

INVITATION FOR BID

IFB # 13-1089-OV

**44th Avenue East - From U.S. 41 (1st Street) to 19th Street Court East,
Project Nos.: 334-6001060 and 319-6045661**

Manatee County, a political subdivision of the State of Florida, (hereinafter the "County") will receive sealed Bids from individuals, corporations, partnerships, and other legal entities organized under the laws of the State of Florida or authorized to conduct business in the State of Florida.

NON-MANDATORY INFORMATION CONFERENCE

In order to insure that all prospective Bidders have sufficient information and understanding of the County's needs, an Information Conference will be held on: **April, 25, 2013 at 2:00 PM** at the **1022 26th Avenue East, Conference Room "B"** Bradenton, FL 34208. Attendance is not mandatory, but is highly encouraged.

NOTE: **Article B.05 Inspection of Site (page 00020-2)** – All potential Contractors, it is mandatory that a site visit be performed at the location to familiarize yourselves with the full scope of the construction site.

DEADLINE FOR CLARIFICATION REQUESTS: **May 3, 2013 at 5:00 PM**
(Reference Bid Article A.06)

TIME AND DATE DUE: **May 23, 2013 at 2:30 PM**

Important Note: Lobbying is prohibited (reference Bid Article A.08).

FOR INFORMATION CONTACT:

Olga Valcich, CPPB, Construction Specialist
(941) 749-3055, Fax (941) 749-3034
olga.valcich@mymanatee.org
Manatee County Financial Management Department
Purchasing Division

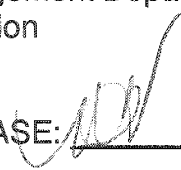
AUTHORIZED FOR RELEASE: 

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Geo Tech Report: Ardaman & Associates, Inc., Subsurface Soil Exploration, Analysis and Recommendations for Proposed Signalization Mast Arms at 44 th Avenue East & 18 th Street East dated February 23, 2012, File No. 10-7413, Attachment "T".....	15 pages
GeoTech Report: Ardaman & Associates, Inc., Subsurface Soil, Groundwater and Pavement Exploration for Reconstruction of 44 th Avenue East, from U.S. 41 to 15 th Street East dated April 15, 1991, File No.90-7853, Attachment "U".....	18 pages
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44th Avenue East - From U.S. 41 (1st Street) to 19th Street East, Project
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.....150 pages

Waterline Improvements - 100% Plans - 44th Avenue East, 411.6001070
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44th Avenue Improvements (Contract Drawings) from US 41 to 15th Street East Project
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.....(TBE Cardno).....74 pages

SECTION 00010
INFORMATION TO BIDDERS

A.01 OPENING LOCATION

These Bids will be **publicly opened** at **Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205** in the presence of County officials at the time and date stated, or soon thereafter. All Bidders or their representatives are invited to be present.

Any Bids received after the stated time and date will not be considered. It shall be the sole responsibility of the Bidder to have their Bid **delivered to the Manatee County Purchasing Division** for receipt on or before the stated time and date. If a Bid is sent by **U.S. Mail**, the Bidder shall be responsible for its timely delivery to the Purchasing Division. Bids delayed by mail shall not be considered, shall not be opened at the public opening, and arrangements shall be made for their return at the respondent's request and expense.

A.02 SEALED & MARKED

One original and two copies of your **signed Bid** shall be submitted in one **sealed** package, clearly marked on the outside **"Sealed Bid #IFB#13-1089-OV, 44th Avenue East, from U.S. 41 (1st Street) to 19th Street Court East, Project Nos: 334-6001060 and 319-6045661"** with your company name.

Address package to: Manatee County Purchasing Division
1112 Manatee Avenue West, Suite 803
Bradenton, Florida 34205

A.03 SECURING OF DOCUMENTS

Complete individual copies of the Bidding documents for the project and/or products can be obtained, free of charge, at the Manatee County Kathleen Casey, 941-708-7450, Extension 7327 or 7334. Documents may be obtained between the hours of 8:00 AM and 4:00 PM Monday through Friday, with the exception of holidays. Complete set of the Bidding document must be used in preparing Bids. The County assumes no responsibility for errors and misinterpretations resulting from the use of incomplete sets of Bidding documents.

A.04 BID DOCUMENTS

Bids on **<http://www.mymanatee.org>**, Bid documents and the Notices of Source Selection related to those Bids are available for download in a portable document format (.PDF) file on the Manatee County web page on the Purchasing tab under "Bids." You may view and print these files using Adobe Acrobat software. You may download a free copy of this software (Adobe) from the Owner's web page if you do not have it.

A.04 BID DOCUMENTS (Continued)

Manatee County collaborates with the Manatee Chamber of Commerce on distributing solicitations using the RFP Tool web page on the Chambers website: <http://www.Manateechamber.com> to post Bid documents in a portable document format (.PDF) file. This step is in addition to the posting on Manatee County Government web pages.

Manatee County may also use an internet service provider to distribute Bids. A link to that service, <http://www.DemandStar.com>, is provided on this web site under the Tab "DemandStar". Participation in the DemandStar system is not a requirement for doing business with Manatee County.

Note: The County posts the Notice of Source Selection seven (7) calendar days prior to the effective date of the Award.

IT IS THE RESPONSIBILITY OF EACH CONTRACTOR, PRIOR TO SUBMITTING THEIR BID, TO CONTACT THE MANATEE COUNTY PURCHASING DIVISION (see contact information on page one of this document) TO DETERMINE IF ADDENDA WERE ISSUED AND TO MAKE SUCH ADDENDA A PART OF THEIR BID .

A.05 MODIFICATION OF BID SPECIFICATIONS

If a Bidder wishes to recommend changes to the Bid specifications, the Bidder shall furnish in writing, data and information necessary to aid the Owner in evaluating the request to modify the specifications. The Owner is not obligated to make any changes to the Bid specifications. Unless an addendum is issued, the Bid specifications shall remain unaltered. **Bidders must fully comply with the Bid specifications, terms, and conditions.**

A.06 DEADLINE FOR CLARIFICATION REQUESTS

May 3, 2013 at 5:00 PM shall be the deadline to submit all inquiries, suggestions, or requests concerning interpretation, clarification or additional information pertaining to the Invitation for Bids to the Manatee County Purchasing Division.

This deadline has been established to maintain fair treatment for all potential Bidders, while maintaining the expedited nature of the Economic Stimulus that the contracting of this Work may achieve.

A.07 CLARIFICATION & ADDENDA

Each Bidder shall examine all Invitation for Bid documents and shall judge all matters relating to the adequacy and accuracy of such documents. Any inquiries, suggestions or requests concerning interpretation, clarification or additional information pertaining to the Invitation for Bids shall be made through the Manatee County Purchasing Division. The County shall not be responsible for oral interpretations given by any County employee, representative, or others. The

A.07 CLARIFICATION & ADDENDA (Continued)

issuance of a written addendum is the only official method whereby interpretation, clarification or additional information can be given.

If any addenda are issued to this Invitation for Bid, the County will broadcast the addenda on the DemandStar distribution system to "Planholders" on this web service, and post the documents on the Purchasing Division's web page at <http://www.mymanatee.org> which can be accessed by clicking on the "Purchasing" button and then clicking on the "Bids" button. It shall be the responsibility of each Bidder, prior to submitting their Bid, to contact Manatee County Purchasing (see contact on page 1) to determine if addenda were issued and to make such addenda a part of their Bid.

A.08 LOBBYING

After the issuance of any Invitation for Bid, prospective Bidders, or any agent, representative or person acting at the request of such Bidder shall not contact, communicate with or discuss any matter relating in any way to the Invitation for Bid with any officer, agent or employee of Manatee County other than the Purchasing Official or as directed in the Invitation for Bid. This prohibition includes the act of carbon copying officers, agents or employees of Manatee County on email correspondence. This requirement begins with the issuance of an Invitation for Bid, and ends upon execution of the final Contract or when the invitation has been canceled. Violators of this prohibition shall be subject to sanctions as provided in the Manatee County Purchasing Code of Law Chapter 2-26.

A.09 UNBALANCED BIDDING PROHIBITED

Manatee County recognizes that large and/or complex projects will often result in a variety of methods, sources, and prices. However, where in the opinion of the County such variation does not appear to be justified, given Bid specifications and industry and market conditions, the Bid will be presumed to be unbalanced. Examples of unbalanced Bids will include:

1. Bids showing omissions, alterations of form, additions not specified or required conditional or unauthorized alternate Bids.
2. Bids quoting prices that substantially deviate, either higher or lower, from those included in the Bids of competitive Bidders for the same line item unit costs.
3. Bids where the unit costs offered are in excess of or below reasonable cost analysis values.

A.09 UNBALANCED BIDDING PROHIBITED (Continued)

In the event the County determines that a Bid is presumed unbalanced, it will request the opportunity to, and reserves the right to, review all source quotes, Bids, price lists, letters of intent, etc., which the Bidder obtained and upon which the Bidder relied upon to develop the Bid. The County reserves the right to reject as non-responsive any presumptive unbalanced Bids where the Bidder is unable to demonstrate the validity and/or necessity of the unbalanced unit costs.

A.10 FRONT END LOADING OF BID PRICING PROHIBITED

Prices offered for performance and/or acquisition activities to occur early in the project schedule, such as mobilization; clearing and grubbing; or maintenance of traffic; that are substantially higher than pricing of competitive Bidders within the same portion of the project schedule, will be presumed to be front end loaded. Front end loaded Bids could reasonably appear to be an attempt to obtain unjustified early payments creating a risk of insufficient incentive for the Contractor to complete the Work or otherwise creating an appearance of an under-capitalized Bidder.

In the event the County determines that a Bid is presumed to be front end loaded, it will request the opportunity to, and reserves the right to, review all source quotes, Bids, price lists, letters of intent, etc., which the Bidder obtained and upon which the Bidder relied upon to develop the pricing or acquisition timing for these Bid items. The County reserves the right to reject as non-responsive any presumptive front end loaded Bids where the Bidder is unable to demonstrate the validity and/or necessity of the front end loaded costs.

A.11 WITHDRAWAL OF OFFERS

Contractors may withdraw offers as follows: a) Mistakes discovered before the opening of a solicitation may be withdrawn by written notice from the Bidder submitting the offer. This request must be received in the office designated for receipt of offers in the solicitation document prior to the time set for delivery and opening of the offers. A copy of the request shall be retained and the unopened offer returned to that Contractor. b) After the responses to a solicitation are opened or a selection has been determined, but before a Contract is signed, a Contractor alleging a material mistake of fact may be permitted to withdraw their offer if: (1) the mistake is clearly evident on the solicitation document; or (2) the Bidder submits evidence which clearly and convincingly demonstrates that a mistake was made. Request to withdraw an offer must be in writing and approved by the Purchasing Official.

A.12 IRREVOCABLE OFFER

Any Bid may be withdrawn up until the date and time set for opening of the Bid. Any Bid not so withdrawn shall, upon opening, constitute an irrevocable offer for a period of ninety (90) days to sell to Manatee County the goods or services set forth in the attached specifications until one or more of the Bids have been duly accepted by the County.

A.13 BID EXPENSES

All expenses for making Bids to the County are to be borne by the Bidder.

A.14 RESERVED RIGHTS

The County reserves the right to accept or reject any and/or all Bids, to waive irregularities and technicalities, and to request resubmission. Also, the County reserves the right to accept all or any part of the Bid and to increase or decrease quantities to meet additional or reduced requirements of the County. Any sole response received by the first submission date may or may not be rejected by the County depending on available competition and current needs of the County. For all items combined, the Bid of the lowest responsive, responsible Bidder will be accepted, unless all Bids are rejected. The lowest responsible Bidder shall mean **that Bidder who makes the lowest Bid to sell goods and/or services of a quality which** meets or exceeds the quality of goods and/or services set forth in the attached specifications or otherwise required by the County, and who is fit and capable to perform the Bid as made.

To be responsive, a Bidder shall submit a Bid which conforms in all material respects to the requirements set forth in the Invitation for Bid. To be a responsible Bidder, the Bidder shall have the capability in all respects to perform fully the Contract requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance. Also, the County reserves the right to make such investigation as it deems necessary to determine the ability of any Bidder to furnish the service requested. Information the County deems necessary to make this determination shall be provided by the Bidder. Such information may include, but shall not be limited to current financial statements, verification of availability of equipment and personnel, and past performance records.

A.15 APPLICABLE LAWS

Bidder must be authorized to transact business in the State of Florida. All applicable laws and regulations of the State of Florida and ordinances and regulations of Manatee County will apply to any resulting Agreement. Any involvement with any Manatee County procurement shall be in accordance with Manatee County Purchasing Ordinance as amended. Any actual or prospective Bidder who is aggrieved in connection with the solicitation or award of a Contract may protest to the Board of County Commissioners of Manatee County as required in Manatee County Code of Laws.

A.16 COLLUSION

By offering a submission to this Invitation for Bid, the Bidder certifies that he has not divulged, discussed or compared their Bid with other Bidder, and has not colluded with any other Bidder or parties to this Bid whatsoever. Also, Bidder certifies, and in the case of a joint Bid each party thereto certifies as to their own organization, that in connection with this Bid:

A.16 COLLUSION (Continued)

- a. any prices and/or cost data submitted have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices and/or cost data, with any other Bidder or with any competitor;
- b. any prices and/or cost data quoted for this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder, prior to the scheduled opening, directly or indirectly to any other Bidder or to any competitor;
- c. no attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition;
- d. the only person or persons interested in this Bid, principal or principals is/are named therein and that no person other than therein mentioned has any interest in this Bid or in the Contract to be entered into; and
- e. no person or agency has been employed or retained to solicit or secure this Contract upon an agreement or understanding or a commission, percentage, brokerage, or contingent fee excepting bona fide employees or established commercial agencies maintained by Bidder for purpose of doing business.

A.17 CODE OF ETHICS

With respect to this Bid, if any Bidder violates, directly or indirectly, the ethics provisions of the Manatee County Purchasing Ordinance and/or Florida criminal or civil laws related to public procurement, including but not limited to Florida Statutes Chapter 112, Part II, Code of Ethics for Public Officers and Employees, such Bidder will be disqualified from eligibility to perform the Work described in this Invitation for Bid, and may also be disqualified from furnishing future goods or services to, and from submitting any future Bids to supply goods or services to, Manatee County.

By submitting a Bid, the Bidder represents to the County that all statements made and materials submitted are truthful, with no relevant facts withheld. If a Bidder is determined to have been untruthful in its Bid or any related presentation, such Bidder will be disqualified from eligibility to perform the Work described in this Invitation for Bid, and may also be disqualified from furnishing future goods or services to, and from submitting any future Bids to supply goods or services to, Manatee County.

A.18 BID FORMS

Bids must be submitted on attached County forms, although additional pages may be attached. **Bidders must fully complete all pages of the Bid Forms. Bid Forms must be executed by an authorized signatory who has the legal authority to make the offer and bind the company. Bidders must fully comply with all Bid specifications, terms and conditions.** Failure to comply shall result in Contract default, whereupon, the defaulting Contractor shall be required to pay for any and all re-procurement costs, damages, and attorney fees as incurred by the County.

A.19 LEGAL NAME

Bids shall clearly indicate the legal name, address and telephone number of the Bidder. Bids shall be signed above the typed or printed name and title of the signer. The signer must have the authority to bind the Bidder to the submitted Bid.

A.20 PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES

A person or affiliate who has been placed on the State's convicted vendor list following a conviction for a public entity crime, as that term is defined in Florida Statute (F.S.) § 287.133, may not submit a Bid, Proposal, or reply on a Contract to provide any goods or services to a public entity; may not submit a Bid, Proposal, or reply on a Contract with a public entity for the construction or repair of a public building or public work; may not submit Bids, Proposals or replies on leases of real property to a public entity; may not be awarded or perform work as a Contractor, Supplier, Subcontractor, or Consultant under a Contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in F.S. § 287.017 for CATEGORY TWO for a period of thirty-six (36) months following the date of being placed on the convicted list.

In addition, the Manatee County Code of Laws prohibits the award of any Contract to any person or entity who/which has, within the past five (5) years, been convicted of, or admitted to in court or sworn to under oath, a public entity crime or of any environmental law that, in the reasonable opinion of the Purchasing Official, establishes reasonable grounds to believe the person or business entity will not conduct business in a responsible matter. To insure compliance with the foregoing, the Code requires all persons or entities desiring to Contract with the County to execute and file with the Purchasing Official an affidavit, executed under the pain and penalties of perjury, confirming that person, entity and any person(s) affiliated with the entity, does not have such a record and is therefore eligible to seek and be awarded business with the County. In the case of a business entity other than a partnership or a corporation, such affidavit shall be executed by an authorized agent of the entity. In the case of a partnership, such affidavit shall be executed by the general partner(s). A Public Contracting and Environmental Crimes Certification form is attached for this purpose.

A.21 DISCOUNTS

Any and all discounts must be incorporated in the prices contained in the Bid and not shown separately. The prices as shown on the Bid Form shall be the price used in determining Award.

A.22 TAXES

Manatee County is exempt from Federal Excise and State Sales Taxes. (F.E.T. Exempt Cert. No. 59-78-0089K; FL Sales Tax Exempt Cert. No. 85-8012622206C-6); therefore, the Contractor is prohibited from delineating a separate line item in his Bid for any sales or service taxes. Nothing herein shall affect the Contractor's normal tax liability.

A.23 DESCRIPTIVE INFORMATION

Unless otherwise specifically provided in the specifications, all equipment, materials and articles incorporated in the Work covered by this Contract shall be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in the specifications, reference to any equipment, material, article or patented process, by trade name, brand name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition.

A.24 AMERICANS WITH DISABILITIES ACT

The Board of County Commissioners of Manatee County, Florida, does not discriminate upon the basis of any individual's disability status. This non-discrimination policy involves every aspect of the County's functions including one's access to, participation, employment, or treatment in its programs or activities. Anyone requiring reasonable accommodation for an **Information Conference** or **Bid Opening** should contact the person named on the first page of this Bid document at least twenty-four (24) hours in advance of either activity.

A.25 EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

In accordance with the provisions of Title VI of the Civil Rights Act of 1964 and Title 15, Part 8 of the Code of Federal Regulations, Manatee County hereby notifies all prospective offerors that they will affirmatively ensure minority business enterprises will be afforded full opportunity to participate in response to this advertisement and will not be discriminated against on the grounds of race, color or national origin in consideration for an Award of Contract.

A.26 MBE/WBE

The State of Florida, **Office of Supplier Diversity** provides the certification process and the database for identifying certified MBE/WBE firms. This service may be directly accessed at: <http://www.osd.dms.state.fl.us/iframe.htm>

If you have any questions regarding this State service, please contact their office at (850) 487-0915.

A.27 MATHEMATICAL ERRORS

In the event of multiplication/extension error(s), the unit price shall prevail. In the event of addition error(s) the extension totals will prevail. All Bids shall be reviewed mathematically and corrected, if necessary, using these standards, prior to additional evaluation.

A.28 DISCLOSURE

Upon receipt, all inquiries and responses to inquiries related to this Invitation for Bid becomes "Public Records", and shall be subject to public disclosure consistent with Chapter 119, Florida Statutes.

Bids become subject to disclosure thirty (30) days after the opening or if a notice of intended Award decision is made earlier than this time as provided by F.S. 119.071(1)(b). No announcement or review of the offer shall be conducted at the public opening. If the County rejects all offers and concurrently notices its intent to reissue the solicitation, initial offers are exempt until the County provides notice of its intended decision, or thirty (30) days after the opening of the new offers.

Based on the above, Manatee County will receive Bids at the date and time stated, and will make public at the opening the names of the business entities of all that submitted an offer and any amount presented as a total offer without any verification of the mathematics or the completeness of the offer. Upon the expiration of the statutory term for exemption the actual documents may be inspected or copied. When County staff have completed a mathematic validation and inspected the completeness of the offers, tabulation shall be posted on www.mymanatee.org.

NOTE: ANY OR ALL STATEMENTS CONTAINED IN THE FOLLOWING SECTIONS: BASIS OF AWARD, TERMS AND CONDITIONS OF THE CONTRACT, OR SPECIFICATIONS, WHICH VARY FROM THE INFORMATION TO BIDDERS, SHALL HAVE PRECEDENCE.

END OF SECTION A

SECTION 00020
BASIS OF AWARD

B.01 BASIS OF AWARD

Award shall be to the lowest, responsive, responsible Bidder meeting specifications and having the lowest Total Bid Price for **Bid "A"**, or the lowest Total Bid Price for **Bid "B"**, for the requirements listed on the Bid Form for the Work as set forth in this Invitation for Bid. Bid prices shall include costs for furnishing all labor, equipment and/or materials for the completion of the Work in accordance with and in the manner set forth and described in the Contract documents to the County's satisfaction within the prescribed time.

Two schedules for Completion of Work shall be considered. Each Bid for completion by the specified stated time shall be offered as a separate "Total Bid Price". The County has the sole authority to select the Bid based on the completion time which is in the best interest of the County. Only one Award shall be made.

NOTE: Inspection of the site is a pre-requisite to be considered for award of this Bid.

In evaluating Bids, the County shall consider the qualifications of the Bidders; and if required, may also consider the qualifications of the Subcontractors, Suppliers, and other persons and organizations proposed. County may also consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work.

Whenever two or more Bids are equal with respect to price, the Bid received from a local business shall be given preference in Award. Whenever two or more Bids which are equal with respect to price are received, and neither of these Bids are from a local business, the Award shall be determined by a chance drawing, coin toss, or similar tie-breaking method conducted by the Purchasing Division and open to the public.

B.02 SUBCONTRACTORS

Subcontractors shall be bound by the terms and conditions of this Contract insofar as it applies to their work, but this shall not relieve the prime Contractor from the full responsibility of the County for the proper completion of all Work to be executed under this Contract.

The employment of unauthorized aliens by any Contractor is considered a violation of Section 274 (e) of the Immigration and Employment Act. If the Contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of this Agreement.

B.03 QUALIFICATIONS OF BIDDERS

Contractors shall be prequalified by the Florida Department of Transportation in order to bid on this project. A copy of Bidder's current prequalification certificate shall be submitted with the Bid Form. Bidder shall have a minimum of three years experience and shall include a current list of projects completed within the past three years.

A complete list of all Subcontractors proposed for any portion of the Work may be requested of any Bidder deemed necessary by the County. Subcontracts shall be awarded only to those Subcontractors considered satisfactory by the County.

B.04 PREPARATION OF CONTRACT

A written notice confirming Award or recommendation thereof will be forwarded to the successful Bidder accompanied by the required number of unsigned counterparts of the Agreement. Within ten (10) days thereafter, successful Bidder shall sign and deliver the required number of counterparts of the Agreement with any other required documents to County. (Note: Contract must be approved in accordance with the Manatee County Code of Laws, Chapter 2-26, Manatee County Purchasing Ordinance and the Administrative Standards and Procedures Manual approved by the County Administrator).

B.05 INSPECTION OF SITE

Inspection of the site is a requirement to be considered for award of this Contract. Prior to submitting a Bid Form, each Bidder shall examine the site and all conditions thereon fully familiarizing themselves with the full scope of the project. Failure to become familiar with site conditions will in no way relieve the successful Bidder from the necessity of furnishing any materials or performing any Work that is required to complete the project in accordance with the plans and specifications. Site visit (s) shall be acknowledged in Section 00300, Bid Form page # 00300-1.

END OF SECTION B

SECTION 00030
GENERAL TERMS AND CONDITIONS OF THE CONTRACT

C.01 CONTRACT FORMS

The Agreement resulting from the acceptance of a Bid shall be in the form of the Agreement stated in this Bid.

C.02 ASSIGNMENT OF CONTRACT

Contractor shall not assign, transfer, convey, sublet or otherwise dispose of this Contract or of his right, title, or interest therein, or his power to execute such Contract, or to assign any monies due or to become due there under to any other person, firm or corporation unless first obtaining the written consent of the County. The giving of such consent to a particular Subcontractor assignment shall not dispense with the necessity of such consent to any further or other assignment.

C.03 COMPLETION OF WORK

The Work will be completed and ready for final inspection within the specified calendar days from the date the Contract time commences to run. Two Bids shall be considered, **Bid "A"** based on **540 calendar days** and **Bid "B"** based on **720 calendar days**. The County has the sole authority to select the Bid based on the completion time which is in the best interest of the County. Only one Award shall be made.

C.04 LIQUIDATED DAMAGES

If the Contractor refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will hinder its completion within the time specified, the County may seek damages. The actual damages for delay will be impossible to determine and in lieu thereof, the Contractor shall pay to the County the sum of **\$2,154.00** as fixed, agreed, and liquidated damages for each calendar day of the delay until the Work is finally accepted by the County and the Contractor and his Surety shall be liable for the amount thereof.

C.05 PAYMENT

Contractor may apply for partial payment on monthly estimates, based on the amount of work done or completed in compliance with the provisions of the Contract. Contractor shall submit an application, on a standard pay application form provided or approved by the County, of an approximate estimate of the proportionate value of the Work done, items and locations of the Work performed up to and including the last day of the period then ending. The County will then review said estimate and make any necessary revisions so that the estimate can receive approval for payment. If the Contractor and the County do not agree on the approximate estimate of the proportionate value of the Work done for any pay period, the determination of the County will be binding. The amount of said estimate after deducting any required retainage and all previous payments shall be due and payable to the Contractor, twenty (20) business days if County is its own Engineer of Record (EOR) or twenty-five (25) business days if outside agent

C.05 PAYMENT (Continued)

approval is required after the pay estimate has been approved by the agent for the County.

In accordance with the Prompt Payment Act, F.S. § 218.735(7), a Punch List shall be formulated.

Time allowed for development of punch list:

1. Awarded Contracts with an estimated cost of less than \$10 million will be within thirty (30) calendar days after reaching substantial completion. Substantial completion is defined as reaching beneficial occupancy or use.
2. Awarded Contracts with a cost of \$10 million dollars or more will be within thirty (30) calendar days OR if extended by Contract, up to sixty (60) calendar days after reaching substantial completion. Substantial completion is defined as reaching beneficial occupancy or use.

The final Contract completion date must be at least thirty (30) days after delivery of the list of items. If the list is not provided to the awarded Contractor by the agreed upon date, the Contract completion time must be extended by the number of days the County exceeds the delivery date.

It is the Contractor's responsibility for the care of the materials. Any damage to or loss of said materials is the full responsibility of the Contractor. Any periodical pay estimate signed by the Contractor shall be final as to the Contractor for any or all Work covered by the periodical pay estimate.

Any requests for payment of materials stored on site must be accompanied with a paid receipt. The Contractor warrants and guarantees that title to all work, materials and equipment covered by any application for payment, whether incorporated in the project or not, will pass to the County at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereafter referred to as "Liens").

The Contractor agrees to furnish an affidavit stating that all laborers, material men, and Subcontractors have been paid on the project for Work covered by the application for payment and that a partial or complete release of lien, as may be necessary, be properly executed by the material men, laborers, Subcontractors on the project for Work covered by the application for payment, sufficient to secure the County from any claim whatsoever arising out of the aforesaid Work.

When the Contractor has completed the Work in compliance with the terms of the Contract documents, he shall notify the County in writing that the project is ready for final inspection. The County will then advise the Contractor as to the arrangements for final inspection and what Work, if any, is required to prepare the project or a portion thereof for final inspection. When the County determines the project or portion thereof is ready for final inspection, the County shall perform same. Upon completion of final inspection, the County will notify Contractor of all particulars in

C.05 PAYMENT (Continued)

which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies. When all such errors have been corrected, a final re-inspection will be made. The process will be repeated until, in the opinion of the County, the project has been completed in compliance with the terms of the Contract documents.

When final acceptance has been made by the County, the County will make final payment of the Contract amount, plus all approved additions, less approved deductions and previous payments made. The Contract will be considered complete when all Work has been finished, the final inspection made, approved as-builts received, and the project finally accepted in writing by the County. The Contractor's responsibility shall then terminate except as otherwise stated.

C.06 RETAINAGE

A retainage of 10% of the total Work in place shall be withheld until 50% complete. After 50% completion, the retainage shall be reduced to 5% of the total Work in place until final completion and acceptance of the Work by the County. Upon final acceptance, the remaining retainage shall be included in the final payment.

C.07 WARRANTY AND GUARANTEE PROVISIONS

All work, materials, and equipment furnished as defined herein shall be guaranteed and warranted by the Contractor for a minimum period of three (3) years, unless otherwise specified, from final acceptance by the County to be free from defects due either to faulty materials or equipment or faulty workmanship.

All materials, equipment, and workmanship furnished and installed by the Contractor is warranted and guaranteed by the Contractor to meet the required standards and to accomplish the purposes and functions of the project as defined, detailed, and specified herein.

The County shall, following discovery thereof, promptly give written notice to the Contractor of faulty materials, equipment, or workmanship within the period of the guarantee and the Contractor shall promptly replace any part of the faulty equipment, material, or workmanship at his own cost. These warranty and guarantee provisions create no limitations on the County as to any claims or actions for breach of guaranty or breach of warranty that the County might have against parties other than the Contractor, and do not constitute exclusive remedies of the County against the Contractor.

C.08 ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees for equipment or processes in conjunction with the equipment and/or services being furnished. Contractor shall defend all suits or claims for infringement of any patent, trademark or copyright, and shall save the County harmless from loss on account thereof, including costs and attorney's fees.

C.09 AUTHORIZED PRODUCT REPRESENTATION

The Contractor, by virtue of submitting the name and specifications of a manufacturer's product, will be required to furnish the named manufacturer's product. Failure to perform accordingly may, in the County's sole discretion, be deemed a breach of Contract, and shall constitute grounds for the County's immediate termination of the Contract.

C.10 REGULATIONS

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

C.11 CANCELLATION

Any failure of the Contractor to furnish or perform the Work (including, but not limited to, commencement of the Work, failure to supply sufficient skilled workers or suitable materials or equipment) in accordance with the Contract, the County may order the stop of the Work, or any portion thereof, until the cause for such order has been eliminated. If the Contractor persistently fails to perform the Work in accordance with the Contract, the County reserves the right to terminate the Contract and select the next qualified Bidder or re-advertise this procurement in part or in whole. The County reserves the right to cancel all or any undelivered or unexecuted portion of this Contract with or without cause.

C.12 INDEMNIFICATION

The Contractor covenants and agrees to indemnify and save harmless the County, its agents and employees, from and against all claims, suits, actions, damages, causes of action, or judgments arising out of the terms of the resulting Agreement for any personal injury, loss of life, or damage to the property sustained as a result of the performance or non-performance of services or delivery of goods; from and against any orders, judgments, or decrees, which may be entered against the County, its agents or employees; and from and against all costs, attorney's fees, expenses and other liabilities incurred in the defense of any such claim, suit or action, and the investigation thereof. Nothing in the Award, resulting Agreement, Contract or Purchase Order shall be deemed to affect the rights, privileges and immunities of the County as set forth in F.S. § 768.28.

C.13 MANUALS, SCHEMATICS, HANDBOOKS (IF APPLICABLE)

All manuals, schematics and handbooks shall be provided which are applicable to the equipment delivered. An operators manual, parts manual and technician manual must also be provided. Parts lists (manuals) must include OEM part numbers for items not manufactured by the Bidder. Contractor shall furnish two (2) copies of each.

C.14 INSURANCE

The Contractor will not commence Work under a Contract until all insurance under this section and such insurance coverage as might be required by the County has been obtained. The Contractor shall obtain, and submit to purchasing within ten (10) calendar days of request, at his expense, the following minimum amounts of insurance (inclusive of any amounts provided by an umbrella or excess policy):

a. Workers' Compensation/Employers' Liability

Part One - There shall be no maximum limit (other than as limited by the applicable statute) for liability imposed by Florida Workers' Compensation Act or any other coverage required by the Contract documents which are customarily insured under Part One of the standard Workers' Compensation Policy.

Part Two - The minimum amount of coverage required by the Contract documents which are customarily insured under Part Two of the standard Workers' Compensation Policy shall be:

(Each Accident)	<u>\$1,000,000</u>
(Disease-Policy Limit)	<u>\$1,000,000</u>
(Disease-Each Employee)	<u>\$1,000,000</u>

b. Commercial General Liability

The limits are to be applicable only to Work performed under this Contract and shall be those that would be provided with the attachment of the Amendment of Limits of Insurance (Designated Project or Premises) endorsement (ISO Form CG 25 03) a Commercial General Liability Policy with the following minimum limits.

General Aggregate:	
Products/Completed Operations Aggregate	<u>\$10,000,000</u>
Personal and Advertising Injury	<u>\$5,000,000</u>
Each Occurrence	<u>\$5,000,000</u>
Fire Damage (Any One Fire)	<u>\$Nil</u>
Medical Expense (Any One Person)	<u>\$Nil</u>

Standard Commercial General Liability Policies exclude coverage for work within fifty (50) feet of any Railroad Right-Of-Way, as defined in Commercial General Liability form CG 00 01 12 07section "V", definitions, subsection 9 "insured contract" parts (b), (f) 1.

The Successful Contractor shall submit to the County evidence of a **Commercial General Liability Policy which has removed the exclusion of work within fifty (50) feet of any Railroad Track or Right of Way.** The County reserves the right to request a copy of the full CGL policy at any time.

C.14 INSURANCE (Continued)

c. Business Auto Policy

Each Occurrence Bodily Injury and Property Damage Liability Combined	<u>\$500,000</u>
Annual Aggregate (if applicable)	<u>\$500,000</u>

d. County's Protective Liability Coverage

The minimum Owner's Protective OPC Policy limits per occurrence and, if subject to an aggregate, annual aggregate to be provided by the Contractor shall be the same as the amounts shown above as the minimum per occurrence and general policy aggregate limits respectively required for the Commercial General Liability coverage. The limits afforded by the OPC Policy and any excess policies shall apply only to the County and the County's officials, officers, agents and employees and only to claims arising out of or in connection with the Work under this Contract.

e. Railroad Insurance

Prior to commencement of any Work under this Contract, the Successful Contractor shall be required to submit an original **Railroad Protective Liability** policy with liability limits as identified in the **CSX Agreement** which is made a part of this Invitation for Bid. **CSX Transportation shall be specifically named as the insured.**

f. Property Insurance

If this Contract includes construction of or additions to above ground buildings or structures, Contractor shall provide "**Builder's Risk**" insurance with the minimum amount of insurance to be 100% of the value of such addition(s), building(s), or structure(s).

g. Installation Floater

If this Contract does not include construction of or additions to above ground building or structures, **but does involve** the installation of machinery or equipment, Contractor shall provide an "**Installation Floater**" with the minimum amount of insurance to be 100% of the value of such addition(s), building(s), or structure(s).

h. Certificates of Insurance and Copies of Policies

Certificates of Insurance in triplicate evidencing the insurance coverage specified in the six above paragraphs a., b., c., d., e., and f., shall be filed with the Purchasing Official before operations are begun. The required certificates of insurance shall name the types of policy, policy number, date of expiration, amount of coverage, companies affording coverage, and also shall refer specifically to the Bid number, project title and location of project. Insurance shall remain in force at least one year after completion and acceptance of the project by the County, in the amounts and types as stated herein, with coverage for all products and services completed under this Contract.

C.14 INSURANCE (Continued)

ADDITIONAL INSURED:

Manatee County, a political subdivision of the State of Florida, shall be specifically named as additional insured on all Commercial General Liability and Auto Liability policies.

If the initial insurance expires prior to the completion of operations and/or services by the Contractor, renewal certificates of insurance and required copies of policies shall be furnished by the Contractor and delivered to the Purchasing Official thirty (30) days prior to the date of their expiration. Nothing herein shall in any manner create any liability of the County in connection with any claim against the Contractor for labor, services, or materials, or of Subcontractors; and nothing herein shall limit the liability of the Contractor or Contractor's sureties to the County or to any workers, suppliers, material men or employees in relation to this Contract.

The County reserves the right to obtain complete, certified copies of all insurance policies required by this Contract to be delivered to the Purchasing Official within ten (10) days of written request.

- i. Certification Requirements – In order for the certificate of insurance to be accepted it **must** comply with the following:
 1. The certificate holder shall be:
Manatee County Board of Commissioners, a political subdivision of the State of Florida
P.O. Box 1000
Bradenton, FL 34206-1000
 2. Certificate shall be mailed to:
Manatee County Purchasing Division
1112 Manatee Avenue West, Suite 803
Bradenton, FL 34205
Attn: Olga Valcich, CPPB, Contract Specialist

C.15 BID BOND/CERTIFIED CHECK

By offering a submission to this Invitation for Bid, the Bidder agrees should the Bidder's Bid be accepted, **to execute the form of Contract and present the same to Manatee County for approval within ten (10) calendar days after notice of Intent to Award.** The Bidder further agrees that failure to execute and deliver said form of Contract **within ten (10) calendar days** will result in damages to Manatee County and as guarantee of payment of same a Bid Bond/Certified Check shall be enclosed within the submitted sealed Bid in the amount of five (5%) percent of the total amount of the Bid.

C.15 BID BOND/CERTIFIED CHECK (Continued)

The Bidder further agrees that in case the Bidder fails to enter into a Contract, as prescribed by Manatee County, the Bid Bond/Certified Check accompanying the Bid shall be forfeited to Manatee County as agreed liquidated damages. If the County enters into a Contract with a Bidder, or if the County rejects any and/or all Bids, accompanying bond will be promptly returned.

C.16 PERFORMANCE AND PAYMENT BONDS

The successful Bidder shall furnish surety bonds using the Public Construction Bond form prescribed in F.S. § 255.05, which is provided herein, as security for faithful performance of the Contract awarded as a result of this Bid and for the payment of all persons performing labor and/or furnishing material in connection therewith. Failure to provide the required bonds on the prescribed form may result in successful Bidder being deemed nonresponsive. Bonds must be in the form prescribed in F.S. § 255.05, and must not contain notice, demand or other terms and conditions, including informal pre-claim meetings, not provided for in F.S. § 255.05.

Surety of such bonds shall be in an amount equal to the Bid Award (100% each) issued by a duly authorized and nationally recognized surety company, authorized to do business in the State of Florida, satisfactory to this County. The attorney-in-fact who signs the bonds must file with the bonds, a certificate and effective dated copy of power-of-attorney. Performance and Payment Bonds shall be issued to Manatee County, a political subdivision of the State of Florida, within ten (10) calendar days after notification of Intent to Award.

In addition, pursuant to F.S. § 255.05(1)(b), prior to commencing Work, the Contractor shall be responsible and bear all costs associated to record the Performance and Payment Bond with the Manatee County Clerk of the Circuit Court. A certified copy of said recording shall be furnished to the Purchasing Division upon filing. Pursuant to F.S. § 255.05(1)(b), the County will make no payment to the Contractor until the Contractor has complied with this paragraph.

Furnishing of the recorded Performance and Payment Bonds shall be requisite to execution of a Contract with the County. Said Performance and Payment Bonds will remain in force for the duration of the Contract with the premiums paid by the Contractor. Failure of the successful Bidder to execute such Contract and to supply the required bonds shall be just cause for cancellation of the Award. The County may then contract with another acceptable Bidder or re-advertise this Invitation for

Bid. If another Bidder is accepted, and notice given within ninety (90) days after the opening of the Bids, this acceptance shall bind the Bidder as though they were originally the successful Bidder.

Failure of the County at any time to require performance by the Contractor of any provisions set out in the Contract will in no way affect the right of the County, thereafter, to enforce those provisions.

C.17 NO DAMAGES FOR DELAY

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

C.18 NO INTEREST

Any monies not paid by the County when claimed to be due to the Contractor under this Contract shall not be subject to interest including prejudgment interest. Any monies not paid by the County when claimed to be due to the Contractor for damages awarded in the case of construction delays shall not be subject to prejudgment interest.

C.19 CONSTRUCTION OF CONTRACT

This Contract and the rights and responsibilities hereunder shall not be construed more strongly against either party, regardless of the extent to which such party may have participated in the preparation hereof.

C.20 BE GREEN

All Bidders are encouraged to use as many **environmentally preferable** "green" products, materials, supplies, etc. as possible in order to promote a safe and healthy environment. **Environmentally preferable are products or services that have a reduced adverse effect on the environment.** Provide detail of your organization's initiative and its ability to meet the goal of environmental sustainability.

END OF SECTION C

SECTION 00100
BID SUMMARY

D.01 THE WORK

The Work included in this Contract consists of the following: Construct a three (3) lane road from U.S. 41 to 15th Street East and four (4) lane road from 15th Street East to 19th Street Court East, with sidewalks, curbs and gutters. Provide turn lanes for intersection at 301 Boulevard, 9th Street East, 15th Street East and 18th Street Court East. Construct new access road and cul-de-sac for 18th Street Court East. Realign the driveway at 18th Street Court East on Beall's Property. Construction shall also include three (3) stormwater ponds, one (1) wetland mitigation, drainage pipes and structures for stormwater management. Contractor shall also Jack and Bore 32" and 46" casing for stormwater pipes crossing underneath the existing CSX Railroad. Tie pavement to the new railroad concrete panel. Provide street lighting along 44th Avenue East from U.S. 41 to 19th Street Court East. Re-install signalization for intersection at 301 Boulevard and 9th Street East. Provide signalization for intersection at 15th Street East and 18th Street Court East. Provide pavement signing and marking throughout the entire project. Install temporary pavement markings for four (4) lane to two (2) lane road transition, from 18th Street Court East to 19th Street Court East.

BIDDERS NOTE: Project must commence by June 30, 2013 or sooner.

The successful Contractor shall furnish all shop drawings, working drawings, labor, materials, equipment, tools, services and incidentals necessary to complete all Work required by these specifications.

The successful Contractor shall perform the Work complete, in place and ready for continuous service and shall include any repairs, replacements, and/or restoration required as a result of damages caused prior to acceptance by the Owner.

The successful Contractor shall furnish and install all materials, equipment and labor which is reasonably and properly inferable and necessary for the proper completion of the Work, whether specifically indicated in the Bid documents or not.

D.02 SUBCONTRACTORS, SUPPLIERS AND OTHERS

The identity of Subcontractors, Suppliers, and other persons and organizations (including those who are to furnish the principal items of material and equipment) may be requested by the County for each Bid item from any of the Bidders; and the Bidder shall respond within five (5) days after the date of such request. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, persons or organization if requested by County. If County, after due investigation, has reasonable objection to any proposed Subcontractor, supplier, other person or organization, County may, before the Notice of Award is given, request the apparent successful Bidder to submit an acceptable substitute without an increase in Contract price or Contract time.

D.02 SUBCONTRACTORS, SUPPLIERS AND OTHERS (Continued)

If apparent successful Bidder declines to make any such substitution, County may award the Contract to the next lowest qualified Bidder that proposes to use acceptable Subcontractors, Suppliers, and other persons who County does not make written objection to. Contractor shall not be required to employ any Subcontractor, Supplier, other person or organization who Contractor has reasonable objection to.

Subcontractors shall be bound by the terms and conditions of this Contract insofar as it applies to their work, but this shall not relieve the prime Contractor from the full responsibility to the County for the proper completion of all Work to be executed under this Contract.

D.03 BIDS

Bids are to be submitted in **triplicate, one original and two copies**, upon the County supplied forms. All blank spaces must be filled in as noted with amounts extended and totaled and no changes shall be made in the wording of the forms or in the items mentioned therein. In the event a change is made in your submittal, the Bidder shall write its initials by the change. Any Bid may be rejected which contains any omissions, alterations, irregularities of any kind, or which shall in any manner fail to conform to Bid requirements.

A Bid made by an individual, either in his/her own or proper person or under a trade or firm name, shall be executed under the individual's signature. If made by a partnership, the Bid shall be executed by two or more of the general partners. If made by a corporation, the Bid shall be executed by its President or other legally authorized corporate officer or agent.

D.04 EXAMINATION OF BID DOCUMENTS AND SITE

It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Bid documents thoroughly; (b) visit the site to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work; (c) consider federal, state, and local codes, laws, and regulations that may affect costs, progress, performance, or furnishing of the Work; (d) study and carefully correlate Bidder's observations with the Bid documents; and (e) notify County of all conflicts, errors, or discrepancies in the Bid document.

Each Bidder may, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine his Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Bid documents. County will provide each Bidder access to the site to conduct such explorations and tests.

D.04 EXAMINATION OF BID DOCUMENTS AND SITE (Continued)

Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by Contractor in performing the Work are identified in the Bid documents.

All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by County unless otherwise provided in the Bid documents.

D.05 MATERIALS AND WORKMANSHIP

All materials and apparatus required for this Work, except as specified otherwise, shall be new, of first class quality, and shall be furnished, delivered, connected and finished in every detail. Construction shall be prescribed by good industry practice and in accordance with manufacturer's recommendations for the type being installed.

Use skilled workman trained and experienced in the necessary trades and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this section.

D.06 REGULATIONS AND MATERIAL DISPOSAL

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

D.07 PROJECT CLOSE-OUT

Clean construction site and remove any and all excess materials. Correct any damages to property that may have occurred as a result of installation and/or delivery. Repair and patch all surfaces cut for installation. The Contractor shall remedy any deficiencies promptly should the County determine any Work is incomplete or defective.

When the County determines the Work is acceptable in accordance with this Invitation for Bid, the Contractor shall provide the close out submittals, including but not necessarily limited to the following:

1 set	Certificate of Warranties	
1 set	Manufacturer's Product Literature	(when applicable)
1 set	Project Record Drawings	
1 set	Subcontractor Information	(when applicable)

D.08 DISCRETIONARY WORK

This Bid item entails minor increases (that may be directed by staff) to existing Bid item quantities or minor modification items not bid which were unforeseen and necessary during the construction to provide a safe, complete project in accordance with Bid documents. (This will not affect the requirement for change orders involving major modifications to the project.) Payment for all Work under this item shall be made only at the County's discretion in order to satisfactorily complete the project. In general, this item is for unanticipated conflicts and/or design changes required during construction which are necessary to complete the project without changing the initial Scope of Work and without costly delays.

D.09 PROGRESS REQUIREMENTS

All Work done under this Contract shall be done with a minimum of inconvenience to the private property owners in the area. The Contractor shall coordinate his Work with private property owners such that existing utility services are maintained and they have access to their property at all times.

END OF SECTION D

SECTION 00150

MANATEE COUNTY LOCAL PREFERENCE LAW AND VENDOR REGISTRATION

E.01 Vendor Registration

All vendors are encouraged to register with Manatee County using the on-line "Vendor Registration" web page on www.mymanatee.org.

Enclosed are a copy of the current Manatee County law that details the County's Local Preference and the County's definition of a local business.

If you assert that your firm meets the stated definition of a local business, we ask that in addition to registering on the County's web page, you fill out the attached "**Affidavit As To Local Business Form**" that is included in this section, have the completed document notarized, and mail the original to the following address: Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205.

Your cooperation in registering your business with Manatee County will enhance our opportunities to identify sources for goods and services, plus identify local businesses. This information is used for soliciting quotations up to \$250,000.00 and for competitive solicitations of larger purchases.

You will note that Manatee County collaborates with the Manatee Chamber of Commerce, posting Bids on www.manateechamber.com as well as using the same vendor categories for registration.

Our staff can assist you with your registration as needed. Our office hours are 8:00 A.M. to 5:00 P.M., Monday through Friday on regular business days. Please call (941) 749-3014 if you wish to have a Purchasing staff member assist you.

Quick steps to registration: **www.mymanatee.org**

A link to "Purchasing" is listed under "Quick Links" on page one of the County web site.

On the left hand side of the Purchasing web page, click on "Vendor Registration".

This will bring up the Vendor Registration form for on-line input. Please note that the definition of a "local business" changed on March 17, 2009. The web page will be updated to include the current law which has been provided in this section of the Bid.

Thank you for reviewing this information and considering registering your business with Manatee County. Registration is not mandatory; however, by taking the time to register, you are helping the County to provide timely notifications of Quotation, Bid and Proposal opportunities to your business.

E.02 Section 2-26-6. Local preference, tie Bids, local business defined.

- a) Whenever a responsible local business Bidder and a responsible non-local business Bidder are found, upon the opening of Bids, to have both submitted the lowest responsive Bid, the Bid of the local Bidder shall be awarded the Contract. Should more than one responsible local business Bidder match the responsible non-local business Bidder's lowest responsive Bid, or should no responsible local business Bidder match the lowest responsive Bid but two or more responsible non-local business Bidders submit lowest responsive Bids for equal amounts, then the Award of the Contract shall be determined by a chance drawing, coin toss, or similar tie-breaking method conducted by the Purchasing Division and open to the public. Any Bidders seeking to be recognized as local businesses for purposes of this local business preference provision may be required by the terms of the Bid announcement to certify they meet the definition of local business set forth in this section, and to register as a local business with the County in the manner prescribed by the County to facilitate the County's ability to track the Award of Contracts to local businesses and to allow the County to provide future notifications to its local businesses concerning other Bidding opportunities.
- b) Nothing herein shall be deemed to prohibit the inclusion of requirements with respect to operating and maintaining a local place of business in any Invitation for Bids when the Bidder's location materially affects the provisions of the services or supplies that are required by the invitation.
- c) **Local business is defined as a business legally authorized to engage in the sale of the goods and/or services to be procured, and which certifies within its Bid that for at least six (6) months prior to the announcement of the solicitation of Bids it has maintained a physical place of business in Manatee, Desoto, Hardee, Hillsborough, Pinellas or Sarasota County with at least one full-time employee at that location.**
- d) **Each solicitation for Bids made by the County shall contain terms expressly describing the local business preference policies of the County, and shall provide that by electing to submit a Bid pursuant to an Invitation for Bid, all Bidders are deemed to understand and agree to those policies.**
- e) For all Contracts for architecture, professional engineering, or other professional services governed by Florida Statute § 287.055, the Consultants' Competitive Negotiation Act, the County shall include the local business status of a firm among the factors considered when selecting which firms are "most highly qualified." In determining which firm is the "most qualified" for purposes of negotiating a satisfactory Contract, preference shall be given to a local business where all other relevant factors are equal.

E.02 Section 2-26-6. Local preference, tie Bids, **local business defined** (Continued)

f) Local preference shall not apply to the following categories of Contracts:

1. Goods or services provided under a cooperative purchasing agreement or similar "piggyback" contract;
2. Contracts for professional services subject to Florida Statute § 287.055, the Consultants' Competitive Negotiation Act, except as provided for in subsection (e) above;
3. Purchases or Contracts which are funded, in whole or in part, by a governmental or other funding entity, where the terms and conditions of receipt of the funds prohibit the preference;
4. Purchases or Contracts made pursuant to a non-competitive award process, unless otherwise provided by this section;
5. Any Bid announcement which specifically provides that the general local preference policies set forth in this section are suspended due to the unique nature of the goods or services sought, the existence of an emergency as found by either the County Commission or County Administrator, or where such suspension is, in the opinion of the County Attorney, required by law.

g) To qualify for local preference under this section, **a local business must certify to the County that it:**

1. Has not within the five (5) years prior to the Bid announcement admitted guilt or been found guilty by any court or state or federal regulatory enforcement agency of violation of any criminal law, or a law or administrative regulation regarding fraud;
2. Is not currently subject to an unresolved citation or notice of violation of any Manatee County Code provision, except citations or notices which are the subject of a current legal appeal, as of the date of the Bid announcement;
3. Is not delinquent in the payment of any fines, liens, assessments, fees or taxes to any governmental unit or taxing authority within Manatee County, except any such sums which are the subject of a current legal appeal.

Ref: Ordinance 09-21 and 09-23 **PASSED AND DULY ADOPTED** in open session, with a quorum present and voting, on the 17th day of March, 2009.

END OF SECTION E

**MANATEE COUNTY GOVERNMENT
AFFIDAVIT AS TO LOCAL BUSINESS
(Complete and Initial Items B-F)**

A. Authorized Representative

I, [name] _____, am the [title] _____ and the duly authorized representative of: [name of business] _____, and that I possess direct personal knowledge to make informed responses to these certifications and the legal authority to make this Affidavit on behalf of myself and the business for which I am acting; and by electing to submit a Bid pursuant to this Invitation for Bids, shall be deemed to understand and agree to the local business preference policies of Manatee County; and that I have the direct knowledge to state that this firm complies with all of the following conditions to be considered to be a local business as required by the Manatee County Code of Law, Section 2-26-6.

B. Place of Business: I certify that the above business is legally authorized to engage in the sale of goods and/or services and has a physical place of business in Manatee, DeSoto, Hardee, Hillsborough, Pinellas or Sarasota County with at least one (1) fulltime employee at that location. The physical address of the location which meets the above criteria is: _____ [Initial] _____

Business Phone Number: _____

Email Address: _____

C. Business History: I certify that business operations began at the above physical address with at least one fulltime employee on [date] _____ [Initial] _____

D. Criminal Violations: I certify that within the past five (5) years of the date of this Bid announcement, this business has not admitted guilt nor been found guilty by any court or local, state or federal regulatory enforcement agency of violation of any criminal law or administrative regulation regarding fraud. [Initial] _____

E. Citations or Code Violations: I certify that this business is not currently subject to any unresolved citation or notice of violation of any Manatee County Code provision, with the exception of citations or notices which are the subject of a legal current appeal within the date of this Bid announcement. [Initial] _____

F. Fees and Taxes: I certify that this business is not delinquent in the payment of fines, liens, assessments, fees or taxes to any governmental unit or taxing authority within Manatee County, with the exception of those which are the subject of a current legal appeal. [Initial] _____

Each of the above certifications is required to meet the qualification of "local business" under Manatee County Code of Laws, 2-26-6.

Signature of Affiant _____

STATE OF FLORIDA
COUNTY OF _____

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

(Notary Seal) Signature of Notary: _____

Name of Notary: (Typed or Printed) _____

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

Submit executed copy to Manatee County Purchasing Division - 1112 Manatee Avenue West - Suite 803 - Bradenton, FL 34205

SECTION 00300
BID FORM
(SUBMIT IN TRIPLICATE)

For: IFB #13-1089-OV, 44th Avenue East - From U.S. 41 (1st Street) to 19th Street Court East, (Project Nos.: 334-6001060 and 319-6045661)

TOTAL BID PRICE (BID "A"): _____
Based on a Completion Time of 540 calendar days
TOTAL BID PRICE (BID "B"): _____
Based on a Completion Time of 720 calendar days

Two schedules for completion of the Work shall be considered. Each Bid for completion by the specified stated time shall be offered as a separate "Total Bid Price". The County has the sole authority to select the Bid based on the completion time which is in the best interest of the County. Only one Award shall be made.

We, the undersigned, hereby declare that we have carefully reviewed the Bid documents, and with full knowledge and understanding of the aforementioned herewith submit this Bid, meeting each and every specification, term, and condition contained in the Invitation for Bids, in its entirety.

We understand that the Bid package, in its entirety, including but not limited to, all specifications, terms, and conditions in their entirety shall be made a part of any Agreement or Contract between Manatee County and the successful Bidder. Failure to comply shall result in Contract default, whereupon, the defaulting Contractor shall be required to pay for any and all re-procurement costs, damages, and attorney fees as incurred by the County.

Communications concerning this Bid shall be addressed as follows: **(Complete all fields)**

Person's Name: _____

Address: _____ Phone: _____

Date: _____ FL Contractor License# _____

License in the Name of: _____

Bidder is a WBE/MBE Vendor? _____ Certification _____

COMPANY'S NAME: _____

AUTHORIZED SIGNATURE(S): _____

Name and Title of Above Signer(s) _____

CO. MAILING ADDRESS: _____

STATE OF INCORPORATION _____ (if applicable)

TELEPHONE: (____) _____ FAX: (____) _____

Email address: _____

I, _____ on [date] _____ attest that I have visited the project site(s) to familiarize myself with the full Scope of Work required for the Bid.

