 347, Guide to Formwork for Concrete.
 8. ACI 350, Environmental Engineering Concrete Structures.
 9. ASTM A 36, Specification for Structural Steel.
 10. Concrete Reinforcing Steel Institute Manual of Standard Practice, include ASTM Standards referred to herein.

1.3 SUBMITTALS

- A. Samples: Submit samples of materials as specified and may be requested by CITY and or Engineer of Record, including names, sources and descriptions. B.

Shop Drawings: Submit for approval the following:

1. Copies of manufacturer's specifications with application and installation instructions for proprietary materials and items, including admixtures and bonding agents.
2. Drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315, Chapters 1 thru 7. Show bar schedules, stirrup spacing, diagrams of bent bars, arrangements and assemblies, as required for the fabrication and placement of concrete reinforcement.
3. List of concrete materials and concrete mix designs proposed for use. Include the results of all tests performed to qualify the materials and to establish the mix designs in accordance with ACI 301, 3.9. Submit written report to CITY and or Engineer of Record for each proposed concrete mix at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed and are acceptable to CITY and or Engineer of Record. Mix designs may be adjusted when material characteristics, job conditions, weather, test results or other circumstances

warrant. Do not use revised concrete mixes until submitted to and accepted by CITY and or Engineer of Record.

- C. Laboratory Test Reports: Submit copies of laboratory test reports for concrete cylinders, materials and mix design tests. CITY and or Engineer of Record review will be for general information only. Production of concrete to comply with specified requirements is the responsibility of CONTRACTOR.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery concrete reinforcement materials to the site bundled, tagged and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.
- B. All materials used for concrete must be kept clean and free from all foreign matter during transportation and handling and kept separate until measured and placed in the mixer. Bins or platforms having hard clean surfaces shall be provided for storage. Suitable means shall be taken during hauling, piling and handling to insure that segregation of the coarse and fine aggregate particles does not occur and the grading is not affected.

PART 2 – PRODUCTS

2.1 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type II. B.
Aggregates: ASTM C 33.
 - 1. Fine Aggregate: Clean, sharp, natural sand free from loam, clay, lumps or other deleterious substances. Dune sand, bank run sand and manufactured sand are not acceptable.
 - 2. Coarse Aggregate: Clean, uncoated, processed aggregate containing no clay, mud, loam, or foreign matter, as follows:
 - a. Crushed stone, processed from natural rock or stone.
 - b. Washed gravel, either natural or crushed. Use of slag and pit or bank run gravel is not permitted.
- C. Coarse Aggregate Size: Size to be ASTM C 33, Nos. 57 or 67, unless permitted otherwise by CITY and or Engineer of Record.
- D. Water: Clean, drinkable.
- E. Air-Entraining Admixture: ASTM C 260.

- F. Water-Reducing High Range Admixture: ASTM C 494, Type F/G. Only use admixtures which have been tested and accepted in mix designs.
- G. Slump Limits
 - 1. Proportion and design mixes to result in concrete slump:
 - a. Not more than 4 inches prior to adding high range water-reducer.
 - b. Not more than 8 inches at point of placement after adding high range water-reducer.

2.2 FORM MATERIALS

- A. Provide form materials with sufficient stability to withstand pressure of placed concrete without bow or deflection.
- B. Exposed Concrete Surfaces: Acceptable panel-type to provide continuous, straight, smooth, as-cast surfaces. Use largest practical sizes to minimize form joints.
- C. Unexposed Concrete Surfaces: Suitable material to suit project conditions.

2.3 REINFORCING MATERIALS

- A. Reinforcing Bars: ASTM A 615, Grade 60. B.
Steel Wire: ASTM A 82.
- C. Supports for Reinforcement: Bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcement in place.
 - 1. Use wire bar type supports complying with CRSI recommendations, except as specified below. Do not use wood, brick, or other unacceptable materials.
 - 2. For slabs on grade, use supports with sand plates or horizontal runners where base materials will not support chair legs.
 - 3. For all concrete surfaces, where legs of supports are in contact with forms, provide supports (Either hot-dip galvanized, plastic protected or stainless steel legs) complying with CRSI, Manual of Standard
 - 4. Over waterproof membranes, use precast concrete chairs.

2.4 RELATED MATERIALS

- A. Waterstops
 - 1. Flat dumbbell or center bulb type, size to suit joints, uniform minimum thickness of 3/8-inch by 9 inches minimum width of Polyvinyl Chloride.

a. Manufacturer: Provide waterstops of one of the following:

- (1) W.R. Meadows, Incorporated. (2)
A.C. Horn, Incorporated.
- (3) Or equal.

B. Membrane-Forming Curing Compound: ASTM C 309, Type I. C.

Epoxy Bonding Agent

1. Two-component epoxy resin bonding agent.

a. Product and Manufacturer: Provide one of the following:

- (1) Sikadur Hi-Mod, as manufactured by Sika Chemical Corporation. (2)
Epoxite Binder (Code No. 2390), as manufactured by A.C. Horn,
Incorporated.
- (3) Or Equal.

2.5 GROUT

A. Non-shrink, Nonmetallic Grout

- 1. Prepackaged non-staining cementitious grout requiring only the addition of water at the job site.
- 2. Product and Manufacturer: Provide one of the following:
 - a. Euco N-S, as manufactured by the Euclid Chemical Company.
 - b. Masterflo 713, as manufactured by Masters Buildings Company. c.
 - Or equal.

B. Non-shrink, Nonmetallic 100% Solids, High Strength Epoxy Grout

- 1. Use prepackaged solvent-free, moisture-insensitive, 3-component epoxy grouting system.
- 2. Product or Manufacturer: Provide one of the following:
 - a. Euco High Strength Grout, as manufactured by the Euclid Chemical Company, Cleveland, Ohio.
 - b. Sikadur 42, Grout-Pak, as manufactured by the Sika Chemical Company, Lyndhurst, NJ
 - c. Or equal.

C. Ordinary Cement-Sand Grout

1. Except where otherwise specified use 1 part cement to 3 parts sand complying with the following:
 - a. Cement: ASTM C 150, Type II. b.
Sand: ASTM C 33.

PART 3 – EXECUTION

3.1 INSPECTION

- A. CONTRACTOR and his installer shall examine the foundation for and the conditions under which work is to be performed and notify CITY of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to CITY and or Engineer of Record.

3.2 FORMWORK

- A. Formwork: Construction so that concrete members and structures are correct size, shape alignment, elevation, and position, complying with ACI 347.
- B. Provide openings in form work to accommodate work of other trades. Accurately place and securely support items built into forms.
- C. Clean and adjust forms prior to concrete placement. Apply form release agents or wet forms, as required. Retighten forms during and after concrete placement if required to eliminate mortar leaks.

3.3 REINFORCEMENT, JOINTS, AND EMBEDDED ITEMS

- A. Comply with the applicable recommendations of specified codes and standards and CRSI. Manual of Standard Practice, for details and methods of reinforcement placement and supports.
- B. Clean reinforcement to bright metal surface unless otherwise directed by City. Remove loose rust and mill scale, earth, and other materials which reduce or destroy bond with concrete.
- C. Position, support, and secure reinforcement against displacement during formwork construction or concrete placement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers, as required.
 1. Place reinforcement to obtain the minimum concrete coverage as shown and as specified in ACI 18. Arrange, space, and securely tie bars and bar supports together with 16 gage wire to hold reinforcement accurately in

- position during concrete placement operations. Set with ties so that twisted ends are directed away from exposed concrete surfaces.
2. Reinforcing steel shall not be secured to forms with wire, nails or other ferrous metal. Metal supports subject to corrosion shall not touch formed or exposed concrete surfaces.
- D. Provide sufficient numbers of supports of strength required to carry reinforcement. Do not place reinforcing bars more than 2 inches beyond the last leg of any continuous bar support. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.
 - E. Splices: Provide standard reinforcement splices by lapping ends, placing bars in contact, and tying tightly with wire. Comply with requirements shown for minimum lap of spliced bars.
 - F. Concrete shall not be placed until the reinforcing steel is inspected and permission for placing concrete is granted by CITY/ ENGINEER. All concrete placed in violation of this provision will be rejected.
 - G. Joints
 1. Provide construction, isolation, and control joints as indicated or required.
 2. Locate construction joints so as to not impair the strength and appearance of the structure.
 3. Place isolation and control joints in slabs on ground to stabilize differential settlement and random cracking.
 4. In mats and slabs on grade, locate joints at a spacing of approximately 40 feet. Place concrete in a strip pattern.
 - H. Installation of Embedded Items: Set and build into the work anchorage devices and embedded items required for other work that is attached to, or supported by cast-in-place concrete. Use setting diagrams, templates and instructions provided under other Sections for locating and setting.