Acknowledge Addendum No. _____ Dated: _____ Acknowledge Addendum No. _____ Dated: _____

Acknowledge Addendum No. _____ Dated: _____ Acknowledge Addendum No. _____ Dated: _____

Acknowledge Addendum No. _____ Dated: _____ Acknowledge Addendum No. _____ Dated: _____

BID FORM / Section 00300 – Bid “A”
Based on 540 Calendar Day Completion
(Submit in Triplicate) / IFB #13-1089-OV
For: 44th Avenue East – From U.S. 41 (1st St to 19th St Court East)

Subtotal: Roadway US 41 to 19th St \$ _____

Subtotal: Utilities – New US 41 to 19th St \$ _____

Subtotal: (Traffic Pay Items Combined)
Traffic Element – Signal, Lighting, S & PM
15th Street (North-South) \$ _____

Subtotal: (Traffic Elements) US41 to 15th St
Signalization Pay Items \$ _____

Subtotal: Lighting Pay Items US41 to 15th St \$ _____

Subtotal: Signing and Marking Pay Items US41 to
15th Street \$ _____

Subtotal: (Traffic Elements) 15th St to 19th St
Signalization Pay Items \$ _____

Subtotal: Lighting Pay Items 15th St to 19th St \$ _____

Subtotal: Signing and Marking Pay Items
15th Street to 19th St \$ _____

Subtotal: Manatee County Miscellaneous Pay Items \$ _____

TOTAL BID PRICE “A” \$ _____

Bidder: _____

Authorized Signature: _____

BID FORM / Section 00300 – Bid “B”
(Based on 720 Calendar Day Completion Time)
(Submit in Triplicate) / IFB #13-1089-OV
For: 44th Avenue East – From U.S. 41 (1st Street) to 19th St Court East

Subtotal: Roadway US 41 to 19th St \$_____

Subtotal: Utilities – New US 41 to 19th St \$_____

Subtotal: (Traffic Pay Items Combined)
Traffic Element – Signal, Lighting, S & PM
15th Street (North-South) \$_____

Subtotal: (Traffic Elements) US41 to 15th St
Signalization Pay Items \$_____

Subtotal: Lighting Pay Items US41 to 15th St \$_____

Subtotal: Signing and Marking Pay Items US41 to
15th Street \$_____

Subtotal: (Traffic Elements) 15th St to 19th St
Signalization Pay Items \$_____

Subtotal: Lighting Pay Items 15th St to 19th St \$_____

Subtotal: Signing and Marking Pay Items
15th Street to 19th St \$_____

Subtotal: Manatee County Miscellaneous Pay Items \$_____

TOTAL BID PRICE “B” \$_____

Bidder:_____

Authorized Signature:_____

**DEFINITION OF THE UNITS OF MEASURE, IFB #13-1089-OV, 44th
Avenue East - From U.S. 41 (1st Street) to 19th Street Court East**

	DEFINITION OF THE UNITS OF MEASURE	UNIT OF MEASURE
	Acre	AC
	Assembly	AS
	Cubic Yard	CY
	Each	EA
	Each Day	ED
	Foot	FT
	Gross Mile	GM
	Hour	HR
	Linear Foot	LF
	Lump Sum	LS
	Net Mile	NM
	Per Intersection	PI
	Pound	LB
	Square Feet	SF
	Square Yard	SY
	Ton	TN

BIDDER: _____

00300-4

AUTHORIZED SIGNATURE: _____

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
ROADWAY - US41 to 19th St.							
ROADWAY PAY ITEMS							
R 1	104-10-3		Staked Silt Fence (Type III)	LF	21,111.00		
R 2	104-11		Floating Turbidity Barrier	LF	126.00		
R 3	104-15		Soil Tracking Prevention Device	EA	2.00		
R 4	104-18		Inlet Protection System	EA	123.00		
R 5	110-1-1		Clearing & Grubbing	AC	38.48		
R 6	110-4		Removal of Exist. Conc. Pvmnt.	SY	335.00		
R 7	110-7-1		Mailbox (Furnish & Install),	EA	14.00		
R 8	120-1		Regular Excavation	CY	130,103.00		
R 9	120-4		Excavation, Subsoil (Roadway)	CY	5,027.00		
R 10	120-6		Embankment (Regular)	CY	14,702.00		
R 11	145-1	*	Geosynthetic Reinforced Soil Slope	SF	3,184.00		
R 12	160-4		6" Stabilized Sub-base	SY	2,129.00		
R 13	160-4		12" Stabilized Sub-base	SY	50,038.00		
R 14	285-701		Optional Base Group 1:(Paved Shoulder)	SY	243.00		
R 15	285-704		Optional Base Group 4: 8th St Ct E	SY	2,023.00		
R 16	285-709		Optional Base Group 9:	SY	47,448.00		
R 17	286-1		Turnout Construction (15th St E Driveways)	SY	76.00		
R 18	327-70-4		Milling Exist. Asph. Pavement (3" Avg. Depth), 15th St E	SY	2,744.00		
R 19	327-70-6		Milling Exist. Asph. Pavement (1" Avg. Depth), 9th St E	SY	1,762.00		
R 20	334-1-13	*	2" SP12.5 Structural Course, Traffic C	TN	592.00		
R 21	334-1-MC1	*	2" Type S-1 Asphalt Concrete (Incl Tack Coat)	TN	4,631.00		
R 22	334-1-MC1	*	1" Type S-1 Asphalt Concrete (Incl Tack Coat)	TN	96.00		
R 23	334-1-MC2	*	1" Type S-III Asphalt Concrete	TN	2,497.00		
R 24	337-7-42	*	1-1/2" asphaltic Friction Course (FC-9.5) (Paved Shoulder)	TN	20.00		

Bidder: _____

00300-5

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
R 25	337-7-42	*	1" Asphaltic Friction Course (FC 9.5) (Traffic C)	TN	296.00		
R 26	400-1-2	*	Class I Concrete (Endwalls and Pipe Support), Including Reinforcing Steel	CY	6.26		
R 27	400-1-2	*	Class I Concrete (Misc, Swale Crossing, Concrete Spillway), Including Reinforcing Steel	CY	103.00		
R 28	400-1-10	*	Class II Concrete (Concrete Encasement), Including Reinforcing Steel and Bearing Pad	CY	162.96		
R 29	410-70-MC	*	Triple Barrel Box Culvert ,3(8' x 4')	LF	192.00		
R 30	425-1-351	*	Inlets (Curb) (Type P-5) (<10')	EA	4.00		
R 31	425-1-352	*	Inlets (Curb) (Type P-5) (>10')	EA	6.00		
R 32	425-1-361	*	Inlets (Curb) (Type P-6) (<10')	EA	5.00		
R 33	425-1-451	*	Inlets (Curb) (Type J-5) (<10')	EA	1.00		
R 34	425-1-MC1	*	Curb Inlet/ Conflict Box	EA	33.00		
R 35	425-1-MC2	*	Grate Inlets	EA	27.00		
R 36	425-1-MC3	*	Drop Inlet	EA	12.00		
R 37	425-1-MC4	*	Outfall Control Structure, Including Reinforcing Steel and Skimmer	EA	3.00		
R 38	425-1-MC5	*	Junction Box/Conflict Box	EA	12.00		
R 39	425-1-MC6	*	Adjust/Reconstruct Existing Inlet	EA	3.00		
R 40	425-1-529	*	Inlet (Dt Bot) (Type C Modified) (<10')	EA	5.00		
R 41	425-1-583	*	Inlet (Dt Bot) (Type H Modified) (<10')	EA	1.00		
R 42	425-1-701	*	Gutter Inlet (modified Type S) (<10)	EA	1.00		
R 43	425-1-711	*	Gutter Inlet (Type V) (<10)	EA	2.00		
R 44	425-2-41	*	Manholes (P-7) (<10')	EA	1.00		
R 45	425-2-61	*	Manholes (P-8)(<10')	EA	7.00		
R 46	425-2-62	*	Manholes (P-8)(>10')	EA	1.00		
R 47	425-2-71	*	Manholes (J-7) (<10')	EA	3.00		
R 48	425-2-91	*	Manholes (J-8)(<10')	EA	3.00		
R 49	430-175-115	*	Pipe Storm Sewer Culv (RCP)(15")	LF	2,421.00		
R 50	430-175-115	*	Pipe Storm Sewer Culv (A2000,PVC)(15")	LF	228.00		
R 51	430-175-118	*	Pipe Storm Sewer Culv (RCP)(18")	LF	2,263.00		

Bidder: _____

00300-6

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
R 52	430-175-118	*	Pipe Storm Sewer Culv (A2000)(18")	LF	972.00		
R 53	430-175-121	*	Pipe Storm Sewer Culv (A2000)(21")	LF	632.00		
R 54	430-175-124	*	Pipe Storm Sewer Culv (RCP)(24")	LF	4,307.00		
R 55	430-175-124	*	Pipe Storm Sewer Culv (A2000)(24")	LF	398.00		
R 56	430-175-130	*	Pipe Storm Sewer Culv (RCP)(30")	LF	741.00		
R 57	430-175-130	*	Pipe Storm Sewer Culv (A2000)(30")	LF	944.00		
R 58	430-175-136	*	Pipe Storm Sewer Culv (RCP)(36")	LF	63.00		
R 59	430-175-136	*	Pipe Storm Sewer Culv (A2000)(36")	LF	833.00		
R 60	430-175-142	*	Pipe Storm Sewer Culv (RCP)(42")	LF	1,040.00		
R 61	430-175-148	*	Pipe Storm Sewer Culv (RCP)(48")	LF	1,096.00		
R 62	430-175-215	*	Pipe Cross Drain Culv (ERCP) (12"x18")	LF	1,940.00		
R 63	430-175-218	*	Pipe Storm Sewer Culv (ERCP) (14"x23")	LF	398.00		
R 64	430-175-224	*	Pipe Cross Drain Culv (ERCP) (19"x30")	LF	612.00		
R 65	430-175-230	*	Pipe Storm Sewer Culv (ERCP)(24"x38")	LF	587.00		
R 66	430-175-242	*	Pipe Storm Sewer Culv (ERCP)(34"x53")	LF	96.00		
R 67	430-175-250	*	Pipe Storm Sewer Culv (ERCP) (38"x60")	LF	254.00		
R 68	430-982-125	*	18" MES (Cross Drain)	EA	1.00		
R 69	430-982-633	*	24x38" MES (Cross Drain)	EA	6.00		
R 70	430-984-125	*	MES (Round)(18"SD)	EA	2.00		
R 71	430-984-138	*	MES (Round) (36" SD)	EA	1.00		
R 72	430-984-625	*	MES (Conc Pipe Ellip) (12"x18") (SD)	EA	2.00		
R 73	430-984-625	*	MES (Conc Pipe Ellip) (14"x23") (SD)	EA	5.00		
R 74	440-1-10	*	6" Underdrain and Clean out	LF	2,615.00		
R 75	455-133-2	*	Steel Sheet Piling (Temporary)	SF	4,000.00		
R 76	515-1-2	*	Pipe Handrail (Aluminum)	LF	99.00		
R 77	520-1-MC1		Type AB Curb & Gutter	LF	785.00		
R 78	520-1-MC2		Miami Curb&Gutter	LF	1,986.00		
R 79	520-1-10		Type F Curb & Gutter	LF	13,463.00		

Bidder:_____

00300-7

Bid "A"

Authorized Signature:_____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
R 80	520-3-		Valley Crossing Gutter, Concrete	LF	482.00		
R 81	520-70		Concrete Traffic Separator (Special)	SY	110.00		
R 82	520-70		Concrete Traffic Separator (Type IV, 4' wide)	SY	145.00		
R 83	522-1		4" Concrete Sidewalk	SY	5,296.00		
R 84	522-2		6" Concrete Sidewalk, Reinforced Driveway	SY	2,131.00		
R 85	522-2		6" Concrete Pedestrian Landing Pad	SY	98.00		
R 86	522-4	*	8" Concrete Bus Shelter Pad, Including Reinforcing Steel	SY	51.00		
R 87	530-3-4		Rip-Rap (Rubble) (Ditch Lining)	TN	90.60		
R 88	550-10-222		Fencing, Type B, 6' Height w/Vinyl Coating, Green	LF	2,710.00		
R 89	550-10-228		Fence Removal and Reinstallation	LF	2,116.00		
R 90	550-MC		Auto Gate Removal and Reinstallation	EA	1.00		
R 91	550-60-233		Fence Gate, Type B, Sliding, 15' opening, w/Vinyl Coating, Green	EA	1.00		
R 92	556-1-5	*	Jack and Bore (32" Steel Casing)	LF	115.00		
R 93	556-1-7	*	Jack & Bore (46" Steel Casing")	LF	120.00		
R 94	570-1-2		Sodding (Performance Turf, Bahia) (Includes Mowing)	SY	73,222.00		
R 95	570-MC		Wetland creation, mitigation and enhancement at NE corner of 44th at 15th	LS	1.00		
						ROADWAY SUBTOTAL:	
UTILITIES - NEW - US41 to 19th St.							
UTILITIES PAY ITEMS							
CO. NO.	FDOT ITEM		DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
U 1		*	8" DIP Waterline (CL 50) (Open Cut)	LF	3,082		
U 2		*	6" DIP Waterline (CL 50) Open Cut	LF	150		
U 3		*	8" HDPE Waterline (C-906) DR 11	LF	40		
U 4		*	24" DIP Waterline (CL 350) (Open Cut)	LF	180		
U 5		*	Ductile Iron Fittings	LB	20,000		
U 6		*	Fire Hydrant Blowoff Assembly (per MC Det. UW8)	EA	1		
U 7		*	Fire Hydrant Assembly , Complete incl. 6" DIP & valve	EA	2		
U 8			Relocate Fire Hydrant Assembly	EA	6		
U 9			Connect to Exist. 8" Waterline	EA	5		
U 10			Connect to Exist 6" Waterline	EA	2		

Bidder: _____

Authorized Signature: _____

00300-8

Bid "A"

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
U 11			Cut-in 24"x8" Tee	EA	1		
U 12			Connect to Exist. 24" Watermain - end connect	EA	3		
U 13		*	Pipe Adapter (HDPE to MJ)	EA	2		
U 14		*	8" Pipe Joint Restraints	EA	180		
U 15		*	24" Pipe Joint Restraints	EA	45		
U 16		*	6" Gate Valve w/Box	EA	3		
U 17		*	8" Gate Valve w/Box	EA	5		
U 18		*	24" Butterfly Valve w/Box	EA	4		
U 19		*	Connect to Exist. 24" Waterline - saddle tap connection	EA	6		
U 20			ARV Assembly for Force Main (per MC Std Det. US 25)	EA	2		
U 21			Grout & plug out of service pipe	CY	25		
U 22		*	Remove Exist. Waterline 8" and under	LF	300		
U 23		*	Forcemain Relocation 6" & Under incl. fittings C900 PVC	LF	160		
U 24		*	Sanitary Sewer Service Lateral (Single)	EA	12		
U 25		*	Sanitary Sewer Service Lateral (Double)	EA	4		
U 26		*	Relay Sewer Service 6" & Under incl. fittings PVC DR26	LF	120		
U 27		*	Sanitary Tanker Service	HR	12		
U 28			Adjust Manhole Lid to Grade	EA	21		
U 29		*	Rehab Existing Sanitary Manhole	SF	2,500		
U 30		*	Hymax Adapter	EA	3		
U 31		*	Remove 24" CI Waterline and Valves	LS	1		
U 32		*	24"x 8" Tapping Sleeve and Valve	EA	2		
U 33		*	24" x 6" Tapping Sleeve and Valve	EA	1		
U 34		*	Replace Water Service, (long, single)	EA	22		
U 35		*	Replace Water Service, (short, single)	EA	6		
U 36			Replace Exist. Water Service, (long, double)	EA	3		
U 37		*	Replace Water Service w/3" DIP, six meter boxes & gate valve	EA	2		
U 38		*	BackFlow Preventer (1" Dia.)	EA	3		
U 39		*	Relocate Master Meter Assembly 6 "	LS	1		

Bidder: _____

Authorized Signature: _____

00300-9

Bid "A"

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
U 40			Replace 2" Master Meter Assembly & service	LS	1		
U 41			2" Air Release Assembly for 16" and Larger Mains (UW 10)	EA	1		
U 42			Miscellaneous Concrete	CY	30		
U 43			Mobilization @ 10%	LS	1		
U 44			UTILITIES Misc Work & Clean Up @5%	LS	1		
U 45			UTILITIES Discretionary	LS	1		\$90,000.00
						UTILITIES SUBTOTAL:	

TRAFFIC ELEMENTS - SIGNAL, LIGHTING, S&PM - 15th St. (NORTH-SOUTH)

TRAFFIC PAY ITEMS (COMBINED)							
CO. NO.	FDOT ITEM	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 1	555-1-2	*	DIRECTIONAL BORE, 6' TO < 12'	LF	400		
T 2	630-1-11	*	SERVICE CONDUIT RISER F&I	LF	75		
T 3	630-1-12	*	CONDUIT, SIGNALS, F&I, UNDERGROUND	LF	200		
T 4	632-6-1	*	CABLE, SIGNAL, F&I, OUTSIDE OF INTERSECTION	LF	400		
T 5	632-7-1	*	CABLE, SIGNAL, F&I COUNT	PI	1		
T 6	633-3-11	*	SIGNALS-FIBER OPTIC CONNECTION HARDWARE, F&I SPLICE ENCLOSURE	EA	1		
T 7	635-1-11	*	PULL & JUNCTION BOXES, F&I, PULL BOX	EA	9		
T 8	639-1-22	*	SIGNALS, ELECTRICAL POWER SERVICE, UNDERGROUND	AS	1		
T 9	639-2-1	*	SIGNALS, ELECTRICAL SERVICE WIRE	LF	100		
T 10	639-3-11	*	SIGNAL, ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	1		
T 11	641-2-12	*	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE 12'	EA	1		
T 12	646-1-11	*	ALUMINUM SIGNAL POLES PEDESTAL, F&I	EA	8		
T 13	649-31-999	*	MAST ARM, F&I, CUSTOM	EA	4		
T 14	650-1-313	*	TRAFFIC SIGNAL, F&I, 3 SECTION, 1 WAY, STANDARD (LED)	AS	4		
T 15	650-1-513	*	TRAFFIC SIGNAL, F&I, 5 SECTIONS, 1 WAY, STANDARD (LED)	AS	4		
T 16	653-191	*	PEDESTRIAN SIGNAL, F&I, LED-COUNTDOWN, 1 DIRECTION 16"	AS	8		
T 17	663-74-15	*	VIDEO DETECTOR ASSEMBLY, F&I	EA	4		
T 18	665-13	*	PEDESTRIAN DETECTOR, F&I, (DETECTOR STATION AND SIGN)	EA	8		
T 19	670-5-111	*	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1		
T 20	699-1-1	*	INTERNAL ILLUM SIGN, F&I, STREET NAME (LED) INTERNAL	EA	4		

Bidder: _____

00300-10

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)	
T 21	700-20-11	*	SINGLE POST SIGN, F&I, LESS THAN 12 SF	AS	9			
T 22	700-46-1	*	SIGN EXISTING, REMOVE	AS	4			
T 23	700-89-2	*	SIGN, ELECTRIC POWERED LED R3-2, 30" x 30"	EA	1			
T 24	706-3	*	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	325			
T 25	711-11-160		THERMOPLASTIC, STANDARD, WHITE, MESSAGE	EA	5			
T 26	711-11-170		THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	13			
T 27	711-11-111		THERMOPLASTIC, STANDARD, WHITE, SOLID, 6"	NM	0			
T 28	711-11-123		THERMOPLASTIC, STANDARD, WHITE, SOLID, 12"	LF	350			
T 29	711-11-224		THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18"	LF	500			
T 30	711-11-125		THERMOPLASTIC, STANDARD, WHITE, SOLID, 24"	LF	200			
T 31	711-11-211		THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6"	NM	0			
T 32	715-1-12	*	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8-6	LF	400			
T 33	715-5-12	*	150 WATT HIGH PRESSURE SODIUM LUMINAIRE, F&I	EA	4			
T 34	783-1-122	*	ITS FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS	LF	125			
T 35	783-5-1	*	ITS PULL BOX FOR FIBER OPTIC CABLE, F&I	EA	1			
T 36	783-6-1	*	ITS SPLICE BOX FOR FIBER OPTIC CABLE, F&I	EA	1			
			SUB TOTAL: TRAFFIC PAY ITEMS (COMBINED)15th St North-South					
Traffic Elements - Signals, Lighting, S&PM - US41 to 15th St.								
SIGNALIZATION PAY ITEMS								
CO. NO.	FDOT ITEM		DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)	
T 37	555-1-1	*	DIRECTIONAL BORE (<6") (2" HDPE)	LF	600			
T 38	555-1-2	*	DIRECTIONAL BORE (6" TO <12") (2" HDPE)	LF	645			
T 39	630-1-11	*	CONDUIT (F&I) (ABOVEGROUND) (2")	LF	80			
T 40	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (1.25")	LF	10			
T 41	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (2")	LF	597			
T 42	630-1-13	*	CONDUIT (F&I) (UNDERPAVEMENT)	LF	134			
T 43	632-7-1	*	CABLE (SIGNAL) (F&I)	PI	2			
T 44	635-1-11	*	PULL AND JUNCTION BOXES (F&I) (PULL BOX)	EA	20			
T 45	639-1-122	*	ELECTRICAL POWER SERVICE (F&I)(UNDERGROUND)	AS	2			

Bidder: _____

00300-11

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 46	639-2-1	*	ELECTRICAL SERVICE WIRE (F&I)	LF	800		
T 47	639-3-11	*	ELECTRICAL SERVICE DISCONNECT (F&I)(POLE MOUNT)	EA	1		
T 48	641-2-12	*	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-II POLE)	EA	3		
T 49	646-1-11	*	ALUMINUM SIGNALS POLE (F&I)(ALUMINUM PEDESTAL)	EA	12		
T 50	649-31-201	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (36)	EA	1		
T 51	649-31-202	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (46)	EA	2		
T 52	649-31-203	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (60)	EA	1		
T 53	649-31-299	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (CUSTOM)	EA	2		
T 54	650-1-311	*	TRAFFIC SIGNAL (F&I) (3 SECT.) (1-WAY) (LED)	AS	10		
T 55	650-1-511	*	TRAFFIC SIGNAL (F&I) (5 SECT.) (1-WAY) (LED)	AS	7		
T 56	653-191	*	PEDESTRIAN SIGNALS (F&I) (LED) (1 WAY)(COUNTDOWN)	AS	8		
T 57	653-192	*	PEDESTRIAN SIGNALS (F&I) (LED) (2 WAY)(COUNTDOWN)	AS	4		
T 58	663-74-15	*	VEHICLE DETECTOR ASSEMBLIES (F&I) (VIDEO)	EA	8		
T 59	665-13	*	PED. DETECTOR (F&I) (DETECTOR WITH SIGN ONLY)	EA	16		
T 60	670-5-110	*	TRAFFIC CONTROLLER ASSEMBLY (F&I) (NEMA) (NO PREEMPT)	AS	2		
T 61	685-106	*	UNINTERRUPTIBLE POWER SOURCE (UPS)	EA	2		
T 62	690-10		REMOVE SIGNAL HEAD ASSEMBLY	EA	8		
T 63	690-20		REMOVE SIGNAL PEDESTRIAN ASSEMBLY	EA	4		
T 64	690-31		REMOVE SIGNAL PEDESTAL	EA	3		
T 65	690-34-1		REMOVE POLE (DEEP) (DIRECT BURIAL)	EA	3		
T 66	690-50		REMOVE CONTROLLER ASSEMBLY	EA	1		
T 67	690-60		REMOVE VEHICLE DETECTOR ASSEMBLY	EA	8		
T 68	690-70		REMOVE DETECTOR PEDESTRIAN ASSEMBLY	EA	8		
T 69	690-80		REMOVE SPAN WIRE ASSEMBLY	EA	2		
T 70	690-90		REMOVE CONDUIT & CABLING	PI	1		
T 71	690-100		REMOVE MISCELLANEOUS SIGNAL EQUIPMENT	PI	1		
T 72	699-1-1	*	INTERNALLY ILLUMINATED SIGN (F&I) (EDGE LIT LED)	EA	8		

Bidder: _____

00300-12

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FOOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 73	700-48-18	*	SIGN PANEL (F&I)	EA	2		
T 74	700-48-60	*	SIGN PANEL (REMOVE)	AS	5		
T 75	783-1-121	*	ITS FIBER OPTIC CABLE (F&I)	LF	1125		
T 76	783-2-31	*	ITS FIBER OPTIC (INSTALL) (SPLICE)	EA	12		
T 77	783-3-11	*	ITS FO CONNECTION HARDWARE (F&I) (SPLICE ENCL)	EA	2		
T 78	783-3-12	*	ITS FO CONNECTION HARDWARE (F&I) (SPLICE TRAY)	EA	2		
T 79	783-3-15	*	ITS FO CONNECTION HARDWARE (F&I) (PATCH PANEL)	EA	2		
T 80	783-4-112	*	ITS CONDUIT (F&I)(UNDERGROUND)	LF	85		
T81	784-1-1	*	ITS FIELD ETHERNET SWITCH	EA	2		
						SUBTOTAL: SIGNALIZATION PAY ITEMS (US41 to 15thSt)	
LIGHTING PAY ITEMS							
T82	555-1-2	*	DIRECTIONAL BORE (6" TO LESS THAN 12")	LF	700		
T83	715-1-13	*	CONDUCTOR (F&I)(INSULATED)(NO. 4)	LF	14,805		
T84	715-2-11	*	CONDUIT (F&I) 2 INCH, (UNDERGROUND) (LIGHTING & COMM.)	LF	4,580		
T85	715-2-11	*	CONDUIT (F&I) 3 INCH, (UNDERGROUND) (LIGHTING & COMM.)	LF	4,580		
T86	715-7-11	*	LOAD CENTER (F&I)(SECONDARY VOLTAGE)	EA	1		
T87	715-14-11	*	PULL BOX (F&I)(ROADSIDE)(MOULDED)	EA	33		
T88	715-500-1	*	POLE CABLE DISTRIBUTION SYSTEM (CONVENTIONAL)	EA	26		
T89	715-511-135	*	LIGHT POLE COMPLETE (SPECIAL)(35 FT MH)	EA	26		
T90	783-5-1	*	FIBER OPTIC PULL BOX	EA	14		
T91	783-6-1	*	FIBER OPTIC SPLICE BOX	EA	4		
						SUBTOTAL: LIGHTING PAY ITEMS (US41 to 15thSt)	

Bidder: _____

Authorized Signature: _____

00300-13

Bid "A"

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
SIGNING AND MARKING PAY ITEMS							
T92	700-20-11	*	SINGLE POST SIGN, (F&I)(LESS THAN 12)	AS	45		
T93	700-20-12	*	SINGLE POST SIGN, (F&I)(12-20)	AS	13		
T94	700-20-40	*	SINGLE POST SIGN, RELOCATE	AS	3		
T95	700-21-11	*	MULTI-POST SIGN, F&I, LESS THAN 50 SF	AS	3		
T96	705-10-1	*	OBJECT MARKER, TYPE 1	EA	9		
T97	706-3	*	RETRO-REFLECTIVE PAVEMENT MARKERS (1 APPLICATIONS)	EA	580		
T98	710-11-190		PAINTED PAVEMENT MARKINGS, STD, WHITE, ISLAND NOSE	SF	30		
T99	711-11-111		THERMOPLASTIC, STD, WHITE, SOLID, 6"	NM	2.13		
T100	711-11-122		THERMOPLASTIC, STD, WHITE, SOLID, 8"	LF	520		
T101	711-11-123		THERMOPLASTIC, STD, WHITE, SOLID, 12"	LF	2140		
T102	711-11-124		THERMOPLASTIC, STD, WHITE, SOLID, 18"	LF	280		
T103	711-11-125		THERMOPLASTIC, STD, WHITE, SOLID, 24"	LF	530		
T104	711-11-151		THERMOPLASTIC, STD, WHITE, DOTTED/GUIDELINE, 6"	LF	120		
T105	711-11-160		THERMOPLASTIC, STD, WHITE, MESSAGE	EA	2		
T106	711-11-170		THERMOPLASTIC, STD, WHITE, ARROW	EA	64		
T107	711-11-180		THERMOPLASTIC, STD, WHITE, YIELD LINE	LF	30		
T108	711-11-211		THERMOPLASTIC, STD, YELLOW, SOLID, 6"	NM	1.811		
T109	711-11-224		THERMOPLASTIC, STD, YELLOW, SOLID, 18"	LF	220		
T110	711-11-231		THERMOPLASTIC, STD, YELLOW, SKIP, 6"	GM	1.317		
T111	711-11-251		THERMOPLASTIC, STD, YELLOW, DOTTED/GUIDELINE, 6"	LF	665		
T112	711-17		THERMOPLASTIC, REMOVE	SF	24		
					US 41 to 15th - S & PM Subtotal:		
Traffic Elements - Signals, Lighting, S&PM - 15th St. to 19th St.							
SIGNALIZATION PAY ITEMS							
CO. NO.	FDOT ITEM		DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T113	555-1-2	*	DIRECTIONAL BORE (6" TO <12") (2" HDPE)	LF	315		
T114	630-1-11	*	CONDUIT (F&I) (ABOVEGROUND) (2")	LF	20		
T115	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (1.25")	LF	20		
T116	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (2")	LF	390		

Bidder: _____

00300-14

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T117	632-7-1	*	CABLE (SIGNAL) (F&I)	PI	1		
T118	635-1-11	*	PULL AND JUNCTION BOXES (F&I) (PULL BOX)	EA	11		
T119	639-1-122	*	ELECTRICAL POWER SERVICE (UNDERGROUND)	AS	1		
T120	639-2-1	*	ELECTRICAL SERVICE WIRE (F&I)	LF	375		
T121	641-2-12	*	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-II POLE)	EA	1		
T122	646-1-11	*	ALUMINUM SIGNALS POLE (F&I)	EA	7		
T123	649-31-202	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (46)	EA	1		
T124	649-31-203	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (60)	EA	1		
T125	649-31-218	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (60-70.5)	EA	1		
T126	650-1-311	*	TRAFFIC SIGNAL (F&I) (3 SECT.) (1-WAY) (LED)	AS	8		
T127	650-1-511	*	TRAFFIC SIGNAL (F&I) (5 SECT.) (1-WAY) (LED)	AS	1		
T128	653-191	*	PEDESTRIAN SIGNALS (F&I) (LED) (1 WAY)(COUNTDOWN)	AS	6		
T129	653-192	*	PEDESTRIAN SIGNALS (F&I) (LED) (2 WAY)(COUNTDOWN)	AS	1		
T130	663-74-15	*	VEHICLE DETECTOR ASSEMBLIES (F&I) (VIDEO)	EA	4		
T131	665-13	*	PED. DETECTOR (F&I) (DETECTOR WITH SIGN ONLY)	EA	8		
T132	670-5-110	*	TRAFFIC CONTROLLER ASSEMBLY (F&I) (NEMA) (NO PREEMPT)	AS	1		
T133	685-106	*	UNINTERRUPTIBLE POWER SOURCE (UPS)	EA	1		
T134	699-1-1	*	INTERNALLY ILLUMINATED SIGN (F&I) (EDGE LIT LED)	EA	4		
T135	700-48-18	*	SIGN PANEL (F&I)	EA	1		
T136	783-1-121	*	ITS FIBER OPTIC CABLE (F&I)	LF	110		
T137	783-2-31	*	ITS FIBER OPTIC (INSTALL) (SPlice)	EA	4		
T138	783-3-15	*	ITS FO CONNECTION HARDWARE (F&I) (PATCH PANEL)	EA	1		
T139	783-4-112	*	ITS CONDUIT (F&I)(UNDERGROUND)	LF	40		
T140	784-1-1	*	ITS FIELD ETHERNET SWITCH	EA	1		
						15th to 19th - Signals Subtotal:	
LIGHTING PAY ITEMS							
T141	555-1-1	*	DIRECTIONAL BORE (LESS THAN 6")	LF	375		
T142	555-1-2	*	DIRECTIONAL BORE (6" TO LESS THAN 12")	LF	350		
T143	715-1-12	*	CONDUCTOR (F&I)(INSULATED)(NO. 6)	LF	9,560		

Bidder: _____

00300-15

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T144	715-1-13	*	CONDUCTOR (F&I)(INSULATED)(NO. 4)	LF	1,335		
T145	715-2-11	*	CONDUIT (F&I 2 INCH UNDERGROUND)(LIGHTING & COMMUNICATION CONDUIT)	LF	2,975		
T146	715-2-11	*	CONDUIT (F & I 3 INCH UNDERGROUND) (LIGHTING & COMMUNICATION CONDUIT)	LF	480		
T147	715-4-123	*	LIGHT POLE COMPLETE (130 MPH)(50 FT MH)	EA	11		
T148	715-7-11	*	LOAD CENTER (F&I)(SECONDARY VOLTAGE)	EA	1		
T149	715-14-11	*	PULL BOX (F&I)(ROADSIDE)(MOULDED)	EA	23		
T150	715-500-1	*	POLE CABLE DISTRIBUTION SYSTEM (CONVENTIONAL)	EA	11		
T51	783-5-1	*	FIBER OPTIC PULL BOX	EA	3		
T152	783-6-1	*	FIBER OPTIC SPLICE BOX	EA	1		
15th to 19th - Lighting Subtotal:							
SIGNING AND MARKING PAY ITEMS							
T153	700-20-11	*	SINGLE POST SIGN, (F&I)(LESS THAN 12)	AS	16		
T154	700-21-11	*	MULTI-POST SIGN, (F&I), LESS THAN 50 SF	AS	4		
T155	705-10-1	*	OBJECT MARKER, TYPE 1	EA	2		
T156	706-3	*	RETRO-REFLECTIVE PAVEMENT MARKERS (1 APPLICATIONS)	EA	218		
T157	710-11-290		PAINTED PAVEMENT MARKINGS, STD, YELLOW, ISLAND NOSE	SF	20		
T158	711-11-111		THERMOPLASTIC, STD, WHITE, SOLID, 6"	NM	0.822		
T159	711-11-123		THERMOPLASTIC, STD, WHITE, SOLID, 12"	LF	762		
T160	711-11-125		THERMOPLASTIC, STD, WHITE, SOLID, 24"	LF	340		
T161	711-11-131		THERMOPLASTIC, STD, WHITE, SKIP, 6", 10-30 SKIP	GM	0.555		
T162	711-11-133		THERMOPLASTIC, STD, WHITE, SKIP, 12", 3-9 LANE DROP	GM	0.077		
T163	711-11-151		THERMOPLASTIC, STD, WHITE, DOTTED/GUIDELINE, 6"	LF	550		
T164	711-11-160		THERMOPLASTIC, STD, WHITE, MESSAGE	EA	26		
T165	711-11-170		THERMOPLASTIC, STD, WHITE, ARROW	EA	34		
T166	711-11-211		THERMOPLASTIC, STD, YELLOW, SOLID, 6"	NM	0.885		
T167	711-11-224		THERMOPLASTIC, STD, YELLOW, SOLID, 18"	LF	95		
15th to 19th- S & PM Subtotal:							

Bidder: _____

00300-16

Bid "A"

Authorized Signature: _____

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "A" Based on a completion time of 540 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
MISC.							
MANATEE COUNTY MISCELLANEOUS PAY ITEMS							
CO. NO.	FDOT ITEM		DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
M 1	101-1		ROADWAY & TRAFFIC Mobilization	LS	1		
M 2	102-1		Maintenance of Traffic (ALL)	LS	1		
M3	102-104		TEMPORARY SIGNALIZATION & MAINTENANCE OF INTERSECTION	ED	400		
M4	102-107-1		TEMPORARY TRAFFIC DETECTION & MAINTENANCE OF INTERSECTION	ED	400		
M5			ROADWAY & TRAFFIC Discretionary Work	LS	1		\$700,000.00
						MANATEE COUNTY MISC PAY ITEMS SUBTOTAL:	
TOTAL BID PRICE:							
BID 'A' BASED ON A 540 CALENDAR DAY COMPLETION TIME							

***Indicates items that require Shop Drawing Submittal. The Contractor shall be responsible for the preparation and submittal of all Shop Drawings in accordance with FDOT Standard Specifications for Road and Bridge Construction 5-1-4.2 Work Items Requiring Shop Drawings.**

Bidder: _____

Authorized Signature: _____

00300-17

Bid "A"

Based on 540 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
ROADWAY - US41 to 19th St.							
ROADWAY PAY ITEMS							
R 1	104-10-3		Staked Silt Fence (Type III)	LF	21,111.00		
R 2	104-11		Floating Turbidity Barrier	LF	126.00		
R 3	104-15		Soil Tracking Prevention Device	EA	2.00		
R 4	104-18		Inlet Protection System	EA	123.00		
R 5	110-1-1		Clearing & Grubbing	AC	38.48		
R 6	110-4		Removal of Exist. Conc. Pvmnt.	SY	335.00		
R 7	110-7-1		Mailbox (Furnish & Install),	EA	14.00		
R 8	120-1		Regular Excavation	CY	130,103.00		
R 9	120-4		Excavation, Subsoil (Roadway)	CY	5,027.00		
R 10	120-6		Embankment (Regular)	CY	14,702.00		
R 11	145-1	*	Geosynthetic Reinforced Soil Slope	SF	3,184.00		
R 12	160-4		6" Stabilized Sub-base	SY	2,129.00		
R 13	160-4		12" Stabilized Sub-base	SY	50,038.00		
R 14	285-701		Optional Base Group 1:(Paved Shoulder)	SY	243.00		
R 15	285-704		Optional Base Group 4: 8th St Ct E	SY	2,023.00		
R 16	285-709		Optional Base Group 9:	SY	47,448.00		
R 17	286-1		Turnout Construction (15th St E Driveways)	SY	76.00		
R 18	327-70-4		Milling Exist. Asph. Pavement (3" Avg. Depth), 15th St E	SY	2,744.00		
R 19	327-70-6		Milling Exist. Asph. Pavement (1" Avg. Depth), 9th St E	SY	1,762.00		
R 20	334-1-13	*	2" SP12.5 Structural Course, Traffic C	TN	592.00		
R 21	334-1-MC1	*	2" Type S-1 Asphalt Concrete (Incl Tack Coat)	TN	4,631.00		
R 22	334-1-MC1	*	1" Type S-1 Asphalt Concrete (Incl Tack Coat)	TN	96.00		
R 23	334-1-MC2	*	1" Type S-III Asphalt Concrete	TN	2,497.00		
R 24	337-7-42	*	1-1/2" asphaltic Friction Course (FC-9.5) (Paved Shoulder)	TN	20.00		

Bidder: _____

00300-18

Bid "B"

Authorized Signature: _____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
R 25	337-7-42	*	1" Asphaltic Friction Course (FC 9.5) (Traffic C)	TN	296.00		
R 26	400-1-2	*	Class I Concrete (Endwalls and Pipe Support), Including Reinforcing Steel	CY	6.26		
R 27	400-1-2	*	Class I Concrete (Misc, Swale Crossing, Concrete Spillway), Including Reinforcing Steel	CY	103.00		
R 28	400-1-10	*	Class II Concrete (Concrete Encasement), Including Reinforcing Steel and Bearing Pad	CY	162.96		
R 29	410-70-MC	*	Triple Barrel Box Culvert ,3(8' x 4')	LF	192.00		
R 30	425-1-351	*	Inlets (Curb) (Type P-5) (<10')	EA	4.00		
R 31	425-1-352	*	Inlets (Curb) (Type P-5) (>10')	EA	6.00		
R 32	425-1-361	*	Inlets (Curb) (Type P-6) (<10')	EA	5.00		
R 33	425-1-451	*	Inlets (Curb) (Type J-5) (<10')	EA	1.00		
R 34	425-1-MC1	*	Curb Inlet/ Conflict Box	EA	33.00		
R 35	425-1-MC2	*	Grate Inlets	EA	27.00		
R 36	425-1-MC3	*	Drop Inlet	EA	12.00		
R 37	425-1-MC4	*	Outfall Control Structure, Including Reinforcing Steel and Skimmer	EA	3.00		
R 38	425-1-MC5	*	Junction Box/Conflict Box	EA	12.00		
R 39	425-1-MC6	*	Adjust/Reconstruct Existing Inlet	EA	3.00		
R 40	425-1-529	*	Inlet (Dt Bot) (Type C Modified) (<10')	EA	5.00		
R 41	425-1-583	*	Inlet (Dt Bot) (Type H Modified) (<10')	EA	1.00		
R 42	425-1-701	*	Gutter Inlet (modified Type S) (<10')	EA	1.00		
R 43	425-1-711	*	Gutter Inlet (Type V) (<10')	EA	2.00		
R 44	425-2-41	*	Manholes (P-7) (<10')	EA	1.00		
R 45	425-2-61	*	Manholes (P-8)(<10')	EA	7.00		
R 46	425-2-62	*	Manholes (P-8)(>10')	EA	1.00		
R 47	425-2-71	*	Manholes (J-7) (<10')	EA	3.00		
R 48	425-2-91	*	Manholes (J-8)(<10')	EA	3.00		
R 49	430-175-115	*	Pipe Storm Sewer Culv (RCP)(15")	LF	2,421.00		
R 50	430-175-115	*	Pipe Storm Sewer Culv (A2000,PVC)(15")	LF	228.00		
R 51	430-175-118	*	Pipe Storm Sewer Culv (RCP)(18")	LF	2,263.00		

Bidder: _____

00300-19

Bid "B"

Authorized Signature: _____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
R 52	430-175-118	*	Pipe Storm Sewer Culv (A2000)(18")	LF	972.00		
R 53	430-175-121	*	Pipe Storm Sewer Culv (A2000)(21")	LF	632.00		
R 54	430-175-124	*	Pipe Storm Sewer Culv (RCP)(24")	LF	4,307.00		
R 55	430-175-124	*	Pipe Storm Sewer Culv (A2000)(24")	LF	398.00		
R 56	430-175-130	*	Pipe Storm Sewer Culv (RCP)(30")	LF	741.00		
R 57	430-175-130	*	Pipe Storm Sewer Culv (A2000)(30")	LF	944.00		
R 58	430-175-136	*	Pipe Storm Sewer Culv (RCP)(36")	LF	63.00		
R 59	430-175-136	*	Pipe Storm Sewer Culv (A2000)(36")	LF	833.00		
R 60	430-175-142	*	Pipe Storm Sewer Culv (RCP)(42")	LF	1,040.00		
R 61	430-175-148	*	Pipe Storm Sewer Culv (RCP)(48")	LF	1,096.00		
R 62	430-175-215	*	Pipe Cross Drain Culv (ERCP) (12"x18")	LF	1,940.00		
R 63	430-175-218	*	Pipe Storm Sewer Culv (ERCP) (14"x23")	LF	398.00		
R 64	430-175-224	*	Pipe Cross Drain Culv (ERCP) (19"x30")	LF	612.00		
R 65	430-175-230	*	Pipe Storm Sewer Culv (ERCP)(24"x38")	LF	587.00		
R 66	430-175-242	*	Pipe Storm Sewer Culv (ERCP)(34"x53")	LF	96.00		
R 67	430-175-250	*	Pipe Storm Sewer Culv (ERCP) (38"x60")	LF	254.00		
R 68	430-982-125	*	18" MES (Cross Drain)	EA	1.00		
R 69	430-982-633	*	24x38" MES (Cross Drain)	EA	6.00		
R 70	430-984-125	*	MES (Round)(18"SD)	EA	2.00		
R 71	430-984-138	*	MES (Round) (36" SD)	EA	1.00		
R 72	430-984-625	*	MES (Conc Pipe Ellip) (12"x18") (SD)	EA	2.00		
R 73	430-984-625	*	MES (Conc Pipe Ellip) (14"x23") (SD)	EA	5.00		
R 74	440-1-10	*	6" Underdrain and Clean out	LF	2,615.00		
R 75	455-133-2	*	Steel Sheet Piling (Temporary)	SF	4,000.00		
R 76	515-1-2	*	Pipe Handrail (Aluminum)	LF	99.00		
R 77	520-1-MC1		Type AB Curb & Gutter	LF	785.00		
R 78	520-1-MC2		Miami Curb&Gutter	LF	1,986.00		
R 79	520-1-10		Type F Curb & Gutter	LF	13,463.00		

Bidder:_____

00300-20

Bid "B"

Authorized Signature:_____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
R 80	520-3-		Valley Crossing Gutter, Concrete	LF	482.00		
R 81	520-70		Concrete Traffic Separator (Special)	SY	110.00		
R 82	520-70		Concrete Traffic Separator (Type IV, 4' wide)	SY	145.00		
R 83	522-1		4" Concrete Sidewalk	SY	5,296.00		
R 84	522-2		6" Concrete Sidewalk, Reinforced Driveway	SY	2,131.00		
R 85	522-2		6" Concrete Pedestrian Landing Pad	SY	98.00		
R 86	522-4	*	8" Concrete Bus Shelter Pad, Including Reinforcing Steel	SY	51.00		
R 87	530-3-4		Rip-Rap (Rubble) (Ditch Lining)	TN	90.60		
R 88	550-10-222		Fencing, Type B, 6' Height w/Vinyl Coating, Green	LF	2,710.00		
R 89	550-10-228		Fence Removal and Reinstallation	LF	2,116.00		
R 90	550-MC		Auto Gate Removal and Reinstallation	EA	1.00		
R 91	550-60-233		Fence Gate, Type B, Sliding, 15' opening, w/Vinyl Coating, Green	EA	1.00		
R 92	556-1-5	*	Jack and Bore (32" Steel Casing)	LF	115.00		
R 93	556-1-7	*	Jack & Bore (46" Steel Casing")	LF	120.00		
R 94	570-1-2		Sodding (Performance Turf, Bahia) (Includes Mowing)	SY	73,222.00		
R 95	570-MC		Wetland creation, mitigation and enhancement at NE corner of 44th at 15th	LS	1.00		
						ROADWAY SUBTOTAL:	
UTILITIES - NEW - US41 to 19th St.							
UTILITIES PAY ITEMS							
CO. NO.	FDOT ITEM	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
U 1		*	8" DIP Waterline (CL 50) (Open Cut)	LF	3,082		
U 2		*	6" DIP Waterline (CL 50) Open Cut	LF	150		
U 3		*	8" HDPE Waterline (C-906) DR 11	LF	40		
U 4		*	24" DIP Waterline (CL 350) (Open Cut)	LF	180		
U 5		*	Ductile Iron Fittings	LB	20,000		
U 6		*	Fire Hydrant Blowoff Assembly (per MC Det. UW8)	EA	1		
U 7		*	Fire Hydrant Assembly , Complete incl. 6" DIP & valve	EA	2		
U 8			Relocate Fire Hydrant Assembly	EA	6		
U 9			Connect to Exist. 8" Waterline	EA	5		
U 10			Connect to Exist 6" Waterline	EA	2		

Bidder: _____

00300-21

Bid "B"

Authorized Signature: _____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
U 11			Cut-in 24"x8" Tee	EA	1		
U 12			Connect to Exist. 24" Watermain - end connect	EA	3		
U 13		*	Pipe Adapter (HDPE to MJ)	EA	2		
U 14		*	8" Pipe Joint Restraints	EA	180		
U 15		*	24" Pipe Joint Restraints	EA	45		
U 16		*	6" Gate Valve w/Box	EA	3		
U 17		*	8" Gate Valve w/Box	EA	5		
U 18		*	24" Butterfly Valve w/Box	EA	4		
U 19		*	Connect to Exist. 24" Waterline - saddle tap connection	EA	6		
U 20			ARV Assembly for Force Main (per MC Std Det. US 25)	EA	2		
U 21			Grout & plug out of service pipe	CY	25		
U 22		*	Remove Exist. Waterline 8" and under	LF	300		
U 23		*	Forcemain Relocation 6" & Under incl. fittings C900 PVC	LF	160		
U 24		*	Sanitary Sewer Service Lateral (Single)	EA	12		
U 25		*	Sanitary Sewer Service Lateral (Double)	EA	4		
U 26		*	Relay Sewer Service 6" & Under incl. fittings PVC DR26	LF	120		
U 27		*	Sanitary Tanker Service	HR	12		
U 28			Adjust Manhole Lid to Grade	EA	21		
U 29		*	Rehab Existing Sanitary Manhole	SF	2,500		
U 30		*	Hymax Adapter	EA	3		
U 31		*	Remove 24" CI Waterline and Valves	LS	1		
U 32		*	24"x 8" Tapping Sleeve and Valve	EA	2		
U 33		*	24" x 6" Tapping Sleeve and Valve	EA	1		
U 34		*	Replace Water Service, (long, single)	EA	22		
U 35		*	Replace Water Service, (short, single)	EA	6		
U 36			Replace Exist. Water Service, (long, double)	EA	3		
U 37		*	Replace Water Service w/3" DIP, six meter boxes & gate valve	EA	2		
U 38		*	BackFlow Preventer (1" Dia.)	EA	3		
U 39		*	Relocate Master Meter Assembly 6 "	LS	1		

Bidder: _____

00300-22

Bid "B"

Authorized Signature: _____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
U 40			Replace 2" Master Meter Assembly & service	LS	1		
U 41			2" Air Release Assembly for 16" and Larger Mains (UW 10)	EA	1		
U 42			Miscellaneous Concrete	CY	30		
U 43			Mobilization @ 10%	LS	1		
U 44			UTILITIES Misc Work & Clean Up @5%	LS	1		
U 45			UTILITIES Discretionary	LS	1		\$90,000.00
						UTILITIES SUBTOTAL:	
TRAFFIC ELEMENTS - SIGNAL, LIGHTING, S&PM - 15th St. (NORTH-SOUTH)							
TRAFFIC PAY ITEMS (COMBINED)							
CO. NO.	FDOT ITEM	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 1	555-1-2	*	DIRECTIONAL BORE, 6' TO < 12'	LF	400		
T 2	630-1-11	*	SERVICE CONDUIT RISER F&I	LF	75		
T 3	630-1-12	*	CONDUIT, SIGNALS, F&I, UNDERGROUND	LF	200		
T 4	632-6-1	*	CABLE, SIGNAL, F&I, OUTSIDE OF INTERSECTION	LF	400		
T 5	632-7-1	*	CABLE, SIGNAL, F&I COUNT	PI	1		
T 6	633-3-11	*	SIGNALS-FIBER OPTIC CONNECTION HARDWARE, F&I SPLICE ENCLOSURE	EA	1		
T 7	635-1-11	*	PULL & JUNCTION BOXES, F&I, PULL BOX	EA	9		
T 8	639-1-22	*	SIGNALS, ELECTRICAL POWER SERVICE, UNDERGROUND	AS	1		
T 9	639-2-1	*	SIGNALS, ELECTRICAL SERVICE WIRE	LF	100		
T 10	639-3-11	*	SIGNAL, ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	1		
T 11	641-2-12	*	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE 12'	EA	1		
T 12	646-1-11	*	ALUMINUM SIGNAL POLES PEDESTAL, F&I	EA	8		
T 13	649-31-999	*	MAST ARM, F&I, CUSTOM	EA	4		
T 14	650-1-313	*	TRAFFIC SIGNAL, F&I, 3 SECTION, 1 WAY, STANDARD (LED)	AS	4		
T 15	650-1-513	*	TRAFFIC SIGNAL, F&I, 5 SECTIONS, 1 WAY, STANDARD (LED)	AS	4		
T 16	653-191	*	PEDESTRIAN SIGNAL, F&I, LED-COUNTDOWN, 1 DIRECTION 16"	AS	8		
T 17	663-74-15	*	VIDEO DETECTOR ASSEMBLY, F&I	EA	4		
T 18	665-13	*	PEDESTRIAN DETECTOR, F&I, (DETECTOR STATION AND SIGN)	EA	8		
T 19	670-5-111	*	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1		
T 20	699-1-1	*	INTERNAL ILLUM SIGN, F&I, STREET NAME (LED) INTERNAL	EA	4		

Bidder: _____

00300-23

Bid "B"

Authorized Signature: _____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 21	700-20-11	*	SINGLE POST SIGN, F&I, LESS THAN 12 SF	AS	9		
T 22	700-46-1	*	SIGN EXISTING, REMOVE	AS	4		
T 23	700-89-2	*	SIGN, ELECTRIC POWERED LED R3-2, 30" x 30"	EA	1		
T 24	706-3	*	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	325		
T 25	711-11-160		THERMOPLASTIC, STANDARD, WHITE, MESSAGE	EA	5		
T 26	711-11-170		THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	13		
T 27	711-11-111		THERMOPLASTIC, STANDARD, WHITE, SOLID, 6"	NM	0		
T 28	711-11-123		THERMOPLASTIC, STANDARD, WHITE, SOLID, 12"	LF	350		
T 29	711-11-224		THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18"	LF	500		
T 30	711-11-125		THERMOPLASTIC, STANDARD, WHITE, SOLID, 24"	LF	200		
T 31	711-11-211		THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6"	NM	0		
T 32	715-1-12	*	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8-6	LF	400		
T 33	715-5-12	*	150 WATT HIGH PRESSURE SODIUM LUMINAIRE, F&I	EA	4		
T 34	783-1-122	*	ITS FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS	LF	125		
T 35	783-5-1	*	ITS PULL BOX FOR FIBER OPTIC CABLE, F&I	EA	1		
T 36	783-6-1	*	ITS SPLICE BOX FOR FIBER OPTIC CABLE, F&I	EA	1		
			SUB TOTAL: TRAFFIC PAY ITEMS (COMBINED)15th St North-South				
Traffic Elements - Signals, Lighting, S&PM - US41 to 15th St.							
SIGNALIZATION PAY ITEMS							
CO. NO.	FDOT ITEM		DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 37	555-1-1	*	DIRECTIONAL BORE (<6") (2" HDPE)	LF	600		
T 38	555-1-2	*	DIRECTIONAL BORE (6" TO <12") (2" HDPE)	LF	645		
T 39	630-1-11	*	CONDUIT (F&I) (ABOVEGROUND) (2")	LF	80		
T 40	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (1.25")	LF	10		
T 41	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (2")	LF	597		
T 42	630-1-13	*	CONDUIT (F&I) (UNDERPAVEMENT)	LF	134		
T 43	632-7-1	*	CABLE (SIGNAL) (F&I)	PI	2		
T 44	635-1-11	*	PULL AND JUNCTION BOXES (F&I) (PULL BOX)	EA	20		
T 45	639-1-122	*	ELECTRICAL POWER SERVICE (F&I)(UNDERGROUND)	AS	2		

Bidder:_____

00300-24

Bid "B"

Authorized Signature:_____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 46	639-2-1	*	ELECTRICAL SERVICE WIRE (F&I)	LF	800		
T 47	639-3-11	*	ELECTRICAL SERVICE DISCONNECT (F&I)(POLE MOUNT)	EA	1		
T 48	641-2-12	*	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-II POLE)	EA	3		
T 49	646-1-11	*	ALUMINUM SIGNALS POLE (F&I)(ALUMINUM PEDESTAL)	EA	12		
T 50	649-31-201	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (36)	EA	1		
T 51	649-31-202	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (46)	EA	2		
T 52	649-31-203	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (60)	EA	1		
T 53	649-31-299	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (CUSTOM)	EA	2		
T 54	650-1-311	*	TRAFFIC SIGNAL (F&I) (3 SECT.) (1-WAY) (LED)	AS	10		
T 55	650-1-511	*	TRAFFIC SIGNAL (F&I) (5 SECT.) (1-WAY) (LED)	AS	7		
T 56	653-191	*	PEDESTRIAN SIGNALS (F&I) (LED) (1 WAY)(COUNTDOWN)	AS	8		
T 57	653-192	*	PEDESTRIAN SIGNALS (F&I) (LED) (2 WAY)(COUNTDOWN)	AS	4		
T 58	663-74-15	*	VEHICLE DETECTOR ASSEMBLIES (F&I) (VIDEO)	EA	8		
T 59	665-13	*	PED. DETECTOR (F&I) (DETECTOR WITH SIGN ONLY)	EA	16		
T 60	670-5-110	*	TRAFFIC CONTROLLER ASSEMBLY (F&I) (NEMA) (NO PREEMPT)	AS	2		
T 61	685-106	*	UNINTERRUPTIBLE POWER SOURCE (UPS)	EA	2		
T 62	690-10		REMOVE SIGNAL HEAD ASSEMBLY	EA	8		
T 63	690-20		REMOVE SIGNAL PEDESTRIAN ASSEMBLY	EA	4		
T 64	690-31		REMOVE SIGNAL PEDESTAL	EA	3		
T 65	690-34-1		REMOVE POLE (DEEP) (DIRECT BURIAL)	EA	3		
T 66	690-50		REMOVE CONTROLLER ASSEMBLY	EA	1		
T 67	690-60		REMOVE VEHICLE DETECTOR ASSEMBLY	EA	8		
T 68	690-70		REMOVE DETECTOR PEDESTRIAN ASSEMBLY	EA	8		
T 69	690-80		REMOVE SPAN WIRE ASSEMBLY	EA	2		
T 70	690-90		REMOVE CONDUIT & CABLING	PI	1		
T 71	690-100		REMOVE MISCELLANEOUS SIGNAL EQUIPMENT	PI	1		
T 72	699-1-1	*	INTERNALLY ILLUMINATED SIGN (F&I) (EDGE LIT LED)	EA	8		

Bidder:_____

00300-25

Bid "B"

Authorized Signature:_____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T 73	700-48-18	*	SIGN PANEL (F&I)	EA	2		
T 74	700-48-60	*	SIGN PANEL (REMOVE)	AS	5		
T 75	783-1-121	*	ITS FIBER OPTIC CABLE (F&I)	LF	1125		
T 76	783-2-31	*	ITS FIBER OPTIC (INSTALL) (SPlice)	EA	12		
T 77	783-3-11	*	ITS FO CONNECTION HARDWARE (F&I) (SPlice ENCL)	EA	2		
T 78	783-3-12	*	ITS FO CONNECTION HARDWARE (F&I) (SPlice TRAY)	EA	2		
T 79	783-3-15	*	ITS FO CONNECTION HARDWARE (F&I) (PATCH PANEL)	EA	2		
T 80	783-4-112	*	ITS CONDUIT (F&I)(UNDERGROUND)	LF	85		
T81	784-1-1	*	ITS FIELD ETHERNET SWITCH	EA	2		
						SUBTOTAL: SIGNALIZATION PAY ITEMS (US41 to 15thSt)	
LIGHTING PAY ITEMS							
T82	555-1-2	*	DIRECTIONAL BORE (6" TO LESS THAN 12")	LF	700		
T83	715-1-13	*	CONDUCTOR (F&I)(INSULATED)(NO. 4)	LF	14,805		
T84	715-2-11	*	CONDUIT (F&I) 2 INCH, (UNDERGROUND) (LIGHTING & COMM.)	LF	4,580		
T85	715-2-11	*	CONDUIT (F&I) 3 INCH, (UNDERGROUND) (LIGHTING & COMM.)	LF	4,580		
T86	715-7-11	*	LOAD CENTER (F&I)(SECONDARY VOLTAGE)	EA	1		
T87	715-14-11	*	PULL BOX (F&I)(ROADSIDE)(MOULDED)	EA	33		
T88	715-500-1	*	POLE CABLE DISTRIBUTION SYSTEM (CONVENTIONAL)	EA	26		
T89	715-511-135	*	LIGHT POLE COMPLETE (SPECIAL)(35 FT MH)	EA	26		
T90	783-5-1	*	FIBER OPTIC PULL BOX	EA	14		
T91	783-6-1	*	FIBER OPTIC SPlice BOX	EA	4		
						SUBTOTAL: LIGHTING PAY ITEMS (US41 to 15thSt)	

Bidder: _____

Authorized Signature: _____

00300-26

Bid "B"

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
SIGNING AND MARKING PAY ITEMS							
T92	700-20-11	*	SINGLE POST SIGN, (F&I)(LESS THAN 12)	AS	45		
T93	700-20-12	*	SINGLE POST SIGN, (F&I)(12-20)	AS	13		
T94	700-20-40	*	SINGLE POST SIGN, RELOCATE	AS	3		
T95	700-21-11	*	MULTI-POST SIGN, F&I, LESS THAN 50 SF	AS	3		
T96	705-10-1	*	OBJECT MARKER, TYPE 1	EA	9		
T97	706-3	*	RETRO-REFLECTIVE PAVEMENT MARKERS (1 APPLICATIONS)	EA	580		
T98	710-11-190		PAINTED PAVEMENT MARKINGS, STD, WHITE, ISLAND NOSE	SF	30		
T99	711-11-111		THERMOPLASTIC, STD, WHITE, SOLID, 6"	NM	2.13		
T100	711-11-122		THERMOPLASTIC, STD, WHITE, SOLID, 8"	LF	520		
T101	711-11-123		THERMOPLASTIC, STD, WHITE, SOLID, 12"	LF	2140		
T102	711-11-124		THERMOPLASTIC, STD, WHITE, SOLID, 18"	LF	280		
T103	711-11-125		THERMOPLASTIC, STD, WHITE, SOLID, 24"	LF	530		
T104	711-11-151		THERMOPLASTIC, STD, WHITE, DOTTED/GUIDELINE, 6"	LF	120		
T105	711-11-160		THERMOPLASTIC, STD, WHITE, MESSAGE	EA	2		
T106	711-11-170		THERMOPLASTIC, STD, WHITE, ARROW	EA	64		
T107	711-11-180		THERMOPLASTIC, STD, WHITE, YIELD LINE	LF	30		
T108	711-11-211		THERMOPLASTIC, STD, YELLOW, SOLID, 6"	NM	1.811		
T109	711-11-224		THERMOPLASTIC, STD, YELLOW, SOLID, 18"	LF	220		
T110	711-11-231		THERMOPLASTIC, STD, YELLOW, SKIP, 6"	GM	1.317		
T111	711-11-251		THERMOPLASTIC, STD, YELLOW, DOTTED/GUIDELINE, 6"	LF	665		
T112	711-17		THERMOPLASTIC, REMOVE	SF	24		
					US 41 to 15th - S & PM Subtotal:		
Traffic Elements - Signals, Lighting, S&PM - 15th St. to 19th St.							
SIGNALIZATION PAY ITEMS							
CO. NO.	FDOT ITEM		DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T113	555-1-2	*	DIRECTIONAL BORE (6" TO <12") (2" HDPE)	LF	315		
T114	630-1-11	*	CONDUIT (F&I) (ABOVEGROUND) (2")	LF	20		
T115	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (1.25")	LF	20		
T116	630-1-12	*	CONDUIT (F&I) (UNDERGROUND) (2")	LF	390		