3.4 CONCRETE AND PLACEMENT

- A. Proportioning and Design of Mix
 1. Minimum compressive strength at 28 days: 3400 psi
 2. Maximum water/cement ratio by weight: 0.45
 3. Minimum cement content: 564 pounds per cubic yard
 4. Normal weight: 145 pounds per cubic foot
 5. Use air-entraining admixture in all concrete: provide not less than 4 percent or more than 8 percent entrained air for concrete.

6. Calcium Chloride: Do not use calcium chloride in concrete, unless otherwise authorized in writing by CITY and or Engineer of record. Do not use water or admixtures containing calcium chloride.
- B. Job-Site Mixing: Use drum type batch machine mixer, mixing not less than 1½ minute for one cubic yard or smaller capacity. Increase mixing time at least 15 seconds for each additional cubic yard or fraction thereof. C.

Ready-Mixed Concrete: ASTM C 94.
- D. Concrete Placement: Comply with ACI 304, placing concrete in a continuous operation within planned joints or sections. Do not begin placement until work of other trades affecting concrete is completed.
- E. Consolidate placed concrete using mechanical vibrating equipment with hand rodding and tamping, so that concrete is worked around reinforcement and other embedded items and into all parts of forms.
- F. Protect concrete from physical damage or reduce strength due to weather extremes during mixing, placement and curing.
 1. In cold weather comply with ACI 306.
 2. In hot weather comply with ACI 305.

3.5 QUALITY OF CONCRETE WORK

- A. Make all concrete solid, compact and smooth, and free of laitance, cracks and cold joints.
- B. All concrete for liquid retaining structures, and all concrete in contact with earth, water, or exposed directly to the elements shall be watertight.
- C. Cut out and properly replace to the extent ordered by CITY, or repair to the satisfaction of CITY, surfaces which contain cracks or voids, are unduly rough, or are in any way defective. Patches or plastering will not be acceptable.
- D. Repair, removal, and replacement of defective concrete as ordered by CITY shall be at no additional cost to CITY.

3.6 CURING

- A. Curing: Begin initial curing as soon as free water has disappeared from exposed surfaces. Where possible, keep continuously moist for not less than 72 hours. Continue curing use of moisture-retaining cover or membrane-forming curing compound. Cure formed surfaces by moist curing until forms are removed. Provide protection as required to prevent damage to exposed concrete surfaces.

3.7 FINISHES

A. Finish

1. After placing concrete slabs, do not work the surface further until ready for floating. Begin floating when the surface water has disappeared or when the concrete has stiffened sufficiently. Use a wood float only. Check and level the surface plane to a tolerance not exceeding $\frac{1}{4}$ inch in 10 feet when tested with a 10 foot straightedge placed on the surface at not less than 2 different angles. Cut down high spots and fill all low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat the surface to a uniform, smooth granular texture.
2. Concrete decorative sidewalk to follow plan requirements to establish pattern, edges, etc. All ADA ramps to be constructed to allow for proper Detectable Warning Surface. Coordinate the required final finish with CITY/ ENGINEER before application.

3.8 GROUT PLACEMENT

A. General

1. Place grout as shown and in accordance with manufacturer's instructions. If manufacturer's instructions conflict with the Specifications do not proceed until CITY provides clarification.
2. Drypacking will not be permitted.
3. Proprietary product manufacturers shall make the services of qualified, full-time employees available upon 72 hours notification to assure that the product is properly used.
4. Placing grout shall conform to the temperature and weather limitations described in Article 3.4 above.

END OF SECTION

SECTION 03450
PRECAST CONCRETE STRUCTURES

PART I – GENERAL

1.1 DESCRIPTION

- A. Scope of Work: The work under this Section includes the design, casting, delivery, and erection of concrete structures as indicated on the Drawings.

1.2 QUALITY ASSURANCE

- A. Standards: Unless otherwise indicated, all materials, workmanship and practices shall be in accordance with the current editions of the following standards:
1. ACI 318, Building Code Requirements for Reinforced Concrete.
 2. PCI MNL 116, Manual for Quality Control for Plants and Production of Precast Concrete Products.
 3. ANSI/ASTM C55 – Concrete Building Brick.
 4. ASTM A48 – Gray Iron Castings.