Bidder: _____

00300-27

Bid "B"

Authorized Signature: _____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T117	632-7-1	*	CABLE (SIGNAL) (F&I)	PI	1		
T118	635-1-11	*	PULL AND JUNCTION BOXES (F&I) (PULL BOX)	EA	11		
T119	639-1-122	*	ELECTRICAL POWER SERVICE (UNDERGROUND)	AS	1		
T120	639-2-1	*	ELECTRICAL SERVICE WIRE (F&I)	LF	375		
T121	641-2-12	*	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-II POLE)	EA	1		
T122	646-1-11	*	ALUMINUM SIGNALS POLE (F&I)	EA	7		
T123	649-31-202	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (46)	EA	1		
T124	649-31-203	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (60)	EA	1		
T125	649-31-218	*	STEEL MAST ARM ASSEMBLY (F&I) (130 MPH) (60-70.5)	EA	1		
T126	650-1-311	*	TRAFFIC SIGNAL (F&I) (3 SECT.) (1-WAY) (LED)	AS	8		
T127	650-1-511	*	TRAFFIC SIGNAL (F&I) (5 SECT.) (1-WAY) (LED)	AS	1		
T128	653-191	*	PEDESTRIAN SIGNALS (F&I) (LED) (1 WAY)(COUNTDOWN)	AS	6		
T129	653-192	*	PEDESTRIAN SIGNALS (F&I) (LED) (2 WAY)(COUNTDOWN)	AS	1		
T130	663-74-15	*	VEHICLE DETECTOR ASSEMBLIES (F&I) (VIDEO)	EA	4		
T131	665-13	*	PED. DETECTOR (F&I) (DETECTOR WITH SIGN ONLY)	EA	8		
T132	670-5-110	*	TRAFFIC CONTROLLER ASSEMBLY (F&I) (NEMA) (NO PREEMPT)	AS	1		
T133	685-106	*	UNINTERRUPTIBLE POWER SOURCE (UPS)	EA	1		
T134	699-1-1	*	INTERNALLY ILLUMINATED SIGN (F&I) (EDGE LIT LED)	EA	4		
T135	700-48-18	*	SIGN PANEL (F&I)	EA	1		
T136	783-1-121	*	ITS FIBER OPTIC CABLE (F&I)	LF	110		
T137	783-2-31	*	ITS FIBER OPTIC (INSTALL) (SPLICE)	EA	4		
T138	783-3-15	*	ITS FO CONNECTION HARDWARE (F&I) (PATCH PANEL)	EA	1		
T139	783-4-112	*	ITS CONDUIT (F&I)(UNDERGROUND)	LF	40		
T140	784-1-1	*	ITS FIELD ETHERNET SWITCH	EA	1		
						15th to 19th - Signals Subtotal:	
LIGHTING PAY ITEMS							
T141	555-1-1	*	DIRECTIONAL BORE (LESS THAN 6")	LF	375		
T142	555-1-2	*	DIRECTIONAL BORE (6" TO LESS THAN 12")	LF	350		
T143	715-1-12	*	CONDUCTOR (F&I)(INSULATED)(NO. 6)	LF	9,560		

Bidder: _____

00300-28

Bid "B"

Authorized Signature: _____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
T144	715-1-13	*	CONDUCTOR (F&I)(INSULATED)(NO. 4)	LF	1,335		
T145	715-2-11	*	CONDUIT (F&I 2 INCH UNDERGROUND)(LIGHTING & COMMUNICATION CONDUIT)	LF	2,975		
T146	715-2-11	*	CONDUIT (F & I 3 INCH UNDERGROUND) (LIGHTING & COMMUNICATION CONDUIT	LF	480		
T147	715-4-123	*	LIGHT POLE COMPLETE (130 MPH)(50 FT MH)	EA	11		
T148	715-7-11	*	LOAD CENTER (F&I)(SECONDARY VOLTAGE)	EA	1		
T149	715-14-11	*	PULL BOX (F&I)(ROADSIDE)(MOULDED)	EA	23		
T150	715-500-1	*	POLE CABLE DISTRIBUTION SYSTEM (CONVENTIONAL)	EA	11		
T51	783-5-1	*	FIBER OPTIC PULL BOX	EA	3		
T152	783-6-1	*	FIBER OPTIC SPLICE BOX	EA	1		
15th to 19th - Lighting Subtotal:							
SIGNING AND MARKING PAY ITEMS							
T153	700-20-11	*	SINGLE POST SIGN, (F&I)(LESS THAN 12)	AS	16		
T154	700-21-11	*	MULTI-POST SIGN, (F&I), LESS THAN 50 SF	AS	4		
T155	705-10-1	*	OBJECT MARKER, TYPE 1	EA	2		
T156	706-3	*	RETRO-REFLECTIVE PAVEMENT MARKERS (1 APPLICATIONS)	EA	218		
T157	710-11-290		PAINTED PAVEMENT MARKINGS, STD, YELLOW, ISLAND NOSE	SF	20		
T158	711-11-111		THERMOPLASTIC, STD, WHITE, SOLID, 6"	NM	0.822		
T159	711-11-123		THERMOPLASTIC, STD, WHITE, SOLID, 12"	LF	762		
T160	711-11-125		THERMOPLASTIC, STD, WHITE, SOLID, 24"	LF	340		
T161	711-11-131		THERMOPLASTIC, STD, WHITE, SKIP, 6", 10-30 SKIP	GM	0.555		
T162	711-11-133		THERMOPLASTIC, STD, WHITE, SKIP, 12", 3-9 LANE DROP	GM	0.077		
T163	711-11-151		THERMOPLASTIC, STD, WHITE, DOTTED/GUIDELINE, 6"	LF	550		
T164	711-11-160		THERMOPLASTIC, STD, WHITE, MESSAGE	EA	26		
T165	711-11-170		THERMOPLASTIC, STD, WHITE, ARROW	EA	34		
T166	711-11-211		THERMOPLASTIC, STD, YELLOW, SOLID, 6"	NM	0.885		
T167	711-11-224		THERMOPLASTIC, STD, YELLOW, SOLID, 18"	LF	95		
15th to 19th- S & PM Subtotal:							

Bidder:_____

00300-29

Bid "B"

Authorized Signature:_____

Based on 720 Calendar Day Completion

SECTION 00300 BID FORM

(Submit in triplicate)

44th AvenueEast - From U.S. 41 (1st Street) to 19th Street Court East

(Project Nos: 334-6001060 and 319-6045661)

Bid "B" Based on a completion time of 720 Calendar Days

(IFB #13-1089-OV)

CO. BID NO.	FDOT ITEM NO.	*	DESCRIPTION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
MISC.							
MANATEE COUNTY MISCELLANEOUS PAY ITEMS							
CO. NO.	FDOT ITEM		DESCRPITION	UNIT	EST. QTY.	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
M 1	101-1		ROADWAY & TRAFFIC Mobilization	LS	1		
M 2	102-1		Maintenance of Traffic (ALL)	LS	1		
M3	102-104		TEMPORARY SIGNALIZATION & MAINTENANCE OF INTERSECTION	ED	400		
M4	102-107-1		TEMPORARY TRAFFIC DETECTION & MAINTENANCE OF INTERSECTION	ED	400		
M5			ROADWAY & TRAFFIC Discretionary Work	LS	1		\$700,000.00
						MANATEE COUNTY MISC PAY ITEMS SUBTOTAL:	
TOTAL BID PRICE:							
BID 'B' BASED ON A 720 CALENDAR DAY COMPLETION TIME							

***Indicates items that require Shop Drawing Submittal. The Contractor shall be responsible for the preparation and submittal of all Shop Drawings in accordance with FDOT Standard Specifications for Road and Bridge Construction 5-1-4.2 Work Items Requiring Shop Drawings.**

Bidder:_____

00300-30

Bid "B"

Authorized Signature:_____

Based on 720 Calendar Day Completion

**SWORN STATEMENT
THE FLORIDA TRENCH SAFETY ACT**

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

1. This Sworn Statement is submitted with IFB No. #13-1089-OV
2. This Sworn Statement is submitted by _____ whose business address is _____ and, if applicable, its Federal Employer Identification Number (FEIN) is _____. If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement _____.
3. Name of individual signing this Sworn Statement is: _____, Whose relationship to the above entity is: _____.
4. The Trench Safety Standards that will be in effect during the construction of this project shall include, but are not limited to: Laws of Florida, Chapters 90-96, TRENCH SAFETY ACT, and OSHA RULES AND REGULATIONS 29 CFR 1926.650 Subpart P, effective October 1, 1990.
5. The undersigned assures that the entity will comply with the applicable Trench Safety Standards and agrees to indemnify and hold harmless the County and Engineer, and any of their agents or employees from any claims arising from the failure to comply with said standard.
6. The undersigned has appropriated the following costs for compliance with the applicable standards:

Trench Safety Measure (Description)	Units of Measure (LF, SY)	Unit Quantity	Unit Cost	Extended Cost
a. _____	_____	_____	\$ _____	_____
b. _____	_____	_____	\$ _____	_____
c. _____	_____	_____	\$ _____	_____
d. _____	_____	_____	\$ _____	_____

7. The undersigned intends to comply with these standards by instituting the following procedures:

THE UNDERSIGNED, in submitting this Bid, represents that they have reviewed and considered all available geotechnical information and made such other investigations and tests as they may deem necessary to adequately design the trench safety system(s) to be utilized on this project.

(AUTHORIZED SIGNATURE / TITLE)

SWORN to and subscribed before me this _____ day of _____, 2013.

(Impress official seal)

Notary Public, State of Florida: _____

My commission expires: _____

SECTION 00430
CONTRACTOR'S QUESTIONNAIRE
(Submit in Triplicate)

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

THIS QUESTIONNAIRE MUST BE COMPLETED AND SUBMITTED WITH YOUR BID

1. License #: _____
License Issued to: _____
Date License Received (MM/DD/YR): _____
Company Name: _____

Company's Physical Address

City _____ State of Incorporation, if applicable _____ (Zip Code) _____
(_____) _____ Telephone Number; (_____) _____ Fax Number
Email Address: _____
2. Bidding as an individual ___ a partnership: ___ a corporation; ___ a joint venture ___
3. If a partnership: list names and addresses of partners; if a corporation: list names of officers, directors, shareholders, and state of incorporation; if joint venture: list names and address of ventures' and the same if any venture are a corporation for each such corporation, partnership, or joint venture:

4. Your organization has been in business (under this firm's name) as a _____

For how many years? _____ Is this firm in bankruptcy? _____

____ Years holding an FDOT Certificate of Qualification
____ Years experience performing Roadwork Construction,
____ Years experience of performing Underground Utility Work
(Attach a list of projects where this specific type of work was performed)

BIDDER:

4. (Continued)

Has license ever been suspended, revoked, removed or under investigation?

5. Describe and give the date and County of the last three government or private work of similar scope you've completed which are similar in cost, type, size, and nature as the one proposed (for a public entity), include contact name and phone number. Provide the budget, actual cost, size and summary of work for each project. Attach additional pages as necessary. (Note: If listing a Manatee County reference they should not be directly associated with this project)

6. Have you ever been assessed liquidated damages under a Contract during the past five (5) years? If so, state when, where (contact name, address and phone number) and why.

7. Have you ever failed to complete work awarded to you? Or provide projects not completed within Contract time. If so, state when, where (contact name, address, phone number) and why.

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

BIDDER: _____

9. What specific steps have you taken to examine the physical conditions at or contiguous to the site, including but not limited to, the location of existing underground facilities? Have you visited the site(s)? _____
Provide date(s) of site visit: _____

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

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

12. If any, list (with Contract amount) WBE/MBE to be utilized:

13. What equipment do you own to accomplish this Work? (A listing may be attached)

14. What equipment will you purchase/rent for the Work? (Specify which)

BIDDER: _____

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

Surety's Name: _____

Surety's Address: _____

Surety's Address: _____

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

Phone: (_____) _____

Email _____

BIDDER: _____

SECTION 00491
PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES CERTIFICATION
SWORN STATEMENT PURSUANT TO ARTICLE V,
MANATEE COUNTY PURCHASING ORDINANCE

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 Manatee County Board of County Commissioners by

_____ [Print individual's name and title]

_____ for _____ [print name of entity submitting sworn statement]

whose business address is _____

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

I understand that no person or entity shall be awarded or receive a County Contract for public improvements, procurement of goods or services (including professional services) or a County lease, franchise, concession or management Agreement, or shall receive a grant of County monies unless such person or entity has submitted a written certification to the County that it has not:

(1) been convicted of bribery or attempting to bribe a public officer or employee of Manatee County, the State of Florida, or any other public entity, including, but not limited to the Government of the United States, any state, or any local government authority in the United States, in that officer's or employee's official capacity; or

(2) been convicted of an agreement or collusion among Bidders or prospective Bidders in restraint of freedom of competition, by agreement to bid a fixed price, or otherwise; or

(3) been convicted of a violation of an environmental law that, in the sole opinion of the County's Purchasing Official, reflects negatively upon the ability of the person or entity to conduct business in a responsible manner; or

(4) made an admission of guilt of such conduct described in items (1), (2) or (3) above, which is a matter of record, but has not been prosecuted for such conduct, or has made an admission of guilt of such conduct, which is a matter of record, pursuant to formal prosecution. An admission of guilt shall be construed to include a plea of nolo contendere; or

(5) where an officer, official, agent or employee of a business entity has been convicted of or has admitted guilt to any of the crimes set forth above on behalf of such an entity and pursuant to the direction or authorization of an official thereof (including the person committing the offense, if he is an official of the business entity), the business shall be chargeable with the conduct herein above set forth. A business entity shall be chargeable with the conduct of an affiliated entity, whether wholly owned, partially owned, or one which has common ownership or a common Board of Directors. For purposes of this Form, business entities are affiliated if, directly or indirectly, one business entity controls or has the power to control another business entity, or if an individual or group of individuals controls or has the power to control both entities. Indicia of control shall include, without limitation, interlocking management or ownership, identity of interests among family members, shared organization of a business entity following the ineligibility of a business entity under this Article, or using substantially the same management, ownership or principles as the ineligible entity.

(Cont'd.)

Any person or entity who claims that this Article is inapplicable to him/her/it because a conviction or judgment has been reversed by a court of competent jurisdiction shall prove the same with documentation satisfactory to the County's Purchasing Official. Upon presentation of such satisfactory proof, the person or entity shall be allowed to contract with the County.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR MANATEE COUNTY IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT ANY CONTRACT OR BUSINESS TRANSACTION SHALL PROVIDE FOR SUSPENSION OF PAYMENTS, OR TERMINATION, OR BOTH, IF THE CONTRACTING OFFICER OR THE COUNTY ADMINISTRATOR DETERMINES THAT **SUCH PERSON OR ENTITY HAS MADE FALSE CERTIFICATION.**

[Signature]

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this ____ day of _____, 20____ by _____

Personally known _____ OR Produced identification _____
[Type of identification]

Notary Public Signature My commission expires _____

[Print, type or stamp Commissioned name of Notary Public]

Signatory Requirement - In the case of a business entity other than a partnership or a corporation, this affidavit shall be executed by an authorized agent of the entity. In the case of a partnership, this affidavit shall be executed by the general partner(s). In the case of a corporation, this affidavit shall be executed by the corporate president.

SECTION 00500
FORM OF AGREEMENT
BETWEEN THE
COUNTY OF MANATEE, FLORIDA
AND THE CONTRACTOR AS IDENTIFIED BELOW
ON THE BASIS OF A STIPULATED UNIT COST CONTRACT PRICE

THIS AGREEMENT is made and entered into by and between the COUNTY OF MANATEE, a political subdivision of the State of Florida, hereinafter referred to as the "COUNTY" and **insert Contractor name**, hereinafter referred to as the "CONTRACTOR," duly authorized to transact business in the State of Florida, with offices located at **insert Contractor address**.

ARTICLE 1. WORK

CONTRACTOR shall furnish all labor, materials, supplies, and other items required to complete the Work for **IFB#13-1089-OV, 44th Avenue East - From U.S. 41 (1st Street) to 19th Street Court East, Project Nos.: 334-6001060 and 319-6045661** in strict accordance with Contract documents and any duly authorized subsequent addenda thereto, all of which are made a part hereof.

ARTICLE 2. COMPENSATION

As compensation to the CONTRACTOR, the COUNTY shall pay and the CONTRACTOR will accept as full consideration for the performance of all Work required by **IFB #13-1089-OV, 44th Avenue East - From U.S. 41 (1st Street) to 19th Street Court East, Project Nos.: 334-6001060 and 319-6045661**, subject to additions and deductions as provided therein, the sum of **\$insert Award amount including discretionary dollars** for Bid "**insert A or B**" based on a completion time of **insert days** calendar days.

ARTICLE 3. LIQUIDATED DAMAGES

Time is of the essence in this Agreement. As of the date of this Agreement, the damages that will be suffered by the County in the event of the Contractor's failure to timely complete the Work are impossible to determine. In lieu thereof, it is agreed that if the Contractor fails to achieve substantial completion of the Work within **insert days**

calendar days of issuance of the Notice to Proceed (accounting, however, for any extensions of time granted pursuant to approved change orders), the Contractor shall pay to the County, as liquidated damages (and not as a penalty), the sum of \$2,514.00 per calendar day for each day beyond insert days days until the Contractor achieves substantial completion. The County shall have the option of withholding said liquidated damages from any pay application(s) thereafter submitted by the Contractor. Alternatively, the Contractor shall immediately pay said sums to the County upon the County's demand for same.

ARTICLE 4. ENGINEER

The County of Manatee, Public Works Department, is responsible as the COUNTY and as "ENGINEER," designed this project and is responsible for technical/engineering reviews and decisions. The ENGINEER is a member of the COUNTY'S project management team which is collectively responsible in ensuring the Work is completed in accordance with the Contract documents.

All communications involving this project will be addressed to: Mr. Walter Sowa, Sr. Engineering Specialist, and to the Engineer of Record, Mr. Christopher Mowbray, Highway Engineering Division Manager, Public Works. All invoicing will be addressed to the attention of: Mr. Walter Sowa, Sr. Engineering Specialist, with invoice copies to Mr. Christopher Mowbray, Highway Engineering Division Manager.

County of Manatee
Public Works Department
Mr. Walter Sowa
Sr. Engineering Specialist
IFB #13-1089-OV
1022 26th Avenue East
Bradenton, FL 34208
Phone: (941) 708-7450, Ext. 7332

County of Manatee
Public Works Department
Mr. Christopher Mowbray
Highway Engineering Division Manager
1022 26th Avenue East
Bradenton, FL 34208
Phone: (941) 708-7450, Ext. 7605

Where the terms ENGINEER and/or COUNTY are used in the Contract Documents, it shall mean the COUNTY'S project management team.

ARTICLE 5. CONTRACTOR'S REPRESENTATIONS

In order to induce COUNTY to enter into this Agreement, CONTRACTOR makes the following representations:

- 5.1 CONTRACTOR has familiarized itself with the nature and extent of the Bid documents, Work, site, locality and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
- 5.2 CONTRACTOR has studied carefully all drawings of the physical conditions upon which CONTRACTOR is entitled to rely.
- 5.3 CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies which pertain to the physical conditions at or contiguous to the site or which otherwise may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract price, within the Contract time and in accordance with the other terms and conditions of the Bid documents; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.
- 5.4 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Bid documents with respect to existing underground facilities at or contiguous to the site and assumes responsibility for the accurate location of said underground facilities. Any additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said underground facilities conducted by the CONTRACTOR will be done at the CONTRACTOR'S expense.

- 5.5 CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Bid.
- 5.6 CONTRACTOR has given COUNTY written notice of all conflicts, errors or discrepancies that have been discovered in the Bid documents and the written resolution thereof by OWNER is acceptable to CONTRACTOR.
- 5.7 CONTRACTOR shall schedule and perform the Work subject to COUNTY'S approval and shall hold COUNTY harmless from all liabilities incurred due to CONTRACTOR'S failure to coordinate with the COUNTY.

ARTICLE 6. CONTRACT DOCUMENTS

The Contract documents which comprise the entire Agreement between COUNTY and CONTRACTOR concerning the Work consist of the following:

- 6.1 This Agreement and Bid document **IFB #13-1089-OV**
- 6.2 Public Construction Bond Form and Insurance Certificate(s)
- 6.3 Drawings/Plans (not attached)
- 6.4 Addendum number insert Addendum # to insert Addendum # inclusive
- 6.5 CONTRACTOR'S Bid Form
- 6.6 Reports
- 6.7 The following, which may be delivered or issued after the effective date of the Agreement and are not attached hereto: all written change orders and other documents amending, modifying, or supplementing the Contract documents.

- 6.8 The documents listed in paragraphs above are attached to this Agreement (except as noted otherwise above). There are no Contract documents other than those listed above in this Article 6.

ARTICLE 7. MISCELLANEOUS

- 7.1 Terms used in this Agreement are defined in Article 1 of the General Conditions.
- 7.2 No assignment by a party hereto of any rights under or interest in the Contract documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law); and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignee from any duty or responsibility under the Contract documents.
- 7.3 COUNTY and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract documents.

AGREEMENT
IFB #i13-1089-OV

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their authorized representatives.

CONTRACTOR

By: _____

Print Name & Title of Signer

Date: _____

COUNTY OF MANATEE, FLORIDA

By: _____
Melissa M. Wendel, CPPO
Purchasing Official

Date: _____

**MANATEE COUNTY GOVERNMENT
PUBLIC CONSTRUCTION BOND**

Bond No. _____
(Enter bond number)

BY THIS BOND, We _____, located at _____, as
(Name of Contractor) (Address)
Principal and _____, a corporation, whose address is
(Name of Surety)

are bound to Manatee County, a political subdivision of the State of Florida, herein called County, in the sum of \$ _____, for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

WHEREAS, the Contractor has entered into Contract No. _____ with the County for the project titled insert title of project, with conditions and provisions as are further described in the aforementioned Contract, which Contract is by reference made a part hereof for the purposes of explaining this bond.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs Contract No. _____, between Principal and County for construction of insert title of project, the Contract being made a part of this bond by reference, at
(Title of Project)

the times and in the manner prescribed in the Contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the Work provided for in the Contract; and

3. Pays County all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that County sustains because of a default by Principal under the Contract; and

4. Performs the guarantee of all Work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

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

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

DATED ON _____.

CONTRACTOR AS PRINCIPAL

SURETY

Company Name

Company Name

Signature

Signature

Print Name & Title

Print Name & Title

(Corporate Seal)

(Corporate Seal)

AGENT or BROKER

Company Name

Address

Telephone

Licensed Florida Insurance Agent? ☐ **Yes** ☐ **No**

License #: _____

State of: _____

County of: _____

City of: _____

SECTION 00700
GENERAL CONDITIONS

ARTICLE 1. DEFINITIONS

Whenever used in the Bid documents, the following terms have the meaning indicated which are applicable to both the singular and plural thereof:

Addendum - Written or graphic instruments issued prior to the opening of Bids which clarify or change the Bidding documents or the Contract documents.

Agreement - The written Agreement between Owner and Contractor covering the Work to be performed; other Contract documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment - The form accepted by the Project Representative which is to be used by Contractor in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract documents.

Award - Acceptance of the Bid from the person, firm, or corporation which in the Owner's sole and absolute judgment will under all circumstances best serve the public interest. Award shall be made in accordance with Manatee County Code of Laws.

Bid - The offer of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bidder - One who submits a Bid directly to the Owner, as distinct from a Sub-bidder, who submits a Bid to a Bidder.

Bidding Documents - Consists of the Invitation for Bid, which includes but is not limited to the Bid Form, drawings, technical specifications, terms and conditions, and the proposed Contract documents (including all addenda issued prior to receipt of Bids); and becomes a part of the Agreement.

Bonds - Performance and payment bonds and other instruments of security.

Change Order - A document recommended by the Project Representative which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract price or the Contract time, issued on or after the effective date of the Agreement.

Compensable Delay - Any delay beyond the control and without the fault or negligence of the Contractor resulting from Owner-caused changes in the Work, differing site conditions, suspensions of the Work, or termination for convenience by Owner.

Contract Documents - The Agreement, addenda (which pertain to the Contract documents), Contractor's Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award), the bonds, the specifications, special provisions and the drawings, together with all amendments, modifications and supplements issued on or after the effective date of the Agreement.

Contract Price - The monies payable by Owner to Contractor under the Contract documents as stated in the Agreement.

Contract Time - The number of days or the date stated in the Notice to Proceed for the completion of the Work.

Contractor - The person, firm or corporation with whom Owner has entered into an Agreement.

Days - All references to days are to be considered calendar days except as specified differently.

Defective - An adjective which when modifying the Work refers to work that is unsatisfactory, faulty or deficient, or does not conform to the Contract documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract documents, or has been damaged prior to Project Representative's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner).

Discretionary – Payment for all Work that shall be made only at the Owner's discretion in order to satisfactorily complete the project in accordance with the plans and specifications.

Drawings - The drawings which show the character and Scope of Work to be performed and which have been prepared or approved by Engineer and are referred to in the Bidding and Contract documents.

Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective (date of execution).

Excusable Delay - Any delay beyond the control and without the negligence of the Contractor, the Owner, or any other Contractor caused by events or circumstances such as, but not limited to, acts of God or of the public enemy, fires, floods, freight embargoes, acts of government other than Owner or epidemics. Labor disputes and above average rainfall shall give rise only to excusable delays.

Field Order - A written order issued by Project Representative which orders minor changes in the Work, but which does not involve a change in the Contract price or the Contract time.

Float or Slack Time - The time available in the progress schedule during which an unexpected activity can be completed without delaying substantial completion of the Work.

Inexcusable Delay - Any delay caused by events or circumstances within the control of the Contractor, such as inadequate crewing, slow submittals, etc., which might have been avoided by the exercise of care, prudence, foresight, or diligence on the part of the Contractor.

Non-prejudicial Delay - Any delay impacting a portion of the Work within the available total float or slack time and not necessarily preventing completion of the Work within the Contract time.

Notice of Award - The written notice to the successful Bidder stating Award has been approved by the Board of County Commissioners; or by the Purchasing Official in accordance with Manatee County Code of Laws, Chapter 2-26, Manatee County Purchasing Ordinance.

Notice of Intent to Award - The written notice to the apparent low Bidder stating Award has been recommended with final Award to be authorized by the Board of County Commissioners.

Notice to Proceed - Written notice by Owner (after execution of Contract) to Contractor fixing the date on which the Contract time will commence to run and on which Contractor shall start to perform (ten (10) days from date of such notice) Contractor's obligations under the Contract documents.

Owner - Manatee County, Florida, Board of County Commissioners.

Preconstruction Conference - Prior to starting the Work, a meeting scheduled by Owner with Contractor to review the Work schedules, to establish procedures for handling shop drawings and other submissions, for processing periodical pay estimates, and such other matters as may be pertinent to the project.

Prejudicial Delay - Any excusable or compensable delay impacting the Work and exceeding the total float available in the progress schedule, thus preventing completion of the Work within the Contract time unless the Work is accelerated.

Pre-operation Testing - All field inspections, installation checks, water tests, performance tests and necessary corrections required of Contractor to demonstrate that individual components of the Work have been properly constructed and do operate in accordance with the Contract documents for their intended purposes.

Project - The total construction of which the Work to be provided under the Contract documents may be the whole or a part as indicated elsewhere in the Contract documents.

Project Representative - The authorized representative of Owner who is assigned to the project or any part thereof.

Schedule of Values – Unit prices shall be established for this Contract by the submission of a schedule of values. The Contractor shall submit a schedule of values within ten (10) days of Notice to Proceed date. The schedule shall include quantities and prices of items equaling the Total Bid Price and will subdivide the Work into components in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work. Upon request of the County, the Contractor shall support the values with data which will substantiate their correctness.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a supplier and submitted by Contractor to illustrate material or equipment for some portion of the Work.

Special Provisions: As required to define work or procedures not covered in the standard specifications, and as necessary to supplement or modify items in the standard specifications.

Specifications - Those portions of the Contract documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor - An individual or corporation having a direct contact with Contractor or with any other Subcontractor for the performance of a part of the Work at the site. Such person or firm has contractual relations with the Contractor, not with the Owner.

Substantial Completion - The Work (or a specified part thereof) has progressed to the point when, in the opinion of the Engineer as evidenced by Engineer's definitive certificate of substantial completion, it is sufficiently complete in accordance with Contract documents so that the Work can be utilized for the purposes for which it is intended; or if there be no such certificate issued, when final payment is due.

Successful Bidder - The lowest, responsible and responsive Bidder to whom an Award is made.

Supplier - A manufacturer, fabricator, supplier, distributor, material man or vendor.

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments and any encasement containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or

other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work - Work to be paid for on the basis of unit prices.

Work - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract documents.

Work Directive Change - A written directive to Contractor, issued on or after the effective date of the Agreement and signed by Owner and recommended by Project Representative ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed or to emergencies. A work directive change may not change the Contract price or the Contract time; but is evidence that the parties expect that the change directed or documented by a work directive change will be incorporated in a subsequently issued change order following negotiations by the parties as to its effect, if any, on the Contract price or Contract time.

Written Amendment - A written amendment of the Contract documents, signed by Owner and Contractor on or after the effective date of the Agreement and normally dealing with the non-engineering or non-technical rather than strictly work related aspects of the Contract documents.

ARTICLE 2. PRELIMINARY MATTERS

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

2.1 The Contractor must submit a proposed schedule of the Work at the preconstruction conference. The purpose of this schedule is to enable the Owner to govern the Work, to protect the functions of the local government and its citizens and to aid in providing appropriate surveillance. The Owner shall have the right to reschedule Work provided such rescheduling is in accord with the remainder of terms of the Contract. The schedule shall show, as a minimum, the approximate dates on which each segment of the Work is expected to be started and finished, the proposed traffic flows during each month, the anticipated earnings by the Contractor for each month and the approximate number of crews and equipment to be used. The Owner, after necessary rescheduling and obtaining additional information for specific purposes, shall review and approve the schedule. The Contractor shall also forward to the Owner, as soon as practicable after the first day of each month, a summary report of the progress of the various parts of the Work under the Contract, in fabrication and in the field, stating the existing status, estimated time of completion and cause of delay, if

any. Together with the summary report, the Contractor shall submit any necessary revisions to the original schedule for the Owner's review and approval. In addition, more detailed schedules may be required by the Owner for daily traffic control.

- 2.2 A Notice to Proceed may be given at any time within thirty (30) days after the effective date of the Agreement. The Contract time will commence at the time specified in such notice. Contractor shall start to perform the Work on the date specified in the Notice to Proceed, but no Work shall be done at the site prior to the date on which the Contract time commences to run.
- 2.3 If at any time the materials and appliances to be used appear to the Owner as insufficient or improper for securing the quality of Work required or the required rate of progress, the Owner may order the Contractor to increase his efficiency or to improve the character of his Work and the Contractor shall conform to such an order. The failure of the Owner to demand any increase of such efficiency of any improvement shall not release the Owner from his obligation to secure the quality of Work or the rate of progress necessary to complete the Work within the limits imposed by the Contract. The Owner may require the Contractor to remove from the Work such employees as the Owner deems incompetent, careless, insubordinate or otherwise objectionable, or whose continued employment on the Work is deemed to be contrary to the Owner's interest.
- 2.4 The Owner reserves the right to let other Contracts in connection with this Work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and execution of their Work, and promptly connect and coordinate the Work with theirs.

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, RE-USE

- 3.1 The Contract documents comprise the entire Agreement between Owner and Contractor concerning the Work. The Contract documents are complementary; what is called for by one is as binding as if called for by all. The Contract documents will be construed in accordance with the laws and ordinances of the State of Florida and Manatee County.

Should a conflict exist within the Contract documents, the precedence in ascending order of authority are as follows: 1) Standard Printed Contract Documents, 2) Special Conditions, 3) General Conditions, and 4) Drawings.

Note: Computed dimensions shall govern over scaled dimensions.

- 3.2 It is the intent of the Contract documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract documents. Any work, materials or equipment that may reasonably be inferred from the Contract documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe work, materials, or

equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract documents) shall be effective to change the duties and responsibilities of Owner, Contractor or Engineer, or any of their agents or employees from those set forth in the Contract documents.

- 3.3 The Contract documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

- 3.3.1 A Formal Written Amendment

- 3.3.2 A Change Order

- 3.3.3 Administrative Contract Adjustment (ACA)

- 3.3.4 A Work Directive Change

- 3.4 In addition, the requirements of the Contract documents may be supplemented and minor variations and deviations in the Work may be authorized in one or more of the following ways:

- 3.4.1 Discretionary Work – Field Directive

- 3.4.2 Engineer's approval of a Shop Drawing or sample

ARTICLE 4. CONTRACTOR'S RESPONSIBILITIES

- 4.1 Contractor shall keep on the Work at all times during its progress a competent resident superintendent; who shall be the Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor.
- 4.2 Contractor shall provide competent, suitable qualified personnel to survey and lay out the Work and perform construction as required by the Contract documents. Contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto and except as otherwise indicated in the Contract documents, all Work at the site shall be performed during regular working hours and Contractor will not permit overtime work or the

performance of work on Saturday, Sunday or legal holiday without Owner's written consent given after prior notice to Engineer (at least seventy-two (72) hours in advance).

- 4.2.1 Contractor shall pay for all additional engineering charges to the Owner for any overtime work which may be authorized. Such additional engineering charges shall be a subsidiary obligation of Contractor and no extra payment shall be made by Owner on account of such overtime work. At Owner's option, overtime costs may be deducted from Contractor's monthly payment request or Contractor's retainage prior to release of final payment.
- 4.3 Unless otherwise specified, Contractor shall furnish and assume full responsibility for all bonds, insurance, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.
- 4.4 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract documents. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instruction of the applicable supplier except as otherwise provided in the Contract documents.
- 4.5 Contractor shall be fully responsible to Owner for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect Contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract documents shall create any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner to pay or to see to the payment of any monies due any such Subcontractor, Supplier or other person or organization.
- 4.6 Permits: Unless otherwise provided, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work.
- 4.7 During the progress of the Work, Contractor shall keep the premises free from accumulation of waste materials rubbish and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste

materials, rubbish, and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials and shall leave the site clean and ready for occupancy by Owner. Contractor shall restore to original conditions all property not designated for alteration by the Contract documents.

- 4.8 Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.
- 4.9 Safety and Protection: Contractor shall comply with the Florida Department of Commerce Safety Regulations and any local safety regulations. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of and shall provide the necessary protection to prevent damage, injury or loss to:
- 4.9.1 all employees on the work and other persons and organizations who may be affected thereby;
- 4.9.2 all the work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- 4.9.3 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.
- 4.9.4 Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for the protection required by public authority or local conditions. Contractor shall provide reasonable maintenance of traffic way for the public and preservation of the Owner's business, taking into full consideration all local conditions. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed.
- 4.10 Emergencies: In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from Engineer or Owner, is obligated to act to prevent threatened damage, injury or loss. Contractor shall give Owner prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract documents have been caused thereby. If Owner

determines that a change in the Contract documents is required because of the action taken in response to an emergency, a work directive change or change order will be issued to document the consequences of the changes or variation.

- 4.11 For substitutes not included with the Bid, but submitted after the effective date of the Agreement, Contractor shall make written application to Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will also contain an itemized estimate of all costs and delays or schedule impacts that will result directly or indirectly from review, acceptance and provisions of such substitute, including costs of redesign and claims of other Contractors affected by the resulting change, all of which will be considered by the Engineer in evaluating the proposed substitute. Engineer may require Contractor to furnish at Contractor's expense, additional data about the proposed substitute. In rendering a decision, Owner/Engineer and Contractor shall have access to any available float time in the construction schedule. In the event that substitute materials or equipment not included as part of the Bid, but proposed after the effective date of the Agreement, are accepted and are less costly than the originally specified materials or equipment, then the net difference in cost shall be credited to the Owner and an appropriate change order executed.

4.11.1 If a specific means, method, technique, sequence of procedure of construction is indicated in or required by the Contract documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Engineer if Contractor submits sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract documents.

4.11.2 Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. Engineer will be the sole judge of acceptability and no substitute will be ordered, installed or utilized without Engineer's prior written acceptance which will be evidenced by either a change order or an approved shop drawing. Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

4.11.3 Contractor shall reimburse Owner for the charges of Engineer and Engineer's Consultants for evaluating each proposed substitute submitted after the effective date of the Agreement and all costs resulting from any delays in the Work while the substitute was undergoing review.

- 4.12 The Contractor shall furnish, free of charge, all labor, stakes, surveys, batter boards for structures, grade lines and other materials and supplies and shall set construction stakes and batter boards for establishing lines, position of structures, slopes and other controlling points necessary for the proper prosecution of the construction work. Where rights-of-way, easements, property lines or any other conditions which make the lay-out of the project or parts of the project critical are involved, the Contractor will employ a competent surveyor who is registered in the State of Florida for lay-out and staking. These stakes and marks shall constitute the field control by and in accord with which the Contractor shall govern and execute the Work. The Contractor will be held responsible for the preservation of all stakes, marks and if for any reason any of the stakes or marks or batter boards become destroyed or disturbed, they will be immediately and accurately replaced by the Contractor.
- 4.13 The Contractor has, by careful examination, satisfied himself as to the nature and location of the Work and all other matters which can in any way affect the Work under this Contract, including, but not limited to details pertaining to boring, as shown on the drawings, are not guaranteed to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the Work, approximately at the locations indicated. The Contractor shall examine boring data, where available, and make his own interpretation of the subsoil investigations and other preliminary data, and shall base his Bid on his own opinion of the conditions likely to be encountered. In no event shall an extension of time be considered for any conditions that existed at the time of bidding, nor shall the Contractor receive extra compensation for completion of the project as intended by the drawings and in keeping with the Contract documents. No verbal agreement or conversation with any officer, agent or employee of the Owner, before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- 4.14 If the Contractor, in the course of the Work, finds that the drawings and/or Contract documents cannot be followed, he shall immediately inform the Owner in writing, and the Owner shall promptly check the accuracy of the information. Any work done after such discovery, until any necessary changes are authorized, will be done at the Contractor's risk.

ARTICLE 5. OWNER'S RESPONSIBILITIES

- 5.1 Owner shall furnish the data required of Owner under the Contract documents promptly and shall make payments to the Contractor within a reasonable time (no more than twenty (20) days) after the Work has been accepted by the Owner. The form of all submittals, notices, change orders and other documents permitted or required to be used or transmitted under the Contract documents shall be determined by the Owner/Engineer. Standard County forms shall be utilized.

- 5.2 The Owner shall provide the lands upon which the Work under this Contract is to be done, except that the Contractor shall provide all necessary additional land required for the erection of temporary construction facilities and storage of his materials, together with right of access to same.
- 5.3 The Owner shall have the right to take possession of and use any completed portions of the Work, although the time for completing the entire Work or such portions may not have expired, but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract documents.

ARTICLE 6. CHANGES IN THE WORK

- 6.1 Without invalidating the Agreement and without notice to any Surety, Owner may, at any time, order additions, deletions or revisions in the Work. These will be authorized by a written amendment, a change order, or a work directive change. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract documents (except as otherwise specifically provided).
- 6.2 Contractor shall not be entitled to an increase in the Contract price or an extension of the Contract time with respect to any Work performed that is not required by the Contract documents as amended, modified and supplemented.
- 6.3 Owner and Contractor shall execute appropriate change orders (or written amendments) covering changes in the Work which are ordered by Owner, or which may be required because of acceptance of defective Work.
- 6.4 At any time Engineer may request a quotation from Contractor for a proposed change in the Work and within twenty-one (21) calendar days after receipt, Contractor shall submit a written and detailed proposal for an increase or decrease in the Contract price or Contract time for the proposed change. Engineer shall have twenty-one (21) calendar days after receipt of the detailed proposal to respond in writing. The proposal shall include an itemized estimate of all costs and time for performance that will result directly or indirectly from the proposed change. Unless otherwise directed, itemized estimates shall be in sufficient detail to reasonably permit an analysis by Engineer of all material, labor, equipment, subcontracts, overhead costs and fees, and shall cover all Work involved in the change, whether such Work was deleted, added, changed or impacted. Notwithstanding the request for quotation, Contractor shall carry on the Work and maintain the progress schedule. Delays in the submittal of the written and detailed proposal will be considered non-prejudicial.

ARTICLE 7. CHANGE OF CONTRACT PRICE

- 7.1 The Contract price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at his expense without change in the Contract price.
- 7.2 The Contract price may only be changed by change order or by a written amendment. Any claim for an increase or decrease in the Contract price shall be based on written notice delivered by the party making the claim to the other party. Notice of the amount of the claim with supporting data shall be delivered within ten (10) days from the beginning of such occurrence and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event.
- 7.3 The value of any Work covered by a change order or of any claim for an increase or decrease in the Contract price shall be determined in one of the following ways (at Owner's discretion):
 - 7.3.1 Where the Work involved is covered by unit prices contained in the Contract documents, cost will be determined by application of such unit prices to the quantities of the items involved.
 - 7.3.2 By mutual acceptance of lump sum.
 - 7.3.3 On the basis of the cost of the Work, plus a 15% Contractor's fee for overhead and profit. (Contractor shall submit an itemized cost breakdown together with supporting data.)
- 7.4 Either Owner or Contractor may make a claim for an adjustment in the Contract price. The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment under the following conditions:
 - 7.4.1 If the total cost of a particular item of Unit Price Work amounts to 5% or more of the Contract price and the variation in the quantity of the particular item of Unit Price Work performed by Contractor differs by more than 15% from the estimated quantity of such item indicated in the Agreement; and
 - 7.4.2 If there is no corresponding adjustment with respect to any other item of Work; and
 - 7.4.3 If a Contractor believes that it has incurred additional expense as a result thereof; or

7.4.4 If Owner believes that the quantity variation entitles it to an adjustment in the unit price; or

7.4.5 If the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

ARTICLE 8. CHANGE OF CONTRACT TIME

8.1 Contract time may only be changed by a change order or a written amendment. Any claim for an extension or shortening of the Contract time shall be based on written notice delivered by the party making the claim to the other party. Notice of the extent of the claim with supporting data shall be delivered within fifteen (15) days from detection or beginning of such occurrence and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event.

8.2 The Contract time will be extended in an amount equal to time lost due to delays beyond the control of Contractor. Such delays shall include, but not be limited to, acts or neglect by Owner or others performing additional Work; or to fires, floods, epidemics, abnormal weather conditions or acts of God.

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

ARTICLE 9. WARRANTY, TEST/INSPECTION, CORRECTION

9.1 Contractor warrants (for a minimum period of three (3) years or as otherwise stated herein) and guarantees to Owner that all Work will be in accordance with the Contract documents and will not be defective; that Owner, representatives of Owner, governmental agencies with jurisdictional interests will have access to the Work at reasonable time for their observation, inspecting and testing (Contractor shall give Engineer timely notice of readiness of the Work for all required approvals and shall assume full responsibility, including costs, in obtaining required tests, inspections, and approval certifications and/or acceptance, unless otherwise stated by Owner).

9.2 If any Work (including work of others) that is to be inspected, tested, or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice. Neither observations by Engineer nor inspections, tests, or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract documents.

9.3 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 the Contract documents, Owner may order Contractor to stop the Work, or any portion thereof and terminate payments to the Contractor until the cause for such order has been eliminated. Contractor shall bear all direct, indirect and consequential costs for satisfactory reconstruction or removal and replacement with non-defective Work, including, but not limited to fees and charges of engineers, architects, attorneys and other professionals and any additional expenses experienced by Owner due to delays to other Contractors performing additional Work and an appropriate deductive change order shall be issued. Contractor shall further bear the responsibility for maintaining schedule and shall not be entitled to an extension of the Contract time and the recovery of delay damages due to correcting or removing defective Work.

9.3.1 If Contractor fails within seven (7) days after written notice to correct defective Work, or fails to perform the Work in accordance with the Contract documents, or fails to comply with any other provision of the Contract documents, Owner may correct and remedy any such deficiency to the extent necessary to complete corrective and remedial action. Owner may exclude Contractor from all or part of the site, take possession of all or part of the Work, Contractor's tools, construction equipment and machinery at the site or for which Owner has paid Contractor but which are stored elsewhere. All direct and indirect costs of Owner in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer and a change order will be issued incorporating the necessary revisions.

9.3.2 If within three (3) years after the date of completion or such longer period of time as may be prescribed by laws or regulations or by the terms of any applicable special guarantee required by the Contract documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work or if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instruction, Owner may have the defective Work corrected/removed and all direct, indirect and consequential costs of such removal and replacement will be paid by Contractor.

ARTICLE 10. SUSPENSION/TERMINATION OF WORK

10.1 Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety (90) days by written notice to Contractor, which will fix the date on which Work will be resumed. Contractor shall be allowed an increase in the Contract price or an extension of the Contract

time, or both, directly attributable to any suspension if Contractor makes an approved claim therefore.

- 10.2 Owner may terminate the Contract if Contractor commences a voluntary case under any chapter of the Bankruptcy Code or any similar action by filing a petition under any other federal or state law relating to the bankruptcy or insolvency; if a petition is filed against the Contractor under any chapter of the Bankruptcy Code or similar relief under any other federal or state law; if Contractor persistently fails to perform the Work in accordance with the Contract documents; if Contractor disregards laws or regulations of any public body having jurisdiction or the Engineer; or otherwise violates in any substantial way any provisions of the Contract.

10.2.1 Owner may, after giving Contractor (and the Surety, if there is one) seven (7) days written notice and to the extent permitted by laws and regulations, terminate the services of Contractor; exclude Contractor from the site and take possession of the Work and of all Contractor's tools, construction equipment and machinery at the site and use the same to the full extent they could be used (without liability to Contractor for trespass or conversion); incorporate in the Work all materials and equipment stored at the site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case, Contractor shall not be entitled to receive any further payment beyond an amount equal to the value of material and equipment not incorporated in the Work, but delivered and suitably stored, less the aggregate of payments previously made. If the direct and indirect costs of completing the Work exceed the unpaid balance of the Contract price, Contractor shall pay the difference to Owner. Such costs incurred by Owner shall be verified by Owner and incorporated in a change order; but in finishing the Work, Owner shall not be required to obtain the lowest figure for the Work performed. Contractor's obligations to pay the difference between such costs and such unpaid balance shall survive termination of the Agreement.

- 10.3 If, through no act or fault of Contractor, the Work is suspended for a period of more than ninety (90) days by Owner or under an order of court or other public authority, or Engineer fails to act on any application or fails to pay Contractor any sum finally determined to be due; then Contractor may, upon seven (7) days written notice to Owner terminate the Agreement and recover from Owner payment for all Work executed, any expense sustained plus reasonable termination expenses. In lieu of terminating the Agreement, if Engineer has failed to act on any application of payment or Owner has failed to make any payment as aforesaid, Contractor may upon seven (7) days written notice to Owner stop the Work until payment of all amounts then due.

ARTICLE 11. CONTRACT CLAIMS

- 11.1 The rendering of a decision by Engineer with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment) will be a condition precedent to any exercise by Owner or Contractor of such right or remedies as either may otherwise have under the Contract documents or by laws or regulations in respect of any such claim, dispute or other matter. No action, either at law or at equity, shall be brought in connection with any such claim, dispute or other matter later than thirty (30) days after the date on which Owner/Engineer has rendered such written decision in respect thereof. Failure to bring an action within said thirty (30) day period shall result in Engineer's decision being final and binding on the Contractor. In no event may any such action be brought after the time at which instituting such proceedings would be otherwise barred by the applicable statute of limitations.
- 11.2 Before bringing any action in court pertaining to any claim, dispute or other matter in question(s) arising out of or relating to the Contract documents or the breach thereof, or Engineer's final decision, except for claims which have been waived by the making and acceptance of final payment, the Contractor shall first submit written notice(s) of Contract claims to the Purchasing Official for a decision; within the earlier of sixty (60) days after the last date on which the Contractor provided any goods or services required by the Contract or after the date on which the Contractor knew or should have known such a claim existed. The Manatee County Code of Laws, Section 2-26-63, Contract Claims, details the requirements and process for such a claim.

ARTICLE 12. RESIDENT PROJECT REPRESENTATIVE - DUTIES, RESPONSIBILITIES

- 12.1 Resident Project Representative is Engineer/Owner's Agent, who will act as directed by and under the supervision of the Engineer, and who will confer with Owner/Engineer regarding his actions. Resident Project Representative's dealing in matters pertaining to the on-site Work shall, in general, be only with the Owner/Engineer and Contractor and dealings with Subcontractors shall only be through or with the full knowledge of Contractor.
- 12.2 Resident Project Representative will:
- 12.2.1 Review the progress schedule, schedule of shop drawing submissions and schedule of values prepared by Contractor and consult with Owner/Engineer concerning their acceptability.
 - 12.2.2 Attend preconstruction conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with Owner/Engineer and notify those expected to attend in advance. Attend meetings and maintain and circulate copies of minutes thereof.

- 12.2.3 Serve as Owner/Engineer's liaison with Contractor, working principally through Contractor's superintendent and assist him in understanding the intent of the Contract documents. As requested by Owner/Engineer, assist in obtaining additional details or information when required at the job site for proper execution of the Work.
- 12.2.4 Receive and record date of receipt of shop drawings and samples, receive samples which are furnished at the site by Contractor and notify Owner/Engineer of their availability for examination.
- 12.2.5 Advise Owner/Engineer and Contractor or his superintendent immediately of the commencement of any Work requiring a shop drawing or sample submission if the submission has not been approved by the Owner/Engineer.
- 12.2.6 Conduct on-site observations of the Work in progress to assist Owner/Engineer in determining if the Work is proceeding in accordance with the Contract documents and that completed Work will conform to the Contract documents.
- 12.2.7 Report to Owner/Engineer whenever he believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract documents, or does not meet the requirements of any inspections, tests or approvals required or if Work has been damaged prior to final payment; and advise Owner/Engineer when he believes Work should be corrected or rejected or should be uncovered of observation or requires special testing, inspection or approval.
- 12.2.8 Verify that tests, equipment and system start-ups and operating and maintenance instructions are conducted as required by the Contract documents and in the presence of the required personnel, and that Contractor maintains adequate records thereof; observe, record and report to Engineer appropriate details relative to the test procedures and start-ups.
- 12.2.9 Accompany visiting inspectors representing public or other agencies having jurisdiction over the project; record the outcome of these inspections and report to Owner/Engineer.
- 12.2.10 Transmit to Contractor, Owner/Engineer's clarifications and interpretations of the Contract documents.
- 12.2.11 Consider and evaluate Contractor's suggestions or modifications in drawings or Contract Documents and report them with recommendations to Owner/Engineer.

- 12.2.12 Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and sample submissions, reproductions of original Contract documents including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the Contract, Owner/Engineer's clarifications and interpretations of the Contract documents, progress reports and other project related documents.
- 12.2.13 Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions; list of visiting officials and representatives or manufacturers, fabricators, suppliers and distributors; daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Send copies to Owner/Engineer.
- 12.2.14 Record names, addresses and telephone numbers of all Contractors, Subcontractors and major Suppliers of materials and equipment.
- 12.2.15 Furnish Owner/Engineer periodic reports as required of progress of the Work and Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions.
- 12.2.16 Consult with Owner/Engineer in advance of scheduling major tests, inspections or start of important phases of the Work.
- 12.2.17 Report immediately the occurrence of any accident.
- 12.2.18 Review applications for payment with Contractor for compliance with the established procedure for their submission and forward them with recommendations to Owner/Engineer, noting particularly their relation to the Schedule of Values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.
- 12.2.19 During the course of the Work, verify that certificates, maintenance and operations manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed, and deliver this material to Owner/Engineer for his review prior to final acceptance of the Work.
- 12.2.20 Before Owner/Engineer issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.
- 12.2.21 Conduct final inspection in the company of Owner/Engineer and Contractor and prepare a final list of items to be completed or corrected.

12.2.22 Verify that all items on final list have been completed or corrected and make recommendations to Owner/Engineer concerning acceptance.

12.3 Except upon written instructions of Owner/Engineer, Resident Project Representative:

12.3.1 Shall not authorize any deviation from the Contract documents or approve any substitute materials or equipment;

12.3.2 Shall not exceed limitations on Owner/Engineer's authority as set forth in the Contract documents;

12.3.3 Shall not undertake any of the responsibilities of Contractor, Subcontractors or Contractor's superintendent, or expedite the Work;

12.3.4 Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract documents;

12.3.5 Shall not advise on or issue directions as to safety precautions and programs in connection with the Work;

12.3.6 Shall not authorize Owner to occupy the project in whole or in part; and

12.3.7 Shall not participate in specialized field or laboratory tests.

ARTICLE 13. APPRENTICES

13.1 If successful Contractor employs apprentices, he shall be governed and comply with the provisions of F.S. § 446.011.

NOTE: The form of all submittals, notices, change orders and other documents permitted or required to be used or transmitted under the Contract shall be determined by the County. Standard County forms shall be utilized.

END OF SECTION

MAILING LABEL

Cut along the outside border and affix this label to your sealed Bid envelope to identify it as a "Sealed Bid". Be sure to include the name of the company submitting the Bid and the Bid due date and time where requested.

MAILING LABEL TO AFFIX TO OUTSIDE OF SEALED BID PACKAGE:

SEALED BID - DO NOT OPEN

CONTRACTOR: _____

SEALED BID NO: IFB#13-1089-OV

BID TITLE: 44th Avenue East - From U.S. 41 (1st Street) to 19th
Street Court East.

DUE DATE/TIME: _____ @ _____

ATTACHMENT 'A'

SPECIAL PROVISIONS

(Latest Revision dated March 29, 2013)

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GENERAL

This Section amends or enhances the Contract Documents and Technical Specifications.

CONTRACT PLANS

The Contract Plans will include the following plan sets:

1. Roadway Plans for 44th Avenue East from 1st Street East to 19th Street Court East, including 15th Street East.
2. Signal Plans and Signing and Pavement Marking for 15th Street East.
3. Waterline Improvements for 44th Avenue East from 1st Street East to 19th Street Court East.
4. Plans for 44th Avenue East from 1st Street East to 15th Street East.
 - a. Signal Plans
 - b. Signing and Pavement Marking Plans
 - c. Lighting Plans
5. Plans for 44th Avenue East from 15th Street East to 19th Street Court East.
 - a. Signal Plans
 - b. Signing and Pavement Marking Plans
 - c. Lighting Plans

STANDARD SPECIFICATIONS

The standard Specifications to be used for this work shall be Division II and III of the Florida Department of Transportation (FDOT) *Standard Specifications for Road and Bridge Construction (2013 Edition)*, and all Supplemental Specifications thereto, hereinafter referred to as the *Standard Specifications*, for roadway construction, except as amended under this Contract, or as noted on the construction plans meeting the Manatee County Highway, Traffic & Stormwater Standards (dated 2007).

The Contractor's work shall follow the Manatee County Public Works Utility Standards and Specifications (dated 2011) for the water main work, reclaimed water main, sanitary sewer, and force main work.

These specifications cover the usual construction requirements for work specified by the County Public Works Department; however, in the event it is determined that the specific work to be done is of such a nature that the method of construction, type and/or kind of material is not defined by the *Standard Specifications*, such work shall be performed in accordance with the Special Provisions.

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

NO SEPARATE PAYMENT FOR SPECIAL PROVISIONS

No separate payment will be made for the Contractor to execute Special Provisions. All expenses borne by the Contractor shall be included in the individual unit prices for the particular pay item, applicable pay item or as part of the lump sum quantity for Mobilization.

CONSTRUCTION HOURS

No work shall be done between 7:00 p.m. and 7:00 a.m., nor on weekends or legal holidays without written permission of the County, except emergency work.

CONSTRUCTION STAKING

All construction staking and survey work shall be completed prior to Clearing and Grubbing activities and shall be performed by a Registered Land Surveyor, unless otherwise approved. The right-of-way shall be staked within 20 days of the Notice to Proceed and shall include any easements (TCE or permanent) and maintained through the duration of construction. Right-of-way stakes shall be placed at all right-of-way corners and a maximum of 200 feet between corners, and shall be visible for contractor personnel, utility companies, and County representatives.

MATERIALS

- a. **Delivery Tickets:** It will be necessary to submit a copy of all delivery tickets for materials used on the project, regardless of the basis of payment.
- b. **Job Mix Formula for Asphaltic Concrete:** Attention is directed to the requirement that job mix formulas for asphaltic concrete, of the type specified, be submitted at least 14 days before plant operations begin. The submitted formula should be derived, or approved, by the laboratory approved by the County Representative to make test on the Project. Costs for such job mix formulation will be paid by the Contractor directly to the assigned laboratory.
- c. **Job Mix Formula for Portland Cement Concrete:** Attention is directed to the requirement that job mix design formulas for all Portland Cement Concrete, of the type specified, be submitted at least 14 days prior to use on the project. The submitted formulas shall be derived or approved by the County Representative and/or its agents. All concrete mix designs shall meet FDOT Concrete Class mix guidelines, except as follows: when approved, in writing by the County Representative, an Alternate Class I Concrete mix design formula, for concrete curb and gutter to be placed by automated curb machines, may show, as a substitution for #57 aggregate, an amount of #89 aggregate not to exceed 33 percent, by weight, of the #57 aggregate.

LABORATORY TESTING

Testing for the Work shall be performed at no expense to the Contractor. However, any test that fails or is not performed, as a result of the Contractor's action will, in turn, be back-charged to the Contractor, including the cost of all re-testing due to defective materials or construction. The testing laboratory shall be approved by the County Representative.

The samples and tests used for determining the quality and acceptability of the materials and workmanship, which have been or are to be incorporated in the Work, shall conform to the requirements of the State of Florida Department of Transportation Materials Sampling, Testing and Reporting Guide, latest edition.

Testing shall be in accordance with the applicable portions of Section 6 of the *Standard Specifications* and these specifications.