1.3 SUBMITTALS

- A. The following information shall be submitted for approval. Fabrication shall not begin until submission has been approved.
1. Quality Control: Satisfactory evidence shall be submitted that plant and production methods meet the requirements of PCI MNL 116.
 2. Submit under provisions of Division 1.
 3. Shop Drawings: Complete fabrication and erection drawings shall be submitted. All drawings shall bear the seal of a Professional Engineer registered in the State of Florida.
- B. Manufacturer's data sheets shall be submitted on the following:
1. Joint mastic and gaskets.
 2. Pipe connections.
 3. Grout material.
 4. Hatches and manhole covers.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Transportation and erection shall be done by qualified personnel using proper equipment. Lifting and supporting shall be done only at points indicated on the shop drawings.

PART 2 – PRODUCTS

2.1 MATERIALS AND FABRICATION A.

Precast Concrete Structures:

1. Design loads shall consist of dead load, live load, impact, soil loads and loads due to water table, as well as other loads which may be imposed upon the structure. Wetwells and manholes shall be designed in accordance with ASTM C-478. The minimum wall thickness for valve vaults shall be as shown on the Drawings.
2. Forms used for precast concrete shall be of metal and sufficiently designed and braced to maintain their alignment under pressures of the concrete during placing. Base and first section of precast structures shall be an integral cast.
3. Aggregates: All aggregates, fine and coarse, other than lightweight aggregate shall conform to ASTM C33. Lightweight aggregates, fine and coarse, shall conform to ASTM C330. Aggregates shall be free of deleterious substances causing reactivity with oxidized hydrogen sulfide. Both types of aggregate shall be graded in a manner so as to produce a homogenous concrete mix. All materials are to be accurately weighed at a central batching facility for mixing.
4. Cement shall be Portland cement Type II.
5. Minimum compressive strength of concrete used for precast concrete structures shall be 4000 psi at 28 days.
6. Placing. All concrete shall be handled from the mixer or transport vehicle to the place of final deposit in a continuous manner, as rapidly as practicable, and without segregation or loss of ingredients, until the approved unit is completed. Maximum elapsed time from batching to placement shall be 2 hours. Concrete shall be placed in layers not over 2 feet deep. Each layer shall be compacted by mechanical internal or external vibrating equipment. Duration of the vibration cycle shall be limited to the time necessary to produce satisfactory consolidation without causing objectionable segregation.
7. Curing:
 - a. For purposes of early reuse of forms, precast concrete may be steam cured after an initial set has taken place. The steam temperature shall not exceed 160°F, and the temperature shall be raised from normal ambient temperatures at a rate not to exceed 40°F per hour.
 - b. The steam cured unit shall not be removed from the forms until sufficient strength is obtained for the unit to withstand any structural strain to which it may be subjected during the form stripping operation. After the stripping of forms, further curing by

means of water spraying or a membrane curing compound may be used, and shall be of a clear or white type, conforming to ASTM C309.

8. Reinforcing steel shall be sufficiently tied to withstand any displacement during the pouring operation. All bars shall be Grade 60.
9. Lifting holes through the structures are not permitted. Equally spaced lifting lugs, rings or non-penetrating lift inserts shall be provided.
10. Top slabs for valve vaults shall be precast. Steel reinforcing shall be as required for the dead load of the slab plus an H-20 designation live load. Concrete for top slabs shall have a compressive strength of 4000 psi at 28 days. Thickness of concrete for top slabs shall be as shown on the Drawings.

- B. Sealing Compound: Plastic sealing compound shall comply with Federal Specification SS-SS-00210.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Earthwork: The CONTRACTOR shall prepare an excavation large enough to accommodate the structure and permit sealing of openings, waterproofing and backfilling operations. Earthwork shall conform to the applicable section of Division 2.
- B. Installation of Precast Concrete Structures: Precast concrete structures shall be constructed in a workmanlike manner at the locations and dimensions indicated on the Drawings. Precast structures shall be set on foundation of #57 crushed stone, 9 inches thick. The precast structures shall be constructed such that the structure will not transmit dead or live loads to the piping. Care shall be taken to prevent earth and other material from entering precast structures.
- C. Tops of Structures: Unless otherwise indicated on the Drawings, in unpaved areas, the tops of valve vaults shall be set 1-inch above grade.
- D. Backfill: After the structure and all appurtenances are in place and approved, backfill shall be placed to the original ground line or to the limits designated on the Drawings. Backfill material shall consist of sand or loose earth, free from stones, clods, or other deleterious material. It shall be placed in horizontal layers not exceeding 12 inches in depth, and shall be moistened and thoroughly compacted to a minimum relative density conforming to the requirements of Division 2.

END OF SECTION