MATERIAL TESTING TABLE

ITEM	TEST	TEST IDENTIFICATION	TEST REQUIREMENTS VERTICAL	TEST FREQUENCY HORIZONTAL
UTILITY TRENCH BACKFILL	MAXIMUM DENSITY OPTIMUM MOISTURE	AASHTO T-180	N/A	PER SOIL CLASSIFICATION/ PER LABORATORY
	FIELD DENSITY	AASHTO T-191 AND AASHTO T-204	PER PLANS	ONE PER 200 LF
SUBGRADE UNCLEAR NEW CURB	MAXIMUM DENSITY OPTIMUM MOISTURE	AASHTO T-180	N/A	PER SOIL CLASSIFICATION/ PER LABORATORY
	FIELD DENSITY	AASHTO T-191 AND AASHTO T-204	PER PLANS	ONE PER 200 LF
LIMEROCK/ SHELL BASE	MAXIMUM DENSITY OPTIMUM MOISTURE	AASHTO T-180	N/A	PER SOIL CLASSIFICATION/ PER LABORATORY
	FIELD DENSITY	AASHTO T-191 AND AASHTO T-204	PER PLANS	ONE PER 200 LF
SOIL CEMENT BASE	SOIL CEMENT PLACEMENT/ MONITORING DENSITIES THICKNESS DETERMINATIONS	AASHTO T-134 AND AASHTO T-135	PER PLANS	ONE PER 200 LF
CONCRETE	COMPRESSIVE STRENGTH (THREE CYLINDERS/TEST)	AASHTO T-23 AND AASHTO T-22	PER SPECS	PER SPECS/MIN. OF ONE SET/DAY FOR POURS BETWEEN 10 & 50 CY
	SLUMP, AIR CONTENT	AASHTO T-119 AND AASHTO T-152	PER SPECS	ADDITIONAL SET FOR EACH 50 CY DAILY OR 1 PER 50 CY MAX
ASPHALT	MATERIAL QUALITY	FLORIDA D.O.T.	PER SPECS	PER SPECS
	GRADATION, STABILITY BITUMEN CONTENT			DAILY OR 1 PER 50 CY MAX
RECYCLED CONCRETE BASE	GRADATION DENSITIES THICKNESS DETERMINATIONS	AASHTO T-180	PER SPECS	PER SOIL CLASSIFICATION/ PER LABORATORY ONE PER 200 LF

DISCRETIONARY WORK (Contingency)

The discretionary work (Contingency) pay item shall cover the cost for various contingencies and contract amendments authorized by the Owner. Any amount of extra work and/or alterations to the proposed work charged to the allowance shall be fully documented and authorized by the Engineer before the start of the work. No payment shall be made for work completed without written authorization from the Owner or Engineer.

MEASUREMENT AND PAYMENT (In accordance with FDOT) Standard Specifications for Road and Bridge Construction (2013 Edition), and all Supplemental Specifications, thereto.....)

- a. All work completed under the terms of this contract shall be measured according to United States Standard Measures.
- b. All measurements shall be taken horizontally or vertically unless specifically provided otherwise.
- c. No payment will be made for construction over a greater area than authorized, nor for material moved from outside of stakes and data shown on the plans, except when such work is performed upon instructions of the County Representative.
- d. The Contractor shall accept compensation provided under the terms of this contract as full payment for furnishing all materials and for performing all work contemplated and embraced under this contract. Such compensation shall also be for any and all loss or damage arising out of the nature of the work or from the action of the elements, or from any unforeseen difficulties or obstructions encountered during the contract period until final acceptance by the County Representative.
- e. Whenever any change, or combination of changes, on the plans results in an increase or decrease in the original contract quantities, and the work added or decreased/eliminated is of the same general character as that called for on the plans, the Contractor shall accept payment in full at the original contract unit prices for the actual quantity of work performed, with no allowance for any loss of anticipated profits.
- f. Any quantity item not indicated in the Bid Form but shown on the Plans shall be included as part of the lump sum quantity for **Mobilization, FDOT Item No. 101-1.**
- g. It is the Contractor's responsibility to perform a detailed quantity take-off from the plans to determine actual quantities for ordering and delivery purposes. The County Representative will not be responsible for quantities ordered in excess of those installed and constructed. The Contractor should be aware that some of the pay items may have contingency quantities. Payment shall be made only for final in-place quantities.
- h. No payment shall be made for contingency quantities or additional work unless otherwise directed and approved in writing by the County Representative.
- i. The Contractor shall submit a Schedule of Values within 30 days of Award of Contract. The values shall be separated by segment from 1st Street East to 15th Street East, including 15th Street East, and segment from 15th Street East to 19th Street Court East.

RESTORATION

Payment for restoration shall be covered under the applicable restoration Pay Items as specified in the Bid Form. If a specific restoration Pay Item is not listed in the Bid Form, the cost of such work shall be included in the applicable Pay Item unless otherwise provided under separate restoration section or pay quantity of these Specifications.

COOPERATION WITH OTHERS

The Contractor shall cooperate with the owner of any underground or overhead utility lines in their removal and rearrangement operations, in order that these operations may progress in a reasonable manner and that service rendered by these parties will not be interrupted. The County shall not be responsible for costs associated with delays, disruptions and remobilizations attributed to utility agency scheduling.

SITE INVESTIGATION

The Contractor acknowledges that he has satisfied himself as to the nature and location of the work; the general and local conditions, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials; availability of labor, water, electric power, roads; and uncertainties of weather, water stages, tides or similar physical conditions at the site; the conformation and conditions of the ground; the character of equipment and facilities needed preliminary to and during prosecution of the work.

The Contractor further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered, insofar as this information presented by the drawings and Specifications made a part of this contract.

The Contractor shall carefully review and adhere to conditions and recommendations made in the project geotechnical report.

Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work.

The County assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the County. The County also assumes no responsibility for any understanding or representations made by its officers or agents during or prior to the execution of this Contract, unless (1) such understanding or interpretations are made in writing by the County or are expressly stated in the Contract and (2) the Contract expressly provides that the responsibility therefore is assumed by the County.

CONTRACTOR'S SUPERVISION

- a. **Prosecution of Work:** The Contractor shall give the work the constant attention necessary to assure the scheduled progress. He shall cooperate fully with the County Representative and with other Contractors at work in the vicinity.

- b. Contractor's Superintendent: The Contractor shall at all times have on the work site as his agent, a competent superintendent capable of thoroughly interpreting the plans and specifications and thoroughly experienced in the type of work being performed, who shall receive the instructions from the County Representative or his authorized representatives. The superintendent shall have full authority to execute the orders or directions of the County Representative and to supply promptly any materials, tools, equipment, labor and incidentals that may be required. Such superintendence shall be furnished regardless of the amount of work sublet.
- c. The Contractor's superintendent shall speak and understand English, and at least one responsible person who speaks and understands English shall be on the project during all working hours.
- d. Supervision for Emergencies: The Contractor shall have a responsible person available at or reasonably near the work site on a 24-hour basis, 7 days a week, in order that he may be contacted for emergencies and in cases where immediate action must be taken to maintain traffic or to handle any other problem that may arise. The Contractor's responsible person for supervision for emergencies shall speak and understand English. The Contractor shall submit, by certified mail, phone numbers and names of personnel designated to be contacted in cases of emergencies along with a description of the project location to the Florida Highway Patrol and all other local law enforcement agencies.

LIST OF EMERGENCY CONTACT NUMBERS & UTILITY SERVICE MAINTENANCE

The Contractor shall obtain and maintain a list of emergency contact phone numbers for all utilities during the course of the project. The Contractor shall maintain utility service during the project except for interruptions authorized by the utility owner. If interruptions are required, the Contractor shall notify the utility owner 48 hours in advance.

MAINTENANCE AND RESTORATION OF JOB SITE

The Contractor shall conduct his operations in such a manner as will result in a minimum of inconvenience to occupants of adjacent homes and business establishments and shall provide temporary access as directed or as may be required by the Project Manager. All final restoration must be performed to an equal or better condition than that which existed prior to construction.

Good housekeeping on this project is extremely important and the Contractor will be responsible for keeping the construction site neat and clean, with debris being removed daily as the work progresses or as otherwise directed by the Project Manager. Good housekeeping at the job site shall include: Removing all tools and temporary structures, dirt, rubbish, etc.; hauling all excess dirt, rock, etc., from excavations to a dump provided by the Contractor; and all clean up shall be accomplished to the satisfaction of the Project Manager. Dust will be controlled daily as may be required. Immediately after construction completion in an area or part thereof (including restoration), barricades, construction equipment and surplus and discarded materials shall be removed by the Contractor.

In the event that the timely clean up and restoration of the job site is not accomplished to the satisfaction of the Project Manager, the Project Manager shall make arrangements to affect the necessary clean up by others. The Contractor shall be charged for these costs through deductions in payment due the contractor. If such action becomes necessary on the part of and in the opinion

of the Project Manager, the County shall not be responsible for the inadvertent removal from the work site of materials which the Contractor would not normally have disposed of had he affected the required clean up.

REQUIREMENTS FOR CONTROL OF THE WORK

Prior to the start of the Work described in this contract, a pre-construction conference shall be held by the Project Manager to be attended by the Contractor and representatives of the various utilities and others as required, for the purpose of establishing a schedule of operations which will coordinate the work to be done under this contract with all related work to be done by others within the limits of the project.

All items of work in this contract shall be coordinated so that progress of each related item will be continuous from week to week. The progress of the work will be reviewed by the Project Manager at the end of each week, and if the progress of any item of work during that week is found to be unsatisfactory, the Contractor shall be required to adjust the rate of progress on that item or other items as directed by the Project Manager without additional compensation. The Contractor will continuously control the work until completed.

PROJECT SCHEDULE

The Contractor shall submit a detailed construction bar chart schedule within 15 days of the notification of intent to award or notification of award for the County to review. The submittal shall meet the following requirements:

- A CPM Schedule will be submitted on 11-inch by 17-inch paper.
- The time scale (horizontal) shall be in weeks. The activities shall be listed on the left hand side (vertical).
- Activities shall show most Work activities. The listing from top to bottom shall be in a logical sequence of how the Work will be accomplished. Space shall be provided between activities or within bars to allow for marking of actual progress.
- The submittal shall show the order and interdependence of activities and the sequence for accomplishing the work. All activities shall be described in sufficient detail so that the Engineer can readily identify the work and measure the progress on of each activity. The submittal shall show each activity with a beginning work date, duration, and a monetary value. Include activities for procurement fabrication, and deliver of materials, plant, and equipment, and review time for shop drawings and submittals. Include milestone activities when milestones are required by the Contract Documents. In a project with more than one phase, adequately identify each phase and its completion date, and do not allow activities to span more than one phase.
- The Contractor shall conduct sufficient liaison and provide sufficient information to indicate coordination activities with utility owners that have facilities within the limits of construction have been resolved. Incorporate in the schedule any utility adjustment schedules included in the Contract Documents unless the utility company and Manatee County mutually agree to changes to the utility schedules shown in the Contract. Submit a working plan with the schedule, consisting of a concise written description of the construction plan.

- The Project Manager will return inadequate schedules to the Contractor for corrections. Resubmit a corrected schedule within 15 calendar days from the date of the Project Manager's return transmittal.
- The Contractor shall submit an updated Work Progress Schedule, for Project Manager's acceptance, if there is a significant change in the planned order or duration of an activity. The Project Manager will review the corrected schedule and respond within 7 calendar days of receipt.

A copy of the schedule, clearly showing progress made, shall be submitted on a monthly basis during the progress of the work at the monthly meeting. Review or acceptance will neither impose on the County responsibility for the progress or scheduling of the Work, nor relieve the Contractor from full responsibility therefore.

By acceptance of the schedule, the Project Manager does not endorse or otherwise certify the validity or accuracy of the activity durations or sequencing of activities. The Project Manager will use the accepted schedule as the baseline against which to measure the progress.

The Contractor shall provide a revised Work schedule if, at any time, the County considers the completion date to be in jeopardy because of "activities behind schedule". An activity that cannot be completed by its original or latest completion date shall be deemed to be behind schedule. The revised Work schedule is designed to show how the Contractor intends to accomplish the Work to meet the contractual completion date. The form and method employed by the Contractor shall be the same as for the original Work schedule.

If the Contractor fails to finalize either the initial or a revised schedule in the time specified, the Project Manager will withhold all Contract payments until the Project Manager accepts the schedule.

The cost to prepare and revise the schedule is considered incidental to the Work.

USE OF PRIVATE PROPERTY

All construction activities required to complete this project in accordance with the Contract Documents shall be confined to public right-of-way, easements of record or temporary construction easements, unless the Contractor makes specific arrangements with private property owners for his use of their property. Written authorization from the granting property owner shall be placed on file with the Project Manager prior to utilization of said private properties. The County assumes no responsibility for damage to private property in such instances. The Contractor is responsible for protection of private property abutting all work areas on this project. Adequate equipment storage and material storage shall also be accomplished outside the County's right-of-way. Pipe and other materials shall not be strung out along the right-of-way, but will be delivered in quantities adequate for one day's installation. The County will coordinate with the Contractor to identify possible storage sites.

PRE-CONSTRUCTION AND CONSTRUCTION PROGRESS PHOTOGRAPHY

General

The Contractor shall employ a competent photographer to take construction record digital photos and perform video recording, including providing all labor, materials, equipment and incidentals necessary to obtain photos and/or video recordings of all areas within the project limits or as otherwise specified in the Contract specifications.

The word "Photo" includes standard photographic methods involving digital photography and production of hard copies for photos and saving photos as jpg files on diskettes and CD-ROMs.

Qualifications

A competent camera operator who is fully experienced and qualified with the specified equipment shall do all photography.

For the video recording, the audio portion should be done by a person qualified and knowledgeable in the specifics of the Contract, who shall speak with clarity and diction so as to be easily understood.

Project Photos for Construction Progress

Provide photos of the entire work area during construction for the purpose of records of completed work. Photos should be spaced at approximately 100-foot intervals. Three prints of each standard photograph shall be provided to the County. In addition to the CD_ROM media, one print of each digital photograph shall be provided to the County.

The Contractor shall pay all costs associated with the required photographs and prints. Any parties requiring additional photography or prints will pay the photographer directly.

Each print shall have clearly marked on the back the name of the project, the orientation of view, the date and time of exposure, name and address of photographer and the photographers numbered identification of exposure.

All project photographs shall be a single weight, color image. All finishes shall be smooth surface and glossy, and all prints shall be 8 inches by 10 inches.

All project photos shall be taken from locations to adequately illustrate conditions prior to construction, or conditions of construction and state of progress. The Contractor shall consult with the County Representative at each period of photography for instructions concerning views required.

The Contractor shall deliver photos in conformance with the above requirements to the County Representative. No construction shall begin until pre-construction photo are completed and submitted to the County Representative.

Record Photos

The Contractor shall require that photographer maintain digital copies of photos for a period of two years from date of Substantial Completion of the Project.

Photographer shall agree to furnish additional prints to the County Representative at commercial rates applicable at the time of purchase. Photographer shall also agree to participate as required in any litigation requiring the photographer as expert witness.

Video Recording for Pre-Construction

Video recording shall be used in lieu of photos for pre-construction. It shall be of sufficient quality to fully illustrate details of conditions and construction, including special features

Video recording shall be accomplished along all routes that are scheduled for construction.

The video recording shall, when viewed, depict an image with $\frac{1}{4}$ of the image being the roadway fronting of property and $\frac{3}{4}$ of the image being of the property. The video recording shall be done so as to show the roadway and property in an oblique view (30 degrees).

A complete view, in sufficient detail, of all driveways, with audio description of the exact location shall be provided.

The Engineering plans shall be used as a reference for stationing in the audio portion of the video recording for easy location identifications. If visible, house numbers shall be mentioned on the audio.

Two complete sets of video recording shall be delivered to the Owner for the permanent and exclusive use of the Owner prior to the start of any construction on the project.

All video recording shall contain the name of the project, the date and time of the video recording the name and address of the photographer and any other identifying information required.

Payment for this item shall be included under the pay item for Mobilization.

PROJECT IDENTIFICATION SIGN

The Contractor shall be responsible for furnishing, installing and maintaining four (4) County project identification signs and removal of same upon completion of the construction. Project identification sign shall be constructed and maintained at the project site as directed by the County Representative. The Contractor shall erect, maintain and relocate the sign as directed for the duration of the Project.

The Contractor shall mount the sign using 4-inch pressure treated lumber or as approved by the County Representative, and other supports as required, at a location mutually agreed by the County Representative and the Contractor.

The identification signs shall not be less than 32 square feet in area. The Contractor shall coordinate with the County Representative for the sign verbiage before fabrication. The signs shall be painted with graphic content to include:

- Title of Project
- Name of Owner
- Names and Titles of authorities, as directed by the County Representative
- Prime Contractor
- Construction Cost

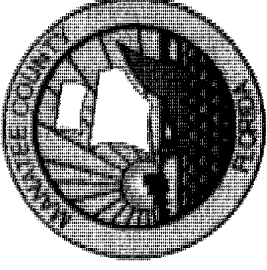
The signs shall be erected prior to commencement of work at a lighted location of high public visibility, adjacent to the main entrance at each end of the project, as approved by the County Representative.

The signs shall be a minimum of 8 feet wide and 4 feet high. The signs shall be constructed of high density 3/4-inch exterior plywood without waves or buckles, mounted and braced with pressure treated lumber as necessary and maintained in a presentable condition for the duration of the project. Hardware shall be galvanized. The surface of the sign shall be of exterior softwood plywood with medium density overlay.

Painting shall be constructed with materials to resist weathering and fading during the construction period. Experienced professionals shall perform painting. Graphic design and style shall be in accordance with the following:

- The signs will be placed in accordance with Manatee County Development Code, Ordinance 90-01, Section 724, Signs and Section 713, Visibility Triangles.

Payment for installing and maintaining the project identification signs shall be included as part of the lump sum quantity under Pay Item Number 1 (101-1) for Mobilization. The sign will remain the property of the County upon completion of the Project unless otherwise directed.



44TH AVE EAST EXTENSION

Board of County Commissioners

LARRY BUSTLE

CHAIRMAN

VANESSA BAUGH

BETSY BENAC

JOHN CHAPPIE

ROBIN DISABATINO

MICHAEL GALLEN

CAROL WHITMORE

CONSTRUCTION COST
\$ (Enter Amount)

PRIME CONTRACTOR
(Enter Contractor Name)

SOIL EROSION AND SILTATION

The Contractor shall plan and control the Work to minimize all soil erosion and the siltation of drains and canals resulting from such erosion.

At the pre-construction meeting, the Contractor shall present his proposed plan and schedule, which shall specifically indicate the proposed used of temporary erosion control features. The plan shall include:

- **Synthetic Bales** designed, furnished and installed by the Contractor in accordance with the plans, FDOT Section 104-6-4, and FDOT Design Standard Index No. 102.
- **Floating turbidity barriers and staked turbidity barriers** furnished and installed by the Contractor as shown on the plans and/or required by conditions of the permits and as outlined in FDOT Section 104-6.4.11.

SHOP DRAWINGS

This project will include multiple EOR's for different areas of practice or different plan sets. The shop drawings shall include, but not be limited to:

- Traffic Control Plan
- Erosion Control Plan
- Drainage components
- Traffic components
- Lighting components
- Signs and object markers

The Contractor shall submit to the County Project Manager for distribution and approval, all working drawings and shop drawings with descriptive specifications and engineering calculations necessary for the successful completion of the Work. The shop drawing shall be submitted in pdf format, along with a submittal log and the number of the submittals should follow the number on the submittal log. Each shop drawing shall have a cover sheet and reference the submittal log number, following the sample format provided in the contact documents.

The Contractor is responsible for maintaining a Submittal Activity Record (Logbook) on this project. The Contractor shall submit all shop drawings to the Roadway Engineer of Record for processing to the appropriate Area of Practice EOR for review. The Area of Practice EOR will complete the review and return the shop drawing to the Roadway Engineer of Record for logging and processing back to the Contractor and to the County Representative.

The logbook shall be updated each day that any Shop Drawing submittal activity occurs.

The following minimum data shall be entered in the logbook for each submittal:

County Project Number
Submittal Number
Description of Submittal

Number of Sheets in the Submittal
Number of Pages of Calculations, in Reports, in Manuals, etc.
Date Transmitted by Contractor to the Roadway Engineer of Record
Date Transmitted by Roadway EOR to the Area of Practice EOR
Date Roadway EOR Receives Shop Drawing Back From Area of Practice EOR
Date Roadway EOR Sends Shop Drawing Back to Contractor
Disposition as either "A" (Approved), "AN" (Approved as Noted), "R" (Resubmit) or "NA" (Not Approved).

The Logbook is a historical record of the activity devoted to an individual submittal as well as that for the project as a whole. It can serve as a verification of review time, to respond to inquiries of a particular submittal's status and as a record of manpower effort to aid in estimating and allocating future workload.

SUBSOIL EXCAVATION

The Contractor shall detect and remove all unsuitable material within project limit, following FDOT Design Standard Index 500, latest version. Payment for subsoil excavation shall be included in the subsoil excavation pay items unless separate pay items are specified.

TEMPORARY PAVEMENT

Temporary pavement shall consist of a minimum of Optional Base Group 04 and one (1) inch of Type SP structural course (Traffic C) asphalt over a firm, unyielding, well-compacted subgrade. The Contractor shall immediately repair all potholes that develop within the project limits and shall maintain a supply of cold mix on the project site to expedite these repairs.

The Temporary by-pass road shall provide adequate cover and protection of existing utilities. It is the Contractor's responsibility to coordinate with utility companies to repair and damages to the existing utilities during the construction at no additional cost to the County.

Payment for the temporary pavement and maintenance of this pavement shall be under Maintenance of Traffic

DEWATERING, SHEETING AND BRACING

Payment for dewatering, sheeting and bracing shall be included in the applicable pay items unless separate pay items are specified.

Approval of Dewatering Plan:

At least 10 days prior to the commencement of any dewatering activity, the Contractor shall submit to the Project Manager for record purposes only, a detailed description of the proposed dewatering system. This plan shall include design computations, layout, type, and spacing of dewatering devices, number and size of pumps and other equipment, with a description of the installation and operating procedures.

EARTHWORK

Quantities included on cross-section sheets, if any, represent estimated in-place quantities and do not include shrinkage and expansion factors. The quantities were calculated by the method with

average end areas between the station-to-station limits. Payment for Earthwork shall be made based on average end area method calculations. Contractor shall provide supporting survey data (before and after cross-sections) and calculations for payment purposes.

MAINTENANCE OF TRAFFIC AND CONSTRUCTION PHASING

The Contractor shall prepare and submit a Maintenance of Traffic plan and submit it to the County Representative for review prior to implementation. The Maintenance of Traffic Plan will require the seal of a Florida licensed Professional Engineer with a current FDOT Advance Work Zone certification if any change is made to the FDOT Index 600 Series. The primary goals for the Maintenance of Traffic Plan are as follows:

1. Provide phasing of construction to accommodate the schedule of the FPL in their relocation of their transmission lines. This includes providing access to the project site for FPL to access the relocation of their transmission lines. Also, this is in addition to normal service pole relocations along the utility corridor of the project.
2. Provide phasing of construction to accommodate the schedule of the CSX railroad crossing work to be performed by CSX. This includes the portion of the roadway and drainage construction necessary to provide access to the location of the RR crossing.
3. No roadway closure shall be allowed unless coordinated with Manatee County Traffic Representative in advance.
4. Comply with the FDOT Connection Permit for the 15th Street East (SR 70A) improvements as shown in the roadway plans.
5. At locations where tractor trailer vehicles access private property from 44th Avenue East, the Contractor's maintenance of traffic shall continue to accommodate the access into and out of the private property by the traffic trailer traffic.
6. Comply with all FDOT safety criteria, FDOT Design Standards 600 Series Indexes, FHWA and MUTCD standards, and allow for traffic to operate in daytime or nighttime.
7. No lane closures will be allowed between the hours of 6 AM to 7 PM
8. Business Entrance signs per FDOT Index 17355 (FTP-59) shall be placed at all business entrance points and maintained during all phases of construction.

Payment for all items related to maintenance of traffic shall be included under the pay item for Maintenance of Traffic, LS. This shall include, but not be limited to, preparation of the signed and sealed maintenance of traffic plan for all segments of roadway construction, all maintenance of traffic signs including business signs and advance warning signs for side streets, all barricades and drums, temporary concrete barrier wall, all warning lights, temporary pavement if required, removal of existing pavement markings, temporary pavement markings, temporary RPM's, portable changeable message signs, advance warning arrow panels, shoulder treatment for drop off conditions, off duty police officer, temporary asphalt aprons around utility and storm manholes and valve boxes located within the pavement area, and any other items required to comply with safety and design standards.

Goals for construction phasing are as follows:

1. Maintain positive drainage throughout the project during construction. Construct the rough grading of the pond sites as a first activity. Install the storm system starting at the pond and progressing in an upstream direction.

2. Maintain access to all properties. This can be accomplished by a linear phasing approach with short segments of road closures. Maintain one-lane one-way traffic during paving operations with the use of flagmen on each end of the work zone. The linear segments should start at the pond areas and move in the direction of the completed storm system.
3. A viable approach for the linear phasing is provided as follows:
 - a. Segment 1 (CSX RR to 18th Street East)
 - i. Rough grade Pond B and Floodplain Mitigation Pond 3.
 - ii. Install storm sewer for this segment.
 - iii. Construct roadway improvements this segment.
 - iv. This segment is through virgin alignment and does not have any traffic. It will provide access for CSX to get into the work site at the RR crossing. This should be the easiest segment to build.
 - b. Segment 2 (18th Street East to 19th Street Court East)
 - i. Install storm sewer for this segment.
 - ii. Construct roadway improvements this segment.
 - iii. Construct a temporary asphalt connection to 19th Street Court East with asphalt pavement overbuild feathering into existing pavement. Maintain two-way two-lane traffic along the south half of 44th Avenue East during project construction.
 - iv. Provide a striped out four-lane to two-lane transition on the approach to 19th Street Court East at the completion of the project.
 - c. Segment 3 (301 Boulevard to CSX RR)
 - i. Construct storm pipes under RR tracks and connect to Pond B.
 - ii. Begin installing storm sewer from 15th Street East toward 301 Boulevard.
 - iii. Construct intersection improvements at 15th Street East (SR 70A).
 - iv. Construct roadway segments in manageable lengths to maintain at least one-way traffic along 44th Avenue East from 15th Street East toward 301 Boulevard.
 - d. Segment 4 (Beginning Project to 301 Boulevard)
 - i. Rough grade Pond A.
 - ii. Begin installing storm sewer from Pond A toward 301 Boulevard.
 - iii. Construct roadway segments in manageable lengths to maintain at least one-way traffic along 44th Avenue East from Beginning of Project toward 301 Boulevard.
 - iv. Construct roadway improvements along 301 Boulevard including intersection area at 44th Avenue East.

MAINTENANCE OF STORM DRAINAGE SYSTEM

The Contractor shall be responsible at all times to maintain the operation of existing stormwater facilities, or, when existing stormwater facilities are removed, to provide equivalent capacity. Temporary drainage systems should be of adequate size to prevent upstream flooding in excess of existing conditions. This responsibility shall include the installation of temporary connections, bypass pumping, or other temporary means necessary until the new drainage system is fully operational. Payment for these items shall be included under the applicable pay item.

FINAL STORM SYSTEM CLEANUP

The Contractor shall televise culverts, clean and remove/dispose all siltation and debris from all proposed storm culverts, structures, swales and ponds. Payment for these items shall be included under the pay item for Mobilization or applicable pay item.

POST-CONSTRUCTION STORM PIPE TESTING

The Contractor shall inspect and televise all newly constructed storm pipes on the project. The purpose is to assure the pipes are properly constructed and do not leak at the joints. Laser profile, Video DVD, and report shall be provided for those pipes whose diameters are equal or smaller than 48 inch, following FDOT Specifications 2013. Payment for this item shall be included under the pay item for Mobilization.

SIDEWALKS TO REMAIN OPEN

Existing sidewalks and proposed sidewalks completed during construction shall remain open at all times unless approved otherwise by the County Representative. Temporary sidewalk may be required to maintain pedestrian movement. Payment for these items shall be included under the pay item for Maintenance of Traffic.

EXISTING SIDEWALK

If the Contractor, in the process of performing his contract operations, breaks any of the existing sidewalks that are to remain in place, replacement of this sidewalk will be at the Contractor's expense.

PEDESTRIAN ACCESS

The Contractor shall provide access and make provisions to maintain school zones during construction. The Contractor is to facilitate pedestrian traffic whether for school or public transportation. Any pedestrian detours needed shall comply with FDOT Design Standards Index 660.

RAILROAD CROSSING

Operations within railroad right-of way shall follow FDOT Standard Specifications for Road and Bridge Construction Dated 2010, or latest revision, section 7-11.5. The Jack & Bore and steel casing shall follow FDOT Standard Specifications for Road and Bridge Construction Dated 2010, or latest revision, section 556.

The Contractor shall contact CSX Road contractor representative before any construction activity occurs within Rail Road right of way. The Contractor shall notify FDOT District Rail Administrator, Arlene G. Barnes, via (863)519-2349 or Arlene.Barnes@dot.state.fl.us, 48 hours prior to any work concerning installation of new crossing.

COORDINATION WITH CSX

Multiple Construction Agreements (the Agreement) between Manatee County and CSX Transportation, Inc. have been executed and are included in this Bid Package as attachments.

Work by CSX

CSX shall install a new full width concrete surface railroad crossing, relocate and upgrade existing automatic warning devices and provide flagging and inspection services during roadway and crossing surface work as detailed in the Agreement.

Work by the Contractor

The Contractor shall perform all related roadway work, maintenance of traffic and detour plans, all sawcut, and asphalt paving as shown on the roadway construction plans and further detailed in the agreement between COUNTY and CSX.

Acceptance by the Contractor

The Contractor and the Contractor's Subcontractors shall be required to sign the "Contractor's Acceptance" form, Schedule I, included in the Agreements, prior to commencing work performed in accordance with the Agreements. By signing the "Contractor's Acceptance", the Contractor agrees to abide by and perform all applicable terms of the Agreement, including, but not limited to the following sections of the Agreement:

(BIDDERS: See Attachment "M", CSX Construction Agreement which is made a part of the Invitation for Bid #13-1089-OV)

Section 3 – Special Provisions -

Section 9 – Insurance

Section 11 – Indemnification

Exhibit C – CSXT Special Provisions

Exhibit F – Insurance Requirements

Payment for these items shall be included under the pay item for Mobilization

COORDINATION WITH FPL

A Construction Agreement (the FPL Agreement) between Manatee County and FPL, Inc. has been executed and are included in this Bid Package. This section of the Manatee County Special Provisions shall be considered to include the FPL Agreement in its entirety as it pertains to the Contractor.

1. Work by FPL
 - a. FPL shall, as part of the FPL Agreement, relocate transmission poles alongside the corridor. This is in addition to the various service poles and other relocations that they may need to perform.
2. Work by the Contractor
 - a. The Contractor shall perform all related roadway work, maintenance of traffic and detour plans and all clearing and grubbing as is needed for FPL to execute the relocation of their transmission poles.
3. Acceptance by the Contractor
 - a. The Contractor and the Contractor's Subcontractors agree to abide by and perform all applicable terms of the FPL Agreement.

DUST CONTROL

The Contractor shall control dust resulting from construction operations at all times. The locations and frequencies of applications shall be as directed by the County Representative. Dust control is required to be in accordance with the FDOT *Standard Specifications* Section 102-5. Payment for Dust Control shall be made under Mobilization unless separate pay item for Dust Control is specified.

UNDERGROUND UTILITY LOCATIONS

The Contractor shall field verify by means of subsurface locating or other approved method all existing utilities to remain and conditions as may be required for the work area. This shall include all areas of potential conflicts with proposed storm, sanitary, force main and water main. The Contractor shall locate all existing utilities to remain at potential conflict locations prior to construction activities and before ordering any proposed structures. The Contractor shall contact and coordinate with Sunshine State One Call 811 as well the individual utilities prior to and during construction for utility locations, relocation and assistance while installing in potential conflict areas. All utility coordination and relocations shall be factored into the Contractor's construction schedule at no additional cost to the County.

The cost of all labor, materials and incidentals required for the performance of any survey and utility location work shall be included under the pay item for Mobilization. A Florida registered land surveyor shall perform all survey work.

UTILITY CONFLICTS

It shall be the Contractor's responsibility to avoid conflicts with other utilities. The County will not be responsible for additional costs incurred by the Contractor for incorrect installations, relocations and breaks due to service conflicts.

UTILITY COORDINATION

The Contractor shall be responsible for coordination of the work with all affected utility owners. The Contractor must take into consideration the required utility adjustments and relocations in development of his schedule for completing the work including construction of temporary work to allow phased construction of the permanent facilities.

The Contractor shall coordinate and schedule utility relocations and/or adjustments with the utility owners along the project in order to avoid delays. The work includes remobilization if required after utility relocation is complete. The intent is to coordinate utility construction activities so the project construction continues and is not stopped or delayed at any time due to utility work being done. Once Notice to Proceed is issued, the Contractor shall contact the affected utilities to discuss the Contractor's anticipated means and methods so temporary and permanent relocation plans can be implemented as needed to meet OSHA safety requirements.

The Contractor shall hold a utility owners meeting every two weeks / or alternate time schedule agreed to by the Owner at 1022 26th Avenue East. The meeting shall review current and upcoming activities for the project. Written meeting minutes will be prepared by the Contractor and distributed to the meeting participants within 3 calendar days of the meeting.

During the design phase of this project the Engineer performed research to obtain the best information available for the existing utilities located within the project limits. The information found from this research has been illustrated on the project plans or provided back to the County in electronic format on CD. The following information is offered to assist the Contractor in understanding the extent of the utility investigations and coordination.

1. Atlas maps for County owned water and sewer utilities were obtained from the County. The existing water and sewer information from the atlas maps were transferred to the plans.
2. A topographic survey was performed for the project and used to prepare the mapping for the project plans. This topographic survey obtained location information for above ground utilities including fire hydrants, valve box tops, manhole tops, and manhole inverts.
3. Subsurface utility engineering survey was performed at specific locations where the Engineer determined there may be potential utility conflicts. The mast arm pole foundation locations shown on the plans were surveyed to verify these specific locations were clear of any existing underground utilities. Potential utility conflicts between proposed water utility improvements and storm sewer or other existing utilities were evaluated by obtaining field verified horizontal and vertical locations of the existing utilities. The field verified locations of existing utilities are at specific points where the conflicts were shown to occur on the drawings.
4. Utility coordination was provided during the design process with all known utility owners. This included submitting plans to the utility owners at the 30%, 75% and 100% design development phases. Marked plans were received from utility owners showing the disposition of their existing or proposed utilities. This information has been transferred to the Utility Adjustment Plans.
5. One utility coordination meeting was held with the utility owners at the 75% design development phase. Minutes of the utility coordination meeting has been provided to Manatee County on the information CD. The information CD is available for Contractor's review.

DAILY CLEAN-UP REQUIREMENTS

The Contractor shall clean up the job site at the end of each workday. Clean up will include the elimination of rubble and waste material on public and private property. Driveways shall remain accessible by residents. Each Friday, the Contractor shall prepare the road surface and barricades in an acceptable manner for weekend traffic use.

RECORD DRAWINGS AND PROJECT CERTIFICATION

The County Representative will furnish the Contractor copies of the bid plans to be used for the record drawings. A Florida Registered Surveyor shall perform a field survey and any differences between the plan elevations or dimensions shall be marked through and the as-built elevation or dimension legibly entered. All elevations and dimensions that are correct shall have a check mark placed beside it.

The Contractor shall keep a complete set of surveyed 'As-built' records. These records shall show all items of Work and existing features of utilities revealed by excavation work. The records shall be kept in a professional manner, in a form that shall be approved by the County prior to the Work. These results shall be available at all times during construction for reference by the County Representative and shall be delivered to the County Representative upon completion of the Work. All completed "As-Built" must be certified by a Florida Licensed Surveyor or Engineer per chapter 61 G 17-6, Florida Administrative Code, pursuant to Sec. 47207, Florida Statutes.

The following information is required on the "Record Drawings":

The "Record Drawings" shall, at a minimum, include the following:

- A. Roadway centerline profile [100-foot maximum interval]
- B. Roadway cross sections [100-foot maximum interval]
- C. Swale or ditch cross sections [100-foot maximum interval] and at all grade breaks (vertical and horizontal)
- D. Drainage structures including all plan dimensions, structure top and bottom elevations, weir elevations, skimmer dimensions/elevations and culvert invert elevations
- E. Side bank, underdrain filters or exfiltration trenches. Provide dimensions and elevations of all including clean-outs, pipes and connections to other structures.
- F. Flow line on all pipes and ditch breaks.
- G. Stormwater ponds and treatment swales with cross sections [25-foot maximum interval] (sufficient to calculate volumes). Also limits of planted littoral shelves.
- H. Wetland mitigation or restoration areas. Provide cross-sections [50-foot maximum interval], number and location/elevation of all plantings.
- I. All underground piping with elevations and dimensions, changes to piping locations, horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements. Actual installed pipe material, class, etc. Dimensions at these locations shall indicate distance from the centerline of construction.
- J. Field changes of dimensions and details.
- K. Details not on original contract drawings.
- L. Bench marks and elevation datum shall be indicated.
- M. Additional elevations or dimensions as required by the County Representative

Following completion of construction and prior to final payment, the Contractor shall submit a Certification by the Contractor and Manufacturer including test data that the materials (filter fabric, filter media, etc.) installed meet plan specifications and regulatory requirements.

Upon completion of the work, four (4) sets of draft "Record Drawings" shall be submitted to the County Representative for review. Such drawings shall accurately show all approved field changes to the original Construction Drawings, including actual locations, dimensions and elevations and shall be subjected to a field review in the presence of the County Representative. The drawings are to be prepared by competent personnel, neatly drafted and certified, signed and sealed by a Florida Registered Surveyor.

The Contractor shall incorporate any comments from the County Representative and shall submit two write-only CD-ROMs (showing changes in AutoCAD format), one set of 24-inch by 36-inch mylar record drawings, and four sets of 24 by 36-inch certified prints with the Surveyor's certification.

All Digital Drawings shall be identical to those submitted as hard copy. The Digital Drawing files shall be AutoCAD format (Release 2010 or later) and shall include all external reference drawings, text fonts, shape files and all other files necessary to make use of the drawings.

In addition, \$150,000 or five percent (whichever is smaller) of the Contract price shall be retained until the County Representative has approved the "Record Drawings". The County Representative will review and approve the "Record Drawings" within 30 days unless additional information is required. No final payment shall be made until such time as the "Record Drawings" have been approved and accepted by SWFWMD for Maintenance and Operation Phase Transfer. Unless there is a separate pay item for Record Drawings, payment shall be included as part of the lump sum quantity for Mobilization.

CURE TIME BEFORE THERMOPLASTIC APPLICATION

The Contractor shall allow minimum 30 days cure time before applying the thermoplastic pavement striping and markings. Necessary re-mobilization for this purpose shall be included under the Pay Item for mobilization. Provide temporary pavement markings during the interim period if the road is open to traffic. The price of temporary pavement marking shall be included in the Maintenance of Traffic.

MAILBOX TEMPORARY REMOVAL

The Contractor shall remove, store and replace all existing mailboxes within the project right-of-way. This work shall include:

- a. Coordinating with each County Representative or resident regarding removal of the existing mailboxes from the right-of-way.
- b. Working with the Local Postmaster to develop a method of temporary mail service for the period between removal and completion of construction activities.
- c. Storing the mailboxes.

- d. Replacing the mailboxes in the right-of-way.

Payment for mailbox temporary removal, storage and replacement shall be included under the pay item for Mailbox (Furnish & Install).

EXISTING TREES

All existing trees located within Right-of-way and Easement limits shall remain unless otherwise noted in the construction plans. Extra attention shall be given for oak trees that are to remain when the excavation is close to the trees and cutting of the roots is unavoidable. Any roots over 1-inch diameter shall have clean cut. The Certified Arborist shall be present during any root pruning process. The payment for tree removal shall be included under Clearing and Grubbing pay item.

TREE REMOVAL PERMIT

The Contractor shall obtain all necessary tree permits prior to any tree removal.

OTHER PERMITS

The Contractor shall comply and adhere to conditions stipulated in other project related permits. It is the Contractor's responsibility to request or obtain a listing of available required permits for this project.

CONTRACTOR TO EXECUTE NPDES "NOTICE OF INTENT"

Prior to proceeding with construction, the Contractor shall prepare and submit a "Notice of Intent to Use Generic Permit for Stormwater Discharge from Construction Activities that Disturb One or More Acres of Land" to the Florida Department of Environmental Protection (FDEP). The Contractor shall monitor the site at all times and take appropriate action to prevent erosion including the use of BMPs. No pumping of ground or surface water shall be performed without approval from the Water Management District. Following completion of construction, Contractor shall prepare and submit a "Notice of Termination of Generic Permit Coverage" to FDEP. Payment for this item shall be included under the pay item for Mobilization.

WORKSITE TRAFFIC SUPERVISOR

- a. The Contractor shall have a Worksite Traffic Supervisor who will be responsible for initiating, installing and maintaining all traffic control devices as described in Section 102 of the FDOT *Standard Specifications for Road and Bridge Construction* and in the Plans. The Worksite Traffic Supervisor shall have at least one year of experience directly related to work site traffic control in a supervisory or responsible capacity and shall be certified by the American Traffic Safety Services Association Worksite Traffic Supervisor Certification Program or an equal approved by FDOT. Approved alternate Worksite Traffic Supervisors may be used when necessary.
- b. The Worksite Traffic Supervisor shall be available on a 24-hour per day basis and shall review the project on a day-to-day basis as well as being involved in all changes to traffic control. The Worksite Traffic Supervisor shall have access to all equipment and materials needed to maintain traffic control and handle traffic related situations. The Worksite Traffic Supervisor shall ensure that routine deficiencies are corrected within a 24-hour period.

- c. The Worksite Traffic Supervisor shall be available on the site within 45 minutes after notification of an emergency situation, prepared to positively respond to repair the work zone traffic control or to provide alternate traffic arrangements.
- d. Failure of the Worksite Traffic Supervisor to comply with the provisions of the Sub-article may be grounds for decertification or removal from the project or both. Failure to maintain a designated Worksite Traffic Supervisor or failure to comply with these provisions will result in temporary suspension of all activities except traffic and erosion control and such other activities deemed to be necessary for project maintenance.
- e. Payment for Worksite Traffic Supervisor shall be included under the pay item for Maintenance of Traffic.

COMPLIANCE WITH THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD) STORMWATER MANAGEMENT AND DISCHARGE PERMIT REQUIREMENTS AND/OR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) DREDGE AND FILL PERMIT REQUIREMENTS

Southwest Florida Water Management District Stormwater Management and Discharge permits or exemptions, if any, and/or a Department of Environmental Protection Dredge and Fill permit, if any, required for this project have been obtained by the County Representative. The Contractor shall comply with the stipulations of the Permits or Exemptions as stated herein.

The Contractor shall allow periodic inspection of the work by authorized representatives of the Department of Environmental Protection, the Southwest Florida Water Management District, as well as other duly authorized law enforcement officers of the State.

The County Representative will furnish the Contractor A copy of the Permit Document, which shall be posted in a conspicuous location at the work site during the entire period of the work. The permit document shall be readily available at the project site to any duly authorized representative of DEP, SWFWMD or other duly empowered law enforcement agency who may wish to enter the work area for ascertaining compliance with the terms of this permit.

The Contractor shall not remove and/or emplace more material or exceed the limits of construction authorized by the Permit. Any unauthorized deviation from the approved drawings, Specifications and conditions of the permit shall constitute grounds for permit revocation and enforcement action by DEP and/or SWFWMD. Any conflicts between the Permit and construction plans or Specifications shall be pointed out to the County Representative in writing.

The Contractor shall exercise extreme care during construction activities to avoid damaging or adversely affecting the personal or property rights of others.

The Contractor shall assume and accept all responsibility and liability for and agrees to save DEP, SWFWMD and all their employees harmless from all claims of damage arising out of operations conducted pursuant to the permit.

The Contractor shall not violate the Water Quality Standards as specified in Chapter 62-302, 62-4 and 62-25 Florida Administrative Codes, including but not limited to:

62-302.500 Minimum Conditions of All Waters, Times and Places

The Contractor shall not allow the turbidity to exceed 29 Nephelometric Turbidity Units (NTU's) as related to standard candle turbidimeter above background or exceed turbidity limits as dictated by the Department of Environmental Protection (DEP). The Contractor is required to have a functional turbidity meter on the job site at all times along with personnel to operate this meter. Turbidity samples will be taken as directed by the County Representative or his representative.

When a turbidity violation is noted, the Contractor shall be required to implement sampling after corrective actions have been taken. The samples shall be taken in the same manner as routine monitoring is done. If samples indicate that the water quality standard for turbidity is still being violated, sampling shall continue at two-hour intervals until the samples indicate no violation is present. In no case shall operations resume until a set of samples has been taken which indicates that the water quality standard for turbidity is no longer being violated.

All turbidity monitoring data shall be submitted as soon as possible after collection. The County Representative will allow a maximum of a one-week period for submittal of data which indicates no violations of the standard.

Monitoring data shall normally be submitted within one week of analysis with documents containing the following information as a minimum: (1) permit number; (2) dates of sampling and analysis; (3) a statement describing the methods used in collection, handling, storage and analysis of the samples; (4) a map indicating the sampling locations and (5) a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data.

Monitoring reports shall include, but not be limited to, the following information for each sample that is taken:

- (1) time of day samples taken;
- (2) depth of water body;
- (3) depths of samples;
- (4) antecedent weather conditions;
- (5) tidal stage and direction of flow; and
- (6) wind direction and velocity.

If monitoring reveals apparent violations of the state water quality standard for turbidity, dredging activities shall cease immediately and not resume until corrective measures have been taken, turbidity has returned to acceptable levels, and a compliance inspection by DEP Department personnel has been conducted.

The Contractor shall not disturb any wetland species until after all desirable species have been relocated by others as directed by the County Representative.

The Contractor shall be required to use silt barriers upstream and downstream of the project. Construction of silt barriers shall be in accordance with plans and Specifications.

The Contractor shall use a qualified testing lab to perform the required monitoring as stipulated in the permit conditions. The Contractor shall be required to cooperate with the testing lab performing the monitoring and shall provide adequate space for storage of any testing equipment, which may be needed at the job site.

If the above-mentioned monitoring reveals apparent violations of the State Water Quality Standards for turbidity, construction activities shall cease immediately as directed by the County Representative.

The Contractor shall perform all work in strict accordance with the permit, plans and Specifications. Any violation of or failure by the Contractor to comply with this permit will subject the Contractor to liability for damages caused to the waters or property, including animal, plant and aquatic life of the State, restoration of the waters and property to their former condition, and civil penalties in the amount of ten thousand dollars (\$10,000) for each day for which the violation occurs.

Copies of the DEP License or Exemption and/or a Dredge and Fill permit issued to the County Representative are available to the Contractor upon request by contacting the County Representative.

CRUSHED CONCRETE BASE

Crushed Concrete Base shall follow FDOT Standard Specifications 2007 (rev 8-07) except that the Lime Rock Bearing Ratio (LBR) shall be minimum 150. The layer coefficient of 0.18 with LBR minimum 150 is allowed to calculate the base thickness.

Only FDOT certified piles are acceptable to this project. The producing process certified by FDOT without the actual pile certified is not considered solid enough for the acceptance of the material. The contractor shall send the engineer the deliver tickets with FDOT certified pile number, pile location, project name and manufactory contact information shown.

Additional tests and pile inspections will be required for the quality control and the contractor will be responsible for the cost of the initial ten tests and any re-tests when needed. The material will be rejected by the County if the initial test fails. The rejected material shall be completely removed from the project site.

1) Regarding structural number on Crushed Concrete Base, Manatee County to approve SN 0.18 if following criteria is met and maintained:

- A) Limerock Bearing Ratio value of 150 or greater 10" compacted thickness in place.
- B) Gradation conforms to FDOT Specifications 2007 (rev 8-07).
- C) Deleterious materials conform to FDOT Specifications 2007 (rev 8-07).
- D) Delivery ticket indicates FDOT approved source, actual lot allocated to a particular project.
- E) Piles or lots to be inspected by Manatee County representative prior to acceptance.

2) Regarding Limerock Bearing Ratio value:

A) No Limerock Bearing Ratio value less than 150, with no under tolerance.

3) Regarding source approval:

A) FDOT approved source, allocated lot sufficient to serve project's needs, delivery tickets stating FDOT approved source, project name, FDOT preapproved lot or pile number.

4) Regarding deleterious materials:

A) Deleterious material content in addition to the FDOT Specifications 2007 (rev 8-07) should state that no construction debris such as Styrofoam insulation, telephone wire, lumber, shingles, aluminum window or door frames etc., or household trash ie: bottles, cans, paper goods etc. is acceptable.

5) Material source inspection:

A) Prior to acceptance of base product, a representative of Manatee County will visit the Producer's location and obtain a sample of the proposed base for the specified project. In addition to sampling, the pile will be visually inspected for deleterious materials, substantial segregation, or any other undesirable characteristics. The pile shall have a traceable identification by pile number or lot number and an accurate quality assessment.

6) Import and placement of base product:

A) During import of base product, a county inspector or duly designated representative of the county will be onsite monitoring incoming loads, making visual assessments of the product and checking load tickets for verification of materials.

7) Import and placement of base product:

A) After spreading out, prior to compacting, samples of the base product will be obtained by Manatee County approved testing lab, every 500 LF staggering right, left, center of the roadway for Limerock Bearing Ratio, gradation and deleterious material testing.

8) Rejection of materials:

A) Material not meeting above requirements will subject to rejection and be removed from the project site. Any three (3) concurrent rejections will require immediate shut down of imported material and require review and remedies prior to restart.

9) Compaction of material:

A) In place material should be a minimum of 10" in compacted thickness and achieve 98% of AASHTO T-180 compaction.

CLARIFICATION OF SPECIFIC LINE ITEMS

Clarification of the County's expectations of work to be performed as it relates to specific line items and/or item No. listed on the Bid Form is included in the FDOT Basis of Estimate Manual version 2012. Where such item number is not available, the description shown herein will prevail.

Line item #R21, #R22 and #R23, Type S-1 and S-III Asphalt Concrete shall follow *FDOT Standard Specifications Road and Bridge Construction* 2000, section 331.

Line item #R29, Triple Barrel- 8'x 4' Box Culvert, shall follow *FDOT Standard Specifications Road and Bridge Construction* 2007, section 410.

Line item #R34, #R35, #R36, #R37, #R38, #R39, the drainage structures shall follow *Manatee County Highway, Traffic and Stormwater Standard* 2007.

Line item #R77 and #R78, Curb Types shall follow *Manatee County Highway, Traffic and Stormwater Standard* 2007.

Line item #R90, the contractor shall coordinate with Beall's for the Auto Gate removal and reinstallation.

Line item #R95, the payment shall include all materials and labor work necessary for the wetland creation and enhancement. The quality of wetland mitigation shall meet the requirement of SWFWMD Environmental Resource Permit.

LIST OF PERMIT DOCUMENTS

IFB#13-1089-OV

**Note: Permits listed below which are a part of the Invitation for Bid #13-1089-OV
Shall be provided to the successful bidder**

Document Number	Permit Name	Notes
1	Environmental Resource General Const. Permit Permit Number 44020046.000 – SWFWMD (9 pages)	Issued 05/14/2004 This permit has been modified.
2	Environmental Resource General Const. Permit Permit Number 44020046.004 – SWFWMD (9 pages)	Issued 12/17/2009 Expires 12/17/2014
3	Modification of Permit by Short Form Permit Number 44020046.005 – SWFWMD (14 pages)	Expires 05/14/2014
4	ERP General Construction Modification Permit Number 44020046.006	Issued 09/20/2012 Expires 09/20/2017
5	FDOT Connection Permit Traffic Signal, S&PM for Intersection Improvements at 44 th Avenue East and 15 th Street East Permit Number - Pending	Pending Issuance Notice of Intent Issued 08/16/2012
6	CSX Facility Encroachment Agreement Agreement No. CSX646784	Effective Date 02/03/2011
7	CSX Construction Agreement	
8	CSX Preemption Agreement	
9	FPL Agreement	
10	Water Distribution Utility Permit No. 0133068-960 DSGP Permit No. 0133068-1016DSGP/02	Expires 11/08/2015

IFB #13-1089-OV

**LIST OF GEOTECHNICAL DOCUMENTS WHICH ARE MADE A
PART OF THE INVITATION FOR BID #13-1089-OV**

1. Soil Report from 1st St. E to 15th St E.
2. Soil Report from 15th St E to 19th St E.
3. Soil Report for Signal Poles.

Date: ___/___/___

Submittal No. _____

SHOP DRAWING SUBMITTAL COVER SHEET

(IFB) # [13-1089-OV]

Project Name: [Insert Full Project Name]

Project File No.: [Insert Project Number]

Specification Title Number: [Insert Section No.] Specification No.: Part [Insert Part No.], [Insert Item No.] Page(s): [Insert Page No.]

Submittal Description: [Insert Title, Description of Submittal and Use]

[Manatee County Shop Drawing Review Stamp goes here. Please leave blank.]

Your Company Logo and/or information

[Contractor's Name]

[Contractor's Title]

[Company Name]

[Company Address]

[Office Number]

[Fax Number]

[email address]

[Approval Signature: _____]

[Approval Date: ___/___/___]

SAMPLE

Date: 10/26/2011

Submittal

No.

7

Shop Drawing Submittal Cover Sheet

(IFB) # 13-1089-OV

Project Name: Project Name Goes Here – Group or Phase 3

Specification Title Number: 2620

Specification No.: Part 2, 2.01.A

Page(s): 141

Submittal Description: National Pipe & Plastics Polyethylene PE 3608 DIPS Potable Water Pipe HDPE

SHOP DRAWING REVIEW

RESPONSE NOT REQUIRED	RESPONSE REQUIRED
☐ NO EXCEPTIONS TAKEN	☐ NOTE MARKINGS, CONFIRM
☐ NOTE MARKINGS	☐ NOTE MARKINGS, RESUBMIT
	☐ REJECTED, RESUBMIT

Engineer's review is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the project drawings and specifications, nor departure therefrom. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing his work in a safe manner.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

By: _____ Date: _____



John Doe
Project Manager
Manatee County
1022 26th Ave E.]
(941) 708-7450]
(941) 708-7431
email@email.com

Approval Signature: _____ Approved: 10/26/

ATTACHMENT 'B'
Technical Specifications
for Bid Item, FDOT No.
663-74-15

FOR

VIDEO VEHICLE DETECTOR ASSEMBLY

COUNTY PROJECT NUMBER: 6045661

The official record of this package is the electronic file signed and sealed under Rule 61G 15-23.003, F.A.C.

Name: Upik Y. Suwarno

Page(s): 1 - 11

VIDEO VEHICLE DETECTOR

663-1 Description

Install video vehicle detectors as shown in plans. The system shall be capable of providing presence vehicle detection at signalized intersections. The video detection system shall be expandable without removing or replacing existing units.

Using standard image sensor optics and in the absence of occlusion, the system shall be able to detect vehicle presence with 98% accuracy under normal conditions (days and nights), and 96% accuracy under adverse conditions (fog, rain, etc).

663-2 Materials

663-2.1 General: Use only video vehicle detectors currently listed on the Department's Approved Product List (APL). Ensure that all equipment is marked in accordance with Section 603 and the markings are visible after installation.

All items and materials furnished shall be new, current production models installed and operational in a user environment, and shall be items currently in distribution.

The system shall be capable of monitoring all vehicles on the roadway, providing video-based vehicle detection and have the capability of being programmed via a CRT display and a mouse. As a minimum, the video detection system shall consist of the following materials:

- (1) Video Image Processing unit(s)
- (2) Video Detection Module(s)
- (3) Video Camera(s) with IR filter, enclosure, and sun shield
- (4) Camera lens
- (5) Camera housing
- (6) Surge suppressor
- (7) Sensor Bracket(s)
- (8) Programming Devices and software
- (9) Coaxial/Power Cable
- (10) Point Discharge Dissipation Terminals
- (11) Coax Line Protectors
- (12) Camera Power Protectors
- (13) Mounting System
- (14) Detector programming device
- (15) Software
- (16) All other necessary equipment for operation

These devices must comply with any applicable FCC regulations. Operation and Maintenance Manuals shall be supplied with each unit. These manuals shall include the following information:

- (1) General description
- (2) General characteristics
- (3) Installation procedure

- (4) Theory of operation
- (5) Schematic and logic diagram
- (6) Parts list (to include part type, part number manufacturer and ratings)

The manufacturer shall provide the following technical data for all materials where applicable:

- (1) Model number
- (2) Power and Current requirements/consumption
- (3) Temperature range
- (4) Weight and Dimensions
- (5) Mechanical Construction
- (6) Mounting equipment necessary
- (7) Operating frequency (FCC approved)
- (8) Detection Range, Angle, and Pattern (horizontal and vertical)
- (9) Response time and Sensitivity
- (10) Software for operation of device
- (11) Device capabilities as claimed by manufacturer.
- (12) Any limitations, requirements, or potential hazards associated with the operation or maintenance of the device.

The manufacturer will test all video units to ensure compliance to all FCC and department specifications.

The manufacturer will be required to supply a medical statement as to the safety of the unit to the general public (example: pacemakers, etc.).

All product documentation shall be written in the English language.

663-2.2 Video Image Processor: The Video Image Processor (VIP) shall be modular by design and housed in either a self-contained stand-alone unit or fit directly into NEMA TS1 & TS2 type racks mount installation without replacing or modifying the existing VIP units. The VIP module shall be able to connect to a camera.

A video system communication board shall control from 1 to 6 VIP boards allowing for 1 to 12 image sensors.

The system shall be designed to operate reliably in the adverse environment of roadside cabinets and shall meet or exceed all NEMA TS1 and TS2, as well as ATC environmental specifications.

The VIP Video inputs shall be 75 ohms impedance with High Z option.

Ambient operating temperature shall be from -34 to +74 degrees Centigrade at 0 to 95% relative humidity non-condensing.

The system shall be powered by a self contained power supply. Power consumption shall not exceed 135 Watts.

Surge ratings shall be set forth in the NEMA TS1 and TS2 specifications.

Serial communications shall be via an RS232 serial port, modem and Ethernet communication port (RJ-45 connection). The Ethernet communications port shall meet the latest applicable IEEE Ethernet Protocol standards and shall be capable of communicating at 10/100 mbps. These ports can be used for communications to a laptop, modem or fiber modem for

upload/download detector configurations, count, turning movement, queue length data, technical events, send firmware upgrades and carryout remote setup of detectors. A standard Internet browser shall connect to Ethernet IP addressable port (RJ-45 connection) to monitor and set-up the VIP boards. RS485 on the front panel shall facilitate communications to other VIP boards.

Each VIP board shall have 4 opto-isolated open collector outputs. Twenty (20) additional outputs shall be available via the expansion port. The outputs shall be programmed for signaling the presence, the arrival or the departure of vehicles in a minimum of 24 detection zones per video image.

Each VIP board shall allow for twenty (20) digital inputs via the I/O Expansion port.

Each VIP board shall have error detection. An output contact will provide a constant call if the video signal is bad or the VIP board is not functioning properly. A user defined quality level will automatically put the VIP into a recall state in cases of severe degraded visibility (i.e., fog, blizzard, etc.). Normal detection resumes when visibility improves above the user defined quality level.

Operator selectable recall shall be available via the VIP front panel. The operator shall have the ability to assign selectable outputs for recall.

A video select button on the VIP front panel will switch between camera images of the VIP.

The VIP board shall have one (VIP3.1) or two (VIP3.2) video inputs (RS-170 NTSC or CCIR composite video) and one video out.

The VIP board shall have a reset button on the front panel to reset video detectors to “relearn”, the roadway image. During “relearn”, selectable recall can be enabled or disabled for immediate operation. Learning time of video detectors shall be less than 6 minutes.

External surge suppression, independent of the VIP board shall separate the VIP from the image sensor.

The VIP board shall have separate light emitting diodes (LEDs) that indicate:

Power	Red to verify power supply.
1/1 Comm	Green to indicate communications to expansion boards.
Video 1 & 2	Green to verify the presence of video input 75 ohm.
TS & RX	Green to indicate communications via the RS485 and Ethernet communication.
Out1 – Out4	Green if the corresponding detection group is active.

The VIP board shall have 2 separate buttons for Video Select:

Recall	Manually places call or selects video on detectors.
Reset	Manually reset detectors to “learn” new background.

The VIP board shall have a: a) video out female RCA style connector b) DB9 female Service port c) DB9 I/O Expansion port.

The VIP Expansion board shall have separate LEDs that indicate:

Power	Red to verify power supply.
Comm	Green to indicate communications to VIP board.
I/O1-I/O4	Green if the corresponding detection group is active.

The VIP Expansion board shall have 8 dipswitches that define which inputs and outputs are to be used.

663-2.3 Functional Capabilities: Video vehicle detector system shall provide real time detection.

Each VIP board shall be capable of processing the video signal of a minimum of four cameras. The video signal shall be analyzed in real time. It shall provide software MPEG-2 video compression at 30 frames per second.

The system shall be expandable up to 12 cameras that may be connected to different VIP units and programmed independently.

The system shall be capable of displaying detectors on the video image with associated outputs. Outputs/Inputs status will be indicated on the screen. Selectable text overlay will also include the ability to view raw video without any verbiage and/or detectors for monitoring purposes.

Each VIP board will detect within the view of the connected camera the presence of vehicles in user-defined zones. Detectors available shall be presence, count, queue length, turning movement, delay, extension, or pulse mode of either arrival or departure of vehicles. Delay and extension shall be defined between 0.1 - 99 seconds and pulse mode between 0 - 165ms in 33ms increments. Queue length detector thresholds can be programmed to generate an output when the threshold is exceeded.

The VIP board shall be programmed with a standard CCTV monitor and keypad plugged into the VIP serial port to facilitate detector programming.

The VIP board shall store up to 8 detector configurations. It shall be possible to switch between detector configurations manually or automatically by time of day or input from the traffic controller.

Via the serial port, detector configurations can be uploaded to a laptop and stored on disk.

Detectors may be linked to 24 outputs and 20 inputs using Boolean Logic features: AND, OR, NOT.

It shall be possible to make a detector directional sensitive. Options will include an omni-directional detector or a detector that only senses movement: from right to left, left to right, up to down or down to up as you look at the monitor.

To facilitate "fine tuning" of detection zones, a maximum of 10 lines and a minimum of 4 lines shall be adjustable within the confines of the detector.

All detectors and parameters can be changed without interrupting detection. For example: when one detector is modified all existing detectors continue to operate, including the one that is being modified. When the new position is confirmed, the new detector will enter a learning phase. Once the new detector is fully functional, it will take over the job of the old one. In this way, the detector is always fully operational with no interruption on any detector, even during modification. Learning phases for new detectors shall not exceed 6 minutes.

Six detectors per input may be used as count, turning movement and queue length detectors. These detectors will detect and store data at user-defined intervals of 1,2,3,4,5,6,10, 15, 30 & 60 minutes. It shall be possible for each VIP board to store up to 14226 intervals of data in non-volatile memory.

Associated software may be used with a PC to download data and export to a spreadsheet. Software will also be used to upload/download detector configurations, count, turning movement and queue length data, technical events, send software version upgrades and do remote setup of detectors.

The VIP board shall have an internal clock with daylight saving time system, which can be enabled or disabled.

The VIP board shall have a security password embedded, which may be enabled or disabled by the supervisor.

The VIP board shall monitor the 120 VAC green outputs of each movement and provide Delay Detection and Stretch Detection Program capability with Green Overrides programmable for each detection zone. Intervals shall be programmed in whole second increments from 0" to 60".

663-2.4 Video Camera: The unit shall be a high resolution (horizontal resolution 460 TV Lines), 1/3" image format CCD camera, designed for professional video detection systems to capture images of vehicles under all weather and lighting conditions. Incorporating the latest in CCD technology, the video camera shall provide detailed video without lag, image retention, or geometric distortion. The VIP board shall work with monochrome and/or color cameras as the video source for real-time vehicle detection.

The Camera must be in an enclosed assembly with the following minimum specifications:

Temperature range	-34 to +74 degrees C
Humidity	0% to 95% relative, non-condensing
Dimensions	47mm X 47mm X 83mm
Weight	200g (max)
Camera mounting slots	¼-20, top and bottom
Connectors	BNC for video out
Lens mount	CS
	Power-in/pressure screw
	Lens/4-square connector
Finish	Off-white, semi-gloss polyurethane
Construction	All metal housing
Rated input voltage	12VDC or 24VAC +/- 10% @ 60Hz
Nominal power	10 Watts maximum
Imager	Interline transfer CCD 1/3" format
Imager spectral response	100% @ 550nm: 30% @ 400nm and 800nm
Sync system	EIA RS-170
Active picture elements	768 H X 494 V
Horizontal resolution	580 TVL

Sensitivity (2856 K)		Usable Picture	Full Video
Scene Illumination	fc	0.012	0.08
	lx	0.12	0.8
Imager Illumination	fc	0.0015	0.01
	lx	0.015	0.1
F1.2 lens @ 75% highlight			
Signal to noise ratio	54 dB minimum		
	58 dB typical		
AGC	18 dB		
Light range (AGC on)	1,000,000:1 min. with f/1.4 to 360 auto-iris lens		
Video out	1.0 volts peak-to-peak +/- 0.1 Volt @ 75 Ohms		
Gray scale	At least 10 steps		

663-2.5 Camera Lens: The camera lens shall be a motorized vari-focal 6.5-39mm with auto iris, including:

Image format	1/3 inch
Focal length	6X zoom (6.5-39mm)
Iris range	f 1.0 – Approx. 1200
Back focus distance	10.05mm (0.4in.) in air
Weight	500g
Size	60mm X 70mm X 89.9mm
Lens mount	CS
Iris control	DC or Video 4-pin square
Focus control	Motorized
Zoom	Motorized

663-2.6 Camera Housing: The camera assembly shall include a weatherproof housing and an integral sunshield for outdoor installation.

The weatherproof housing shall incorporate a mounting bracket to allow proper positioning of the camera. The mounting bracket shall be pre-drilled to allow attachment to standard brackets for mounting on mast arms or on Luminaire arms. Separate connectors at the back of the housing for both video and power cables shall be provided to make the camera assembly field-replaceable if service is required. A heater shall be mounted near the faceplate of the housing to minimize condensation.

The sunshield shall minimize the heating of the housing during hot weather. The sunshield shall extend beyond the ends of the weatherproof housing to minimize rain on the faceplate or body of the housing to eliminate dripping water in the line of sight of the camera.

The weatherproof housing shall be an aluminum enclosure and as a minimum, shall meet the following specifications:

Temperature range	-34 to +74 degrees C
Dimensions	449mm x 97mm x 112mm
Weight	1.4kg
Housing mounting	Three 1/4-20 tapped holes

Camera mounting	Removable cradle assembly
Cable entry	Three liquid-tight fittings that will accept cable diameters of: One fitting – 2 to 7 mm Two fittings – 3 to 10 mm
Finish	Off-white semi-gloss polyurethane
Construction	Extruded aluminum housing, Aluminum rear-end cap, Aluminum front cap with glass faceplate, and aluminum cradle A sunshield shall be included
Window	3 mm thick glass, that includes a Thermostatically controlled window Heater/defogger strip
Rated input voltage	115 VAC 60 Hertz
Voltage range	108 VAC to 132 VAC
Output voltage	24 VAC 60 Hertz
Nominal power	30 Watts (Includes 20 Watts max for heater)
Enclosure protection	Waterproof and dust-tight in a NEMA-4, IP65, enclosure Type 3

663-2.7 Surge Suppressor: The video surge suppressor shall provide coaxial cable connection points to a transient suppressor for each image sensor and as a minimum shall include the following:

Peak Surge Current (8x20 us)	5KA
Technology	Hybrid, Solid State
Attenuation	0.1db @ 10Mhz
Response Time	<1 nanosecond
Protection	Line to Ground
Shield to Ground	(isolated shield modules)
Clamp Voltage	6 volts
Connectors	BNC
Impedance	75 Ohms
Temperature	-34 to +74 degrees C
Humidity	0-95% non-condensing
Dimensions	4.5" x 1.5" x 1.25"
UL Listed	UL 497B

Point Discharge Dissipation Terminal and Camera Power Protectors shall be provided for each camera. An Uninterruptible Power Source of at least 350 VA capacity shall be provided for the VIP and cameras.

663-2.8 Sensor Bracket: Camera brackets for mast arm installations shall provide adjustments for both vertical and horizontal positioning for the camera. Camera attachments shall be designed to securely fasten the camera to prevent the camera assembly from falling into the path of vehicles and/or becoming loose. Miscellaneous hardware shall be stainless steel or galvanized steel.

Camera brackets for luminaire arm installations shall provide adjustments for both vertical and horizontal positioning of the camera. Camera attachments shall be designed to securely fasten the camera to the luminaire arm. Miscellaneous hardware shall be stainless steel or galvanized steel.

663-2.9 Coaxial and Power Cable: Coaxial & Power cable (Hybrid) shall be suitable for exterior use and in direct sunlight. Power cable shall have a minimum of 5 conductors. Coaxial cable will be used for zooming and, focusing of the image sensor from the controller cabinet.

663-2.10 Programming Device: In an effort to upload/download detector configurations, count, turning movement and queue length data, technical events, send software versions upgrades and to setup detectors, the product supplier of the video detection system shall provide one (1) laptop devices with the following minimum configuration:

Central Processor (1.5GHz) with the following:
32MB Video, 14.1 XGA
USB Optical Mouse with Scroll feature
512MB Memory, 2DIMM
24X CDRW/DVD Drive
40 GB Ultra ATA Hard Drive
Internal 56K Modem
3.5" 1.44HD Floppy Drive
Windows XP Operating System (professional)
48WHr Additional Modular Battery for Dual Battery Support
Microsoft Office "Standard"

663-2.11 Software: The manufacturer software shall be provided for detection zone programming and operation. One software package shall be provided for each detection system. Software updates/revisions shall be provided to the FDOT as updated by the manufacturer at no additional charge.

All setup, controller program and diagnostic software shall be provided and run on the latest version of Windows based-operating systems. Software updates shall be provided free of charge during the warranty period.

All on-line help shall be provided as an integral part of the system software.

The operator shall be able to perform the following functions through the setup program.

- (1) View a detection output from the detection unit.
- (2) View a low signal from the detector unit.
- (3) Program the presence timeout parameters in one minute increments from zero to thirty minutes.
- (4) Provide a quick tune feature for re-tuning in an expedited fashion under ideal background condition.
- (5) Select and program a new ID number for each detector unit.
- (6) Program a response time for the detector unit.
- (7) Program a hysteresis value from a selection of low, medium, or high.
- (8) Program a profile number for each detector unit.

The system shall include software that detects vehicles in multiple lanes using only the video image. Detection zones shall be defined using only an on board video menu and a pointing device the zones on a video image. Up to 24 detection zones per camera view shall be available. A separate computer shall not be required to program the detection zones.

663-3 Installation

663-3.1 General: Take all precautions necessary for the protection of all personnel and meet all requirements of OSHA regulations and FDOT Specifications Section 7-1.5 for the Occupational Safety and Health Requirements associated with this work.

Use manufacturer recommended tools and equipment to install all video detection equipment, retaining/mounting devices and software. All special installation and maintenance equipment must be provided by the vendor/manufacture and should allow for adjustments without lane closure.

A factory certified representative from the manufacturer should be on-site during installation to supervise the installation and testing of the video equipment by maintaining agency personnel.

663-3.2 Mounting: Video detectors work in either a side-fire or overhead position. They should be mounted at a height that enables distinction between vehicles. Special instructions for mounting must be provided by the manufacturer.

Consider the location of the installed video detectors on the plans as sufficiently flexible as to allow for unanticipated field conditions at the site. The Engineer will direct any variations from the locations shown.

663-3.2 Powering: The manufacturer must provide required amplifiers for installation.

663-3.3 Calibrations and Aiming: All calibration and aiming shall be done with the device mounted in place, without interruption of traffic. Adjustments will be made according to manufacturer's recommendations.

The operator shall be able to set up, monitor lane status and retrieve data from the detector through the RS 232 serial port with any IBM compatible laptop or desktop computer. Also, the detector shall be compatible with a standard phone modem for remote data retrieval.

The sensor shall be able to hold the detection until the zone is cleared. Additionally, the sensor shall be able to tune-out stationary targets that remain within the detection zone for a minimum of 15 minutes.

The sensor shall self-tune to its detection zone with no external adjustments other than physical alignment. There will be no external tuning controls of any kind, which will require an operator.

The detector output must be directly compatible with the controller cabinet detector input.

663-4 Method of Measurement

663-4.1 General: Measurement for payment will be in accordance with the following task.

663-4.2 Furnish and Install: The Contract unit price per each for Vehicle Detector Assembly, furnished and installed, will include all equipment, materials as specified in the Contract Documents and as specified in this Section, and all labor, equipment, and miscellaneous materials necessary for a complete and accepted installation.

663-5 Basis of Payment

Price and payment will be full compensation for all work specified in this Section. Payment will be made under:

Item No. 663-74-15 Vehicle Detector Assembly (Video) – each.

ATTACHMENT 'C'

TECHNICAL SPECIAL PROVISION

FOR
SECTION 685
UNINTERRUPTIBLE POWER SOURCE

COUNTY PROJECT NUMBER: 6045661

The official record of this package is the electronic file signed and sealed under Rule 61G 15-23.003, F.A.C.

Prepared by: Upik Y. Suwarno, P.E.
Date: February 13, 2012
Pages 1 thru 6

SECTION 685

Uninterruptible Power Source (UPS) with Battery Charger/Battery Eliminator.

The following section is added after Section 678 (page 772).

685 -1 Product

These are the minimum requirements for an Uninterruptible Power Source (UPS) with an external battery charger/battery eliminator. It is to provide battery backup when commercial power is lost and to smooth the power when operating on a generator.

The UPS shall be on the Florida Department of Transportation's Approved Products List (APL).

The unit shall be comprised of but not limited to; UPS, cabinet enclosure, inverter/charger/controller and an external power converter/charger, power transfer switch with a manually operated, non-electronic bypass switch, and all necessary hardware and interconnect wiring.

UPS equipment shall be compatible with maintaining agency existing system and shall include Ethernet connection and SNMP V3 Support.

685-2 Function

The UPS shall provide a minimum of 8 hours battery back-up time under a 450 watt load @ 25°F. Battery balancer and equalizer shall be included. While operating on generator power, the external battery charger shall charge the batteries and operate the intersection. The UPS shall have lightning surge protection compliant with IEEE/ANSI C.62.41 for 2000 Volts AC.

The UPS shall be field programmable from a touch pad on the unit and from a computer interface. They must be user friendly, in menu driven formats and must not require external or proprietary software. The DB-9 connector for the RS-232 interface must be installed on the front panel of the UPS. The UPS shall have a battery connector on the front panel. The battery connector shall be an Anderson p/n SB50 or equivalent. The UPS shall have an external battery temperature probe connector on the front panel.

The UPS shall be capable of performing a SELF-TEST from the UPS front panel LCD and remotely via an RS-232 interface. The duration of the SELF-TEST shall be programmable in 1-minute increments from 1 min. to 255 minutes.

The operation of the flash mode shall be field programmable to activate at various times depending on remaining battery capacities.

The batteries shall be Absorbed Glass Matt/Valve Regulated Lead Acid (AGM/VRLA) type specifically designed for UPS's and outdoor use. The batteries shall be designed for "Float Service" to provide 100% out-of-box runtime capacity.

The maximum transfer time allowed, from disruption of normal utility line voltage to stabilized inverter line voltage from batteries, shall be less than 65 milliseconds. The same maximum allowable transfer time shall also apply when switching from inverter line voltage to utility line voltage. The transfer from utility power to battery power, and vice versa, shall not interfere with the normal operation of the traffic controller, conflict monitor or any other peripheral devices within the traffic controller assembly.

When utilizing battery power, the UPS output voltage shall be between 110VAC and 125VAC, pure sine wave output with THD < 3% at 60 Hz +/- 3 Hz.

The UPS shall be capable of providing power for all of the following: full run-time operation, flashing mode operation, or a combination of both full and flash mode operation of an intersection. The batteries shall not be charged when battery temperature exceeds 50°C +/- 3°C.

The temperature sensor shall be external to the UPS unit. The sensor output will be used to regulate the charge rate at high ambient cabinet temperature.

The batteries shall be approved for both float and/or standby applications. The batteries shall charge whether on generator power or on commercial power. The UPS shall have a user configurable low battery warning. The UPS shall have a low battery shutdown and a low battery alarm. The UPS low battery shutdown will shut down the UPS unit to prevent battery deep-discharge. The programmable LOW BATTERY alarm shall be user definable and available for local access and via the RS-232 for remote access.

The UPS shall be equipped with an event log that stores at a minimum the last 100 events. The events shall be time and date stamped. The event log shall be retrievable from the RS-232 and from the UPS LCD screen. The RS-232 communication to the PC shall display events in a Text message format with the use of HyperTerminal. The UPS LCD Screen shall display the events in a Binary message format.

The UPS shall have six (6) independently programmable control relays for control and report functions. The UPS shall have two (2) 0 to 8 hour, independently programmable timers with two (2) time-of-day restrictions on each timer.

The UPS shall have six (6) sets of normally open (NO) and normally closed (NC) single pole double-throw (SPDT) dry contact relays rated for 120VAC @ 1A.

1. ON BATTERY. The relay is energized whenever the UPS switches to battery power.
2. LOW BATTERY. The relay is energized when the battery has reached a user defined low battery level of remaining useful capacity. This alarm is latched when a qualified line returns or the inverter shuts down.
3. TIMER 1. The relay is energized after being in backup mode for a given amount of time. This timer is adjustable from 0 to 8hr. The default setting is two (2)

hours.

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4. ALARM- relay activates after a specific after a specific or general alarm is detected. These alarm conditions include: line frequency, low output voltage, no temperature probe, overload, batteries not connected, high temperature, and low temperature. The relay can be programmed to activate when any of these alarm conditions are met, or when a specific condition is met.
5. FAULT- relay activates after a specific or general fault is detected. These fault conditions include: short circuit, low battery voltage, high battery voltage, high internal temperature, and excessive overload. The relay can be programmed to activate when any of these fault conditions are met, or when a specific condition is met.
6. AC/DC FAN CONTROL. The relay is activated when the battery ambient temperature is greater than 35°C or at a user programmable threshold from 25 to 55°C @ 5°C increment.

The operating temperature for the UPS, power transfer switch, and manual bypass switch shall be -37°C to +74°C @ 1500 Watts.

The operating temperature range of the external inverter/charger shall be 0° to 40°C with the capability of operating output amperage of 15 Amps @ 54.4 Volts. The external inverter/charger shall shut down for temperatures over 80°C.

The UPS shall be compatible with all of the following for full phase, flash operation mode, or a combination of both full and flash mode operation:

- Type 332 cabinets,
- Type 170 controllers,
- Type 2070 controllers,
- NEMA TS1 Controllers,
- NEMA TS2 Controllers,
- Electrical Service Pedestals

The UPS shall be easily replaced and installed (complete turnkey system with all necessary hardware). UPS shall not require any special tools for installation.

The UPS shall be equipped to prevent a malfunction feedback to the cabinet and from feeding back to the utility service per UL 1778, Section 48 "Back-feed Protection Test". The upstream back feed voltage from UPS system shall be less than 1 Volts AC.

In the event the UPS senses the utility line voltage is outside the Hi and Low Limits (100 & 130VAC respectively set as default), the UPS shall transfer the load to battery power. The user can change the Hi and Low limits to suit NEMA Hi and Low Limit Specifications.

A low profile, red LED light shall indicate loss of commercial power. It shall be mounted on the top of the cabinet.

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The UPS shall return to line mode when the utility power has been restored to above 105VAC and below 125VAC for more than 30 seconds and when the utility power is back to nominal.

This line qualification time will be adjustable to 3, 10 to 30 seconds. The operator will have the option of making the adjustments locally, using the touch pad or remotely, using the RD-232 interface.

The power transfer switch (PTS) shall be activated during BUCK and BOOST operation. The power transfer time shall be 10 milliseconds or less. The BUCK and BOOST mode shall be provided in case of extended power variations. The UPS shall have the ability to BUCK and BOOST at least 10% +/-.

In the event of UPS failure, battery failure, or complete battery discharge, the power transfer switch shall revert to the Utility or Line Mode (in a de-energized state).

The PTS shall automatically remove power to the intersection's illuminated street name signs when the UPS is operating on battery back-up.

685-3 Assembly

The piggy-back cabinet shall be manufactured from H5052 0.125 aluminum and house the UPS system, including batteries, switches, charger, inverter and mounting kit. The cabinet must meet the requirements for NEMA 3R enclosures. The door shall have a 3-point locking system with ¾ inch ball bearing nylon rollers and a number 2 lock. The door shall have louvered vents with a 9" X 14" replaceable filter. The door shall be attached to the cabinet with a 316 stainless steel continuous hinge and be riveted to the cabinet with stainless steel rivets. The door shall seal with neoprene gasket. The handle shall be ¾ inch 316 stainless steel with pad lock hasp. The roof of the cabinet shall slant from back to front to allow rain to shed away from the mounting cabinet. The cabinet shall have a separate shelf for the UPS and adjustable shelves for batteries.

The cabinet shall have a generator access compartment with a ¼ turn twist lock receptacle inside to allow the cabinet to be powered by a generator. The generator access door shall be flush mounted with a number 2 lock. The door shall be bolted on with six 1/32 stainless steel pem studs. The door shall be capable of closing and locking while the generator cord is plugged into the ¼ turn twist lock receptacle. A fan must be mounted in the air baffle at the top of the cabinet with an air outlet built into the overhang. The fan must be thermostatically controlled. The bottom of the door must be louvered to allow airflow. A removable dust filter must be located behind the vent. The UPS shall be cooled by a variable speed fan that is microprocessor and PWM controlled. The fan shall be OFF when the ambient temperature is less than 40°C.

A fluorescent light shall be provided and be turned on through a cabinet door switch

One mounting kit and wiring kit shall be included with each UPS cabinet assembly. The mounting kit shall include twelve 5/16 inch, stainless steel bolts with nuts, washers, and lock washers. A 1 ½ inch by ¼ inch rubber grommet shall be provided for the cabinet through hole protection.

Page 5 of 6

The wiring kit shall include six, 12 foot, color coded AWG 10 wires with the following color code and point of termination:

Black with red stripe	incoming commercial A/C power
Black	incoming generator A/C power
White	A/C neutral
Green	A/C ground
Blue	main circuit breaker in controller cabinet
Red	auxiliary circuit breaker in controller cabinet

The enclosure will include built-in transfer switches for both bypassing the UPS for maintenance and to manually transfer to generator power when a generator is connected during power outages.

The batteries shall be provided with appropriate interconnect wiring harnesses with 75 amp quick disconnects with oxlic grease that prevents oxidation and improved conductivity. Battery terminals shall be sprayed with a protective spray that prevents corrosion buildup and neutralizes battery acid.

685-4 Warranty

The UPS shall have a two (2) year full replacement, non-prorated manufacturer's warranty.

Shipping, handling, and all costs associated with repairing or replacing faulty equipment shall be covered by the vendor.

The manufacturer shall provide trouble-shooting via a toll free customer service number.

The manufacturer shall make field maintenance available via a toll free customer service number.

685-5 Method of Measurement

General: Measurement for payment will be in accordance with the following task.

Furnish and Install: The Contract unit price per each for Uninterruptible Power Source (UPS), furnished and installed, will include all equipment, materials, as specified in the Contract Documents and as specified in this Section, and all labor, equipment, and miscellaneous material necessary for a complete and accepted installation.

685-6 Basis of Payment

Basis of Payment: Price and payment will be full compensation for all work specified in this Section. Payment will be made under:
Item No. 685-106 Uninterruptible Power Source (UPS)-each.

ATTACHMENT 'D'

GRADED AGGREGATE BASE.

(REV 8-8-07) (1-08)

SECTION 204 (Pages 206-208) is deleted and the following substituted:

SECTION 204 GRADED AGGREGATE BASE

204-1 Description.

Construct a base course composed of graded aggregate.

204-2 Materials.

Use graded aggregate material, produced from Department approved sources, which yields a satisfactory mixture meeting the requirements of these Specifications after it has been crushed and processed as a part of the mining or reclamation operations.

204-2.1: Mined Materials: Use material of uniform quality throughout that does not contain vegetable matter, shale, or lumps of clay balls in sufficient quantity as to be detrimental to the proper bonding, finishing, or strength of the base. Material shall have a Limerock Bearing Ratio value of not less than 100. Use material retained on the No. 10 sieve composed of aggregate meeting the following requirements:

Soundness Loss, Sodium, Sulfate: AASHTO T 104 15%

Percent Wear: AASHTO T 96 (Grading A)

Group 1 Aggregates 45%

Group 2 Aggregates 65%

Group 1: This group of aggregates is composed of limestone, marble, or dolomite.

Group 2: This group of aggregates is composed of granite, gneiss, or quartzite.

204-2.1.1 Gradation: Meet the following gradation requirements:

Sieve Size	Percent by Weight Passing
2 inch	100
1 1/2 inch	95 to 100
3/4 inch	65 to 90
3/8 inch	45 to 75
No. 4	35 to 60
No. 10	25 to 45
No. 50	5 to 25
No. 200	0 to 10

204-2.1.2 Liquid Limits and Plasticity Requirements: For Group 1 aggregates, ensure that the fraction passing the No. 40 sieve has a Plasticity Index (AASHTO T 90) of not more than 4.0 and a Liquid Limit (AASHTO T 89) of not more than 25, and contains not more than 67% of its weight passing the No. 200 sieve.

For Group 2 aggregates, ensure that the material passing the No. 10 sieve has a sand equivalent (AASHTO T 176) value of not less than 28.

The Contractor may use graded aggregate of either Group 1 or Group 2, but only use one group on any Contract. (Graded aggregate may be referred to hereinafter as “aggregate”.)

204-2.2 Reclaimed Concrete Aggregate Base Materials: Use reclaimed concrete aggregate base that meets the requirements of this Section after crushing and processing, that was produced from a source approved by the Department under Rule 14-103, Florida Administrative Code. The reclaimed concrete aggregate base supplier shall have Department of Environmental Protection (DEP) permit requirements section 62-701.730 or be qualified as a clean debris source under DEP rules. The reclaimed concrete aggregate base shall consist of crushed concrete material derived from the crushing of hard Portland cement concrete.

204-2.2.1 Gradation: Meet the following gradation requirements:

Sieve Size	Percent by Weight Passing
2 inch	100
3/4 inch	65 to 95
3/8 inch	40 to 85
No. 4	25 to 65
No. 10	20 to 50
No. 50	5 to 25
No. 200	0 to 10

204-2.2.2 Plasticity: Reclaimed concrete aggregate base shall not contain plastic soils such that the minus 0.425 mm (No. 40) sieve material shall be non-plastic.

204-2.2.3 Limerock Bearing Ratio: Reclaimed concrete aggregate base shall have a minimum limerock bearing ratio (LBR) of 120.

204-2.2.4 Deleterious Substances: Reclaimed concrete aggregate base shall be free of all materials that fall under the category of solid waste or hazardous materials as defined by the state or local jurisdiction. Reclaimed concrete aggregate base shall meet all Department of Environmental Protection permit requirements which pertain to construction, demolition and recycling of these materials. Reclaimed concrete aggregate base shall be substantially free from other deleterious materials which are not classified as solid waste or hazardous materials. Reclaimed concrete aggregate base shall be asbestos free. The following limits shall not be exceeded:

Bituminous Concrete	1% by weight
Bricks	1% by weight
Wood and other organic substances.....	0.1% by weight
Heavy Metals (except Lead).....	0.1% by weight
Lead.....	5 parts per million
Reinforcing Steel and Welded Wire Fabric.....	0.1% by weight
Plaster and gypsum board.....	0.1% by weight

204-3 Equipment.

Provide equipment meeting the requirements of 200-3.

204-4 Transporting Aggregate.

Transport aggregate as specified in 200-4.

204-5 Spreading Aggregate.

Spread aggregate as specified in 200-5.

204-6 Compacting and Finishing Base.

204-6.1 General: Meet the requirements of 200-7.1 with density requirements of 204-6.3.

204-6.1.1 Single-Course Base: Construct as specified in 200-6.1.1.

204-6.1.2 Multiple-Course Base: Construct as specified in 200-6.1.2.

204-6.2 Moisture Content: Meet the requirements of 200-6.2.

204-6.3 Density Requirements: Meet the requirements of 200-7.1, except after attaining the proper moisture conditions, uniformly compact the material to a density of not less than 100% of the maximum density as determined by FM 1-T 180. Ensure that the minimum density that will be acceptable at any location outside the traveled roadway (such as intersections, crossovers, turnouts, etc.) is 98% of the maximum density.

204-6.4 Correction of Defects: Meet the requirements of 200-6.4.

204-6.5 Dust Abatement: Minimize the dispersion of dust from the base material during construction and maintenance operations by applying water or other dust control materials.

204-7 Testing Surface.

Test the surface in accordance with the requirements of 200-6.

204-8 Priming and Maintaining.

Meet the requirements of 200-8.

204-9 Thickness Requirements.

Meet the requirements of 200-6.3.

204-10 Calculations for Average Thickness of Base.

Calculations for determining the average thickness of base will be made in accordance with 285-7.

204-11 Method of Measurement.

204-11.1 General: The quantity to be paid for will be the area, in square yards, completed and accepted.

204-11.2 Authorized Normal Thickness Base: The surface area of authorized normal thickness base will be calculated as specified in 9-1.3, omitting any areas not allowed for payment under the provisions of 204-9 and omitting areas which are to be included for payment under 204-11.3. The area for payment, of authorized normal thickness base, will be the surface area determined as provided above, adjusted by adding or deducting, as appropriate, the area of base represented by the difference between the calculated average thickness, determined as provided in 204-10, and the specified normal thickness, converted to equivalent square yards of normal thickness base.

204-11.3 Authorized Variable Thickness Base: As specified in 200-10.3.

204-12 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including dust abatement, correcting all defective surface and deficient thickness, removing cracks and checks and the additional aggregate required for such crack elimination.

Payment will be made under:

Item No. 285- 7- Optional Base - per square yard.

ATTACHMENT 'E'

CONTRACT DOCUMENTS

FOR

**Waterline/Utility Improvements 44th Avenue East
1st Street (US 41) to 19th Street East**

PROJECT # 411.6001070 (1st to 18th) and 323.6045661 (18th to 19th St. E)

December 2012

PROJECT OWNER:

County of Manatee, Florida
c/o Manatee County Purchasing Division
1112 Manatee Avenue West
Bradenton, Florida 34205
(941) 748-4501

PREPARED BY:

Engineering Division
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1022 26th Avenue East
Bradenton, Florida 34208
(941) 708-7450

INFRASTRUCTURE ENGINEERING STANDARD SPECIFICATIONS

SCOPE: This specification is for the county-owned utility improvements portion of the project:

SCOPE: THIS SPECIFICATION IS FOR THE COUNTY-OWNED UTILITY IMPROVEMENTS		
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This specification includes by reference the Manatee County Utility Standards approved May 2011.

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01005 GENERAL REQUIREMENTS

PART 1 GENERAL

1.01 SCOPE AND INTENT

A. Description

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

B. Work Included

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

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

C. Public Utility Installations and Structures

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

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

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

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

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

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

1.02 PLANS AND SPECIFICATIONS

A. Plans

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

B. Supplementary Drawings

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

C. Contractor to Check Plans and Data

The Contractor shall verify all dimensions, quantities and details shown on the Plans, Supplementary Drawings, Schedules, Specifications or other data received from the County, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction or improper operation resulting therefrom nor from rectifying such conditions at his own expense. He will not be allowed to take advantage of any errors or omissions, as full instructions will be furnished by the County, should such errors or omissions be discovered. All schedules are given for the convenience of the County and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quality of materials and equipment included in work to be done under the Contract.

1.03 MATERIALS AND EQUIPMENT

A. Manufacturer

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

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

B. Delivery

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

C. Tools and Accessories

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

Spare parts shall be furnished as specified.

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

1.04 INSPECTION AND TESTING

A. General

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

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

C. Certificate of Manufacture

When inspection is waived or when the County so requires, the Contractor shall furnish to him authoritative evidence in the form of Certificates of Manufacture that the materials to be used in the work have been manufactured and tested in conformity with the Contract Documents. These certificates shall be notarized and shall include copies of the results of

physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.

D. Final Field Tests

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

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

E. Failure of Tests

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

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

FI. Final Inspection

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

1.05 TEMPORARY STRUCTURES

A. Temporary Fences

If, during the course of the work, it is necessary to remove or disturb any fence or part thereof, the Contractor shall, at his own expense, if so ordered by the County, provide a suitable temporary fence which shall be maintained until the permanent fence is replaced. The County shall be solely responsible for the determination of the necessity for providing a temporary fence and the type of temporary fence to be used.

1.06 TEMPORARY SERVICES

A. First Aid

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

1.07 LINES AND GRADES

A. Grade

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

B. Safeguarding Marks

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

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

C. Datum Plane

All elevations indicated or specified refer to the Mean Sea Level Datum of the NGVD 1929 Datum and/or NAVD 1988.

1.08 ADJACENT STRUCTURES AND LANDSCAPING

A. Responsibility

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

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

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

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

B. Protection of Trees

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

C. Lawn Areas

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

D. Restoration of Fences

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

1.09 PROTECTION OF WORK AND PUBLIC

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

B. Smoke Prevention

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

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

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

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

1.10 CUTTING AND PATCHING

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

1.11 CLEANING

A. During construction of the work, the Contractor shall, at all times, keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove the same from any portion of the site if, in the opinion of the County, such material, debris, or rubbish constitutes a nuisance or is objectionable. The Contractor shall remove from the site all of his surplus materials and temporary structures when no further need therefore develops.

B. Final Cleaning

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

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

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01010 SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS INCLUDED

- A. The work included in this contract consists of the construction, disinfection and testing of approximately 3,200 linear feet of 8 inch and 24 inch diameter waterlines being relocated due to roadwork, including associated appurtenances, hydrants, and services, relocation and replacement of master meters, a small quantity of sewer service lateral replacements, a short section of force main relocation, and preparation of record drawings. Pavement, sidewalk, and driveway restoration, sod, seeding, traffic control, and erosion control, will be included in the roadwork portion bid items of the contract.
- B. The Contractor shall furnish all shop drawings, working drawings, labor, materials, equipment, tools, services and incidentals necessary to complete all work required by these Specifications and as shown on the Contract Drawings.
- C. The Contractor shall perform the work complete, in place and ready for continuous service and shall include any repairs, replacements, and/or restoration required as a result of damages caused prior to acceptance by the County.
- D. The Contractor shall furnish and install all materials, equipment and labor which is reasonably and properly inferable and necessary for the proper completion of the work, whether specifically indicated in the Contract Documents or not.

1.02 CONTRACTS

Construct all the Work under a single contract.

1.03 WORK SEQUENCE

- A. All work done under this Contract shall be done with a minimum of inconvenience to the users of the system or facility. The Contractor shall coordinate his work with private property owners such that existing utility services are maintained to all users to the maximum extent possible.
- B. The Contractor shall, if necessary and feasible, construct the work in stages to accommodate the County's use of the premises during the construction period; coordinate the construction schedule and operations with the County's Representative.
- C. The Contractor shall, where feasible, construct the Work in stages to provide for public convenience and not close off public use of any facility until completion of construction to provide alternative usage.

1.04 CONSTRUCTION AREAS

- A. The Contractor shall: Limit his use of the construction areas for work and for storage, to allow for:
 - 1. Work by other Contractors.
 - 2. County's Use.
 - 3. Public Use.

- B. Coordinate use of work site under direction of County's Representative.
- C. Assume full responsibility for the protection and safekeeping of products under this Contract, stored on the site.
- D. Move any stored products under the Contractor's control, which interfere with operations of the County or separate contractor.
- E. Obtain and pay for the use of additional storage of work areas needed for Contractor operations.

1.05 COUNTY OCCUPANCY

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

1.06 PARTIAL COUNTY OCCUPANCY

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

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01015 CONTROL OF WORK

PART 1 GENERAL

1.01 WORK PROGRESS

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

1.02 PRIVATE LAND

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

1.03 WORK LOCATIONS

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

1.04 OPEN EXCAVATIONS

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

1.05 DISTRIBUTION SYSTEMS AND SERVICES

- A. The Contractor shall avoid interruptions to water, telephone, cable TV, sewer, gas, or other related utility services. He shall notify the County and the appropriate agency well in advance of any requirement for dewatering, isolating, or relocating a section of a utility, so that necessary arrangements may be made.
- B. If it appears that utility service will be interrupted for an extended period, the County may order the Contractor to provide temporary service lines at the Contractor's expense.

Inconvenience of the users shall be kept to the minimum, consistent with existing conditions. The safety and integrity of the systems are of prime importance in scheduling work.

1.06 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES

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

1.07 TEST PITS

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

1.08 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition equal or better to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the County.
- B. All sidewalks which are disturbed by the Contractor's operations shall be restored to their original or better condition by the use of similar or comparable materials. All curbing shall be restored in a condition equal to the original construction and in accordance with the best modern practice.

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

1.09 WATER FOR CONSTRUCTION PURPOSES

- A. In locations where public water supply is available, the Contractor may purchase water for all construction purposes.
- B. The Contractor shall be responsible for paying for all water tap fees incurred for the purpose of obtaining a potable water service or temporary use meter.

1.10 MAINTENANCE OF FLOW

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

1.11 COOPERATION WITHIN THIS CONTRACT

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

1.12 PROTECTION OF CONSTRUCTION AND EQUIPMENT

- A. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed and all portions injured shall be reconstructed by the Contractor at his own expense.
- B. All structures shall be protected in a manner approved by the County. Should any of the floors or other parts of the structures become heaved, cracked, or otherwise damaged, all such damaged portions of the work shall be completely repaired and made good by the

Contractor, at his own expense and to the satisfaction of the County. If, in the final inspection of the work, any defects, faults, or omissions are found, the Contractor shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the Contractor shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein, for at least the warranty period described in the Contract.

- C. Further, the Contractor shall take all necessary precautions to prevent damage to any structure due to water pressure during and after construction and until such structure is accepted and taken over by the County.

1.15 CONSTRUCTION WITHIN RIGHT-OF-WAY

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

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01030 SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 PERMITS

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

1.02 CONNECTIONS TO EXISTING SYSTEM

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

1.03 RELOCATIONS

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

1.04 EXISTING UNDERGROUND PIPING, STRUCTURES AND UTILITIES

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

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

1.05 SUSPENSION OF WORK DUE TO WEATHER

Refer to FDOT Standards and Specifications Book, Section 8.

1.06 HURRICANE PREPAREDNESS PLAN

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

1.07 POWER SUPPLY

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

1.08 SALVAGE

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

1.09 DEWATERING

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

1.10 ADDITIONAL PROVISIONS

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

1.11 CONSTRUCTION CONDITIONS

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

1.12 PUBLIC NUISANCE

- A. The Contractor shall not create a public nuisance including but not limited to encroachment on adjacent lands, flooding of adjacent lands, excessive noise or dust.
- B. Sound levels must meet Manatee County Ordinance #87-34, (which amends Ordinance 81-3, The Manatee County Noise Control Ordinance). Sound levels in excess of such ordinance are sufficient cause to have the work halted until equipment can be quieted to these levels. Work stoppage by the County for excessive noise shall not relieve the Contractor of the other portions of this specification.
- C. No extra charge may be made for time lost due to work stoppage resulting from the creation of a public nuisance.

1.13 WARRANTIES

- A. All material supplied under these Specifications shall be warranted by the Contractor and the manufacturers for a period of three (3) years. Warranty period shall commence on the date of County acceptance.
- B. The material shall be warranted to be free from defects in workmanship, design and materials. If any part of the system should fail during the warranty period, it shall be replaced at no expense to the County.
- C. The manufacturer's warranty period shall run concurrently with the Contractor's warranty or guarantee period. No exception to this provision shall be allowed. The Contractor shall be responsible for obtaining warranties from each of the respective suppliers or manufacturers for all the material specified under these contract specifications,
- D. In the event that the manufacturer is unwilling to provide a three-year warranty commencing at the time of County acceptance, the Contractor shall obtain from the manufacturer a four (4) year warranty starting at the time of equipment delivery to the job

site. This four-year warranty shall not relieve the Contractor of the three-year warranty starting at the time of County acceptance of the equipment.

1.14 FUEL STORAGE & FILLING

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

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01045 CUTTING AND PATCHING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

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

PART 2 PRODUCTS

2.01 MATERIALS

Comply with specifications and standards for each specific product involved.

PART 3 EXECUTION

3.01 INSPECTION

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

3.02 PREPARATION

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

3.03 PERFORMANCE

- A. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.

- C. Fit and adjust products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- D. Restore work which has been cut or removed; install new products to provide completed work in accordance with the requirements of the Contract Documents.
- E. Replace surfaces airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- F. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes.

END OF SECTION

SECTION 01050 FIELD ENGINEERING AND SURVEYING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall provide and pay for field surveying service required for the project.
- B. The Contractor shall furnish and set all necessary stakes to establish the lines and grades as shown on the Contract Drawings and layout each portion of the Work of the Contract.

1.02 QUALIFICATION OF SURVEYOR AND ENGINEER

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

1.03 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points for the Project are designated on the Contract Drawings.
- B. Locate and protect all survey monumentation, property corners and project control points prior to starting work and preserve all permanent reference points during construction. All costs associated with the replacement of all survey monumentation, property corners and project control points shall be borne by the Contractor.

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

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

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

Establish replacements based on original survey control.

1.04 PROJECT SURVEY REQUIREMENTS

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

1.05 RECORDS

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

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01090 REFERENCE STANDARDS

PART 1 GENERAL

1.01 REQUIREMENTS

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

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

1.03 ABBREVIATIONS, NAMES AND ADDRESSES OR ORGANIZATIONS

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

AA	Aluminum Association 818 Connecticut Avenue, N.W. Washington, DC 20006
AASHTO	American Association of State Highway and Transportation Officials 444 North Capital Street, N.W. Washington, DC 20001
ACI	American Concrete Institute Box 19150 Reford Station Detroit, MI 48219
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740
AISC	American Institute of Steel Construction 1221 Avenue of the Americas New York, NY 10020
AISI	American Iron and Steel Institute 1000 16th Street NW Washington, DC 20036
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 179I Tullie Circle, N.E. Atlanta, GA 30329

ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
AWS	American Welding Society 2501 N.W. 7th Street Miami, FL 33125
CRSI	Concrete Reinforcing Steel Institute 180 North LaSalle Street, Suite 2110 Chicago, IL 60601
FDEP	Florida Department of Environmental Protection 3900 Commonwealth Blvd. Tallahassee, Florida 32399
FDOT	Florida Department of Transportation Standards Specifications for Road and Bridge Construction Maps & Publication Sales - Mail Station 12 605 Suwannee St. Tallahassee, FL 32399-0450
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Bldg. 197 Washington, DC 20407
MCPW UTIL STD	Manatee County Utility Engineering 4410-B 66th St. W. Bradenton, FL 34210
MLSFA	Metal Lath/Steel Framing Association 221 North LaSalle Street Chicago, IL 60601
MMA	Monorail Manufacturer's Association 1326 Freeport Road Pittsburgh, PA 15238
NAAMM	National Association of Architectural Metal Manufacturers 221 North LaSalle Street Chicago, IL 60601

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

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01150 MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE

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

1.02 ESTIMATED QUANTITIES

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

1.03 WORK OUTSIDE AUTHORIZED LIMITS

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

1.04 MEASUREMENT STANDARDS

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

1.05 AREA MEASUREMENTS

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

1.06 LUMP SUM ITEMS

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

1.07 UNIT PRICE ITEM

Separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the

work shall be considered to be included in the scope of the appropriate listed work items.

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

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

BID ITEM 1,2,4 - DUCTILE IRON WATER LINE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per linear foot for furnishing and installing the listed diameter and class of ductile iron water main (AWWA C-151, CL-350) pipe as shown on the Contract Drawings or where directed by the Project Representative. Measurement and Payment shall be made for the actual length of the listed diameter pipe installed and will represent full compensation for all labor, materials, excavation, including rock, 10 gage copper clad steel wire, detectable tape, dewatering, thrust blocking, joint restraints except for restraint sizes specifically provided in another bid item, bedding, backfill, compaction, testing and disinfection and equipment required to complete these Bid Items. No additional compensation will be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill materials, or for repair of any trench settlement.

BID ITEM 3 - HDPE C-906 WATER LINE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per linear foot for furnishing and installing the listed diameter and class of HDPE water main (AWWA C-906, DR 11 or 9, Class 160 or 200) pipe and fittings as shown on the Contract Drawings or where directed by the Project Representative. Measurement and Payment shall be made for the actual length of the listed diameter pipe installed and acceptably furnished and will represent full compensation for all directional drilling, labor, materials, all non- DI fittings unless specifically included in other bid items, 10 gage copper clad steel wire, detectable tape, excavation, including rock, dewatering, bedding, backfill,

compaction, testing and disinfection and equipment required to complete these Bid Items. No additional compensation will be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill materials, or for repair of any settlement.

BID ITEM 5 - DUCTILE IRON FITTINGS

Payment for all work included in these Bid Items will be made at the applicable Contract unit price bid per pound for furnishing and installing each ductile iron fitting (cement-lined for water, epoxy lined for wastewater) as shown on the Contract Drawings and listed on the Bid Form. Payment shall represent full compensation for all labor, material, equipment, excavation, including rock, bedding, backfill, compaction, testing and disinfection required to complete these Bid Items.

BID ITEM 6 - FIRE HYDRANT BLOWOFF ASSEMBLY

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each hydrant blowoff assembly, including hydrant lead, tee, gate valve, box cover, concrete pads, restraining rods and/or thrust blocks, as shown on the Contract Drawings and listed on the Bid Form. Payment shall represent full compensation for all labor, material, equipment, excavation, including rock, bedding, backfill, compaction, testing and disinfection required to complete this Bid Item.

BID ITEM 7 - FIRE HYDRANT ASSEMBLY

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each hydrant assembly, including hydrant lead, tee, gate valve, box cover, concrete pads, restraining rods and/or thrust blocks, as shown on the Contract Drawings and listed on the Bid Form. Payment shall represent full compensation for all labor, material, equipment, excavation, including rock, bedding, backfill, compaction, testing and disinfection required to complete this Bid Item.

BID ITEM 8 - RELOCATE FIRE HYDRANT ASSEMBLY

Payment for all work included in this Bid Item will be made at the applicable Contract unit price bid per each hydrant relocation, including hydrant lead, tapping sleeve and tapping valve or tee, restraining rods, thrust blocks, concrete pad, and gate valve as necessary, removal and cleaning of existing hydrant assembly, and relocation and installation of the hydrant assembly to the new location as shown on the Contract Drawings and listed on the Bid Form. The County may provide one or more new hydrants to the Contractor for installation instead of the existing hydrant, and the Contractor shall give the existing hydrant to the County and install the new hydrant at no additional cost to the County. Payment shall represent full compensation for all labor, materials, equipment, testing and disinfection necessary to complete this Bid Item, ready for approval and acceptance by the County.

BID ITEM 9,10,12 - CONNECTION TO EXISTING WATER LINES

Payment for all work included in this Bid Item will be made at the applicable Contract unit price bid per each connection to existing water main size as specified, acceptably furnished and installed as shown on the Contract Drawings or where directed by the Project Representative. Measurement will be based on each complete connection made and accepted. The work for this item includes but is not limited to removal of existing fittings and pipe as required, furnish and install all fittings, bolts, gaskets, thrust blocking, pipe restraints,

excavation, backfill, couplings, plugs, caps, adapters, and materials except where specifically included in other pay items. Payment shall represent full compensation for all labor, materials, equipment, testing and disinfection necessary to complete this Bid Item, ready for approval and acceptance by the Engineer/Owner.

BID ITEM 11 - CUT IN 24" x 8" TEE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each cut-in tee for furnishing and installing each tee, including but not limited to, nuts, bolts, hardware, stainless steel insert, gland, gasket, and all other related items as shown on the Contract Drawings. Payment shall represent full compensation for all labor, material, excavation, including rock as necessary, bedding, backfill, compaction, testing and disinfection and equipment required to complete this Bid Item.

BID ITEM 13 - PIPE ADAPTER (HDPE to MJ)

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each pipe adapter for furnishing and installing each adapter, including but not limited to, nuts, bolts, hardware, stainless steel insert, gland, gasket, and all other related items as shown on the Contract Drawings. Payment shall represent full compensation for all labor, material, excavation, including rock as necessary, bedding, backfill, compaction, testing and disinfection and equipment required to complete these Bid Items.

BID ITEM 14,15 - PIPE JOINT RESTRAINTS

Payment for all work included in this Bid Item will be made at the applicable Contract unit price bid for furnishing and installing the specified size of pipe joint restraints as shown on the Contract Drawings. Payment shall represent full compensation for all labor, materials, necessary equipment, and incidentals necessary to complete the work.

BID ITEM 16,17,18 - GATE AND BUTTERFLY VALVES

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each valve for furnishing and installing the listed diameter valve, box, cover and concrete pad as shown on the Contract Drawings and listed on the Bid Form. Payment shall represent full compensation for all labor, material, excavation, including rock as necessary, bedding, backfill, compaction, testing and disinfection and equipment required to complete these Bid Items.

BID ITEM 19 - CONNECT TO EXISTING 24" WATER LINE - SADDLE TAP

Payment for all work included in this Bid Item will be made at the applicable Contract unit price bid per each connection to existing water main size as specified, acceptably furnished and installed as shown on the Contract Drawings or where directed by the Project Representative. Measurement will be based on each complete connection made and accepted. The work for this item includes but is not limited to removal of existing fittings and pipe as required, furnish and install all fittings, saddle, bolts, gaskets, thrust blocking, pipe restraints, excavation, backfill, couplings, plugs, caps, adapters, and materials except where specifically included in other pay items. Payment shall represent full compensation for all labor, materials, equipment, testing and disinfection necessary to complete this Bid Item, ready for approval and acceptance by the Engineer/Owner.

BID ITEM 20 - AIR RELEASE VALVE ASSEMBLY FOR FORCE MAIN

Payment for work under this Bid Item shall be made at the Contract unit price bid for each air release valve assembly furnished and installed complete including fittings, enclosure, pad, adapters, restraints, valves, stainless steel piping, and other components as shown on the Contract Drawings.

Measurement shall be for each ARV assembly installed complete and accepted. Excavation, including rock as necessary, bedding, backfill, dewatering, sheeting, concrete, tracer wire, testing and all other items necessary for a completed system in accordance with the Contract Documents shall be included. Payment shall represent full compensation for all labor, materials, equipment and incidental items necessary to complete each ARV, ready for operation and approval by the Engineer and Owner.

BID ITEM 21 - GROUT FILL & PLUG OUT OF SERVICE PIPE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per cubic yard for grouting existing pipes as required to complete the work as shown on the Contract Drawings or as directed by the Project Representative. Measurement and Payment shall be made when completed and will represent full compensation for all labor, materials, excavation, including rock, dewatering, backfill, compaction, and equipment required to complete this Bid Item. No additional compensation shall be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill material, or for repair of any settlement.

BID ITEM 22 - REMOVE EXISTING WATERLINE 8" AND UNDER

Payment for all work included in this Bid Item will be made at the applicable Contract unit price bid per linear foot for removal and disposal of existing waterline as shown on the Contract Drawings or as directed by the Project Representative. Payment shall represent full compensation for all labor, materials, equipment, excavation, and compaction necessary to complete this Bid Item, ready for approval and acceptance by the County.

BID ITEM 23 - FORCE MAIN RELOCATION 6" & UNDER PVC C-900

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per linear foot for furnishing and installing the listed diameter PVC force main (AWWA C-900, CL-150 or C-905, CL-235) pipe and fittings as shown on the Contract Drawings or as directed by the Project Representative. Measurement and Payment shall be made for the actual length of the listed diameter pipe installed and will represent full compensation for all labor, materials, excavation, including rock, dewatering, bedding, backfill, compaction, testing and equipment required to complete these Bid Items. The County will provide three lift station shutdowns each up to 4 hours between 12:00am and 5:00am. Additional shutdowns will be charged to the Contractor at \$3,500 each. No additional compensation shall be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill material, or for repair of any trench settlement.

BID ITEM 24,25 - SANITARY SEWER SERVICE LATERAL

Payment for work included under this Bid Item shall be made at the Contract unit price bid for each single or double sewer service lateral and connection at the main line sewer, 6-inch diameter service line to the location designated on the Contract Drawings, as directed by the Project Representative, or as alternately requested by the property owner, and including all bends, fittings, concrete encasement, the vertical extension, cap and concrete pad at the surface, all as shown on the service connection detail on the Contract Drawings and all other appurtenances including all labor, equipment, and materials necessary to complete each service connection. The elevation depth below grade as shown in the service connection detail on the Contract Drawings for the lateral invert shall be maintained by the Contractor installing the sanitary sewer service line.

All service locations shown on the Contract Drawings are approximate and it shall be the responsibility of the Contractor to contract all homeowners for locating the owner's septic tank or existing service and determine, subject to approval by the County, the best locations and depth for each service lateral. Locations of all connections at the main line sewer and at the property line by station and offset method shall be recorded on the as-built drawings to be furnished to County by the Contractor.

Also included in payment shall be all excavation, including rock as necessary, bedding, backfill, compaction, testing, extensions and caps all as shown on the Contract Drawings, furnished and installed watertight, ready for approval by the County acceptance.

BID ITEM 26 - RELAY SEWER SERVICE 6" & UNDER PVC DR 26

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per linear foot for furnishing and installing the listed diameter PVC sewer service (DR26) pipe and fittings as shown on the Contract Drawings or as directed by the Project Representative. The Contractor shall relay existing sewer services under proposed storm drains or other conflicts. Measurement and Payment shall be made for the actual length of the listed diameter pipe installed and will represent full compensation for all labor, materials, excavation, including rock, dewatering, bedding, backfill, compaction, testing and equipment required to complete these Bid Items. No additional compensation shall be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill material, pumping, or for repair of any trench settlement.

BID ITEM 27 - SANITARY TANKER SERVICE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per hour for furnishing vector or similar truck(s) of sufficient size and capacity to handle force main and/or lift station flows during force main shutdowns, and all other associated labor to perform this task. Payment shall represent full compensation for all labor, material, and equipment required to perform this function.

BID ITEM 28 - ADJUST MANHOLE LID TO GRADE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each manhole to adjust the lid to the proposed finished grade. The work includes but is not limited to: remove the existing frame and cover, install precast concrete rings as necessary, mortar, set the lid to proposed grade, encase with a concrete collar, and all other work to provide a finished manhole top as shown on Standard Detail US 2. Payment

shall represent full compensation for all labor, material, excavation, backfill, and equipment required to complete this Bid Item.

BID ITEM 29 - REHAB EXISTING SANITARY MANHOLE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per square foot for surface repair, surface preparation and spray coating of all internal manhole surfaces except the sewer pipe in accordance with the liner manufacturer's instructions and specifications, and all associated labor, equipment and materials to perform this task. Payment shall represent full compensation for all labor, material, and equipment required to perform this function.

Measurement and Payment shall be per square foot of liner and/or coating furnished, installed, and accepted by the Owner.

The unit bid price shall include, but is not limited to, surface repair, surface preparation as recommended by the product's manufacturer; spoil removal and disposal; all materials and incidentals necessary to complete these bid items, ready for approval and acceptance by the Engineer/Owner.

BID ITEM 30 - HYMAX ADAPTER

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each hymax adapter for furnishing and installing each adapter, including but not limited to, nuts, bolts, hardware, stainless steel insert, gland, gasket, and all other related items as shown on the Contract Drawings. Payment shall represent full compensation for all labor, material, excavation, including rock as necessary, bedding, backfill, compaction, testing and disinfection and equipment required to complete these Bid Items.

BID ITEM 31 - REMOVE 24" CI WATER LINE AND VALVES

Payment for all work included in this Bid Item shall be made at the applicable Contract lump sum price bid for removing the specified water main pipe and valves as shown on the Contract Drawings. No additional compensation will be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill materials, or for repair of any trench settlement.

BID ITEM 32,33 - TAPPING SLEEVES/VALVES

Payment for all work included in these Bid Items shall be at the applicable Contract unit price bid per each tapping sleeve and tapping valve for furnishing and installing the listed diameter tapping sleeve and tapping valve, box, cover and concrete pad as shown on the Contract Drawings and listed on the Bid Form. Prior to the tapping operation, the Contractor will contact the County as to the date and time of the proposed work. The tapping operation itself up to 12-inches in diameter will be performed by the County. All tapping operations larger than 12 inches in diameter shall be performed by the Contractor with the County's Representative present. Payment shall represent full compensation for all labor, material, excavation, including rock as necessary, bedding, backfill, compaction testing, disinfection and equipment required to complete these Bid Items.

BID ITEM 34,35,36 - REPLACE WATER SERVICE

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid for each service type for furnishing and installing the listed 1" single and double water service lines, both short and long side, as shown on the Contract Drawings and listed on the Bid Form. Where the water main is under pavement, services shall be copper under the pavement and at least 10 feet beyond the pavement. Payment shall represent full compensation for all labor, material, excavation, including rock, bedding, backfill, compaction, testing and disinfection and equipment required to complete these Bid Items.

This Bid Item includes the construction of potable water services including service line, meter box and appurtenances of the specified type acceptably furnished and installed as shown on the Drawings or where directed by the Project Representative. The work includes removal of the existing meter box and appurtenances, connection of the new water service to the existing water service line, and installation of new service line as required on private property from the existing box to the meter box installed by the Contractor. The Project Representative may require a plumber licensed in Manatee County to install the portions of the work on private property. Measurement will be according to the type of services, long or short, single or double. The work shall include, but is not limited to; service piping, excavation, directional drilling, restoration, compaction, casing pipe, meter box, tapping saddles, corporation stops, curb stops, curb or pavement location disks, 10 gauge copper clad steel tracer wire, complete meter assembly & yoke, all necessary fittings, all service connections, disinfection, coordination with service customers, and all other related and necessary materials, work and equipment associated with this item. The Contractor shall reinstall existing meters or install new meters provided by the County at no charge to the Contractor.

BID ITEM 37 - REPLACE WATER SERVICE w/3"DIP, six meter boxes & GV

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid for each service group for furnishing and installing the listed 3" DIP water service line, reducer to 2" copper, 2" FIP x 4-1" FIP multiservice wyes (Ford Y11-474) with six meter boxes and 3" gate valve, as shown on the Contract Drawings and listed on the Bid Form. Payment shall represent full compensation for all labor, material, excavation, including rock, bedding, backfill, compaction, testing and disinfection and equipment required to complete these Bid Items.

This Bid Item includes the construction of potable water services including service lines, meter boxes and appurtenances of the specified type acceptably furnished and installed as shown on the Drawings or where directed by the Project Representative. The work includes removal of the existing meter boxes and appurtenances, connection of the new water services to the existing water service lines, and installation of new service lines as required on private property from the existing box to the meter box installed by the Contractor. The Project Representative may require a plumber licensed in Manatee County to install the portions of the work on private property. Measurement will be according to the type of services, long or short, single or double. The work shall include, but is not limited to; service piping, excavation, directional drilling, restoration, compaction, meter boxes, tapping saddles, corporation stops, curb stops, curb or pavement location disks, 10 gauge copper clad steel tracer wire, complete meter assembly & yoke, all necessary fittings, all service connections, disinfection, coordination with service customers, and all other related and necessary materials, work and equipment associated

with this item. The Contractor shall reinstall existing meters or install new meters provided by the County at no charge to the Contractor.

BID ITEM 38 - BACKFLOW PREVENTER

It is expected that some service line connections shall require installation of a backflow preventer assembly, per Manatee County Utility Standards UW-12 and UW-13, at the water service meter, and a thermal expansion tank for each service. All work performed on private property must be performed by an appropriately licensed plumbing contractor per the Florida Building Code - Building and Plumbing and the Manatee County Building Department. After the backflow assembly is installed, tested and inspected the contractor shall be responsible to register it using the Manatee County Utility Department on-line registration system.

This Bid Item includes the construction of all backflow preventers of the specified type, and expansion tanks, acceptably furnished and installed at the locations required by the Florida Plumbing Code or where directed by the Project Representative. Measurement will be based on each complete backflow preventer installed as shown on the drawings. Payment for all work under this Bid Item shall be made at the applicable Contract unit price bid according to the number of backflow preventers. The work shall include, but is not limited to, backflow preventer, expansion tank, ball valves, concrete slabs, test cocks and sleeves, all necessary fittings, all service connections, disinfection, certification, and all other related and necessary materials, work and equipment associated with this item.

BID ITEM 39 - RELOCATE MASTER METER ASSEMBLY 6"

Payment for all work included in this Bid Item shall be made at the applicable Contract lump sum price bid for relocating the existing 6" master meter as shown on the Contract Drawings or where directed by the Project Representative and in accordance with Standard Detail UW 15. Payment will represent full compensation for all labor, materials, excavation, including rock, ductile iron pipe, 10 gage copper clad steel wire, detectable tape, dewatering, thrust blocking, joint restraints, bedding, backfill, compaction, testing and disinfection and equipment required to complete this Bid Item. No additional compensation will be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill materials, or for repair of any trench settlement.

BID ITEM 40 - REPLACE 2" MASTER METER ASSEMBLY & SERVICE

Payment for all work included in this Bid Item shall be made at the applicable Contract lump sum price bid for furnishing and installing the listed diameter of master meter assembly as shown on Standard Detail UW 13 and 2" copper service pipe from the main. Payment shall represent full compensation for all labor, materials, excavation, including rock, 10 gage copper clad steel wire, valves, meter, detectable tape, dewatering, thrust blocking, joint restraints, bedding, backfill, compaction, testing and disinfection and equipment required to complete this Bid Item. No additional compensation will be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill materials, or for repair of any trench settlement.

BID ITEM 41 - 2" AIR RELEASE ASSEMBLY

Payment for work under this Bid Item shall be made at the Contract unit price bid for each air release valve assembly furnished and installed complete including enclosure, fittings,

adapters, restraints, valves, all protective coatings, and other components as shown on the Contract Drawings and Standard Detail UW10.

Measurement shall be for each ARV assembly installed complete and accepted. Excavation, including rock as necessary, bedding, backfill, dewatering, concrete, tracer wire, testing and all other items necessary for a completed system in accordance with the Contract Documents shall be included. Payment shall represent full compensation for all labor, materials, equipment and incidental items necessary to complete each ARV, ready for operation and approval by the Engineer and Owner.

BID ITEM 42 - MISCELLANEOUS CONCRETE

Payment for all work under this Bid Item shall be made at the applicable Contract unit price bid per cubic yard of concrete as shown on the Bid Form for furnishing, placing and installing the miscellaneous concrete, measured in place, within the lines and grades as shown on the Contract Drawings and as described in the Specifications. All concrete placed outside these lines and grades to fill unauthorized excavation and all concrete for replacing defective work shall be at the expense of the Contractor. Concrete specifically included under any other Bid Item will not be measured or paid for under this Bid Item.

Measurement for miscellaneous concrete shall be per actual cubic yard of concrete furnished, placed and installed as shown on the Contract Drawings or as ordered by the County in writing. This Bid Item includes encasements, nonreinforced pipe cradles, thrust blocks, and like work. Payment shall represent full compensation for all labor, materials, and equipment for mixing, placing, forming and curing of the concrete and all incidentals necessary to complete the concrete work, ready for approval and acceptance by the County.

BID ITEM 43 - MOBILIZATION

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

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

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

Percent of Original Utility Work Contract Amount:	Percent Allowable Payment of Mobilization/Demobilization Bid Item Price:
5	25
10	35
25	45

50	50
75	75
100	100

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

BID ITEM 44 - MISCELLANEOUS WORK AND CLEANUP

Payment for all work included under this Bid Item shall be made at the Contract lump sum price bid listed in the Bid Form and shall represent full compensation for all labor, materials and equipment required to perform all the work as shown on the Contract Drawings and specified herein and any other miscellaneous work not specifically included for payment under other Bid Items obviously necessary to complete the Contract. Partial payments will be based on the breakdown of the Bid Item in accordance with the Schedule of Values submitted by the Contractor and approved by the County. Payment shall also include full compensation for project photographs, as-builts record drawings, project signs, traffic control, rubbish and spoil removal, repair, replacement or relocation of all signs, walls, private irrigation systems and related items and any and all other items required to complete the project in accordance with Contract Documents.

BID ITEM 45 - DISCRETIONARY WORK

Payment for all work under this Bid Item and listed in the Bid Form shall be made only at the County's discretion in order to satisfactorily complete the project in accordance with the Plans and Specifications.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01152 REQUESTS FOR PAYMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Submit Applications for Payment to the Project Manager or as directed at the preconstruction meeting, in accordance with the schedule established by Conditions of the Contract and Agreement between County and Contractor.

1.02 FORMAT AND DATA REQUIRED

- A. Submit payment requests in the form provided by the County with itemized data typed in accordance with the Bid Form.
- B. Provide construction photographs in accordance with Contract Documents.

1.03 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. When the County requires substantiating data, Contractor shall submit suitable information with a cover letter.
- B. Submit one copy of data and cover letter for each copy of application.

1.04 PREPARATION OF APPLICATION FOR FINAL PAYMENT

Fill in application form as specified for progress payments.

1.05 SUBMITTAL PROCEDURE

- A. Submit applications for payment at the times stipulated in the Agreement.
- B. Number: Three (3) copies of each application; all signed and certified by the Contractor.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01153 CHANGE ORDER PROCEDURES

PART 1 GENERAL

1.01 DEFINITION

- A. Change Order: Major change in contract scope or time that must be approved and executed by the Board before it becomes effective.
- B. Administrative Change Adjustment: Minor change order under 10% of project cost or 20% time, does not have to be Board approved.
- C. Field Directive Change: Change to contract quantity that does not require a change of scope or time extension.

1.02 REQUIREMENTS INCLUDED

- A. The Contractor shall promptly implement change order procedures:
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time-and-material/force account basis.
 - 3. Provide full documentation to County on request.
- B. The Contractor shall designate a member of the Contractor's organization who:
 - 1. Is authorized to accept changes to the Work.
 - 2. Is responsible for informing others in the Contractor's employ of the authorized changes into the Work.

1.03 PRELIMINARY PROCEDURES

- A. Project Manager may initiate changes by submitting a Request to Contractor. Request will include:
 - 1. Detailed description of the change, products, costs and location of the change in the Project.
 - 2. Supplementary or revised Drawings and Specifications.
 - 3. The projected time extension for making the change.
 - 4. A specified period of time during which the requested price will be considered valid.
 - 5. Such request is for information only and is not an instruction to execute the changes, nor to stop work in progress.
- B. Contractor may initiate changes by submitting a written notice to the Project Manager, containing:
 - 1. Description of the proposed changes.
 - 2. Statement of the reason for making the changes.
 - 3. Statement of the effect on the Contract Sum and the Contract Time.
 - 4. Statement of the effect on the work of separate contractors.
 - 5. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

1.04 FIELD DIRECTIVE CHANGE

- A. In lieu of a Change Order, the Project Manager may issue a Field Directive change for the Contractor to proceed with additional work within the original intent of the Project.
- B. Field Directive change will describe changes in the work, with attachments of backup information to define details of the change.
- C. Contractor must sign and date the Field Directive change to indicate agreement with the terms therein.

1.05 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump sum proposal and for each unit price which has not previously been established, with sufficient substantiating data to allow the County to evaluate the quotation.
- B. On request, provide additional data to support time and cost computations:
 - 1. Labor required.
 - 2. Equipment required.
 - 3. Products required.
 - a. Recommended source of purchase and unit cost.
 - b. Quantities required.
 - 4. Taxes, insurance and bonds.
 - 5. Credit for work deleted from Contract, similarly documented.
 - 6. Overhead and profit.
 - 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal.
 - 1. Name of the County's authorized agent who ordered the work and date of the order.
 - 2. Date and time work was performed and by whom.
 - 3. Time record, summary of hours work and hourly rates paid.
 - 4. Receipts and invoices for:
 - a. Equipment used, listing dates and time of use.
 - b. Products used, listing of quantities.
 - c. Subcontracts.

1.06 PREPARATION OF CHANGE ORDERS

- A. Project Manager will prepare each Change Order.
- B. Change Order will describe changes in the Work, both additions and deletions, with attachments as necessary to define details of the change.
- C. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.

1.07 LUMP SUM/FIXED PRICE CHANGE ORDER

- A. Project Manager initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by the Contractor, or requests from the County, or both.
- B. Once the form has been completed, all copies should be sent to Contractor for approval. After approval by Contractor, all copies should be sent to County for approval. The County will distribute executed copies after approval by the Board of County Commissioners.

1.08 UNIT PRICE CHANGE ORDER

- A. Contents of Change Orders will be based on, either:
 - 1. County's definition of the scope of the required changes.
 - 2. Contractor's Proposal for a change, as approved by the County.
 - 3. Survey of completed work.
- B. The amounts of the unit prices to be:
 - 1. Those stated in the Agreement.
 - 2. Those mutually agreed upon between County and Contractor.

1.09 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER/CONSTRUCTION CHANGE AUTHORIZATION

- A. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article "Documentation of Proposals and Claims" of this Section.
- B. County will determine the allowable cost of such work, as provided in General Conditions and Supplementary Conditions.
- C. County will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
- D. County and Contractor will sign and date the Change Order to indicate their agreement therewith.

1.10 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Periodically revise Schedule of Values and Application for Payment forms to record each change as a separate item of work, and to record the adjusted Contract Sum.
- B. Periodically revise the Construction Schedule to reflect each change in Contract Time. Revise sub schedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01200 PROJECT MEETINGS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The County shall schedule the pre-construction meeting, periodic progress meetings and special meetings, if required, throughout progress of work.
- B. Representatives of contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall attend meetings to ascertain that work is expedited consistent with Contract Documents and construction schedules.

1.02 PRE-CONSTRUCTION MEETING

A. Attendance:

- 1. County's Engineer.
- 2. County's Project Manager
- 3. Contractor.
- 4. Resident Project Representative.
- 5. Related Labor Contractor's Superintendent.
- 6. Major Subcontractors.
- 7. Major Suppliers.
- 8. Others as appropriate.

B. Suggested Agenda:

- 1. Distribution and discussion of:
 - a. List of major subcontractors.
 - b. Projected Construction Schedules.
 - c. Coordination of Utilities
- 2. Critical work sequencing.
- 3. Project Coordination.
 - a. Designation of responsible personnel.
 - b. Emergency contact persons with phone numbers.
- 4. Procedures and processing of:
 - a. Field decisions.
 - b. Submittals.
 - c. Change Orders.
 - d. Applications for Payment.
- 5. Procedures for maintaining Record Documents.
- 6. Use of premises:
 - a. Office, work and storage areas.
 - b. County's REQUIREMENTS.
- 7. Temporary utilities.
- 8. Housekeeping procedures.
- 9. Liquidated damages.
- 10. Equal Opportunity Requirements.
- 11. Laboratory testing.
- 12. Project / Job meetings: Progress meeting, other special topics as needed

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01310 CONSTRUCTION SCHEDULE & PROJECT RESTRAINTS

PART 1 GENERAL

1.01 GENERAL

- A. Construction under this contract must be coordinated with the County and accomplished in a logical order to maintain utilization and flow through existing facilities and public properties and rights-of-way and to allow construction to be completed within the time allowed by Contract Documents and in the manner set forth in the Contract.

1.02 CONSTRUCTION SCHEDULING GENERAL PROVISIONS

- A. No work shall be done between 7:00 p.m. and 7:00 a.m. nor on weekends or legal holidays without written permission of the County. However, emergency work may be done without prior permission.
- B. Night work may be established by the Contractor as regular procedure with the written permission of the County. Such permission, however, may be revoked at any time by the County if the Contractor fails to maintain adequate equipment and supervision for the proper execution and control of the work at night.
- C. Due to potential health hazards and requirements of the State of Florida and the U.S. Environmental Protection Agency, existing facilities must be maintained in operation.
- D. The Contractor shall be fully responsible for providing all temporary piping, plumbing, electrical hook-ups, lighting, temporary structure, or other materials, equipment and systems required to maintain the existing facility's operations. All details of temporary piping and temporary construction are not necessarily shown on the Drawings or covered in the Specifications. However, this does not relieve the Contractor of the responsibility to insure that construction will not interrupt proper facility operations.
- E. The Contractor shall designate an authorized representative of his firm who shall be responsible for development and maintenance of the schedule and of progress and payment reports. This representative of the Contractor shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the commitments of the Contractor's schedule.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. See General Provisions

2.02 MONTHLY STATUS REPORTS

- A. Contractor shall submit detailed schedule status reports on a monthly basis with the Application for Payment. The first such status report shall be submitted with the first Application for Payment and include data as of the last day of the pay period. The Monthly Report shall include a "marked-up" copy of the latest detailed schedule of legal status and a supporting narrative including updated information as described above. The Monthly Report will be reviewed by County and Contractor at a monthly schedule meeting and Contractor will address County's comments on the subsequent monthly report.

Monthly status reports shall be the basis for evaluating Contractor's progress.

- B. The "marked-up" diagram shall show, for the latest detailed schedule of legal status, percentages of completion for all activities, actual start and finish dates and remaining durations, as appropriate. Activities not previously included in the latest detailed schedule of legal status shall be added, except that contractual dates will not be changed except by change order. Review of a marked-up diagram by County will not be construed to constitute concurrence with the time frames, duration, or sequencing for such added activities; instead the corresponding data as ultimately incorporated into an appropriate change order shall govern.

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01340 SHOP DRAWINGS, PROJECT DATA AND SAMPLES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall submit to the County for review and approval: working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this section called data), and material samples (hereinafter in this section called samples) as are required for the proper control of work, including, but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
- B. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the County. This log should include the following items:
 - 1. Submittal description and number assigned.
 - 2. Date to County.
 - 3. Date returned to Contractor (from County).
 - 4. Status of Submittal (No exceptions taken, returned for confirmation or resubmittal, rejected).
 - 5. Date of Resubmittal and Return (as applicable).
 - 6. Date material released (for fabrication).
 - 7. Projected date of fabrication.
 - 8. Projected date of delivery to site.
 - 9. Projected date and required lead time so that product installation does not delay contact.
 - 10. Status of O&M manuals submitted.

1.03 CONTRACTOR'S RESPONSIBILITY

- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the County for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the County without the Contractor's stamp will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the contract Documents.
- B. Determine and verify:
 - 1. Field measurements.
 - 2. Field construction criteria.
 - 3. Catalog numbers and similar data.
 - 4. Conformance with Specifications and indicate all variances from the Specifications.
- C. The Contractor shall furnish the County a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

- D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the County, with No Exceptions Taken or Approved As Noted.
- E. The Contractor shall submit to the County all drawings and schedules sufficiently in advance of construction requirements to provide no less than twenty-one (21) calendar days for checking and appropriate action from the time the County receives them.
- F. All material & product submittals, other than samples, may be transmitted electronically as a pdf file. All returns to the contractor will be as a pdf file only unless specifically requested otherwise.
- G. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by County of the necessary Shop Drawings.

1.04 COUNTY'S REVIEW OF SHOP DRAWINGS AND WORKING DRAWINGS

- A. The County's review of drawings, data and samples submitted by the Contractor shall cover only general conformity to the Specifications, external connections and dimensions which affect the installation.
- B. The review of drawings and schedules shall be general and shall not be construed:
 - 1. As permitting any departure from the Contract requirements.
 - 2. As relieving the Contractor of responsibility for any errors, including details, dimensions and materials.
 - 3. As approving departures from details furnished by the County, except as otherwise provided herein.
- C. If the drawings or schedules as submitted describe variations and show a departure from the Contract requirements which the County finds to be in the interest of the County and to be so minor as not to involve a change in Contract Price or time for performance, the County may return the reviewed drawings without noting any exception.
- D. When reviewed by the County, each of the Shop and Working Drawings shall be identified as having received such review being so stamped and dated. Shop Drawings stamped "REJECTED" and with required corrections shown shall be returned to the Contractor for correction and resubmittal.
- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals, the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the County on previous submissions. The Contractor shall make any corrections required by the County.
- F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the County.
- G. The County shall review a submittal/resubmittal a maximum of three (3) times after which cost of review shall be borne by the Contractor. The cost of engineering shall be equal to the County's actual payroll cost.

- H. When the Shop and Working Drawings have been completed to the satisfaction of the County, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the County.
- I. No partial submittals shall be reviewed. Incomplete submittals shall be returned to the Contractor and shall be considered not approved until resubmitted.

1.05 SHOP DRAWINGS

- A. When used in the Contract Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, drawings, setting drawings, schedule drawings, manufacturer's scale drawings and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature and performance and test data, shall be considered only as supportive to required Shop Drawings as defined above.
- B. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the County and shall bear the Contractor's stamp of approval and original signature as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval and original signature shall be returned to the Contractor for resubmission.
- C. Each Shop Drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
 - 1. Number and title of the drawing.
 - 2. Date of Drawing or revision.
 - 3. Name of project building or facility.
 - 4. Name of contractor and subcontractor submitting drawing.
 - 5. Clear identification of contents and location of the work.
 - 6. Specification title and number.
- D. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility of executing the work in accordance with the Contract, even though such drawings have been reviewed.
- E. Data on materials and equipment shall include, without limitation, materials and equipment lists, catalog sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.
- F. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name and address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.
- G. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the County along with the required shop drawings. The

installation list shall include at least five installations where identical equipment has been installed and have been in operation for a period of at least one (1) year.

- H. Only the County will utilize the color "red" in marking shop drawing submittals.

1.06 WORKING DRAWINGS

- A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's fabrication and erection drawings for structures such as roof trusses, steelwork, precast concrete elements, bulkheads, support of open cut excavation, support of utilities, groundwater control systems, forming and false work; underpinning; and for such other work as may be required for construction of the project.
- B. Copies of working drawings as noted above, shall be submitted to the County where required by the Contract Documents or requested by the County and shall be submitted at least thirty (30) days (unless otherwise specified by the County) in advance of their being required for work.
- C. Working drawings shall be signed by a registered Professional Engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such work, working drawings must have been reviewed without specific exceptions by the County, which review will be for general conformance and will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the Contractor; the County and Engineer shall not have responsibility therefor.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01510 TEMPORARY AND PERMANENT UTILITIES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

The Contractor shall be responsible for furnishing all requisite temporary utilities, i.e., power, water, sanitation, etc. The Contractor shall obtain and pay for all permits required as well as pay for all temporary usages. The Contractor shall remove all temporary facilities upon completion of work.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with National Electric Code.
- B. Comply with Federal, State and Local codes and regulations and with utility company requirements.
- C. Comply with County Health Department regulations.

PART 2 PRODUCTS

2.01 MATERIALS, GENERAL

Materials for temporary utilities may be "used". Materials for electrical utilities shall be adequate in capacity for the required usage, shall not create unsafe conditions and shall not violate requirements of applicable codes and standards.

2.02 TEMPORARY ELECTRICITY AND LIGHTING

Arrange with the applicable utility company for temporary power supply. Provide service required for temporary power and lighting and pay all costs for permits, service and for power used.

2.03 TEMPORARY WATER

- A. The Contractor shall arrange with Manatee County Utilities Customer Service office to provide water for construction purposes, i.e., meter, pay all costs for installation, maintenance and removal, and service charges for water used.
- B. The Contractor shall protect piping and fitting against freezing.

2.04 TEMPORARY SANITARY FACILITIES

- A. The Contractor shall provide sanitary facilities in compliance with all laws and regulations.
- B. The Contractor shall service, clean and maintain facilities and enclosures.

PART 3 EXECUTION

3.01 GENERAL

- A. The Contractor shall maintain and operate systems to assure continuous service.

- B. The Contractor shall modify and extend systems as work progress requires.

3.02 REMOVAL

- A. The Contractor shall completely remove temporary materials and equipment when their use is no longer required.
- B. The Contractor shall clean and repair damage caused by temporary installations or use of temporary facilities.

END OF SECTION

SECTION 01620 STORAGE AND PROTECTION

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Provide secure storage and protection for products to be incorporated into the work and maintenance and protection for products after installation and until completion of Work.

1.02 STORAGE

- A. Store products immediately on delivery and protect until installed in the Work, in accord with manufacturer's instructions, with seals and labels intact and legible.
- B. Exterior Storage
 - 1. Provide substantial platform, blocking or skids to support fabricated products above ground to prevent soiling or staining.
 - a. Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
 - b. Prevent mixing of refuse or chemically injurious materials or liquids.
- A. Arrange storage in manner to provide easy access for inspection.

1.03 MAINTENANCE OF STORAGE

- A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:
 - 1. State of storage facilities is adequate to provide required conditions.
 - 2. Required environmental conditions are maintained on continuing basis.
 - 3. Surfaces of products exposed to elements are not adversely affected. Any weathering of products, coatings and finishes is not acceptable under requirements of these Contract Documents.

1.04 PROTECTION AFTER INSTALLATION

- A. Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work.
- B. Control traffic to prevent damage to equipment and surfaces.
- C. Provide coverings to protect finished surfaces from damage.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01720 PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall maintain at the site for the County one record copy of:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. County's field orders or written instructions.
 - 6. Approved shop drawings, working drawings and samples.
 - 7. Field test records.
 - 8. Construction photographs.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI format.
- C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the County.

1.03 MARKING DEVICES

- A. Provide felt tip marking pens for recording information in the color code designated by the County.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress.
- C. Do not conceal any work until required information is recorded.
- D. Drawings; Legibly mark to record actual construction:
 - 1. All underground piping with elevations and dimensions. Changes to piping location. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Actual installed pipe material, class, etc. Locations of drainage ditches, swales, water lines and force mains shall be shown every 200 feet (measured along the centerline) or alternate lot lines, whichever is closer. Dimensions at these locations shall indicate

- distance from centerline of right-of-way to the facility.
2. Field changes of dimension and detail.
3. Changes made by Field Order or by Change Order.
4. Details not on original contract drawings.
5. Equipment and piping relocations.
6. Locations of all valves, fire hydrants, manholes, water and sewer services, water and force main fittings, underdrain cleanouts, catch basins, junction boxes and any other structures located in the right-of-way or easement, shall be located by elevation and by station and offset based on intersection P.I.'s and centerline of right-of-way. For facilities located on private roads, the dimensioning shall be from centerline of paving or another readily visible baseline.
7. Elevations shall be provided for all manhole rim and inverts; junction box rim and inverts; catch basin rim and inverts; and baffle, weir and invert elevations in control structures. Elevations shall also be provided at the PVI's and at every other lot line or 200 feet, whichever is less, of drainage swales and ditches. Bench marks and elevation datum shall be indicated.
8. Slopes for pipes and ditches shall be recalculated, based on actual field measured distances, elevations, pipe sizes, and type shown. Cross section of drainage ditches and swales shall be verified.
9. Centerline of roads shall be tied to right-of-way lines. Elevation of roadway centerline shall be given at PVI's and at all intersections.
10. Record drawings shall show bearings and distances for all right-of-way and easement lines, and property corners.
11. Sidewalks, fences and walls, if installed at the time of initial record drawing submittal, shall be located every 200 feet or alternate lot lines, whichever is closer. Dimensions shall include distance from the right-of-way line and the back of curb and lot line or easement line.
12. Sanitary sewer mainline wyes shall be located from the downstream manhole. These dimensions shall be provided by on-site inspections or televiewing of the sewer following installation.
13. Elevations shall be provided on the top of operating nuts for all water and force main valves.
14. Allowable tolerance shall be ± 6.0 inches for horizontal dimensions. Vertical dimensions such as the difference in elevations between manhole inverts shall have an allowable tolerance of $\pm 1/8$ inch per 50 feet (or part thereof) of horizontal distance up to a maximum tolerance of ± 2 inch.
15. Properly prepared record drawings on mylar, together with two copies, shall be certified by a design professional (Engineer and/or Surveyor registered in the State of Florida), employed by the Contractor, and submitted to the County.

E. Specifications and Addenda; Legibly mark each Section to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
2. Changes made by field order or by change order.

F. Shop Drawings (after final review and approval):

1. Five sets of record drawings for each process equipment, piping, electrical system and instrumentation system.

1.05 SUBMITTAL

- A. Prior to substantial completion and prior to starting the bacteria testing of water lines, deliver signed and sealed Record Documents and Record Drawings to the County. These will be reviewed and verified by the inspector. If there are any required changes or additions, these shall be completed and the entire signed and sealed set resubmitted prior to final pay application.
- B. The Contractor shall employ a Professional Engineer or Surveyor registered in the State of Florida to verify survey data and properly prepare record drawings. Record drawings shall be certified by the professional(s) (Engineer or Surveyor licensed in Florida), as stipulated by the Land Development Ordinance and submitted on signed and sealed paper drawings, signed and dated mylar drawings together with an AutoCAD version on a recordable compact disk (CD).
- C. The CD shall contain media in AutoCad Version 2004 or later, or in any other CAD program compatible with AutoCad in DWG or DXF form. All fonts, line types, shape files or other pertinent information used in the drawing and not normally included in AutoCad shall be included on the media with a text file or attached noted as to its relevance and use.
- D. Accompany submittal with transmittal letter, containing:
 - 1. Date.
 - 2. Project title and number.
 - 3. Contractor's name and address.
 - 4. Title and number of each Record Document.
 - 5. Signature of Contractor or his authorized representative.

Note: The data required to properly prepare these record drawings shall be obtained at the site, at no cost to the County by the responsible design professional or his/her duly appointed representative. The appointed representative shall be a qualified employee of the responsible design professional or a qualified inspector retained by the responsible design professional on a project-by-project basis.

PART 2 STANDARDS

2.01 MINIMUM RECORD DRAWING STANDARDS FOR ALL RECORD DRAWINGS SUBMITTED TO MANATEE COUNTY

- A. Record drawings shall be submitted to at least the level of detail in the contract documents. It is anticipated that the original contract documents shall serve as at least a background for all record information. Original drawings in CAD format may be requested of the County.
- B. Drawings shall meet the criteria of paragraph 1.04 D above.

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01730 OPERATING AND MAINTENANCE DATA

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile product data and related information appropriate for County's maintenance and operation of products furnished under Contract.

Prepare operating and maintenance data as specified in this and as referenced in other pertinent sections of Specifications.

- B. Instruct County's personnel in maintenance of products and equipment and systems.
- C. Provide three (3) sets of operating and maintenance manuals for each piece of equipment provided within this Contract.

1.02 FORM OF SUBMITTALS

- A. Prepare data in form of an instructional manual for use by County's personnel.

- B. Format:

1. Size: 8-1/2 inch x 11 inch
2. Paper: 20 pound minimum, white, for typed pages
3. Text: Manufacturer's printed data or neatly typewritten
4. Drawings:
 - a. Provide reinforced punched binder tab, bind in with text.
 - b. Fold larger drawings to size of text pages.
5. Provide fly-leaf for each separate product or each piece of operating equipment.
 - a. Provide typed description of product and major component parts of equipment.
 - b. Provide indexed tabs.
6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS". List:
 - a. Title of Project.
 - b. Identity of separate structures as applicable.
 - c. Identity of general subject matter covered in the manual.

- C. Binders:

1. Commercial quality three-ring binders with durable and cleanable plastic covers.
2. Maximum ring size: 1 inch.
3. When multiple binders are used, correlate the data into related consistent groupings.

1.03 SUBMITTAL SCHEDULE

- A. Submit one copy of completed data in final form fifteen days prior to substantial completion.

1. Copy will be returned after substantial completion, with comments (if any).

- B. Submit two copies of approved data in final form. Final acceptance will not be provided until the completed manual is received and approved.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01740 WARRANTIES AND BONDS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittals when so specified.
- D. Review submittals to verify compliance with Contract Documents.
- E. Submit to County for review and transmittal.

1.02 SUBMITTAL REQUIREMENTS

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers and subcontractors.
- B. Number of original signed copies required: Two each.
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning of warranty, bond or service and maintenance contract.
 - 5. Duration of warranty, bond or service maintenance contract.
 - 6. Provide information for County's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty or bond.
 - 7. Contractor, name of responsible principal, address and telephone number.

1.03 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2 inch x 11 inch punched sheets for standard 3-ring binder. Fold larger sheets to fit into binders.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
 - a. Title of Project.
 - b. Name of Contractor.
- C. Binders: Commercial quality, three-ring, with durable and cleanable plastic covers.

1.04 TIME OF SUBMITTALS

- A. Make submittals within ten days after date of substantial completion and prior to final request for payment.
- B. For items of work, where acceptance is delayed materially beyond date of substantial completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.05 SUBMITTALS REQUIRED

- A. Submit warranties, bonds, service and maintenance contracts as specified in respective sections of Specifications.
- B. Approval by the County of all documents required under this section is a pre-requisite to requesting a final inspection and final payment

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

DIVISION 2 SITE WORK

SECTION 02064 MODIFICATIONS TO EXISTING STRUCTURES, PIPING AND EQUIPMENT

PART 1 GENERAL

1.01 SCOPE OF WORK

Furnish all labor, materials, equipment and incidentals required to modify, alter and/or convert existing structures as shown or specified and as required for the installation of piping, mechanical equipment and appurtenances. Existing piping and equipment shall be removed and dismantled as necessary for the performance of facility alterations in accordance with the requirements herein specified.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. The Contractor shall cut, repair, reuse, excavate, demolish or otherwise remove parts of the existing structures or appurtenances, as indicated on the Contract Drawings, herein specified, or necessary to permit completion of the work under this Contract. The Contractor shall dispose of surplus materials resulting from the above work in an approved manner. The work shall include all necessary cutting and bending of reinforcing steel, structural steel, or miscellaneous metal work found embedded in the existing structures.
- B. The Contractor shall dismantle and remove all existing equipment, piping, and other appurtenances required for the completion of the work. Where called for or required, the contractor shall cut existing pipelines for the purpose of making connections thereto. Anchor bolts for equipment and structural steel removed shall be cut off one inch below the concrete surface. Surface shall be finished as specified in the Contract Documents.
- C. At the time that a new connection is made to an existing pipeline, additional new piping, extending to and including a new valve, shall be installed. Pipe anchorage, if required, is part of the installation shall also be installed as directed by the County.
- D. No existing structure, equipment, or appurtenance shall be shifted, cut, removed, or otherwise altered except with the express approval of and to the extent approved by the County.
- E. When removing materials or portions of existing utility pipelines and/or structures or when making openings in walls and partitions, the Contractor shall take all precautions and use all necessary barriers and other protective devices so as not to damage the structures beyond the limits necessary for the new work, and not to damage the structures or contents by falling or flying debris. Unless otherwise permitted, line drilling will be required in cutting existing concrete.
- F. Materials and equipment removed in the course of making alterations and additions shall remain the property of the County, except that items not salvageable, as determined by the County, shall become the property of the Contractor to be disposed of by him off the

work site at his own place of disposal. Operating equipment shall be thoroughly cleaned, lubricated, and greased for protection during prolonged storage.

- G. All alterations to existing utility pipes and structures shall be done at such time and in such manner as to comply with the approved time schedule. So far as possible before any part of the work is started, all tools, equipment, and materials shall be assembled and made ready so that the work can be completed without delay.
- H. All workmanship and new materials involved in constructing the alterations shall conform to the General Specifications for the classes of work insofar as such specifications are applicable.
- I. All cutting of existing concrete or other material to provide suitable bonding to new work shall be done in a manner to meet the requirements of the respective section of these Specifications covering the new work. When not covered, the work shall be carried on in the manner and to the extent directed by the Resident Project Representative.
- J. Surfaces of seals visible in the completed work shall be made to match as nearly as possible the adjacent surfaces.
- K. Non-shrink grout shall be used for setting wall castings, sleeves, leveling pump bases, doweling anchors into existing concrete and elsewhere as shown.
- L. Where necessary or required for the purpose of making connections, the Contractor shall cut existing pipelines in a manner to provide an approved joint. Where required, he shall use flanges, or provide Dresser Couplings, all as required.
- M. The Contractor shall provide flumes, hoses, piping and other related items to divert or provide suitable plugs, bulkheads, or other means to hold back the flow of water or other liquids, all as required in the performance of the work under this Contract.
- N. Care shall be taken not to damage any part of existing buildings or foundations or outside structures.

3.02 CONNECTING TO EXISTING PIPING AND EQUIPMENT

The Contractor shall verify exact location, material, alignment, joint, etc. of existing piping and equipment prior to making the connections called out in the Drawings. The verifications shall be performed with adequate time to correct any potential alignment or other problems prior to the actual time of connection. A Manatee County representative must be present for all tie-ins for a visual inspection.

3.03 REMOVAL AND ABANDONMENT OF ASBESTOS CEMENT PIPE AND APPURTENANCES

- A. All work associated with the removal or abandonment of existing asbestos cement pipe and appurtenances shall be performed by a licensed asbestos abatement contractor or subcontractor registered in the State of Florida. After removal of the facilities, all trenches shall be backfilled in accordance with the Contract Documents. The cost of disposing of the removed materials shall be borne by the Contractor.
- B. The asbestos abatement contractor or subcontractor shall contact the appropriate regulatory agencies prior to removal or abandonment of any asbestos material and shall

obtain all required permits and licenses and issue all required notices. The Contractor shall be responsible for all fees associated with permits, licenses and notices to the governing regulatory agencies. An asbestos manifest form must accompany each and every shipment of such pipe or pipe material waste to the Manatee County Lena Road Landfill. Prior to each shipment, a minimum of 24 hours notice to the Landfill field office (Phone #748-5543) is required.

- C. All work associated with removal or abandonment of asbestos cement pipe and appurtenances shall be performed in accordance with the standards listed below and all other applicable local, State, or Federal standards.
 - 1. Florida Administrative Code, Chapter 62-257, "Asbestos Program".
 - 2. National Emission Standards Hazardous Air Pollution (NESHAP), 40 CFR, Part 61, Subpart M, latest revision.
 - 3. Occupational Safety and Health Act, 29 CFR, 1910.1001 - Asbestos.
 - 4. Title 40 CFR, Part 763, Asbestos.
 - 5. Florida Statute Title XXXII, Chapter 469, Asbestos Abatement.

3.04 IN-PLACE GROUTING OF EXISTING PIPE

- A. Where water and wastewater utility pipes are to be abandoned in place, they shall be filled with a sand/cement grout as specified herein. When such pipes are constructed with asbestos cement materials, the abandonment activities shall be performed by a licensed asbestos abatement contractor as specified in these Specifications.
- B. Grout shall be injected within the pipe sections indicated on the Drawings. The ends of these sections shall be capped and/or plugged. The grouting program shall consist of pumping sand-cement grout with suitable chemical additives at pressures necessary to fill the pipe sections shown on the Drawings to prevent the potential for future collapse.
- C. The pump used for grouting should be a continuous flow, positive displacement model with a pugmill type mixing vat having a minimum shaft speed of 60 rpm and incorporated as an integral part of the equipment. Alternate equipment may be used subject to the approval of the County. The rate of pumping shall not exceed six (6) cubic feet per minute. The pumping pressures shall be in the range of 100 to 150 psi.
- D. The Contractor shall provide standpipes and/or additional means of visual inspection as required by the County to determine if adequate grout material has filled the entire pipe section(s). The Contractor shall make necessary provisions for the County's representative to monitor all grouting operations.
- E. All pipe to be abandoned shall be capped or plugged with a fitting or material that will prevent soil or other material from entering the pipe. All caps and plugs shall be subject to approval by the County.

END OF SECTION

SECTION 02100 SITE PREPARATION

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This Section covers clearing, grubbing and stripping of the project site and/or along the pipeline route.
- B. The Contractor shall clear and grub all of the area within the limits of construction or as required, which includes, but is not limited to utility easements. The width of the area to be cleared shall be reviewed by the County prior to the beginning of any clearing.
- C. The Contractor's attention is directed to any Soil Erosion and Sediment Control Ordinances in force in Manatee County. The Contractor shall comply with all applicable sections of these ordinances.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 CLEARING

The surface of the ground, for the area to be cleared and grubbed shall be completely cleared of all timber, brush, stumps, roots, grass, weeds, rubbish and all other objectionable obstructions resting on or protruding through the surface of the ground. However, trees shall be preserved as hereinafter specified unless otherwise designated by the County. Clearing operations shall be conducted so as to prevent damage to existing structures and installations and to those under construction, so as to provide for the safety of employees and others. Soil erosion control devices such as hay bales and silt fences shall be installed to satisfy all Federal, State and County requirements.

3.02 GRUBBING

Grubbing shall consist of the complete removal of all stumps, roots larger than 1-1/2 inches in diameter, matted roots, brush, timber, logs and any other organic or metallic debris not suitable for foundation purposes, resting on, under or protruding through the surface of the ground to a depth of 18 inches below the subgrade. All depressions excavated below the original ground surface for or by the removal of such objects, shall be refilled with suitable materials and compacted to a density conforming to the surrounding ground surface.

3.03 STRIPPING

In areas so designated, topsoil shall be stockpiled. Topsoil so stockpiled shall be protected until it is placed as specified. The County shall have the option to receive all excess topsoil materials. The Contractor shall pay all equipment and labor cost to deliver excess top soil material to a remote site chosen by the County within a five mile radius of the construction site. Should County not choose to receive any or all excess topsoil materials, the Contractor shall dispose of said material at no additional cost to County.

3.04 DISPOSAL OF CLEARED AND GRUBBED MATERIAL

The Contractor shall dispose of all material and debris from the clearing and grubbing operation by hauling such material and debris off site. The cost of disposal (including hauling) of cleared and grubbed material and debris shall be considered a subsidiary obligation of the Contractor; the cost of which shall be included in the prices bid for the various classes of work.

3.05 PRESERVATION OF TREES

Those trees which are not designated for removal by the County shall be carefully protected from damage. The Contractor shall erect such barricades, guards and enclosures as may be considered necessary by him for the protection of the trees during all construction operation.

3.06 PRESERVATION OF DEVELOPED PRIVATE PROPERTY

- A. The Contractor shall exercise extreme care to avoid unnecessary disturbance of developed private property adjacent to proposed project site. Trees, shrubbery, gardens, lawns and other landscaping, which are not designated by the County to be removed, shall be replaced and replanted to restore the construction easement to the condition existing prior to construction.
- B. All soil preservation procedures and replanting operations shall be under the supervision of a nursery representative experienced in such operations.
- C. Improvements to the land such as fences, walls, outbuildings and other structures which of necessity must be removed, shall be replaced with equal quality materials and workmanship.
- D. The Contractor shall clean up the construction site across developed private property directly after construction is completed upon approval of the County.

3.07 PRESERVATION OF PUBLIC PROPERTY

The appropriate paragraphs of these Specifications shall apply to the preservation and restoration of public lands, parks, rights-of-way, easements and all other damaged areas. This includes, but is not limited to the trimming of trees damaged by contractor's equipment.

END OF SECTION

SECTION 02220 EXCAVATION, BACKFILL, FILL AND GRADING FOR STRUCTURES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Structural excavation shall consist of the removal of material for the construction of foundations for structures and other excavation designated on the drawings or in these specifications.
- B. Structural excavation and backfill shall consist of furnishing material, if necessary and placing and compacting backfill material around structures to the lines and grades designated on the drawings, as specified or directed by the County.
- C. Structural excavation and backfill shall include the furnishing of all materials, equipment and other facilities which may be necessary to perform the excavations, place and compact the backfill, install sheeting and bracing, and carry out any necessary dewatering. It shall also include the wasting or disposal of surplus excavated material in a manner and in locations approved by the County.
- D. The Contractor is responsible for the protection of every tree which is scheduled to remain in the project area. This includes trees which may or may not be shown on the plans. Every tree shall be adequately protected in place at no additional cost to the County. This includes, but is not limited to, protecting the root systems and adjusting grades as necessary for tree/root protection.

1.02 QUALITY ASSURANCE

- A. Testing Agency:
 - 1. In place soil compaction tests shall be performed by a qualified testing laboratory.
 - 2. Compaction tests shall be taken every 500 feet, except in the road crossings or road shoulders. Tests are to be taken according to current FDOT Standards.
- B. Reference Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. ASTM D1557, Moisture-Density Relations of Soils Using 10-lb. (4.5-kg) Rammer and 18-in. (457-mm) Drop.

1.03 JOB CONDITIONS

- A. The Contractor shall provide, operate and maintain all necessary pumps, discharge lines, well points, etc., in sufficient number and capacity to keep all excavation, bases, pits, etc., free from seepage, standing or running water at all times throughout the period of construction.
- B. The Contractor shall assume all responsibility for the security of the excavation required, employing bracing, lining or other accepted means necessary to accomplish same.
- C. Excavated areas shall be cleared of all debris, water, slush, muck, clay and soft or loose earth and shall be conditioned to the entire satisfaction of the County.

- D. All excavated material unsuitable for use or which will not be used shall be disposed of in a manner consistent with State and County regulation.
- E. All unsuitable organic materials, roots, logs, etc., found during excavation shall be removed by the Contractor and the trench shall be refilled with suitable material.

PART 2 PRODUCTS

2.01 MATERIAL FOR CONTROLLED FILL

- A. Composition: Only approved material free from organic matter and lumps of clay, shall be used for backfill. Excavated earth free from debris or organic material may be used for backfilling foundations or fill.
- B. Crushed stone and shell shall meet or exceed current FDOT Standards.

2.02 UNSUITABLE MATERIAL

Unsuitable material shall be defined as highly organic soil per ASTM D2487 Group PT. This includes, but is not limited to, such items as topsoil, roots, vegetable matter, trash, debris, and clays that cannot be dried sufficiently to obtain specified compaction.

PART 3 EXECUTION

3.01 INSPECTION

- A. The Contractor shall verify that work preceding the affected work of this Section has been satisfactorily completed.
- B. Conditions adversely affecting the work of this Section shall be corrected to the satisfaction of the County.

3.02 REMOVAL OF UNSUITABLE MATERIALS

- A. The Contractor shall remove unsuitable material from within the limits of the Work.
- B. Materials meeting requirements for controlled fill shall be stockpiled as necessary and in such a manner satisfactory to the County.
- C. All material excavated shall be placed so as to minimize interference with public travel and to permit proper access for inspection of the work.

3.03 EXCAVATION

- A. When concrete or shell subbase footing is to rest on an excavated surface, care shall be taken not to disturb the natural soil. Final removal and replacement of the foundation material and subbase compaction to grade shall not be made until just before the concrete or masonry is placed.
- B. When any structural excavation is completed, the Contractor shall notify the County who will make an inspection of the excavation. No concrete or masonry shall be placed until the excavation has been approved by the County.

- C. The elevations of the footing bottom and the base slab as shown on the Drawings, shall be considered as approximate and the County may order in writing, such changes in dimensions or elevations of the footings and slab base as necessary to secure satisfactory foundations.
- D. All excavation shall be made within an area bounded by lines five feet outside and parallel to the exterior walls of the structure to allow for correct forming, shoring and inspection of foundation work. Pouring of concrete against earth side walls shall not be permitted.
- E. If the ground is excavated below the grade called for by the Drawings or becomes unstable due to the Contractor's carelessness or operations, the ground shall be excavated to undisturbed native soil before continuing concreting operations.
- F. If in the opinion of the County, the material at or below the normal grade of the bottom of the trench is unsuitable for pipe or structure foundation, it shall be removed to the depth directed by the County and if so directed, replaced by crushed stone or washed shell.

3.04 STRUCTURAL BACKFILL

- A. Structural backfill shall not be placed until the footings or other portions of the structure or facility have been inspected by the County and approved for backfilling.
- B. A minimum of 1-1/2" layer of lean concrete shall be placed as a working mat for the concrete base slabs and footings if required by the County.
- C. Fill shall be placed in uniform layers not more than 12" thick and compacted to a minimum of 98 percent of the maximum density determined by ASTM D1557, Method A or C, or as directed by the County. The Contractor shall securely tamp the backfill with pneumatic rammer around all wall foundations. The method of compaction shall be satisfactory to the County.
- D. Compaction of structural backfill by ponding and jetting may be permitted when, as determined by the County: the backfill material is of such character that it will be self-draining when compacted; foundation materials will not soften or be otherwise damaged by the applied water; no damage from hydrostatic pressure will result to the structure. Ponding and jetting within two feet below finished subgrade shall not be permitted in roadway areas. At the discretion of the County, ponding and jetting may be permitted with compaction layers not to exceed four feet.
- E. Surplus material not used on-site shall be removed and disposed of off-site by the Contractor. In no case shall surplus material be deposited on adjacent lands. Fill used for grading shall be placed in layers not to exceed 12 inches in thickness and shall be compacted to a density equal or greater to that of the surrounding natural ground.

3.05 BACKFILLING AROUND STRUCTURES

- A. Common fill and structural fill are specified for use as backfill against the exterior walls of the structures. Fill shall be placed in layers having a maximum thickness of eight (8) inches in loose state and shall be compacted sufficiently to prevent settlement. If compaction is by rolling or ramming, material shall be wetted down as required. Where material can be suitably compacted by jetting or puddling, the Contractor may use one of these methods. No boulders shall be allowed to roll down the slopes and hit the walls.

- B. Backfilling shall be carried up evenly on all walls of an individual structure simultaneously. A variation of two (2) feet in elevation will be the maximum allowable. No backfill shall be allowed against walls until the walls and their supporting slabs, if applicable, have attained sufficient strength. Backfilling shall be subjected to approval by the County.
- C. In locations where pipes pass through building walls, the Contractor shall take the following precautions to consolidate the refill up to an elevation of at least one foot above the bottom of the pipes:
 - 1. Place structural fill in such areas for a distance of not less than three feet either side of the center line of the pipe in level layers not exceeding 6-inches in depth.
 - 2. Wet each layer to the extent directed and thoroughly compact each layer with a power tamper to the satisfaction of the County.
 - 3. Structural fill shall be of the quality specified under Part 2 of this Section.
- D. The surface of filled areas shall be graded to smooth true lines, strictly conforming to grades indicated on the grading plan. No soft spots or uncompacted areas shall be allowed in the work.
- E. Temporary bracing shall be provided as required during construction of all structures to protect partially completed structures against all construction loads, hydraulic pressure and earth pressure. The bracing shall be capable of resisting all loads applied to the walls as a result of backfilling.

3.06 FIELD QUALITY CONTROL

- A. The density of soil in place shall be a minimum of 95 percent in accordance with ASTM test 1557-70T, Method A or C.

END OF SECTION

SECTION 02221 TRENCHING, BEDDING AND BACKFILL FOR PIPE

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals necessary to perform all excavation, backfill, fill, grading, trench protection or other related work required to complete the piping work shown on the Drawings and specified herein. The work shall include, but not be limited to: vaults; duct conduit; pipe; roadways and paving; backfilling; required fill or borrow operations; grading; disposal of surplus and unsuitable materials; and all related work such as sheeting, bracing and dewatering.
- B. Prior to commencing work, the Contractor shall examine the site and review test borings if available, or undertake his own subsurface investigations and take into consideration all conditions that may affect his work.
- C. The Contractor is responsible for the protection of every tree which is scheduled to remain in the project area. This includes trees which may or may not be shown on the plans. Every tree shall be adequately protected in place at no additional cost to the County. This includes, but is not limited to protecting the root systems and adjusting grades as necessary for tree/root protection.

1.02 PROTECTION

- A. Sheeting and Bracing in Excavations:
 - 1. In connection with construction of underground structures, the Contractor shall properly construct and maintain cofferdams. These shall consist of: sheeting and bracing as required to support the sides of excavations, to prevent any movement which could in any way diminish the width of the excavation below that necessary for proper construction and to protect adjacent structures, existing yard pipe and/or foundation material from disturbance, undermining, or other damage. Care shall be taken to prevent voids outside of the sheeting, but if voids are formed, they shall be immediately filled and rammed.
 - 2. Trench sheeting for pipes: no sheeting is to be withdrawn if driven below, mid-diameter of any pipe and no wood sheeting shall be cut off at a level lower than one foot above the top of any pipe unless otherwise directed by the County. During the progress of the work, the County may direct the Contractor in writing to leave additional wood sheeting in place. If steel sheeting is used for trench sheeting, removal shall be as specified above, unless written approval is given for an alternate method of removal.
 - 3. All sheeting and bracing not left in place shall be carefully removed in such a manner as not to endanger the construction or other structures, utilities, existing piping, or property. Unless otherwise approved or indicated on the Drawings or in the Specification, all sheeting and bracing shall be removed after completion of the piping or structure, care being taken not to disturb or otherwise injure the pipeline or finished masonry. All voids left or caused by withdrawal of sheeting shall be immediately refilled with sand by ramming with tools specifically made for that purpose, by watering, or as may otherwise be directed.
 - 4. The Contractor shall construct, to the extent he deems it desirable for his method of operation, the cofferdams and sheeting outside the neat lines of the pipeline trench or foundation unless otherwise indicated on the Drawings or directed by the

County. Sheeting shall be plumb and securely braced and tied in position. Sheeting, bracing and cofferdams shall be adequate to withstand all pressures to which the pipeline or structure will be subjected. Pumping, bracing and other work within the cofferdam shall be done in a manner to avoid disturbing any construction of the pipeline or the enclosed masonry. Any movement or bulging which may occur shall be corrected by the Contractor at his own expense so as to provide the necessary clearances and dimensions.

5. Drawings of the cofferdams and design computations shall be submitted to the County and approved prior to any construction. However, approval of these drawings shall not relieve the Contractor of the responsibility for the cofferdams. The drawings and computations shall be prepared and stamped by a Registered Professional Engineer in the State of Florida and shall be in sufficient detail to disclose the method of operation for each of the various stages of construction, if required, for the completion of the pipeline and substructures.

B. Dewatering, Drainage and Flotation

1. The Contractor shall construct and place all pipelines, concrete work, structural fill, bedding rock and limerock base course, in-the-dry. In addition, the Contractor shall make the final 24" of excavation for this work in-the-dry and not until the water level is a minimum of 6" below proposed bottom of excavation.
2. The Contractor shall, at all times during construction, provide and maintain proper equipment and facilities to remove promptly and dispose of properly all water entering excavation and keep such excavations dry so as to obtain a satisfactory undisturbed subgrade foundation condition until the fill, structure, or pipes to be built thereon have been completed to such extent that they will not be floated or otherwise damaged by allowing water levels to return to natural elevations.
3. Dewatering shall at all times be conducted in such a manner as to preserve the natural undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation.
4. Wellpoints may be required for dewatering the soil prior to final excavation for deeper in-ground structures or piping and for maintaining the lowered groundwater level until construction has been completed to avoid the structure, pipeline, or fill from becoming floated or otherwise damaged. Wellpoints shall be surrounded by suitable filter sand and no fines shall be removed by pumping. Pumping from wellpoints shall be continuous and standby pumps shall be provided.
5. The Contractor shall furnish all materials and equipment to perform all work required to install and maintain the proposed drainage systems for handling groundwater and surface water encountered during construction of structures, pipelines and compacted fills.
6. Where required, the Contractor shall provide a minimum of two operating groundwater observation wells at each structure to determine the water level during construction of the pipeline or structure. Locations of the observation wells shall be at structures and along pipelines as approved by the County prior to their installation. The observation wells shall be extended to 6 inches above finished grade, capped with screw-on caps protected by 24" x 24" wide concrete base and left in place at the completion of this Project.
7. Prior to excavation, the Contractor shall submit his proposed method of dewatering and maintaining dry conditions to the County for approval. Such approval shall not relieve the Contractor of the responsibility for the satisfactory performance of the system. The Contractor shall be responsible for correcting any disturbance of natural bearing soils for damage to pipeline or structures caused by an inadequate

- dewatering system or by interruption of the continuous operation of the system as specified.
8. As part of his request for approval of a dewatering system, the Contractor shall demonstrate the adequacy of the proposed system and wellpoint filter sand by means of a test installation. Discharge water shall be clear, with no visible soil particles in a one quart sample. Discharge water shall not flow directly into wetlands or Waters of the State as defined by FDEP and SWFWMD.
 9. During backfilling and construction, water levels shall be measured in observation wells located as directed by the County.
 10. Continuous pumping will be required as long as water levels are required to be below natural levels.

PART 2 PRODUCTS

2.01 MATERIALS

A. General

1. Materials for use as fill and backfill shall be described below. For each material, the Contractor shall notify the County of the source of the material and shall furnish the County, for approval, a representative sample weighing approximately 50 pounds, at least ten calendar days prior to the date of anticipated use of such material.
2. Additional materials shall be furnished as required from off-site sources and hauled to the site.

B. Structural Fill

1. Structural fill in trenches shall be used below spread footing foundations, slab-on-grade floors and other structures as backfill within three feet of the below grade portions of structures.
2. Structural fill material shall be a minimum of 60 percent clean sand, free of organic, deleterious and/or compressible material. Minimum acceptable density shall be 98 percent of the maximum density as determined by AASHTO T-180. Rock in excess of 2-1/2" in diameter shall not be used in the fill material. If the moisture content is improper for attaining the specified density, either water shall be added or material shall be permitted to dry until the proper moisture content for compaction is reached.

C. Common Fill

1. Common fill material shall be free from organic matter, muck or marl and rock exceeding 2-1/2" in diameter. Common fill shall not contain broken concrete, masonry, rubble or other similar materials. Existing soil may be used to adjust grades over the site with the exception of the construction area.
2. Material falling within the above specification, encountered during the excavation, may be stored in segregated stockpiles for reuse. All material which, in the opinion of the County, is not suitable for reuse shall be spoiled as specified herein for disposal of unsuitable materials by the Contractor.

D. Crushed Stone

1. Crushed stone may be used for pipe bedding, manhole bases, as a drainage layer below structures with underdrains and at other locations indicated on the Drawings.
2. Crushed stone shall be size No. 57 with gradation as noted in Table 1 of Section 901 of Florida Department of Transportation, Construction of Roads and Bridges.

PART 3 EXECUTION

3.01 TRENCH EXCAVATION AND BACKFILLING

- A. Excavation for all trenches required for the installation of pipes and electrical ducts shall be made to the depths indicated on the Drawings and in such manner and to such widths as will give suitable room for laying the pipe or installing the ducts within the trenches.
- B. Rock shall be removed to a minimum 6" clearance around the bottom and sides of all the pipe or ducts being laid.
- C. Where pipes or ducts are to be laid in limerock bedding or encased in concrete, the trench may be excavated by machinery to or just below the designated subgrade provided that the material remaining in the bottom of the trench is no more than slightly disturbed.
- D. Where the pipes or ducts are to be laid directly on the trench bottom, the lower part of the trenches shall not be excavated to grade by machinery. The last of the material being excavated manually, shall be done in such a manner that will give a flat bottom true to grade so that pipe or duct can be evenly supported on undisturbed material. Bell holes shall be made as required.
- E. Backfilling over pipes shall begin as soon as practicable after the pipe has been laid, jointed and inspected and the trench filled with suitable compacted material to the mid-diameter of the pipe.
- F. Backfilling over ducts shall begin not less than three days after placing concrete encasement.
- G. All backfilling shall be prosecuted expeditiously and as detailed on the Drawings.
- H. Any space remaining between the pipe and sides of the trench shall be packed full by hand shovel with selected earth, free from stones having a diameter greater than 2" and thoroughly compacted with a tamper as fast as placed, up to a level of one foot above the top of the pipe.
- I. The filling shall be carried up evenly on both sides with at least one man tamping for each man shoveling material into the trench.
- J. The remainder of the trench above the compacted backfill, as just described above, shall be filled and thoroughly compacted by rolling, ramming, or puddling, as the County may direct, sufficiently to prevent subsequent settling.

END OF SECTION

SECTION 02223 EXCAVATION BELOW GRADE AND CRUSHED STONE OR SHELL REFILL

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. If in the opinion of the County, the material at or below the normal grade of the bottom of the trench is unsuitable for pipe or structure foundation, it shall be removed to the depth directed by the County and replaced by crushed stone or washed shell.

PART 2 PRODUCTS (NOT USED)

PART 3 MATERIALS

3.01 EXCAVATION AND DRAINAGE

- A. Whatever the nature of unstable material encountered or the groundwater conditions, trench stabilization shall be complete and effective.
- B. Should the Contractor excavate below the grade shown on the Contract drawings because of negligence or for his own convenience; due to failure in properly dewatering the trench; disturbs the subgrade before dewatering is sufficiently complete; he shall be directed by the County to excavate below grade. The work of excavating below grade and furnishing and placing the approved refill material shall be performed at the Contractor's expense.

3.02 REFILL

- A. Should the material at the level of trench bottom consist of fine sand, sand and silt or soft earth, the subgrade material shall be removed as directed by the County and the excavation shall be refilled with crushed stone or washed shell.

END OF SECTION

SECTION 02260 FINISH GRADING

PART 1 GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall finish grade sub-soil.
- B. The Contractor shall cut out areas to receive stabilizing base course materials for paving and sidewalks.
- C. The Contractor shall place, finish grade and compact top soil.

1.02 PROTECTION

The Contractor shall prevent damage to existing fencing, trees, landscaping, natural features, bench marks, pavement and utility lines. Damage shall be corrected at no cost to the County.

PART 2 PRODUCTS

- A. Topsoil: Shall be friable loam free from subsoil, roots, grass, excessive amount of weeds or other organics, stones, and foreign matter; acidity range (pH) of 5.5 to 7.5; containing a minimum of 4 percent and a maximum of 25 percent organic matter. The Contractor may use topsoil stockpiles on site if they conform to these requirements.

PART 3 EXECUTION

3.01 SUB-SOIL PREPARATION

- A. The Contractor shall rough grade sub-soil systematically to allow for a maximum amount of natural settlement and compaction. Uneven areas and low spots shall be eliminated. Debris, roots, branches or other organics, stones, and sub-soil shall be removed by the Contractor and disposed of in a manner consistent with the latest Manatee County Standards as well as any affected regulatory agency. Should contaminated soil be found, the Contractor shall notify the County.
- B. The Contractor shall cut out areas to sub-grade elevation to stabilize base material for paving and sidewalks.
- C. The Contractor shall bring sub-soil to required profiles and contour grades gradually; and blend slopes into level areas.
- D. The Contractor shall slope the structure grade a minimum of two (2) inches in ten (10) feet unless indicated otherwise on the Drawings.
- E. The Contractor shall cultivate sub-grade to a depth of 3 inches where the topsoil is to be placed. He shall repeat cultivation in areas where equipment use has compacted sub-soil.
- F. The Contractor shall not make grade changes which causes water to flow onto adjacent lands.

3.02 PLACING TOPSOIL

- A. The Contractor shall place topsoil in areas where seeding, sodding and planting is to be performed. He shall place from the following minimum depths, up to finished grade elevations:
 - 1. 6 inches for seeded areas
 - 2. 4-1/2 inches for sodded areas
 - 3. 24 inches for shrub beds
 - 4. 18 inches for flower beds
- B. The Contractor shall use topsoil in a dry state as determined by the County. He shall place the material during dry weather.
- C. The Contractor shall use fine grade topsoil eliminating rough and low areas to ensure positive drainage. He shall maintain levels, profiles and contours of the sub-grades.
- D. The Contractor shall remove stone, roots, grass, weeds, debris, and other organics or foreign material while spreading the material.
- E. The Contractor shall manually spread topsoil around trees, plants and structures to prevent damage which may be caused by grading equipment.
- F. The Contractor shall lightly compact and place the topsoil.

3.03 SURPLUS MATERIAL

- A. The Contractor shall remove surplus sub-soil and topsoil from site at his expense.
- B. The Contractor shall leave stockpile areas and entire job site clean and raked, ready for landscaping operations.

END OF SECTION

SECTION 02276 TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work specified in this Section consists of the design, provision, maintenance and removal of temporary erosion and sedimentation controls as necessary.
- B. Temporary erosion controls include, but are not limited to: grassing, mulching, netting, watering, and the reseeding of on-site surfaces and spoil and borrow area surfaces, interceptor ditches at ends of berms and other such work at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the County.
- C. Temporary sedimentation controls include, but are not limited to: silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which shall ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the County.
- D. The Contractor is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.

1.02 REFERENCE DOCUMENTS

- A. Florida Building Code.
- B. FDEP/COE Dredge and Fill Regulations and/or Permit as applicable.
- C. SWFWMD Permit Regulations and/or Permit as applicable.
- D. Florida Stormwater, Erosion and Sedimentation Control Inspector's Manual.

PART 2 PRODUCTS

2.01 EROSION CONTROL

- A. Netting - fabricated of material acceptable to the County.
- B. Seed and sod.

2.02 SEDIMENTATION CONTROL

- A. Bales - clean, seed free cereal hay type.
- B. Netting - fabricated of material acceptable to the County.
- C. Filter stone - crushed stone conforming to Florida Dept of Transportation specifications.
- D. Concrete block - hollow, non-load-bearing type.
- E. Concrete - exterior grade not less than one inch thick.

PART 3 EXECUTION

3.01 EROSION CONTROL

- A. Minimum procedures for grassing shall be:
1. Scarify slopes to a depth of not less than six inches and remove large clods, rock, stumps, roots larger than 1/2 inch in diameter and debris.
 2. Sow seed within twenty-four (24) hours after the ground is scarified with either mechanical seed drills or rotary hand seeders.
 3. Apply mulch loosely and to a thickness of between 3/4-inch and 1-1/2 inches.
 4. Apply netting over mulched areas on sloped surfaces.
 5. Roll and water seeded areas in a manner which will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.

3.02 SEDIMENTATION CONTROL

- A. The Contractor shall install and maintain silt dams, traps, barriers, and appurtenances as shown on the approved descriptions and working drawings. Deteriorated hay bales and dislodged filter stone shall be replaced by the Contractor at his expense.

3.03 PERFORMANCE

- A. The Contractor, at his own expense, shall immediately take whatever steps are necessary to correct any deficiencies of the temporary erosion and sediment control measures employed if they fail to produce results or do not comply with the requirements of the State of Florida or any other federal, governmental or regulatory agency.

END OF SECTION

SECTION 02325 ROAD AND RAILROAD CROSSINGS

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish all labor, equipment, materials and incidentals required to install road or railroad crossings as shown on the Drawings and as specified herein.

1.02 OPERATIONS ON MANATEE COUNTY OR STATE OF FLORIDA PROPERTY

- A. All work affecting Manatee County, Florida Department of Transportation, any other governmental agency's right-of-way or facilities, or railroad right-of-way shall be carried out to the full satisfaction of the applicable Department's authorized representative. The Contractor shall be responsible to meet any and all requirements of the Department of Transportation, railroad, or other agency pertaining to the specific project and shall conduct all his work accordingly.
- B. Prior to the start of the jacking operation, a detailed jacking plan shall be submitted to the County for review and approval. No work shall be permitted until the submittals are accepted. A Bore Path Report shall be submitted with in three (3) days of completion of the bore.
- C. Prior to construction, a minimum of three working days written notice prior to start of the actual work shall be given to the County and to the Florida Department of Transportation or other applicable agency.
- D. The Contractor shall install, maintain and leave in place any sheeting, underpinning, cribbing and other related items (other than that required for the jacking pits) to support any structures or facility on the right-of-way owned by either Manatee County, Florida Dept. of Transportation or other governmental agency or railroad entity. The Contractor, at his expense, may be directed by the Department of Transportation, other applicable agency, or the County, to leave sheeting in place.
- E. The Contractor shall perform all necessary soil test borings to determine actual soil conditions and shall utilize the results of said borings to determine the procedures required for each jack and bore operation, including, but not limited to, the presence of rock and necessary dewatering requirements.
- F. No wires, equipment, or other appurtenances shall be permitted to be placed across or pass across State property without the express written permission of the Department of Transportation's authorized representative.
- G. All equipment used by the Contractor on State property may be inspected by the State and shall not be used if it is deemed unsatisfactory by an authorized State representative. State highways shall be kept free of obstructions at all times.
- H. No blasting shall be permitted under or adjacent to any State highways.
- I. The Contractor shall be responsible for all damages arising from his negligence or failure to comply with any State or Manatee County regulations or requirements or deviations from the Contract Documents.

- J. All State highway crossings shall be performed and completed in a manner fully satisfactory to the Department of Transportation and Manatee County.
- K. Traffic control requirements and procedures are detailed in Section 01570 of this specification.

1.03 SHOP DRAWINGS

The Contractor shall furnish working drawings showing all fabrication and construction details for the jacked crossings.

1.04 SUBMITTALS

- A. Contractor shall submit a Jacking Plan that includes the following:
 - 1. Site layout plan for entry and exit pit locations, drawn to scale, depicting the position of all required equipment, access points, existing facilities to remain in place, existing traffic lanes to be maintained in operation, office trailers and storage sites.
 - 2. Qualification information on jack/bore contractor.
 - 3. Manufacturer's information on equipment to be used.
 - 4. Methods and materials for retaining walls for jacking and receiving pits.
- B. Bore Report that details final alignment, dimensions, and record documentation.

PART 2 PRODUCTS

2.01 MATERIALS

Sleeve, carrier pipe, skids, insulation, bulkheads, etc. shall be per contract plans.

PART 3 EXECUTION

3.01 JACKING SLEEVE

- A. The Contractor shall provide all labor, material, equipment and appurtenances required for jacking the sleeves beneath the roadway or railroad tracks. The steel sleeve shall be welded steel pipe and jacked in one continuous operation at the locations shown on the drawings. Once the operation starts, jacking shall not be discontinued. Proper alignment and elevation of the sleeves shall be consistently maintained throughout the jacking operation.
- B. The Contractor shall shore the jacking pits with sheeting or such other materials as required. Sheeting shall be driven to a sufficient depth below the invert of the steel sleeve to resist any pressure developed by the soil outside the jacking pit. Sheeting shall terminate not less than 3-feet, 6-inches above existing grade.
- C. The sections of steel sleeve shall be field welded in accordance with the applicable portions of AWWA C-206 for field welded water pipe joints. Steel sleeve shall receive one coat of Tnemec 46H-413 Hi-Build Tnemec-tar applied in accordance with manufacturer's recommendation.
- D. At the completion of the jacking operations, the Contractor shall be required to leave all

sheeting in place. The top of the sheeting shall be cut off 36-inches below finished grade.

- E. The Contractor shall be responsible for preventing voids outside the steel sleeves. Should they occur, the Contractor may be directed to fill them with grout in a method approved by the County. The Contractor shall exercise care in the sleeve removal to prevent voids.
- F. The Contractor shall be responsible for furnishing, installing and removing the thrust block or restraint which was employed in driving the sleeve forward. No additional payment for the jacking restraint shall be made other than the unit price for this item. The entire jacking operation shall be discussed and accepted by the County prior to commencing jack and bore operation. After completion, the backup structures shall be removed in part or whole to permit construction of the pipeline in the sleeve.

3.02 INSTALLING PIPE IN SLEEVE

- A. The Contractor shall install the pipe in full conformity with the Contract Documents. The pipe shall be installed to the lines and grades required within the sleeve and placed to the approval of the County. The pipe shall be braced to the side and the top of the sleeve to prevent flotation or motion.
- B. A bulkhead shall be placed at the ends of the sleeve to keep the surrounding soil and material from migrating into the voids in the sleeve..

3.03 TESTING

The pipe shall be tested as provided in the Contract Document.

END OF SECTION

SECTION 02355 LUMBER LEFT IN PLACE

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish and install shoring and sheeting as necessary to provide adequate safety.

PART 2 PRODUCTS

2.01 MATERIALS

Wood for shoring and sheeting shall be green, rough cut hardwood planking.

PART 3 EXECUTION

3.01 INSTALLATION

- A. The Contractor shall furnish, install and maintain sheeting and bracing required to support the sides of excavations, to prevent any movement which could in any way diminish the width of the excavation below which is necessary for proper construction and to protect adjacent structures from undermining or other damage. If the County determines that insufficient or improper supports have been provided, he may order additional supports to be installed at the expense of the Contractor. Compliance with such orders shall not relieve or release the Contractor from his responsibility for the sufficiency of such supports. Care shall be taken to prevent voids outside of the sheeting. Should voids form, they shall be immediately filled and rammed.
- B. The Contractor shall embed and leave in place all sheeting, bracing and other related items as shown on the Contract Drawings. The County may direct that sheeting and bracing timber be cut off at a specified elevation. No additional payment or compensation shall be made for this work.
- C. Sheeting and bracing not left in place shall be removed carefully in such manner as not to endanger other structures, utilities, property, or proposed construction.
- D. The County may order sheeting and bracing to be left in place; however, this shall not relieve the Contractor from liability for damages to persons or property due to negligence or the failure on the part of the Contractor to leave in place sufficient sheeting and bracing to prevent any caving or moving of the ground.
- E. The Contractor shall receive no payment other than that included in the pipe bid item price for any timber used for sheeting bracing, or other related items.

END OF SECTION

SECTION 02444 FENCING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, material, equipment and incidentals necessary for complete installation of chain link fence systems. The fencing shall be installed according to manufacturer's specifications unless otherwise directed or authorized by the County.
- B. The Contractor's security fencing is at his expense and option and is not covered in this Section.

1.02 QUALITY ASSURANCE

- A. Standards of Manufacture shall comply with the standards of the Chain Link Fence Manufacturer's Institute for "Galvanized Steel Chain Link Fence Fabric" and as herein specified.
- B. Provide each type of steel fence and gates as a complete unit produced by a single manufacturer, including, but not limited to accessories, fittings, fasteners and appurtenances complete and ready for use.
- C. Acceptable Manufacturers: Anchor, Cyclone, or approved equal
- D. Erector Qualifications: The Contractor or approved subcontractor, must have a minimum of two years experience in similar fence installation.

1.03 SUBMITTALS

- A. Product Data:

For Steel Fences and Gates, the Contractor shall submit for review and approval to the County, five (5) copies of the manufacturer's technical data, details of fabrication, installation instructions and procedures for steel fences and gates. The Contractor shall be responsible for a copy of each instruction to be given to the Installer.
- B. Samples:

The Contractor shall submit two samples approximate size 6-inches long, or 6-inches square of fabric material, framework members and typical accessories to the County for review and approval.
- C. Certificates:

The Contractor shall provide manufacturer's certification that materials meet or exceed the Contract Document requirements.

PART 2 PRODUCTS

2.01 GENERAL

- A. The pipe sizes indicated are commercial pipe sizes.

- B. The tube sizes indicated are nominal outside dimension.
- C. Framework and appurtenances shall be finished with not less than minimum weight of zinc per sq. ft. and shall comply with the following:
 - 1. Pipe: ASTM A53 (1.8 oz. zinc psf)
 - 2. Square tubing: ASTM A 123 (2.0 oz. zinc psf)
 - 3. Hardware and Accessories: ASTM A 153 (zinc weight per Table I).
- D. All fence components shall be galvanically compatible.
- E. Vinyl coatings for fabric, posts, rails, gates, and all other fittings and components shall be thermally fused polyvinyl chloride; heavy mil coating per ASTM F 668.

2.02 FABRIC

Fabric shall be 0.148 inch (9 gage) steel wire, 2-inch diamond mesh and both top and bottom salvages shall be twisted and barbed for fabric over 60-inches high. Finish shall be hot dipped galvanized, ASTM A 392, Class II.

2.03 POSTS, RAILS AND BRACES

- A. End, Corner and Pull Posts:
 - 1. The Contractor shall furnish end, corner and pull posts of the minimum size and weight as follows:
 - a. Up to 5 foot fabric height
 - (1) 2.375-inch OD pipe weighing 3.65 pounds per linear ft.
 - (2) 2.50-inch square tubing weighing 5.59 pounds per linear foot.
 - b. Over 5 foot fabric height
 - (1) 2.875-inch OD pipe weighing 5.79 pounds per linear foot.
 - (2) 2.50-inch square tubing weighing 5.59 lbs. per linear foot.
- B. Line Post:
 - 1. The Contractor shall furnish line posts of the minimum sizes and weight as follows. Post shall be spaced 10 foot o.c. maximum, unless otherwise indicated:
 - a. Up to 5 foot fabric height.
 - (1) 1.90-inch OD pipe weighing 2.72 pounds per linear foot.
 - b. Over 5 foot fabric height.
 - (1) 2.375-inch OD pipe weighing 3.65 pounds per linear foot.
- C. Gate Posts:
 - 1. The Contractor shall furnish gate posts for supporting single gate leaf, or one leaf of a double gate installation, for nominal gate widths as follows:
 - a. Up to 6 feet wide.
 - (1) 2.875-inch OD pipe weighing 5.79 pounds per linear foot.
 - (2) 2-1/2 inch square tubing weighing 5.59 pounds per linear foot.
 - b. Over 6 feet and up to 13 feet wide.
 - (1) 4-inch OD pipe weighing 9.11 pounds per linear foot.
 - c. Over 13 feet and up to 18 feet wide.

- (1) 6.625 inches OD weighing 18.97 pounds per linear foot.
 - d. Over 18 feet.
 - (1) 8.625 inches OD weighing 28.55 pounds per linear foot.

D. Top Rails:

- 1. The Contractor shall furnish the following top rails unless otherwise indicated:
 - a. 1.660-inch OD pipe weighing 2.27 pounds per linear foot.

E. Post Brace Assembly:

- 1. The Contractor shall furnish bracing assemblies at the end, gate, at both sides of corner and pull posts, with the horizontal brace located at mid-height of the fabric.
- 2. Use 1.660-inch OD pipe weighing 2.27 pounds per linear foot for horizontal brace and 3/8-inch diameter rod with turnbuckles for diagonal truss.

F. Tension Wire:

- 1. The Contractor shall furnish tension wire consisting of galvanized 0.177 inch (7 gage) coiled spring wire as per ASTM A824 at the bottom of the fabric only.

G. Barbed Wire Supporting Arms:

- 1. The Contractor shall furnish pressed steel, wrought iron, or malleable iron barbed wire supporting arms, complete with provisions for anchorage to posts and attaching three rows of barbed wire to each arm. Supporting arms may be attached either to posts or integral with post top weather cap. The Contractor shall provide a single 45 degree arm for each post where indicated.

H. Barbed Wire:

- 1. The Contractor shall furnish barbed wire. It shall be 2 strand, 12-1/2 gauge wire with 14 gauge, 4-point barbs spaced 5-inch o.c., galvanized, complying with ASTM A121, Class 3.

I. Post Tops:

- 1. The Contractor shall furnish post tops. Tops shall be pressed steel, wrought iron, or malleable iron of ASTM F626 designed as a weathertight closure cap (for tubular posts). The Contractor shall furnish one cap for each post unless equal protection is afforded by a combination of post top cap and barbed wire supporting arm. The Contractor shall furnish caps with openings to permit through passage of the top rail.

J. Stretcher Bars:

- 1. The Contractor shall furnish stretcher bars. Bars shall be one piece lengths equal to the full height of the fabric, with a minimum cross-section of 3/16-inch x 3/4-inch. The Contractor shall provide one stretcher bar for each gate and end post and two bars for each corner and pull post, except where fabric is integrally woven into the post.

K. Stretcher Bar Bands:

1. The Contractor shall furnish stretcher bar bands. Bands shall be steel, wrought iron, or malleable iron, a maximum space of 15-inch o.c. to secure stretcher bars to end, corner, pull and gate posts.

2.04

GATES

- A. The Contractor shall provide fabricated gate perimeter frames of tubular members. Additional horizontal and vertical members shall ensure proper gate operation and attachment of fabric, hardware and accessories. The maximum space of the frame members shall not be more than 8-inches apart. Fabrication is as follows:
 1. Up to 5 feet high, or leaf width 8 feet or less.
 - a. 1.660-inch OD pipe weighing 2.27 pounds per linear foot.
 - b. 1.5 inch sq. tubing weighing 2.27 pounds per linear foot.
 2. Over 5 feet high, or leaf width exceeding 8 feet.
 - a. 1.90 inch OD pipe weighing 2.72 pounds per linear foot.
 - b. 2-inch square tubing weighing 2.60 pounds per linear foot.
- B. The Contractor shall assemble gate frames by welding or with special malleable or pressed steel fittings and rivets for rigid connections. He shall use the same fabric width as for the fence, unless otherwise indicated in the Contract Documents or authorized by the County. He shall install the fabric with stretcher bars at vertical edges. The bars may also be used at the top and bottom edges. The contractor shall attach stretchers to the gate frame at a maximum spacing of 15-inch o.c. He shall attach the hardware with rivets or by other means which will prevent removal or breakage.
- C. The Contractor shall install diagonal cross-bracing consisting of 3/8-inch diameter adjustable length truss rods on gates as necessary to ensure frame rigidity without sag or twist.
- D. The Contractor shall install barbed wire above the gates. He shall extend the end members of gate frames 12-inches above the top member which will be prepared for three strands of wire. The Contractor shall provide necessary clips for securing wire to extensions.
- E. Gate Hardware:
 1. The Contractor shall furnish the following hardware and accessories for each gate.
 - a. Hinges: Pressed or forged steel or malleable iron to suit gate size, non-lift-off type, offset to permit 180 degrees gate opening. Provide 1-1/2 pair of hinges for each leaf over six feet nominal height.
 - b. Latch: Forked type of plunger-bar type to permit operation from either side of gate with padlock eye as integral part of latch.
 - c. Keeper: Provide keeper for all vehicle gates, which automatically engages the gate leaf and holds it in the open position until manually released.
 - d. Double Gates: Provide gate stops for double gates, consisting of mushroom type of flush plate with anchors. Set in concrete to engage the center drip drop rod or plunger bar. Include locking device and padlock eyes as an integral part of the latch, using one padlock for locking both gate leaves.
 - e. Where gates are between masonry piers, provide "J" with 4-inch square anchor plate to masonry contractor for building in.

2.05 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Wire Ties: The Contractor shall tie fabric to line posts. He shall use 9 gauge wire ties spaced 12-inches o.c. For tying fabric to rails and braces, he shall use 9 gauge wire ties spaced 24-inches o.c. For tying fabric to tension wire, he shall use 11 gauge hog rings spaced 24-inches o.c. The finish of ties shall match the fabric finish.
- B. Concrete: The Contractor shall provide portland cement concrete in compliance with ASTM C-150 and the Contract Documents. Aggregates shall comply with ASTM C-33. The Contractor shall mix the materials to obtain a minimum 28-day compressive strength of 2500 psi, using a minimum of 4 sacks of cement per cubic yard, a maximum size aggregate of 1-inch, a maximum 3-inch slump and air entrainment of 2 percent to 4 percent.
- C. Privacy Decorative Slating (PDS) shall be PVC, bottom locking, non-fin type, sized to match the fabric height and color in both the fence and gates.

PART 3 EXECUTION

3.01 INSTALLATION

- A. The Contractor shall not start the fence installation prior to the final grade completion, and the finish elevations established, unless otherwise authorized by the County.
- B. The Contractor shall repair damaged coatings in the shop or in the field by recoating utilizing manufacturers recommended repair compounds and as applied per manufacturer's recommendations.
- C. Excavation:
 - 1. For post footings, the Contractor shall drill holes in firm, undisturbed or compacted soil of the diameters and spacings shown or called out in the Contract Documents.
 - a. For holes not shown or called out on the Contract Documents, the Contractor shall excavate minimum diameters recommended by the fence manufacturer.
 - b. Post holes shall be in true alignment and of sufficient size to provide a permanent concrete foundation. Concrete shall be poured against undisturbed earth sides and bottom. All holes shall be 48-inches deep with posts and corner posts placed in the concrete to a depth of 36-inches. The gate posts shall be set in the concrete to a depth of 42-inches below the surface in firm, undisturbed soil. Holes shall be well centered on the posts. A minimum diameter of 12-inches shall be required for all post holes.
 - c. Excavated soil shall be removed from the County's property.
 - d. If solid rock is encountered near the surface, the Contractor shall drill into rock at least 12-inches for line posts and at least 18-inches for end, pull, corner or gate posts. Hole shall be drilled to at least 1-inch greater diameter than the largest dimension of the post to be place.
 - e. If the Contractor encounters solid rock below solid overburden, he shall drill to the full depth required; however, rock penetration need not exceed the minimum depths specified.
- D. Setting Posts:

1. The Contractor shall remove loose and foreign materials from the sides and bottoms of holes, and moisten soil prior to placing concrete.
 - a. Center and align posts in holes above bottom of excavation.
 - b. Place concrete around posts in a continuous pour and vibrate or tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations. The top of concrete shall extend 2-inches above finish grade.
 - c. Trowel finish tops of footings and slope or dome to direct water away from posts. Extend footings for gate posts to the underside of bottom hinge. Set keeps, stops, sleeves and other accessories into concrete as required.
 - d. Keep exposed concrete surfaces moist for at least 7 days after placement, or cure with membrane curing materials, or other acceptable curing method.
 - e. Grout-in posts set into sleeved holes, concrete constructions, or rock excavations with non-shrink portland cement grout, or other acceptable grouting material.

E. Concrete Strength:

The Contractor shall allow the concrete to attain at least 75% of its minimum 28-day compressive strength no sooner than 7 days after placement, before rails, tension wires, barbed wire, or fabric is installed. The Contractor shall not stretch and tension fabric or wires and shall not hang gates until the concrete has attained its full design strength.

F. Top Rails:

The Contractor shall run the rail continuously through post caps or extension arms and bend to radius for curved runs. He shall provide expansion coupling as recommended by fencing manufacturer.

G. Brace Assemblies:

The Contractor shall install braces so that posts are plumb when diagonal rod is under proper tension.

H. Tension Wire:

The Contractor shall install tension wires by weaving through the fabric and tying to each post with not less than 0.170 inch galvanized wire, or by securing the wire to the fabric.

I. Fabric:

The Contractor shall leave approximately 3-inches between finish grade and bottom salvage, except where the bottom of the fabric extends into the concrete. He shall pull the fabric taut and tie it to posts, rails and tension wires. He shall install fabric on the security side of the fence and anchor it to the framework so that the fabric remains in tension after the pulling force is released.

J. Stretcher Bars:

The Contractor shall thread through or clamp the bars to the fabric 4-inches o.c. and secure them to posts with metal bands spaced 15-inches o.c.

K. Barbed Wire:

The Contractor shall install 3 parallel wires on each extension arm on the security side of fence, unless otherwise indicated. He shall pull the wire taut and fasten securely to each extension arm.

L. Gate:

The Contractor shall install gates plumb, level and secure for full opening without interference. He shall install ground-set items in concrete for anchorage, as recommended by the fence manufacturer. He shall adjust hardware for smooth operation and lubricate where necessary.

M. Tie Wires:

The Contractor shall use U-shaped wire, conforming to the diameter of the attached pipe, and shall clasp the pipe and fabric firmly with twisted ends of at least 2 full turns. He shall bend the end of the wire to minimize hazard to persons or clothing.

N. Fasteners:

The Contractor shall install nuts for tension band and hardware bolts on the side of fence opposite the fabric side. Pen ends of bolts or score threads to prevent removal of nuts.

3.02 INSTALLATION

Fence shall be constructed such that each run of fence between corner posts or gate posts has equal spacing between the line posts. Spacing shall not exceed 10 feet, and shall not exceed 8 feet for fabric with privacy decorative slatting.

END OF SECTION

SECTION 02480 LANDSCAPING

PART 1 GENERAL

1.10 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment, and incidentals required to install trees, ground cover, and shrubs, to place accessory planting materials, to maintain and guarantee all planted areas. All work shall be in strict accordance with sound nursery practice and shall include maintenance and watering of all of the work of this Contract until final completion and acceptance by the County.
- B. The landscaping shall be performed by a contractor or subcontractor who specializes in landscaping and who is fully familiar and experienced in projects of this type and scope. The landscaping contractor or subcontractor shall be subject to the approval of the County.
- C. The Contractor shall provide all landscaping complete and ready for use as specified in the Contract Documents and as shown on the Drawings.

1.02 SUBMITTALS

- A. The Contractor shall submit to the County for review and approval, shop drawings and complete written maintenance instructions for each type of plant furnished under this Contract.
- B. The Contractor shall submit representative samples of any or all of required accessory planting materials as requested by the County.

1.03 OBSTRUCTIONS BELOW GROUND

- A. The County may change the location of plant material if underground construction, utilities or obstructions are encountered in excavation of planting areas or pits.
- B. The Contractor shall make such changes without additional compensation from the County.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Plant species and size shall conform to those indicated in the Plant List and in plan locations shown on the Drawings. Nomenclature shall conform to the Florida Department of Agriculture: "Grades and Standards for Nursery Plants". The designated authority for identification of plants shall be in conformance with FDOT Standard Specification Section 580-2.1.1 Plants.
- B. Plants shall be sound, healthy, vigorous, free from plant diseases, insects, pests, or their eggs and shall have healthy normal root systems. Plants shall be nursery grown stock, freshly dug. No heeled in, cold storage, or collected stock shall be accepted.
- C. Shape and Form

1. Plant material shall be symmetrical, typical for the variety and species, and shall conform to the measurements specified in the Plant List.
 2. Plants used where symmetry is required shall be matched as nearly as possible.
 3. Plants shall not be pruned prior to delivery except as authorized by the County.
 4. All plants shall have been transplanted or root pruned at least once in the past three years.
 5. Unless otherwise noted, street trees shall be free of branches up to six feet, with the single leader well branched, and with straight trunks.
 6. Shrubs shall have been transplanted twice, have fully developed root systems, be heavily canned with foliage to base, fulfill dimensions required, and be typical of species.
 7. Ground covers shall have sturdy fibrous root systems and shall be heavily leafed.
- D. Measurement: The height and/or width of trees shall be measured from the ground or across the normal spread of branches with the plants in their normal position. This measurement shall not include the immediate terminal growth.
- E. Substitutions in plant species or size shall be made only with the written approval of the County.
- F. Ground cover plants shall be planted in beds of four inches of approved topsoil. The beds shall be thoroughly disked into the soil. The compacted and settled finished surface shall be set to the required grade. Plants shall be spaced as described in the Contract Documents or shown on the Contract Drawings, or otherwise directed by the County in accordance with the best practices of the trade.
- G. Planting Soil
1. Soil for backfilling around plants and planting beds shall be a good grade of garden loam as approved by the County. Soil shall be free of heavy clay, coarse sand, stones, lumps, sticks, or other foreign material. The soil shall not be delivered or used in a muddy condition.
 2. The soil shall be taken from ground that has never been stripped. There shall be a slight acid reaction to the soil with no excess of calcium or carbonate. The soil shall be free from excess weeds or other objectionable material.
 3. Soil for trees and shrubs shall be delivered in a loose, friable condition. All trees shall average approximately one cubic yard per tree, except Sabal Palmetto, which shall be planted with clean sand. There shall be a minimum of 4-inches of planting soil in ground cover areas and 1/8 cubic yard per shrub or vine.
 4. No marl shall be allowed in ground cover planting beds.
- H. Before plants are backfilled with planting soil, fertilizer tablets, Agriform 20-10-5 or equal, shall be placed in each pit. The Contractor shall provide three tablets for each tree and one for each shrub or vine.
- I. Tree Staking: All tree staking and bracing shall be included herein in accordance with sound nursery practice and shall be in accordance with the Contract Documents. The Contractor shall furnish all materials required for staking and bracing as approved.
- J. Landscaping stones shall be inert and nonleaching. The Contractor shall provide physical samples for approval prior to installation. Crushed limerock shall not be acceptable.

PART 3 EXECUTION

3.01 PLANTING PROCEDURES

- A. Plant Locations: All plants shall be located as shown on the Drawings, to dimensions if shown, to scale if not dimensioned. Large areas or beds shall be scaled and the plants spaced evenly. Approval by the County is required before any plants may be installed.
- B. Tree Pits: Pits for trees shall be at least two feet greater in diameter than the specified diameter of the ball. Pits shall be of sufficient depth to allow a 12-inch layer of planting soil under the ball when it is set to grade. Bottom of pit shall be loosened prior to backfilling.
- C. Digging and Handling
 - 1. Plants shall be handled at all times so that roots or balls are adequately protected from sun or drying winds. Tops or roots of plant allowed to dry out will be rejected.
 - 2. Balled and burlapped plants shall be moved with firm, natural balls of soil, not less than one foot diameter of ball to every one inch caliper of trunk, and a depth of not less than 2/3 of ball diameter. No plant shall be accepted when the ball of earth surrounding its roots has been cracked or broken. All trees, except palms, shall be dug with ball and burlapped. Root pruning shall have been done at minimum of four weeks before planting at the job.
 - 3. Bare root plants shall be dug with spread of root and of sufficient depth to insure full recovery of plant.
- D. Cabbage Palms (Sable Palmetto):
 - 1. Cabbage Palms shall be taken from moist black sand areas. Only a minimum of fronds shall be removed from the crown to facilitate moving and handling. Clear trunk or overall height shall be as specified after the minimum of fronds have been removed.
 - 2. Cabbage Palms buds shall be tied to a suitable support with a burlap strip, to be left in place until the tree is well established in its new location.
 - 3. Cabbage Palms shall be planted in sand, thoroughly washed in during planting operations, and with a dished or saucer depression left at the soil line for future waterings. Palms with marred or burned trunks will be accepted at the discretion of the County only.
 - 4. Trees moved by winch or crane shall be thoroughly protected from chain marks, girdling or bark slippage by means of burlap, wood battens, or other approved method.
- E. When balled or burlapped plants are set, planting soil shall be carefully tamped under and around the base of the balls to prevent voids. All burlap, rope, wires, etc., shall be removed from the sides and tops of balls, but no burlap shall be pulled from underneath. Roots of bare rooted plants shall be properly spread out and planting soil carefully worked in among them.
- F. All plants shall be set straight or plumb, in locations shown on the Drawings. Except as otherwise specified, plants shall be planted in pits which shall be set at such level that, after settlement, they bear the same relation to the finished grade or the surrounding ground as they bore to the grade of the soil from which they are taken.
- G. Pruning shall be carefully done by experienced plantsmen. Prune immediately upon acceptance by the County, including any broken branches, thinning small branches and

tipping back main branches (except main leaders).

- H. Excess soil and debris shall be disposed of off the project site unless ordered stockpiled by the County.

3.02 NORMAL MAINTENANCE OF PLANT MATERIALS

- A. Plant material maintenance shall begin when planting operations start and shall extend until final acceptance of work.
- B. Maintain all plant materials under this Contract to the satisfaction of the County. Maintenance shall include necessary watering, cultivation, weeding, pruning, spraying, tightening and repair to guy wires, removal of dead material, resetting, and other work required to conform with referenced standards and accepted nursery standards as approved.
- C. Plant materials which are in a tilted or in a leaning position shall be properly righted.
- D. After final acceptance by the County and until one calendar year after acceptance of all plantings, the landscaping contractor or subcontractor shall make monthly inspections of materials and report in writing to the County the conditions of the plants and the necessary requirements to keep the plants in a healthy growing condition.

3.03 TREE AND PLANT PROTECTION

- A. The Contractor shall remove all trees (if any) within the limit of landscaping shown on the detail sheet except those designated to be salvaged (if any). Prior to removal of said trees, the Contractor shall obtain a tree removal permit, if required. All other trees in the vicinity of the work shall be protected against damage by the Contractor until all work under the Contract has been completed.
- B. Consult with the County, and remove agreed-on roots and branches which interfere with construction. Employ qualified tree surgeon to remove, and to treat cuts.
- C. Provide temporary barriers to a height of six feet around each group of trees and plants.
- D. Protect root zones of trees and plants
 - 1. Do not allow vehicular traffic or parking.
 - 2. Do not store materials or products.
 - 3. Prevent dumping or refuse or chemically injurious materials or liquids.
 - 4. Prevent puddling or continuous running water.
- E. Carefully supervise excavating, grading, and filling, and subsequent construction operations, to prevent damage.
- F. In case of inadvertent damage to any tree or plant by the Contractor or any of his subcontractors or employees, the Contractor shall provide replacement of each such damaged tree or plant with a new one of acceptable type, size and quality.
- G. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by the County.

- H. Clean and repair damage caused by installation, fill and grade the areas of the site to required elevations and slopes, and clean the area.

3.04 GUARANTEE

The life and satisfactory condition of all plant material planted shall be guaranteed by the Contractor for a minimum of one calendar year. Guarantee shall include complete replacement with material of the same kind and size as in the original work if not in a healthy condition, as determined by the County, at the end of the guarantee period.

3.05 REPLACEMENT

- A. At the end of the guarantee period, any plant required under this Contract that is dead or not in satisfactory growth as determined by the County, shall be removed. Plants replaced shall be guaranteed for 90 days after date of replacement.
- B. Replacement of plants necessary during guarantee period shall be the responsibility of the Contractor, except for possible replacements of plants resulting from removal, vandalism, acts of neglect on the part of others, or acts of God.
- C. All replacements shall be plants of the same kind and size as specified in the Drawings. They shall be furnished and planted as herein specified. The cost shall be the responsibility of the Contractor.

END OF SECTION

SECTION 02485 SEEDING AND SODDING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials and equipment necessary to satisfactorily return all construction areas to their original conditions or better.
- B. Work shall include furnishing and placing seed or sod, fertilizing, planting, watering and maintenance until acceptance by County.

1.02 RELATED WORK NOT INCLUDED

Excavation, filling and grading required to establish elevation shown on the Drawings are included under other sections of these Specifications.

1.03 QUALITY ASSURANCE

- A. It is the intent of this Specification that the Contractor is obliged to deliver a satisfactory stand of grass as specified. If necessary, the Contractor shall repeat any or all of the work, including grading, fertilizing, watering and seeding or sodding at no additional cost to the County until a satisfactory stand is obtained. For purposes of grassing, a satisfactory stand of grass is herein defined as a full lawn cover over areas to be sodded or seeded, with grass free of weeds, alive and growing, leaving no bare spots larger than 3/4 square yard within a radius of 8 feet.
- B. All previously grassed areas where pipelines are laid shall be sodded. All sodding and grassing shall be installed in accordance with these Specifications or as directed by the County.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Fertilizer: The fertilizer shall be of the slow-release type meeting the following minimum requirements: 12 percent nitrogen, 8 percent phosphorus, 8 percent potassium; 40 percent other available materials derived from organic sources. At least 50 percent of the phosphoric acid shall be from normal super phosphate or an equivalent source which will provide a minimum of two units of sulfur. The amount of sulfur shall be indicated on the quantitative analysis card attached to each bag or other container. Fertilizer shall be uniform in composition, dry and free flowing delivered to sites in original unopened containers bearing manufacturer's statement or guarantee.
- B. Seeding/Grassing: The Contractor shall grass all unpaved areas disturbed during construction which do not require sod. All grassing shall be completed in conformance with FDOT Specifications, Sections 570 and 981. The grassed areas shall be mulched and fertilized in accordance with FDOT Specifications, except that no additional payment will be made for mulching, fertilizing and/or watering.
- C. Sodding: Sod shall be provided as required on the construction drawings or at locations as directed by the County in accordance with Florida Department of Transportation, Specifications Section 575 and 981. The Contractor shall furnish bahia grass sod or

match existing sod. Placement and watering requirements shall be in accordance with FDOT Specifications Section 575, except that no additional payment will be made for placement and/or watering. This cost shall be included in the Contract price bid for sodding.

- D. Topsoil: Topsoil stockpiled during excavation may be used as necessary. If additional topsoil is required to replace topsoil removed during construction, it shall be obtained off site at no additional cost to the County. Topsoil shall be fertile, natural surface soil, capable of producing all trees, plants and grassing specified herein.
- E. Water: It is the Contractor's responsibility to supply all water to the site, as required during seeding and sodding operations and through the maintenance period and until the work is accepted. The Contractor shall make whatever arrangements that may be necessary to ensure an adequate supply of water to meet the needs for his work. He shall also furnish all necessary hose, equipment, attachments and accessories for the adequate irrigation of lawns and planted areas as may be required. Water shall be suitable for irrigation and free from ingredients harmful to plant life.

PART 3 EXECUTION

3.01 INSTALLATION

- A. When the trench backfill has stabilized sufficiently, the Contractor shall commence work on lawns and grassed areas, including fine grading as necessary and as directed by the County.
- B. Finish Grading: Areas to be seeded or sodded shall be finish graded, raked, and debris removed. Soft spots and uneven grades shall be eliminated. The County shall approve the finish grade of all areas to be seeded or sodded prior to seed or sod application.
- C. Protection: Seeded and sodded areas shall be protected against traffic or other use by placing warning signs or erecting barricades as necessary. Any areas damaged prior to acceptance by the County shall be repaired by the Contractor as directed by the County.

3.02 CLEANUP

Soil or similar materials spilled onto paved areas shall be removed promptly, keeping those areas as clean as possible at all times. Upon completion of seeding and sodding operations, all excess soil, stones and debris remaining shall be removed from the construction areas.

3.03 LANDSCAPE MAINTENANCE

- A. Any existing landscape items damaged or altered during construction by the Contractor shall be restored or replaced as directed by the County.
- B. Maintain landscape work for a period of 90 days immediately following complete installation of work or until County accepts project. Watering, weeding, cultivating, restoration of grade, mowing and trimming, protection from insects and diseases, fertilizing and similar operations as needed to ensure normal growth and good health for live plant material shall be included at no additional cost to the County.

3.04 REPAIRS TO LAWN AREAS DISTURBED BY CONTRACTOR'S OPERATORS

Lawn areas planted under this Contract and all lawn areas damaged by the Contractor's operation shall be repaired at once by proper soil preparation, fertilizing and sodding, in accordance with these Specifications.

END OF SECTION

SECTION 02513 ASPHALT CONCRETE PAVING

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish all labor, materials and equipment necessary to complete all milling asphalt pavement and asphalt concrete paving (including restoration of driveways) as called out on the Contract Documents or as shown on the Drawings.

1.02 QUALITY ASSURANCE

- A. Qualifications of Asphalt Concrete Producer: The only materials permitted shall be furnished by a bulk asphalt concrete producer exclusively engaged in the production of hot-mix, hot-laid asphalt concrete.
- B. Qualification of Testing Agency: The County may employ a commercial testing laboratory to conduct tests and evaluations of asphalt concrete materials and design. The Contractor shall:
 - 1. Provide asphalt concrete testing and inspection service acceptable to County.
 - 2. Include sampling and testing asphalt concrete materials proposed, and tests and calculations for asphalt concrete mixtures.
 - 3. Provide field testing facilities for quality control testing during paving operations.
- C. Requirements of Regulatory Agencies: The Contractor shall comply with the applicable requirements of:
 - 1. Manatee County Utility Operations Department
 - 2. Manatee County Transportation Department
 - 3. State of Florida Dept. of Transportation

1.03 PAVING QUALITY REQUIREMENTS

- A. General: In addition to other specified conditions, the Contractor shall comply with the following minimum requirements:
 - 1. In-place asphalt concrete course shall be tested for compliance with requirements for density, thickness and surface smoothness.
 - 2. Final surface shall be provided of uniform texture, conforming to required grades and cross sections.
 - 3. A minimum of four inch diameter pavement specimens for each completed course shall be taken from locations as directed by the County.
 - 4. Holes from test specimens shall be repaved as specified for patching defective work.
- B. Density:
 - 1. When subjected to 50 blows of standard Marshall hammer on each side of an in place material specimen, densities shall be comparable to a laboratory specimen of same asphalt concrete mixture.
 - 2. The minimum acceptable density of in-place course material shall be 98% of the recorded laboratory specimen density.

- C. Thickness: In-place compacted thicknesses shall not be acceptable if less than the minimum thicknesses shown on the Drawings.
- D. Surface Smoothness:
1. Finished surface of each asphalt concrete course shall be tested for smoothness, using a 10 ft. straightedge applied parallel to and at right angles to centerline of paved areas.
 2. Surface areas shall be checked at intervals directed by County.
 3. Surfaces shall not be acceptable if they exceed the following:
 - a. Base Course: 1/4 in. in 10 ft.
 - b. Surface Course: 3/16 in. in 10 ft.
 - c. Crowned Surfaces:
 - (1) Test crowned surfaces with a crown template, centered and at right angles to the crown.
 - (2) Surfaces will not be acceptable if varying more than 1/4 in. from the template.

1.04 SUBMITTALS

- A. Samples: The Contractor may be required to provide samples of materials for laboratory testing and job-mix design.
- B. Test Reports: The Contractor shall submit laboratory reports for following materials tests:
1. Coarse and fine aggregates from each material source and each required grading:
 - a. Sieve Analysis: ASTM C 136 (AASHTO T 27).
 - b. Unit Weight of Slag: ASTM C29 (AASHTO T 19).
 - c. Soundness: ASTM C 88 (AASHTO T 104) for surface course aggregates only.
 - d. Sand Equivalent: ASTM D 2419 (AASHTO T 176).
 - e. Abrasion of Coarse Aggregate: ASTM C131 (AASHTO T 96), for surface course aggregates only.
 2. Asphalt cement for each penetration grade:
 - a. Penetration: ASTM D5 (AASHTO T49).
 - b. Viscosity (Kinematic): ASTM D2170 (AASHTO T 201).
 - c. Flash Point: ASTM D92 (AASHTO T 48).
 - d. Ductility: ASTM D 113 (AASHTO T 51).
 - e. Solubility: ASTM D 4 (AASHTO T 44).
 - f. Specific Gravity: ASTM D 70 (AASHTO T 43).
 3. Job-mix design mixtures for each material or grade:
 - a. Bulk Specific Gravity for Coarse Aggregate: ASTM C 117(AASHTO T 85).
 - b. Bulk Specific Gravity for Fine Aggregate: ASTM C 128(AASHTO T 84).
 4. Uncompacted asphalt concrete mix: Maximum Specific Gravity: ASTM D 2041 (AASHTO T 209).
 5. Compacted asphalt concrete mix:
 - a. Bulk Density: ASTM D 1188 (AASHTO T 166).
 - b. Marshall Stability and Flow: ASTM D 1559.
 6. Density and voids analysis:
 - a. Provide each series of asphalt concrete mixture test specimens, in accordance with A.I. MS-2 "Mix Design Methods for Asphalt Concrete".
 - b. Use Marshall method of mix design unless otherwise directed or

- acceptable to the County.
 - c. Report the quantity of absorbed asphalt cement in pounds of dry aggregate, percent air voids, and percent voids in mineral aggregate.
- 7. Sampling and testing of asphalt concrete mixtures for quality control during paving operations:
 - a. Uncompacted asphalt concrete mix.
 - (1) Asphalt Cement Content: ASTM D 2172 (AASHTO T 164).
 - (2) Penetration of Recovered Asphalt Cement: ASTM D 5(AASHTO T 49).
 - (3) Ductility of Recovered Asphalt Cement: ASTM D 113(AASHTO T 51).
 - b. Compacted asphalt concrete mix:
 - (1) Bulk Density: ASTM D 1188 (AASHTO T 166).
 - Marshall Stability and Flow: ASTM D1559).
 - c. Perform at least one test for each day's paving.
- 8. Asphalt plant inspection: ASTM D 290.
- 9. Additional testing:
 - a. Retesting shall be required if previous tests indicate insufficient values, or if directed by the County.
 - b. Testing shall continue until specified values have been attained.
- 10. Asphalt concrete materials which do not comply with specified requirements shall not be permitted in the work.

1.05 JOB CONDITIONS

- A. Weather Limitations:
 - 1. Apply bituminous prime and tack coats only when the ambient temperature in the shade is 50 degrees F. and when the temperature has not been below 35 degrees F. for 12 hours immediately prior to application.
 - 2. Do not apply when the base surface is wet or contains an excess of moisture which would prevent uniform distribution and the required penetration.
 - 3. Construct asphalt concrete surface course only when atmospheric temperature is above 40 degrees F., when the underlying base is dry, and when weather is not rainy.
 - 4. Base course may be placed when air temperature is not below 30 degrees F. and rising, when acceptable to the County.
- B. Grade Control: Establish and maintain the required lines and grades, including crown and cross-slope, for each course during construction operations.
- C. Traffic Control: Maintain vehicular and pedestrian traffic during paving operations, as required for other construction activities.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Soil Cement or Shell Base Course: as specified in FDOT Section 270, "Material for Base and Stabilized Base", and as called for in the Contract Documents.
- B. Aggregate for Asphalt Concrete, General:

1. Sound, angular crushed stone, crushed gravel, or crushed slag: ASTM D 692.
 2. Sand, stone, or slag screening: ASTM D 1073.
 3. Provide aggregate in gradations for various courses to comply with local highway standards.
- C. Surface Course Aggregates:
1. Provide natural sand, unless sand prepared from stone, slag, or gravel or combinations are required to suit local conditions.
- D. Asphalt Cement: Comply with ASTM D 946 for 85-100 penetration grade.
- E. Prime Coat:
1. Cut-back liquid asphalt.
 2. Medium-Curing type: ASTM D 2027, Grade MC-70.

2.02 ASPHALT-AGGREGATE MIXTURES

- A. Job-mix criteria:
1. Provide job-mix formulas for each required asphalt-aggregate mixture.
 2. Establish a single percentage of aggregate passing each required sieve size, a single percentage of asphalt cement to be added to aggregate, and a single temperature at which asphalt concrete is to be produced.
 3. Comply with the mix requirements of local governing highway standards.
 4. Maintain material quantities within allowable tolerances of the governing standards.

2.03 TRAFFIC AND PARKING MARKING MATERIALS

- A. Traffic lane marking paint with chlorinated rubber base.
- B. Factory mixed, quick drying and non bleeding, FS TT-P-115C, Type III.
- C. Color: Driving Lane Dividers - White
No Parking Zone - Yellow
Parking Dividers - White

PART 3 EXECUTION

3.01 SURFACE PREPARATION

- A. Subbase Preparation:
1. The Contractor shall remove from the area all organic substance encountered to a depth of six or eight inches (6" or 8"), or to such depth and width as directed by the County. The entire area shall be plowed and dragged prior to placing a stabilizing additive, if required to meet minimum bearing value.
 2. Subbase shall be compacted to a minimum density of 98 percent of the maximum as determined by the Modified Proctor Density AASHTO T180, and shall have a minimum bearing value of 40 pounds per square inch as determined by the Florida Bearing Test.

B. Base Course:

1. Check subgrade for conformity with elevations and section immediately before placing base material.
2. Place base material in compacted layers not more than 6 inches thick, unless continuing tests indicate the required results are being obtained with thicker layers.
3. In no case will more than 8-inches of compacted base be placed in one lift.
4. Spread, shape, and compact all base material deposited on the subgrade during the same day.
5. Compact base course material to be not less than 95% of maximum density: ASTM D 1557, Method D (98 percent maximum density: AASHTO T-180).
6. Test density of compacted base course: ASTM D 2167.
7. Conduct one test for each 250 sq. yds. of in-place material, but in no case not less than one daily for each layer.

C. Loose and Foreign Material:

1. Remove loose and foreign material from compacted subbase surface immediately before application of paving.
2. Use power brooms or blowers, and brooming as required.
3. Do not displace subbase material.

D. Prime Coat:

1. Uniformly apply at rate of 0.20 to 0.5 gal. per sq. yd. over compacted and cleaned subbase surface.
2. Apply enough material to penetrate and seal, but not flood the surface.
3. Allow to cure and dry as long as required to attain penetration and evaporation of volatile, and in no case less than 24 hours unless otherwise acceptable to the County.
4. Blot excess asphalt with just enough sand to prevent pick-up under traffic.
5. Remove loose sand before paving.

E. Tack Coat:

1. Dilute material with equal parts of water and apply to contact surfaces of previously constructed asphalt concrete or portland cement concrete and similar surfaces.
2. Apply at rate of 0.05 to 0.15 gal. per sq. yd. of surface.
3. Apply tack coat by brush to contact surfaces of structures projecting into or abutting asphalt concrete pavement.
4. Allow surfaces to dry until material is at condition of tackiness to receive pavement.

3.02 MANHOLE FRAME / VALVE BOX ADJUSTMENTS (IF APPLICABLE)

A. Placing Manhole frames:

1. Surround manhole frames set to elevation with a ring of compacted asphalt concrete base prior to paving.
2. Place asphalt concrete mixture up to 1 in. below top of frame, slope to grade, and compact by hand tamping.

B. Adjust manhole frames to proper position to meet paving.

- C. If permanent covers are not in place, provide temporary covers over openings until completion of rolling operations.
- D. Set cover manhole frames to grade, flush with surface of adjacent pavement.

3.03 PREPARING THE MIXTURE

- A. Comply with ASTM D 995 for material storage, control, and mixing, and for plant equipment and operation.
- B. Stockpiles:
 - 1. Keep each component of the various-sized combined aggregates in separate stockpiles.
 - 2. Maintain stockpiles so that separate aggregate sizes shall not be intermixed.
- C. Heating:
 - 1. Heat the asphalt cement at the mixing plant to viscosity at which it can be uniformly distributed throughout mixture
 - 2. Use lowest possible temperature to suit temperature-viscosity characteristics of asphalt.
 - 3. Do not exceed 350 degrees F. (176.6 degrees C.).
- D. Aggregate:
 - 1. Heat-dry aggregates to reduce moisture content to not more than 2.0%.
 - 2. Deliver dry aggregate to mixer at recommended temperature to suit penetration grade and viscosity characteristics of asphalt cement, ambient temperature, and workability of mixture.
 - 3. Accurately weigh or measure dry aggregates and weigh or meter asphalt cement to comply with job-mix formula requirements.
- E. Mix aggregate and asphalt cement to achieve 90-95% of coated particles for base mixtures and 85-90% of coated particles for surface mixture, when tested in accordance with ASTM D 2489.
- F. Transporting:
 - 1. Transport asphalt concrete mixtures from mixing site in trucks having tight, clean compartments.
 - 2. Coat hauling compartments with a lime-water mixture to prevent asphalt concrete mixture from sticking.
 - 3. Elevate and drain compartment of excess solution before loading mix.
 - 4. Provide covers over asphalt concrete mixture when transporting to protect from weather and to prevent loss of heat.
 - 5. During periods of cold weather or for long-distance deliveries, provide insulation around entire truck bed surfaces.

3.04 EQUIPMENT

- A. Provide size and quantity of equipment to complete the work specified within project time

schedule.

- B. Bituminous Pavers: Self-propelled that spread hot asphalt concrete mixtures without tearing, shoving or gouging surfaces, and control pavement edges to true lines without use of stationary forms.
- C. Rolling Equipment:
 - 1. Self-propelled, steel-wheeled and pneumatic-tired rollers that can reverse direction without backlash.
 - 2. Other type rollers may be used if acceptable to the County.
- D. Hand Tools: Provide rakes, lutes, shovels, tampers, smoothing irons, pavement cutters, portable heaters, and other miscellaneous small tools to complete the work specified.

3.05 PLACING THE MIX

- A. Place asphalt concrete mixture on prepared surface, spread and strike-off using paving machine.
- B. Spread mixture at a minimum temperature of 225 degrees F. (107.2 degrees C.).
- C. Inaccessible and small areas may be placed by hand.
- D. Place each course at thickness so that when compacted, it will conform to the indicated grade, cross-section, finish thickness, and density indicated.
- E. Paver Placing:
 - 1. Unless otherwise directed, begin placing along centerline of areas to be paved on crowned section, and at high side of sections on one-way slope, and in direction of traffic flow.
 - 2. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips.
 - 3. Complete base courses for a section before placing surface courses.
 - 4. Place mixture in continuous operation as practicable.
- F. Hand Placing:
 - 1. Spread, tamp, and finish mixture using hand tools in areas where machine spreading is not possible, as acceptable to County.
 - 2. Place mixture at a rate that will insure handling and compaction before mixture becomes cooler than acceptable working temperature.
- G. Joints:
 - 1. Carefully make joints between old and new pavements, or between successive days' work, to ensure a continuous bond between adjoining work.
 - 2. Construct joints to have same texture, density and smoothness as adjacent sections of asphalt concrete course.
 - 3. Clean contact surfaces free of sand, dirt, or other objectionable material and apply tack coat.
 - 4. Offset transverse joints in succeeding courses not less than 24 inches.
 - 5. Cut back edge of previously placed course to expose an even, vertical surface for

- full course thickness.
- 6. Offset longitudinal joints in succeeding courses not less than 6 inches.
- 7. When the edges of longitudinal joints are irregular, honeycombed, or inadequately compacted, cut back unsatisfactory sections to expose an even, vertical surface for full course thickness.

3.06 COMPACTING THE MIX

- A. Provide sufficient rollers to obtain the required pavement density.
- B. Begin rolling operations as soon after placing when the mixture will bear weight of roller without excessive displacement.
- C. Do not permit heavy equipment, including rollers to stand on finished surface before it has thoroughly cooled or set.
- D. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.
- E. Start rolling longitudinally at extreme lower side of sections and proceed toward center of pavement. Roll to slightly different lengths on alternate roller runs.
- F. Do not roll centers of sections first under any circumstances.
- G. Breakdown Rolling:
 - 1. Accomplish breakdown or initial rolling immediately following rolling of transverse and longitudinal joints and outside edge.
 - 2. Operate rollers as close as possible to paver without causing pavement displacement.
 - 3. Check crown, grade, and smoothness after breakdown rolling.
 - 4. Repair displaced areas by loosening at once with lutes or rakes and filling, if required, with hot loose material before continuing rolling.
- A. Second Rolling:
 - 1. Follow breakdown rolling as soon as possible, while mixture is hot and in condition for compaction.
 - 2. Continue second rolling until mixture has been thoroughly compacted.
- I. Finish Rolling:
 - 1. Perform finish rolling while mixture is still warm enough for removal of roller marks.
 - 2. Continue rolling until roller marks are eliminated and course has attained specified density.
- J. Patching:
 - 1. Remove and replace defective areas.
 - 2. Cut-out and fill with fresh, hot asphalt concrete.
 - 3. Compact by rolling to specified surface density and smoothness.
 - 4. Remove deficient areas for full depth of course.
 - 5. Cut sides perpendicular and parallel to direction of traffic with edges vertical.

6. Apply tack coat to exposed surfaces before placing new asphalt concrete mixture.

3.07 MARKING ASPHALT CONCRETE PAVEMENT

A. Cleaning:

1. Sweep surface with power broom supplemented by hand brooms to remove loose material and dirt.
2. Do not begin marking asphalt concrete pavement until acceptable to the County.

B. Apply paint with mechanical equipment.

1. Provide uniform straight edges.
2. Not less than two separate coats in accordance with manufacturer's recommended rates.

3.08 CLEANING AND PROTECTION

A. Cleaning: After completion of paving operations, clean surfaces of excess or spilled asphalt materials to the satisfaction of the County.

B. Protection:

1. After final rolling, do not permit vehicular traffic on asphalt concrete pavement until it has cooled and hardened, and in no case sooner than 6 hours.
2. Provide barricades and warning devices as required to protect pavement.
3. Cover openings of structures in the area of paving until permanent coverings are placed (if applicable).

END OF SECTION

SECTION 02575 PAVEMENT REPAIR AND RESTORATION

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish all labor, materials, equipment, obtain County or State right-of-way permits and incidentals required and remove and replace pavements over trenches excavated for installation of water or sewer lines and appurtenances as shown on the Contract Drawings.

1.02 GENERAL

- A. The Contractor shall take before and after photographs.
- B. The Contractor shall repair in a manner satisfactory to the County or State, all damage done to existing structures, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipe lines, conduits, drains, catch basin, flagstones, or stabilized areas or driveways and including all obstructions not specifically named herein, which results from this Project.
- C. The Contractor shall keep the surface of the backfilled area of excavation in a safe traffic bearing condition and firm and level with the remaining pavement until the pavement is restored in the manner specified herein. All surface irregularities that are dangerous or obstructive to traffic are to be removed. The repair shall conform to applicable requirements of Manatee County Transportation Department requirements for pavement repair and as described herein, including all base, subbase and asphalt replacement.
- D. All materials and workmanship shall meet or exceed the County requirements and as called for in the Contract Documents and nothing herein shall be construed as to relieve the Contractor from this responsibility.
- E. All street, road and highway repair shall be made in accordance with the FDOT and County details indicated on the Drawings and in accordance with the applicable requirements and approval of affected County and State agencies.

PART 2 PRODUCTS

2.01 PAVEMENT SECTION

- A. Asphaltic concrete shall consist of asphalt cement, coarse aggregate, fine aggregate and mineral filler conforming to FDOT Type S-III Asphalt. Pavement replacement thickness shall match that removed but in no case shall be less than 1-1/2" compacted thickness. All asphalt concrete pavement shall be furnished, installed and tested in accordance with FDOT Specifications for Road and Bridge Construction.
- B. Asphalt or crushed concrete or approved equal base material shall be furnished and installed under all pavement sections restored under this Contract. Asphalt base shall have a minimum 6" compacted thickness, meet requirements for FDOT ABC III (Minimum Marshall Stability of 1000) and be furnished, installed and tested in accordance with the requirements of the FDOT Standards. Crushed concrete base shall be 10" minimum compacted thickness. Crushed concrete aggregate material shall have a minimum LBR of

140 compacted to 99% T-180 AASHTO density. Asphalt base and crushed concrete base are acceptable. Other bases shall be submitted for approval.

- C. Prime and tack will be required and applied in accordance with Section 300 - FDOT Specifications: Prime and Tack Coat for Base Courses.

PART 3 EXECUTION

3.01 CUTTING PAVEMENT

- A. The Contractor shall saw cut in straight lines and remove pavement as necessary to install the new pipelines and appurtenances and for making connections to existing pipelines.
- B. Prior to pavement removal, the Contractor shall mark the pavement for cuts nearly paralleling pipe lines and existing street lines. Asphalt pavement shall be cut along the markings with a rotary saw or other suitable tool. Concrete pavement shall be scored to a depth of approximately two (2) inches below the surface of the concrete along the marked cuts. Scoring shall be done by use of a rotary saw, after which the pavement may be broken below the scoring with a jackhammer or other suitable equipment.
- C. The Contractor shall not machine pull the pavement until it is completely broken and separated along the marked cuts.
- D. The pavement adjacent to pipe line trenches shall neither be disturbed or damaged. If the adjacent pavement is disturbed or damaged, irrespective of cause, the Contractor shall remove and replace the pavement. In addition, the base and sub-base shall be restored in accordance with these Specifications, Florida Dept. of Transportation Standard Specifications and as directed by the County.

3.02 PAVEMENT REPAIR AND REPLACEMENT

- A. The Contractor shall repair, to meet or exceed original surface material, all existing concrete or asphaltic pavement, driveways, or sidewalks cut or damaged by construction under this Contract. He shall match the original grade unless otherwise specified or shown on the Drawings. Materials and construction procedures for base course and pavement repair shall conform to those of the Florida Dept. of Transportation.
- B. The Contractor's repair shall include the preparation of the subbase and base, place and maintain the roadway surface, any special requirements whether specifically called for or implied and all work necessary for a satisfactory completion of this work. Stabilized roads and drives shall be finished to match the existing grade. Dirt roads and drives shall have the required depth of backfill material as shown on the Contract Drawings.
- C. The width of all asphaltic concrete repairs shall extend the full width and length of the excavation or to the limits of any damaged section. The edge of the pavement to be left in place shall be cut to a true edge with a saw or other approved method so as to provide a clean edge to abut the repair. The line of the repair shall be reasonably uniform with no unnecessary irregularities.

3.03 MISCELLANEOUS RESTORATION

Sidewalks or driveways cut or damaged by construction shall be restored in full sections or blocks to a minimum thickness of four inches. Concrete curb or curb and gutter shall be

restored to the existing height and cross section in full sections or lengths between joints. RCP pipe shall be repaired or installed in accordance with manufacturer's specifications. Grassed yards, shoulders and parkways shall be restored to match the existing sections with grass sod of a type matching the existing grass.

3.04 SPECIAL REQUIREMENTS

The restoration of all surfaces, as described herein, disturbed by the installation of pipelines shall be completed as soon as is reasonable and practical. The complete and final restoration of both paved and shell stabilized roads within a reasonable time frame is of paramount importance. To this end, the Contractor shall, as part of his work schedule, complete the restoration of any area of road within five weeks after removing the original surface. Successful leak testing shall be performed prior to restoring any area of road. All restoration and replacement or repairs are the responsibility of the Contractor.

3.05 CLEANUP

After all repair and restoration or paving has been completed, all excess asphalt, dirt and other debris shall be removed from the roadways. All existing storm sewers and inlets shall be checked and cleaned of any construction debris.

3.06 MAINTENANCE OR REPAIR

All wearing surfaces shall be maintained by the Contractor in good order suitable for traffic prior to completion and acceptance of the work.

END OF SECTION

SECTION 02615 DUCTILE IRON PIPE AND FITTINGS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required to install ductile iron pipe and restrained joint ductile iron pipe and cast iron or ductile iron restrained joint fittings, complete, as shown on the Drawings and specified in these Standards.
- B. Fittings are noted on the drawings for the Contractor's convenience and do not relieve him from laying and jointing different or additional items where required.
- C. The Contractor shall furnish all labor, materials, equipment and incidentals required to install push-on joint or restrained joint ductile iron pipe, complete as shown on the Drawings and Specifications.
- D. Newly installed pipe shall be kept clean and free of all foreign matter. All DI pipe installed underground shall be poly wrapped unless noted otherwise on the plans.

1.02 SUBMITTALS

- A. The Contractor shall submit to the County, within ten days after receipt of Notice to Proceed, a list of materials to be furnished, the names of the suppliers and the appropriate shop drawings for all ductile iron pipe and fittings.
- B. The Contractor shall submit the pipe manufacturer's certification of compliance with the applicable sections of the Specifications.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Ductile iron pipe shall conform to ANSI/AWWA C150/A21.50 and ANSI/AWWA C151/A21.51. Thickness of pipe shall be Class 50 or pressure Class 350. All pipe not buried shall be Class 53. All ductile iron pipe shall be clearly marked on the outside of the barrel to readily identify it from cast iron.
- B. Unrestrained joint pipe shall be supplied in lengths not to exceed 21 feet. Unless otherwise called for in the Contract Documents, unrestrained joint pipe shall be either the rubber-ring type push-on joint or standard mechanical joint pipe as manufactured by the American Cast Iron Pipe Company, U.S. Pipe and Foundry Company, or approved equal.
- C. All fittings shall be pressure rated for 350 psi and meet the requirement of AWWA C110 or AWWA C153 except flanged fittings shall be rated for 250 psi. Rubber gaskets shall conform to ANSI A21.11 for mechanical and push-on type joints for diameters up to 14" diameter. Gaskets for 16" diameter and larger pipe shall be EPDM (Ethylene-Propylene Dine Monomer) such as the "Fastite Gasket" of American Ductile Iron Pipe Co., or approved equal.
- D. Water Mains: All ductile iron pipe and fittings shall have a standard thickness cement

lining on the inside in accordance with AWWA/ANSI C104/A21.4 and a coal tar enamel coating on the outside. The coal tar enamel shall be in accordance with ANSI A21.4. All interior linings shall be EPA/NSF approved.

- E. Force Main: All ductile iron pipe and fittings shall have a factory applied fusion bonded epoxy or epoxy and polyethylene lining on the inside in accordance with manufacturer's specifications and a coal tar enamel coating on the outside. The coal tar enamel shall be in accordance with ANSI A21.4. The interior lining is to be based on manufacturer's recommendation for long-term exposure to raw sewage. It shall have a minimum ten year warranty covering failure of the lining and bond failure between liner and pipe.
- F. Restrained joints shall be provided at all horizontal and vertical bends and fittings, at casings under roads and railroads and at other locations shown on the Contract Drawings. Restrained joint pipe fittings shall be designed and rated for the following pressures: 350 psi for pipe sizes up to and including 24" diameter; 250 psi for pipe sizes 30" diameter and above.

2.02 IDENTIFICATION

- A. Each length of pipe and each fitting shall be marked with the name of the manufacturer, size and class and shall be clearly identified as ductile iron pipe. All gaskets shall be marked with the name of the manufacturer, size and proper insertion direction.
- B. Pipe shall be poly wrapped blue for potable water mains, purple for reclaimed water mains and green for sewage force mains. All potable water pipe shall be NSF certified and copies of lab certification shall be submitted to the County.
- C. All above ground potable water mains and appurtenances shall be painted safety blue.

END OF SECTION

SECTION 02616 DISINFECTING POTABLE WATER PIPE LINES

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish all labor, materials, equipment and incidentals required to clean and disinfect potable water pipe lines. This work is required to place all types of pipe into service as potable water lines.

1.02 CLEANING WATER MAINS

At the conclusion of the work, the Contractor shall thoroughly clean all of the new pipes to remove all dirt, stones, pieces of wood or other material which may have entered during the construction period per Section 02618.

1.03 DISINFECTING POTABLE WATER PIPE LINES

- A. All record drawing requirements must be submitted to the County prior to starting the bacteriological testing of the water lines.
- B. Prior to being placed in service, all potable water pipe lines shall be chlorinated in accordance with AWWA 651, "Standard Procedure for Disinfecting Water Main". The procedure shall meet Health Department requirements. The location of the chlorination and sampling points shall be determined by the County. Taps for chlorination and sampling shall be uncovered and backfilled by the Contractor as required.
- A. The general procedure for chlorination shall be to flush all dirty or discolored water from the lines, then introduce chlorine in approved dosages through a tap at one end while water is being withdrawn at the other end of the line. The chlorine solution shall remain in the pipe line for 24 hours.

Water for flushing, filling and disinfecting the new lines must be obtained without contaminating existing pipe lines. Water obtained from existing pipe lines for this purpose shall pass through an approved air gap or backflow prevention device.

- B. Following the chlorination period, all treated water shall be flushed from the lines at their extremities and replaced with water from the distribution system. Bacteriological sampling and analysis of the replacement water shall then be made by an approved laboratory or the Health Department in full accordance with the AWWA Manual C651. The line shall not be placed in service until the requirements of the State and County Public Health Department are met. Results of the bacteriological tests together with certified record drawings must be submitted to the Health Department (FDEP) within 30 days of the tests.
- C. Special disinfecting procedures when approved by the County, may be used where the method outlined above is not practical.

END OF SECTION

SECTION 02617 INSTALLATION AND TESTING OF PRESSURE PIPE

PART 1 GENERAL

1.01 INSTALLING PIPE AND FITTINGS

- A. The Contractor shall install all pipe in accordance with the recommendations of the pipe manufacturer and as specified herein.
- B. The Contractor shall take care in handling, storage and installation of pipe and fittings to prevent injury to the pipe or coatings. All pipe and fittings shall be examined before installation and pipe which is deemed to be defective by the County shall not be installed.
- C. The Contractor shall thoroughly clean and keep thoroughly clean, all pipe and fittings prior to during and after installation.
- D. The Contractor shall lay the pipe to the lines and grades shown on the Contract Drawings with bedding and backfill as shown on the Drawings or called out in the Contract Documents. Blocking under the pipe shall not be permitted except through casing sleeves.
- E. The Contractor shall keep the open ends of all pipe closed with a tightly fitting plug when installation is not in progress or the potential exists for dirt or debris to enter the pipe.
- F. The pipe or accessories shall not be dropped into the trench under any circumstances.
- G. The Contractor shall construct all water mains pursuant to the provisions of "Recommended Standards for Water Works", Part 8, incorporated by reference in Rule 17-555.330(3), F.A.C.
- H. As a marker for the Surveyor, a PVC pipe marker or 2" x 4" marker shall be inserted by the Contractor on the top of pipe for potable water mains, reclaimed water mains and sanitary force mains at intervals no greater than 200 feet apart and at locations where there is a substantial grade change. The pipe markers shall indicate the pipe diameter and shall be labeled PWM in "safety" blue, RWM in purple, and FM in green, for potable water mains, reclaimed water mains and sanitary force mains, respectively. As a marker for the Surveyor, a PVC pipe marker or 2" x 4" marker shall be inserted by the Contractor on the top of all pipe fittings (other than sanitary sewer service wyes, potable water saddles and reclaimed water saddles). The markers for fittings shall indicate the type of fitting and shall be labeled PWF in "safety" blue, RWF in purple, and FMF in green, for potable water fittings, reclaimed water fittings, and sanitary force main fittings, respectively. The Contractor is responsible for making the aforementioned markers available to the Surveyor. The Contractor shall field locate the mains and fittings when markers are not made available to the Surveyor.
- I. A PVC pipe marker or 2" x 4" marker shall be inserted by the Contractor at the beginning and end of each horizontal directional drill (HDD). The HDD Contractor shall provide a certified report and bore log indicating the horizontal and vertical location every 25 linear feet or less along the pipe.
- J. A 2" PVC pipe marker with a painted end cap shall be inserted by the Contractor at the ROW line indicating each individual new service location or stub out. The marker shall be a 6 foot length of PVC pipe inserted 2 feet into the ground and shall be painted "safety"

blue for potable water, purple for reclaimed water, and green for sewer.

1.02 PROCEDURE FOR TESTING WATER LINES, FORCE MAINS AND RECLAIMED WATER LINES

- A. A 48-hour notice is needed prior to testing. A letter stating the reasons testing should be scheduled ahead of other jobs must accompany all emergency testing requests.
- B. County and Contractor must be present for all testing, except for testing tapping valves and sleeves.
- C. All pressure pipe lines shall remain undisturbed for 24 hours to develop complete strength at all joints. All pipe lines shall be subjected to a hydrostatic pressure test for two (2) hours at full working pressure, but not less than 180 psi for water/reclaimed (150 psi for force main). Maximum length of pipe to be tested at one time is 2,600 feet. If line is longer than 2,600 feet and cannot be sectioned in 2,600 feet (max.) lengths, the allowable leakage will be figured at 2,600 feet.
- D. Allowable leakage shall be determined by AWWA C600 table for hydrostatic tests. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof; to maintain the test pressure after the air in the pipe line has been expelled and the pipe has been filled with water.
- E. All digging on the job site in the right-of-way must be completed before any testing of water or sewer. Any digging or boring across water or sewer lines after they have been tested may result in a retest of the lines at the County's request.
- F. If any revisions or changes are made after initial testing, lines will be re-tested at the County's request.
- G. Disconnect water supply during test.
- H. All force mains will be tested from the valves in the valve vault at the lift station to the point of connection whether it be against a valve on another force main or into a manhole.
- I. All services to be aboveground during test. The services should be the correct length so they will be one (1) foot inside right-of-way line.
- J. All fire hydrant gate valves to be open during test.
- K. All visible leaks are to be repaired, regardless of the amount of leakage.
- L. Check gauge pressure periodically during test. If test pressure drops to 175 psi for water/reclaimed lines or to 145 psi for force mains during test, the line must be repumped back to 180 psi for water/reclaimed (150 psi force mains) and the amount of leakage measured. The test will continue on with the remaining time left. At the end of the test, the line must be repumped again back to 180 psi (150 psi for force main) and the amount of leakage measured and added to any previous leakage determined earlier in the test.
- M. After the line passes the test, the pressure will be blown off from the opposite end of line from the gauge location. Fire hydrants, services and end-of-line blow offs will be opened to demonstrate they were on line during the test.

- N. At end of test, the test gauge must return to zero. The pressure gauge must read 0 psi to a maximum of 300 psi in 5 psi increments.
- O. The section of line being tested must be identified on the charge sheet. The length and size of pipe, the exact area being tested and the valves being tested against, must be identified. Use Station numbers if available.
- P. A punch list must be made at the end of all tests.
- Q. A copy of the charge sheet will be given to the County and the Contractor at the end of the test.

1.03 INSPECTION/TESTING PROCEDURE COVERING BORED PIPE LINES OR CASING AND CONDUITS INSTALLED ACROSS PREVIOUSLY TESTED AND/OR COUNTY ACCEPTED WATER AND SEWER PIPE WITHIN DEVELOPMENT PROJECTS UNDER ACTIVE CONSTRUCTION

- A. Prior to testing water and sewer lines, every effort will be made to install sleeves for underground utilities that will cross these water and sewer lines or services.
- B. Where it has not been possible to pre-install sleeves prior to testing and bores or conduits are required, it is the responsibility of the utility company and/or their Contractor performing the work to provide Manatee County Utility Operations Department or the Engineer of Record with accurate horizontal and vertical as-built information of the sleeves, bores and conduits installed by said utility company. This applies to all bores and conduits crossing water and sewer lines.
- C. Procedures to be followed for installation of conduits, pipe lines and bores that will cross, or be closer than 5'-0" horizontally and 18 inches vertically to, previously tested water and sewer lines that are still under the ownership of the developer/contractor.
 - 1. Notify the County and obtain the best as-built information available. Allow sufficient time for the County to field locate the existing pipe lines.
 - 2. Submit drawings of proposed location to the County and Manatee County Utility Operations Dept. Utility Locations Section for review.
 - 3. Obtain a County Right-of-Way Use Permit if the work area is within a dedicated area of right-of-way.
 - 4. Perform installation in the presence of a County representative. Call (941) 792-8811, ext. 5061 or ext. 5069 with at least two (2) working days notice.
 - 5. Submit two (2) copies of as-built information to the County to incorporate into the record drawings to be submitted to the County.
 - 6. Failure to follow steps 2) thru 5) will result in additional charges for retesting the previously tested water and sewer lines.
- D. Procedures to be followed for installation of conduits, pipe lines and bores crossing or closer than 5'-0" horizontally and 18 inches vertically to previously tested water and sewer lines that have been previously accepted by Manatee County:
 - 1. Obtain record drawing information from the County.
 - 2. If roadway has been dedicated to Manatee County, obtain Right-of-Way Use Permit and copy the Project Management Department Locations Section with proposed location drawing.
 - 3. Follow procedures in "Sunshine State One-Call", paying special attention to the

requirements of Section VII.

- E. Should water or sewer lines be damaged during the bore pipe line or casing installation, the cost of any repairs and retesting will be paid for by the utility company that installed the bore. The actual clearance between a bored casing crossing a water or sewer pipe should not be less than 18 inches.

1.04 DETECTION

- A. Direct buried pipe shall have 3" detectable metallic tape of the proper color placed directly above the pipe and 12" below finished grade or 6" detectable tape between 12" and 24" below finished grade.
- B. Direct buried or horizontal directional drilled non-metallic pipe shall also have tracer wire installed along the pipe alignment. The tracer wire to be used shall be a solid, 10 gauge, high strength, copper clad steel wire with a polyethylene jacket of appropriate color manufactured by Copperhead Industries or Manatee County approved equal.

END OF SECTION

SECTION 02618 PIPELINE CLEANING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required to clean all new lines 4" and larger, and existing pipelines as specified in this specification and as indicated on the Drawings.
- B. This work shall include the furnishing and installation of all pig launching and retrieval devices and the appropriate pigs for the cleaning procedure, and all necessary excavations, shutdowns, fittings and valves required.

1.02 RELATED WORK

- A. The contractor is responsible for all necessary supply water.
- B. The contractor is responsible for all necessary bypass pumping.
- C. The contractor is responsible for the proper disposal of any materials removed from the pipe lines as a result of the cleaning procedure.

1.03 SUBMITTALS

- A. The Contractor shall submit prior to construction, a cleaning plan, Shop Drawings, and layout diagram for approval to the County.
- B. The Contractor shall submit to the County a list of materials to be furnished, and the names of suppliers.

1.04 QUALIFICATIONS

- A. The Contractor performing this work shall be fully qualified, experienced and equipped to complete this work expeditiously and in a satisfactory manner.
- B. The Contractor shall also be capable of providing crews as needed to complete this work without undue delay.
- C. The County reserves the right to approve or disapprove the Contractor, based on the submitted qualifications.

PART 2 PRODUCTS

2.01 GENERAL

- A. The contractor shall be responsible for furnishing pigs in sufficient numbers and sizes, of appropriate densities, coatings and configurations to properly clean the piping systems.
- B. All pigs used for the cleaning of sewer or reclaimed water lines shall not be used in the cleaning of potable water lines.

2.02 MATERIALS

- A. The pig launching and retrieval equipment shall be of the latest design and construction and shall include the means to maintain constant monitoring of the in-line flows and pressures of the system being cleaned and the constant location of the cleaning pigs in the system. Launching and retrieval systems shall be fabricated, designed and manufactured according to ANSI standards and capable of withstanding working pressures of 150 psi. Launching and receiving devices shall be sized one diameter larger than the system to which it will be attached with a minimum length of 2.5 times the diameter.
- B. The contractor shall have available for immediate use an electronic pig detector for use in the system being cleaned to provide a means of tracking the passage of the pig in the system to locate areas of potential or suspected blockage and other disparities in the system.
- C. The pig shall be constructed of elastomer polyurethane with an open cell construction and a density equal to or suitable for use in the piping system being cleaned. Pig configuration shall consist of a parabolic nose with a concave base and coated with a resilient surface material that will maintain a peripheral seal and will effectively clean the piping system without over abrading the interior pipe wall. Pig characteristics shall include the ability to navigate through 90 degree bends, 180 degree turns, bi-directional fittings, full port valves, reduce its cross sectional area and return to its original design configuration and be propelled by hydraulic pressure.

PART 3 EXECUTION

3.01 PIPELINE CLEANING

- A. The cleaning of the pipe line shall be done by the controlled and pressurized passage of a polyurethane pig of varying dimensions, coatings and densities as determined by the County through the piping system.
- B. A series of pigs shall be entered into the system at a point as near to the beginning as is logistically and mechanically feasible.
- C. A launching assembly shall be used as the entrance point for the pig. This assembly shall allow for the following:
 - 1. The entering of pigs into the system by providing the means to induce flow from an external source, independent of the flows and pressures immediately available from the system, on the back of the pig to develop sufficient pressure to force the pig through the system.
 - 2. A means to control and regulate the flow.
 - 3. A means to monitor the flows and pressures.
 - 4. A means to connect and disconnect from the system without any disruption to the operation of the system.
- D. The pig shall be removed or discharged from the system at a point as near to the end as is logistically and mechanically feasible.
- E. The contractor shall be responsible for the retrieval of the pig at the discharge point. This may include setting a trap that will not disrupt normal flow and operations but will capture the pig and any debris. A retrieval assembly may also be used but said assembly shall be

able to connect and disconnect from the system without any disruption to the operation of the system.

- F. Alternative launching and retrieval methods shall be done with the prior approval of the County.
- G. Any pig that cannot progress through the piping system shall be located by the contractor and removed by excavation of the pipe in order to remove the blockage. All pipe repairs shall be the responsibility of the contractor and shall be performed with as little disruption to the system as possible.
- H. Any increase in pressure that cannot be accounted for, i.e. fittings or valves or additional cleaning runs, shall be investigated, per the Engineers' approval, by locating the pig at the beginning of the increased pressure and excavating to determine the cause of the pressure increase. All pipe repairs shall be the responsibility of the contractor and shall be performed with as little disruption to the system as possible.
- I. Final flushing of the cleansed lines shall be performed after the last successful run of the pig as determined by the County. The contractor shall be responsible for all applicable flushing and disinfection requirements for potable water lines.

3.02 ACCEPTANCE

- A. The contractor shall maintain and provide a report at the end of the cleaning procedure containing the following:
 - 1. The pressures in the pipe during the pigging procedure.
 - 2. Any inline problems encountered during the procedure including all excavations with detailed locations, reason for the excavation and any corrective measures taken to the pipeline.
 - 3. A record of the pigs used, their sizes, styles and other pertinent information regarding what materials were used during the cleaning.
 - 4. An analysis of the condition of the pipeline before and after the cleaning procedure.

END OF SECTION

SECTION 02619 HORIZONTAL DIRECTIONAL DRILLING

PART 1 GENERAL

1.01 SCOPE

The Contractor shall furnish all labor, materials, equipment and incidentals required to install all pipe, fittings and appurtenances as shown on the Drawings and specified in the Contract Documents by Horizontal Directional Drilling (HDD).

1.02 GENERAL

- A. All existing structures, water and sewer lines, storm drains, utilities, driveways, sidewalks, signs, mail boxes, fences, trees, landscaping, and any other improvement or facility in the construction area that the Contractor disturbs for his own construction purposes shall be replaced to original condition at no additional cost to the County.
- B. For "Navigable Waters of the U.S." reference 33 of the Code of Federal Regulations, Part 329.
- C. For "Waters of the U.S." reference 33 of the Code of Federal Regulations, Part 323.
- D. For "Waters of the State" reference Section 62-301 of the Florida Administrative Code.

1.03 TESTING

- A. In place soil compaction tests shall be performed by a qualified testing laboratory.
- B. Compaction tests shall be taken at every excavation, except in the road crossings or road shoulders; tests are to be taken according to current FDOT Standards.
- C. All pipe shall be tested in accordance with the appropriate material specifications.
- D. Reference Standards: American Society for Testing and Materials (ASTM), D1557, Moisture-Density Relations of Soils Using 10-lb. Rammer and 18-in. Drop.
- E. The density of soil in place shall be a minimum of 95 percent in accordance with ASTM test 1557-70T, Method A or C.

1.04 QUALIFICATIONS

- A. Pipe Manufacture: All pipe and fittings shall be furnished by a single manufacturer who is fully experienced, reputable and qualified in the manufacture of the items to be furnished.
- B. Drilling Supervisor: The Contractor shall provide a competent boring specialist who shall remain on the project site during the entirety of the directional boring operation. This includes, but is not limited to, drilling fluid preparation, seaming, boring and pulling. The boring specialist shall have a minimum of five years experience in supervising directional bores of similar nature, diameter, materials and lengths.
- C. Pipe Fusion: All boring and fusing equipment shall be certified for operation. The Contractor responsible for thermal butt fusing pipe and fittings shall have manufacturer certification for performing such work or a minimum of five years experience performing

this type of work. If no certification is available, written documentation of the required work experience shall be submitted for approval.

- D. **Drilling Fluid Specialist:** The personnel responsible for supervising the supply, mixing, monitoring fluid quality, pumping and re-circulation system proposed for the drilling fluid shall have a written certification issued by the Drilling Fluid manufacturer for performing such work or a minimum of five years experience performing this type of work. If no certification is available, written documentation of the required work experience for the proposed personnel shall be submitted for review and approval.

1.05 SUBMITTALS

- A. Detailed description including specifications and catalog cuts for:
1. Shop drawings and catalog data for all HDD equipment.
 2. The pipe manufacturer's maximum degree of radial bending allowed for the pipe when full and when empty and pullback force recommended setting.
 3. Steering and tracking devices including specific tracer wire.
 4. Drilling fluids; the drilling fluid submittal shall include the ratio of mixture to water, including any additives, based on the Contractor's field observations prior to construction, knowledge and experience with drilling in similar conditions, and any soil data provided in the Contract Documents, which shall be verified by the fluid specialist.
 5. Shop drawings for the breakaway swivel, including the method of setting the swivels' break point and set point to be used.
 6. Pipe assembly procedure, details of support devices, and staging area layout including methods to avoid interference with local streets, driveways, and sidewalks.
 7. Details of pipe fusion procedures and copies of the fusion technician qualification certification or documentation.
 8. Drilling fluid technician qualification certification or documentation
- B. If the Contractor proposes any changes to the pull-back distance or profile shown on the drawings, he may be required to submit a complete design for the proposed pipe including an analysis for pull-back forces, external loads including full hydrostatic pressure if empty, external forces due to borehole collapse, ovalization during pull-back, thermal stress while exposed to Sun-light, shortening after release of pull-back force, and tensile stress during pull-back.
- C. **Bore Plan:** For all contiguous piping installations over 300 feet in length or any installations for piping larger than 4" in diameter, the Contractor shall submit a Bore Plan that includes the following:
1. Contact information and experience for the drilling fluid specialist.
 2. The number of passes the bore will include to get the product pipe installed.
 3. The pilot bore and all reaming bore sizes including the final pullback with the product pipe.
 4. Drilling rod length in feet.
 5. The pilot bore, pre-ream bores (if any) and pullback production rate in minutes per (drilling) rod to maintain adequate mud flow.
 6. Details of the entry and exit pit locations along with entry and exit angles for the bore, drawn to scale, depicting the position of all required equipment, access

- points, existing facilities to remain in place, existing traffic lanes to be maintained in operation, office trailers and storage sites.
7. The method of fusing or joining pipe of adjacent bores to ensure that the joint is on grade with the installed pipe.
- D. Furnish a Bore Path Report to the County within seven days of the completion of each bore path. Data collected by the County Representative does not relieve the Contractor from the responsibility of recording his own data. Include the following in the report:
1. Location of project, project name and number
 2. Name of person collecting data, including title, position and company name
 3. Investigation site location (Contract plans station number or reference to a permanent structure within the project right-of-way)
 4. Driller's Log & identification of the detection method used
 5. Elevations and offset dimensions of installed pipe as referenced to the drawings
 6. Data log of pullback force during product pipe installation
 7. All failed bores. Include length of pipe left in place and explanation of failed installation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Incidental materials that may or may not be used to install the product depending on field requirements are not paid for separately and will be included in the cost of the installed product.
- B. Drilling Fluids shall use a mixture of bentonite clay or other approved stabilizing agent mixed with potable water with a pH of 8.5 to 10.0 to create the drilling fluid for lubrication and soil stabilization. Vary the fluid viscosity to best fit the soil conditions encountered. Contractor shall have appropriate additives for drilling fluid available for different soil conditions that may be encountered. Do not use any other chemicals or polymer surfactants in the drilling fluid without written consent from the County. Certify to the County in writing that any chemicals to be added are environmentally safe and not harmful or corrosive to the product pipe.
- C. For drilling operations that will be below waters of the State of Florida, only bentonite free drilling fluids shall be used. Acceptable products are BioMax, manufactured by M-I Swaco, Inc., P.O. Box 2216, Laurel, Mississippi 39440, Phone: (800) 731-7331 or Bio-Bore, manufactured by Baroid Drilling Fluids, Inc., P.O. Box 1675, Houston, Texas 77251, Phone: (731) 987-5900 or approved equal.
- D. Identify the source of water for mixing the drilling fluid. Approvals and permits are required for obtaining water from such sources as streams, rivers, ponds or fire hydrants. Any water source used other than potable water may require a pH test.
- E. The tracer wire to be used for all directional drills shall be a solid, 10 gauge, high strength, copper clad steel wire with a polyethylene jacket of appropriate color manufactured by Copperhead Industries or Manatee County approved equal.
- F. Breakaway connectors shall be supplied by DCD Design & Manufacturing, Condux International, Inc. or approved equal.

PART 3 EXECUTION

3.01 SITE CONDITIONS

- A. Carry out excavation for entry, exit, recovery pits, slurry sump pits, or any other excavation as specified in the Contract documents. Sump pits are required to contain drilling fluids if vacuum devices are not operated throughout the drilling operation, unless approved by the County.
- B. Within 48 hours of completing installation of the boring product, clean the work site of all excess slurry or spoils. Take responsibility for the removal and final disposition of excess slurry or spoils. Ensure that the work site is restored to pre-construction conditions or as identified on the plans.
- C. Exposure of product pipe to sunlight shall be limited to 14 consecutive days unless approved by the County.
- A. The pipe shall be supported at intervals along its length with rollers or Teflon pads to minimize frictional forces when being pulled, and to hold the pipe above the ground. Surface cuts or scratches greater than or equal to the maximum defect depth in 3.08 E are not acceptable.

3.02 DAMAGE RESTORATION & REMEDIATION

- A. The Contractor shall take responsibility for restoration for any damage caused by heaving, settlement, separation of pavement, escaping drilling fluid (frac-out), or the directional drilling operation, at no cost to the County.
- B. When required by the County, provide detailed plans which show how damage to any roadway facility will be remedied. These details will become part of the Record Drawings Package. Remediation Plans must follow the same guidelines for development and presentation of the Record Drawings. When remediation plans are required, they must be approved by the County before any work proceeds.
- C. For HDD operations that will be below waters of the State of Florida, the contractor shall be responsible for any damage caused by the drilling operation, including, but not limited to, fracturing of the channel bottom. Any State or Federal required environmental cleanup due to the release of drilling fluids into State waters shall be at the Contractor's expense. The Contractor may at his own expense increase the depth of his drilling operations upon the approval from the County.

3.03 QUALIFICATIONS FOR REJECTION OF DIRECTIONAL BORE

- A. The County may reject any portion of the work that is deemed to be non-responsive to the Contract requirements or not in conformance with approved plans and submittals, and for other factors including the following:
 - 1. Failed Bore: When there is any indication that the installed product has sustained damage, stop all work, notify the County and investigate damage. The County may require a pressure and / or mandrel test at no additional cost to the County and shall have a County representative present during the test. Perform all testing within 24 hours unless otherwise approved by the County. Furnish a copy of the test results and all bore logs to the County for review and approval. The County is

- allowed up to 5 working days to approve or determine if the product installation is not in compliance with the specifications.
2. Obstructions: If an obstruction is encountered during boring which prevents completion of the installation in accordance with the design location and specification, the pipe may be taken out of service and left in place at the discretion of the County.
 3. Pull-back Failure: If the installed breakaway device should fail during pull back.
 4. Loss of Drilling Fluids: If the drilling fluid is "lost" during the pull back of the product and can not be regained within the required timeframe of the manufacturer or if more than a reasonable amount of fluid is used to fill an unknown void and flow can not be regained. No pipe shall be pulled without visible flow of drilling fluid.
 5. Test Failure: If the pipe shall fail a hydraulic pressure test as specified by the County.
 6. Damaged Pipe: If at any time when the product is pulled back and any exposed areas have a greater than allowable "gouging" or visible marring of the pipe per the table in 3.08 E.
 7. Alignment Tolerance Exceeded: If the vertical and horizontal limits are not within tolerances.
 8. Defective Material: Any other defect in material or workmanship which would affect the quality, performance, or installation life of the installed pipeline.
- B. Remediation: All rejected bores shall be at the Contractors expense to correct and provide a satisfactory installed product. The Contractor shall submit to the County a revised installation plan and procedure for approval before resuming work. The County may require non-compliant installations to be filled with excavatable flowable fill or to be completely removed at no additional cost to the County.

3.04 PRODUCT LOCATING AND TRACKING

- A. The County recognizes walkover, wire line, and wire line with surface grid verification, or any other system as approved by the County, as the accepted methods of tracking directional bores. Use a locating and tracking system capable of ensuring that the proposed installation is installed as intended. The locating and tracking system must provide information on:
1. Clock and pitch information
 2. Depth
 3. Transmitter temperature
 4. Battery status
 5. Position (x,y)
 6. Azimuth, where direct overhead readings (walkover) are not possible (i.e. sub aqueous)
- B. Ensure proper calibration of all equipment before commencing directional drilling operation.
- C. Prepare the Driller's Log. Take and record alignment readings or plot points such that elevations on top of and offset dimensions from the center of the product to a permanent fixed feature are provided. Such permanent fixed feature must have prior approval of the County. Provide elevations and dimensions at all bore alignment corrections (vertical and horizontal) with a minimum distance between points of 10 feet. Provide a sufficient number of elevations and offset distances to accurately plot the vertical and horizontal alignment of the installed product.

- D. Installation Location Tolerances: The location of the initial bored hole shall be deemed acceptable by the County if the deviations of the bore from the design alignment or approved adjustments do not exceed the following tolerances:
1. Profile:
 - a. 2.0 feet within a length of 100 feet
 - b. No reverse curvature within 200 feet
 - c. Total deviation not to exceed 5 feet
 2. Alignment:
 - a. 3.0 feet within a length of 200 feet
 - b. No reverse curvature
 - c. Total deviation not to exceed 7.0 feet

3.05 PRODUCT BORE HOLE DIAMETER

Minimize potential damage from soil displacement/settlement by limiting the ratio of the bore hole to the product size. The size of the back reamer bit or pilot bit, if no back reaming is required, will be limited relative to the product diameter to be installed as follows:

Maximum Pilot or Back-Reamer Bit Diameter When Rotated 360 Degrees	
Nominal Inside Pipe Diameter Inches	Bit Diameter Inches
2	4
3	6
4	8
6	10
8	12
10	16
12 and greater	Maximum Product OD plus 6

3.06 EQUIPMENT REQUIREMENTS

- A. The HDD equipment selected by the Contractor shall be capable of drilling, steering, tracking, reaming and installing the pipeline through all the subsurface conditions that may be present at the site.
- B. Match equipment to the size of pipe being installed. Obtain the County's approval for installations differing from the above chart. Ensure that the drill rod can meet the bend radius required for the proposed installation.
- C. All HDD equipment shall have a data logger to record pull back force during all pipe installations.
- D. All HDD equipment that has the capability to exceed the maximum recommended pulling force shall have a breakaway swivel properly attached to the product pipe that will release if the pullback force exceeds the pipe manufacturers recommended pulling force.

3.07 THRUST / PULLBACK REQUIREMENTS

The Contractor shall provide as part of the required working drawings submittal complete

data regarding the operational and maximum thrust or pulling forces to be used for the initial drill head and back-reamer installations, and the final pull-back of the pipe. Gages or other measurement tools shall be used to monitor the forces being used.

3.08 INSTALLATION PROCESS

- A. Ensure adequate removal of soil cuttings and stability of the bore hole by monitoring the drilling fluids such as the pumping rate, pressures, viscosity and density during the pilot bore, back reaming and pipe installation. Relief holes can be used as necessary to relieve excess pressure down hole. Obtain the County's approval of the location and all conditions necessary to construct relief holes to ensure the proper disposition of drilling fluids is maintained and unnecessary inconvenience is minimized to other facility users.
- B. The Contractor shall determine the pull-back rate in order to allow the removal of soil cuttings without building excess down-hole pressure and to avoid local heaving, or spills. Contain excess drilling fluids at entry and exit points until they are recycled and separated from excavated materials, or removed from the site or vacuumed during drilling operations. Ensure that entry and exit pits and storage tanks are of sufficient size to contain the expected return of drilling fluids and soil cuttings. The bored hole shall always be maintained full of drilling fluids for support of surfaces, and the fluid re-circulation equipment shall operate continuously until the pipe installation is completed and accepted by the County.
- C. Ensure that all drilling fluids are disposed of or recycled in a manner acceptable to the appropriate local, state, or federal regulatory agencies. When drilling in suspected contaminated ground, test the drilling fluid for contamination and appropriately dispose of it. Remove any excess material upon completion of the bore. If in the drilling process it becomes evident that the soil is contaminated, contact the County immediately. Do not continue drilling without the County's approval.
- D. The timing of all boring processes is critical. Install a product into a bore hole within the same day that the pre-bore is completed to ensure necessary support exists. Once pullback operations have commenced, the operation shall continue without interruption until the pipe is completely pulled into the borehole.
- B. All prepared pipe that is being used for installation shall be adequately supported off the ground along the entire length to avoid damaging of the material during pullback due to ground surface conditions. Surface cuts or scratches greater than or equal to the maximum defect depth are not acceptable.

Pipe Size	Max. Defect Depth
In.	In.
4	1/16
6	1/11
8	5/32
10	3/16
12	1/4
> 12	Per Pipe Manufacturer's Recommendations

- F. The drilling fluid specialist shall remain on the project site during the entirety of the directional boring operation to ensure proper mixture and production of drilling fluids needed for the bore.

- G. Upon successful completion of the pilot hole, the borehole shall be reamed to a minimum of 25 percent greater than the outside diameter of the pipe being installed.
- H. For bores with more than two radii of curvature (entrance and exit), the borehole should be reamed up to 50 percent larger than the outside diameter of the carrier pipe. Prereaming may be necessary dependent on size of material to be pulled.
- I. Additional passes for prereaming may be required for larger pipe. Incremental increases shall be used as needed until appropriate bore hole size has been achieved.
- J. Prereaming must be accomplished with no product attached to the reamer head on all bore pipe 6" and larger. The bore product maybe pulled back on final pass of prereaming upon prior approval from the County.
- K. After reaming the borehole to the required diameter, the pipe shall be pulled through the hole. In front of the pipe shall be a breakaway swivel and barrel reamer to compact the borehole walls.
- L. The Contractor shall not attempt to ream at a rate greater than the drilling equipment and drilling fluid system are designed to safely handle.
- M. Install all piping such that their location can be readily determined by electronic designation after installation. For non-conductive installations, externally attach two (2) tracer wires; see Section 2.01 - Materials, Part I. above, to the product pipe.

Connect any break in the conductor line before construction with an electrical clamp, or solder, and coat the connection with a rubber or plastic insulator to maintain the integrity of the connection from corrosion. Clamp connections must be made of brass or copper and of the butt end type with wires secured by compression. Soldered connections must be made by tight spiral winding of each wire around the other with a finished length minimum of 3 inches overlap. Tracking conductors must extend 2 feet beyond bore termini. Test conductors for continuity. Each conductor that passes must be identified as such by removing the last 6 inches of the sheath. No deductions are allowed for failed tracking conductors. Upon completion of the directional bore, the Contractor shall demonstrate to the County that the wire is continuous and unbroken through the entire run of the pipe by providing full signal conductivity (including splices) when energizing for the entire run in the presence of the County Representative. If the wire is broken, the Contractor shall repair or replace it at no additional cost to the County.

END OF SECTION

SECTION 02620 POLYETHYLENE (PE) PRESSURE PIPE

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required to install polyethylene pressure pipe, fittings and appurtenances as shown on the Drawings and specified in the Contract Documents and these Standards.
- B. Newly installed pipe shall be kept clean and free of all foreign matter & gouges.
- C. All pipe shall be correctly color coded / identified.

1.02 QUALIFICATIONS

All polyethylene pipe, fittings and appurtenances shall be furnished by a single manufacturer who is fully experienced, reputable and qualified in the manufacture of the items to be furnished.

1.03 SUBMITTALS

- A. The Contractor shall submit to the County, within ten days after receipt of Notice to Proceed, a list of materials to be furnished, the names of the suppliers and the appropriate shop drawings for all polyethylene pipe and fittings.
- B. The Contractor shall submit the pipe manufacturer's certification of compliance with the applicable sections of the Specifications.
- C. The Contractor shall submit shop drawings showing installation method and the proposed method and specialized equipment to be used.

PART 2 PRODUCTS

2.01 POLYETHYLENE PRESSURE PIPE

- A. Polyethylene pipe 4" diameter and larger shall be high-density PE 3408 polyethylene resin per ASTM D 3350, Cell Classification 345464C, Class 160, DR 11, CPChem DriscoPlex 4000, 4300 or 4500 or an approved equal, meeting the requirements of AWWA C906. All pipe materials used in potable water systems shall comply with NSF Standard 61. Outside diameters of water, reclaimed water and pressure sewer HDPE pipes shall be ductile iron size (DIPS).
- B. Polyethylene pipe and tubing 3" diameter and smaller shall be pressure Class 200, DR 9 "Driscopipe 5100", Endo Pure by Endot, or equal, meeting the requirements of AWWA C901 (latest revision) and the following ASTM requirements:

Material Designation PPI/ASTM PE 3408
Material Classification ASTM D-1248 III C5 P34
Cell Classification ASTM D-3350

2.02 JOINTS

- A. Where PE pipe is joined to PE pipe, it shall be by thermal butt fusion. Thermal fusion shall be accomplished in accordance with the written instructions of the pipe manufacturer and fusion equipment supplier. The installer of the thermal butt fused PE pipe shall have received training in heat fusion pipe joining methods and shall have had experience in performing this type of work.
- B. Where thermal butt fusion cannot be used, or when specifically called for on the plans, electro-fused couplings may be used. Fusion shall be in accordance with the written instructions of the fitting manufacturer.
- C. Flanged joints, mechanical joints, tapping saddles, and molded fittings shall be in accordance with AWWA C901, C906 or C909, ASTM D3350 and D3140, as applicable. Fusion and mechanical connections are allowed, chemical (solvents, epoxies, etc.) are not allowed.

2.03 DETECTION

- A. Direct buried HDPE pipe shall have 3" detectable metallic tape of the proper color placed directly above the pipe and 12" below finished grade or 6" detectable tape between 12" and 24" below finished grade.
- B. Direct buried or horizontal directional drilled HDPE pipe shall also have tracer wire installed along the pipe alignment. The tracer wire to be used shall be a solid, 10 gauge, high strength, copper clad steel wire with a polyethylene jacket of appropriate color manufactured by Copperhead Industries or Manatee County approved equal.

2.04 IDENTIFICATION

- A. Pipe shall bear identification markings in accordance with AWWA C906.
- B. Pipe shall be color coded blue for water, purple (Pantone 522 C) for reclaimed water or green for pressure sewer using a solid pipe color or embedded colored stripes. Where stripes are used, there shall be a minimum of three stripes equally spaced.

PART 3 EXECUTION

3.01 INSTALLING POLYETHYLENE PRESSURE PIPE AND FITTINGS

All polyethylene pressure pipe shall be installed by direct bury, directional bore, or a method approved by the County prior to construction. If directional bore is used, or if directed by the County, the entire area of construction shall be surrounded by silt barriers during construction.

3.02 INSPECTION AND TESTING

All pipelines shall remain undisturbed for 24 hours to develop complete strength at all joints. All pipelines shall be subjected to a hydrostatic pressure and leak test per section 02617.

END OF SECTION

SECTION 02622 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS (AWWA SPECIFICATIONS C-900 & C-905)

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish all labor, materials, equipment and incidentals required to install the plastic piping, fittings and appurtenances complete and ready for use as specified in the Contract Documents and these Standards.

1.02 DESCRIPTION OF SYSTEM

The Contractor shall install the piping in the locations as shown on the Drawings.

1.03 QUALIFICATIONS

All plastic pipe, fittings and appurtenances shall be furnished by a single manufacturer who is fully experienced, reputable, qualified and specializes in the manufacture of the items to be furnished. The pipe and fittings shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these Specifications.

1.04 SUBMITTALS

- A. The Contractor shall submit shop drawings to the County including, but not limited to, dimensions and technical specifications for all piping.
- B. The Contractor shall submit to the County, samples of all materials specified herein.
- C. The Contractor shall submit and shall comply with pipe manufacturer's recommendation for handling, storing and installing pipe and fittings.
- D. The Contractor shall submit pipe manufacturer's certification of compliance with these Specifications.

1.05 TOOLS

The Contractor shall supply special tools, solvents, lubricants, and caulking compounds required for proper installation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pressure Class-Rated Polyvinyl Chloride (PVC) Pipe
 - 1. Pressure class-rated PVC pipe and accessories four to twelve inches (4"-12") in diameter, shall meet the requirements of AWWA Specification C-900 "Polyvinyl Chloride (PVC) Pressure Pipe". Pipe shall be Class 150, meeting requirements of Dimension Ratio (DR) 18 and shall have the dimension of ductile iron outside diameters. Each length of pipe shall be hydrotested to four (4) times its class pressure by the manufacturer in accordance with AWWA C-900.

2. PVC pipe 14" through 36" shall meet the requirements of AWWA Standard C-905, Polyvinyl Chloride (PVC) Water Transmission Pipe. Pipe 14" thru 24" for potable and reclaim water shall meet the requirements for dimension ratio (DR) 18. Each length of pipe shall be tested at twice the pressure rating (PR 235 psi) for a minimum dwell of 5 seconds in accordance with AWWA C-905. Fourteen inch (14") thru 36" PVC pipe for sewer force mains shall meet AWWA C-905 requirements for dimension ratio (DR) 21. Each length of pipe shall be tested at twice the pressure rating (PR 200 psi) for a minimum dwell of five seconds in accordance with AWWA C-905.

Pipe shall be listed by Underwriters Laboratories. Provisions shall be made for expansion and contraction at each joint with an elastomeric ring, and shall have an integral thickened bell as part of each joint. PVC Class pipe shall be installed as recommended by the manufacturer. Pipe shall be furnished in nominal lengths of approximately 20 feet, unless otherwise directed by the County. Pipe and accessories shall bear the NSF mark indicating pipe size, manufacturer's names, AWWA and/or ASTM Specification number, working pressure, and production code.

3. Gaskets for 16" diameter and larger pipe used for potable water pipe shall be EPDM (Ethylene-Propylene Dine Monomer).
4. PVC pipe 3" and less in diameter may be constructed using pipe conforming to ASTM D2241 with push-on joints. Pipe shall be 200 psi pipe-SDR 21 unless otherwise specified by the County. This PVC pipe shall not be used for working pressures greater than 125 psi.
5. Pipe shall be blue for potable water mains, green for sewage force mains and purple for reclaimed water mains. All potable water pipe shall be NSF certified and copies of lab certification shall be submitted to the County.
6. Where colored pipe is unavailable, white PVC color coded spiral wrapped pipe shall be installed.

B. Joints

1. The PVC joints for pipe shall be of the push-on type unless otherwise directed by the County so that the pipe and fittings may be connected on the job without the use of solvent cement or any special equipment. The push-on joint shall be a single resilient gasket joint designed to be assembled by the positioning of a continuous, molded resilient ring gasket in an annular recess in the pipe or fitting socket and the forcing of the plain end of the entering pipe into the socket, thereby compressing the gasket radially to the pipe to form a positive seal. The gasket and annular recess shall be designed and shaped so that the gasket is locked in place against displacement as the joint is assembled.

The resilient ring joint shall be designed for thermal expansion or contraction with a total temperature change of at least 75 degrees F in each joint per length of pipe. The bell shall consist of an integral wall section with a solid cross section elastomeric ring which shall meet requirements of ASTM F-477. The thickened bell section shall be designed to be at least as strong as the pipe wall. Lubricant furnished for lubricating joints shall be nontoxic, shall not support the growth of bacteria, shall have no deteriorating effects on the gasket or pipe material, and shall not impart color, taste, or odor to the water. Gaskets shall be suitable for use

with potable water, reclaimed water or sanitary sewer as applicable.

2. Restrained joints shall be provided at all horizontal and vertical bends and fittings, at casings under roads and railroads and at other locations shown on the Contract Drawings. PVC joints for pipe shall be restrained by the following methods: thrust blocks, restraining glands such as Certa-Lok Restraining Joint Municipal Water Pipe by the Certain Teed Corporation of Valley Forge, PA, or approved equal. All Grip, Star Grip by Star Products, MJR by Tyler Pipe, Tyler, Texas. Restrained joint PVC pipe shall be installed in strict accordance with the manufacturer's recommendation.

C. Fittings

1. All fittings for class-rated PVC pipe shall be ductile iron with mechanical joints and shall conform to the specifications for ductile iron fittings, unless otherwise directed. Class 200, C-900 PVC fittings are allowable for sewage force main applications up to and including 12" diameter only. DR ratio shall be the same as the pipe.
2. The manufacturer of the pipe shall supply all polyvinyl chloride accessories as well as any adapters and/or specials required to perform the work as shown on the Drawings and specified herein. Standard double bell couplings will not be accepted where the pipe will slip completely through the coupling.

PART 3 EXECUTION

3.01 INSTALLATION

The Contractor shall install the plastic pipe in strict accordance with the manufacturer's technical data and printed instructions. Direct bury pipe shall have 3" detectable metallic tape of the proper color placed directly above the pipe 12" below finished grade or 6" detectable tape between 12" and 24" below grade.

3.02 INSPECTION AND TESTING

All pipe lines shall remain undisturbed for 24 hours to develop complete strength at all joints. All pipe lines shall be subjected to a hydrostatic pressure test for two (2) hours at full working pressure, but not less than 180 psi for water/reclaimed (150 psi for force main). All visible leaks shall be repaired and retested for approval by the County. Prior to testing, the pipe lines shall be supported in a manner approved by the County to prevent movement during tests.

END OF SECTION

SECTION 02623 POLYVINYL CHLORIDE (PVC) PIPE (GRAVITY SEWER)

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, equipment, materials, pipe and incidentals and shall construct gravity sewers, complete, as shown on the drawings and as herein specified.
- B. The work shall include furnishing, laying and testing gravity sewer pipe.

1.02 SUBMITTALS DURING CONSTRUCTION

- A. The Contractor shall submit prior to construction, Shop Drawings, Working Drawings and Samples for approval to the County.
- B. The Contractor shall submit to the County not less than fourteen (14) calendar days after the date of the Notice to Proceed, a list of materials to be furnished, the names of suppliers and an expected schedule of delivery of materials to the site.
- C. The Contractor shall furnish in duplicate to the County sworn certificates that all tests and inspections required by the Specifications under which the pipe is manufactured have been satisfied.
- D. The pipe manufacturer shall inspect all pipe joints for out-of-roundness and pipe ends for squareness. The Contractor shall furnish to the County, a manufacturer's Notarized Affidavit stating all pipe meets the requirements of ASTM, ASCE, ANSI, the Contract Documents, as well as all applicable standards regarding the joint design with respect to square ends and out-of-round joint surfaces.

1.03 INSPECTION AND TESTS

- A. All pipe and accessories installed under this Contract shall be inspected and tested as required by the Standard Specifications to which the material is manufactured. The pipe shall be tested at the place of manufacture or taken to an independent laboratory by the manufacturer.
- B. Each length of pipe shall be subject to inspection and approval at the factory, point of delivery and site of work. Sample of pipe to be tested shall be selected at random by the County or the testing laboratory and shall be delivered by the Contractor to the testing laboratory approved by the County.
- C. When the specimens tested conform to applicable standards, all pipe represented by such specimens shall be considered acceptable based on the test parameters measured. Copies of test reports shall be submitted to the County prior to the pipe installation. Acceptable pipe shall be stamped with an appropriate monogram under the supervision of the testing laboratory.
- D. All pipe test specimens failing to meet the applicable standards shall be rejected. The Contractor may provide two additional test specimens from the same shipment or delivery for each failed specimen. The pipe shall be acceptable if both of these additional specimens meet the requirements of the applicable standards.

- E. Pipe which has been deemed unacceptable by the County shall be removed from the work site by the Contractor and shall be replaced with acceptable pipe.

PART 2 MATERIALS

2.01 GENERAL

- A. The sizes of gravity sewer pipe shall be shown on the Drawings.
- B. Each length of pipe shall bear the name or trademark of the manufacturer, the location of the manufacturing plant and the class or strength classification of the pipe. The markings shall be plainly visible on the pipe barrel.

2.02 POLYVINYL CHLORIDE (PVC) GRAVITY SEWER PIPE

- A. PVC pipe, sizes 6" through 12", for use in non-pressure gravity sewer mains and laterals shall have an SDR of 26 and conform to ASTM D-3034. PVC pipe shall be made of PVC plastic, homogenous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. The pipe shall be uniform in color, density and other physical properties.
- B. PVC pipe sizes over 12" shall be approved by Manatee County.
- C. All pipe shall be in compliance with the above standard and be clearly marked as follows at intervals of 5 feet or less:
 - 1. Manufacturer's name or trademark.
 - 2. Nominal pipe size.
 - 3. PVC cell classification (eg. 12454-B).
 - 4. The legend "Type PSM SDR-26 PVC Sewer Pipe" and the designation ASTM D-3034.
- D. In addition to the above mentioned requirements, all PVC sanitary sewer pipe shall be color coded green to conform with Manatee County Standards.
- E. PVC sewer fittings shall conform to the requirements of ASTM D-3034 and shall have an SDR of 26. Six inch PVC fittings for sewer laterals shall be SDR 26. Fittings shall be molded in one piece with elastomeric joints and minimum socket depths as measured in accordance with ASTM D-3034. Fittings not currently available in molded form may be fabricated in accordance with ASTM D-3034 with manufacturer's standard pipe bells and gaskets. Gasket shall have a minimum cross sectional area of 0.20 sq. in. and conform to ASTM F-477 specification.

2.03 JOINTING PVC PIPE

- A. The PVC joints shall be of the push-on type so that the pipe and fittings may be connected on the job without the use of solvent cement or any special equipment. The push-on joint shall be a single rubber gasket conforming to ASTM F-477, designed to be assembled by the positioning of a continuous molded rubber ring gasket in an annular recess in the pipe of fitting socket and the forcing of the plain end of the entering pipe into the socket, thereby compressing the gasket radially to the pipe to form a positive seal. The gasket and annular recess shall be designed and shaped so that the gasket is locked in place against displacement as the joint is assembled. The rubber ring joint shall be designed for

thermal expansion or contraction with a total temperature change of at least 75 degrees F in each joint per length of pipe. The bell shall consist of an integral wall section with a solid cross-section elastomeric ring which shall meet requirements of ASTM F-477. The thickened bell section shall be designed to be at least as strong as the pipe wall. Lubricant furnished for lubricating joints shall be nontoxic, shall not support the growth of bacteria, and shall have no deteriorating effects on the gasket or pipe material.

- B. Wyes and riser fittings shall be gasketed connections. If female adapters SDR 26 or 35 are unavailable, solvent welds shall be acceptable upon approval by the County.
- C. Rubber doughnuts are not to be used.

2.04 JOINTS FOR DISSIMILAR PIPE

Joints between pipe of different materials shall be made using mechanical joint connections. Metal piping shall not be threaded into plastic fittings, valves, or couplings, nor shall plastic piping be threaded into metal valves, fittings, or couplings.

2.05 PIPE BEDDING AND PIPE COVER MATERIALS

- A. Pipe bedding and cover material shall be as specified in the Contract Documents.
- B. Pipe bedding and cover material for polyethylene coated ductile iron pipe fittings shall be well graded sand.

PART 3 EXECUTION

3.01 PIPE DISTRIBUTION

The Contractor shall not distribute material on the job faster than it can be used to good advantage. He shall unload pipe which cannot be physically lifted by workers from the trucks, by a forklift, or other approved means. He shall not drop pipe of any size from the bed of the truck to the ground. He shall not distribute more than one weeks supply of material in advance of laying, unless otherwise approved by the County.

3.02 PIPE PREPARATION AND HANDLING

- A. The Contractor shall inspect all pipe and fittings prior to lowering them into trench. Cracked, broken, or otherwise defective materials are not acceptable and shall not be used. The Contractor shall clean the ends of the pipe thoroughly. He shall remove foreign matter and dirt from inside of pipe and keep the pipe clean during and after laying.
- B. The Contractor shall use proper implements, tools and facilities for the safe and proper protection of the work. He shall lower the pipe into the trench in a manner to avoid any physical damage to the pipe, remove all damaged pipe from the job site and under no circumstances shall the pipe be dropped or dumped into trenches.

3.03 LINE AND GRADE

- A. The Contractor shall not deviate more than 1/2-inch for line and 1/4-inch for grade from the line design and design grade established by the County provided that such variation does not result in a level or a reverse sloping invert. He shall measure the grade at the pipe invert and not at the top of the pipe. The Contractor shall furnish, set and control the

line and grade by laser beam method. Other methods of controlling line and grade may be submitted to the County for approval if using the laser beam method proves to be impractical because of other conditions.

- B. The Contractor shall use the laser beam method of maintaining line and grade. The Contractor shall submit evidence to the County that a qualified operator shall handle the equipment during the course of construction. A "Caution-Laser Light" placard shall be displayed in a conspicuous place. When "in the pipe" method is used, grade boards shall be installed for the first 50 feet of pipe. The Contractor shall check the line and grade at any additional points at which offset stakes have been placed and when requested by the County. A fan shall be provided to circulate the air if bending of the beam due to air temperature variations becomes apparent with "in the pipe" units. However excessive air velocity shall not be permitted to cause pulsating or vibrating of the beam. If, in the opinion of the County, the beam cannot be accurately controlled, this method of setting line and grade shall be discontinued. When the above ground method is used, the set-up shall be checked with the three grade boards including one set at the upstream manhole. If the laser has a gradient indicator, two boards may be used to check the set-up. The grade board at the up-stream manhole shall be retained to check into as pipe laying progresses.

3.04 PREPARATION OF TRENCH

- A. The Contractor shall provide pipe bedding material under all the pipe for the full trench width. The minimum depth of bedding material below the pipe barrel shall be as follows

Minimum Depth of

<u>Pipe Size</u>	<u>Bedding Under Pipe Barrel</u>
15" & Smaller	4 inches
18" to 36"	6 inches
42" & Large	9 inches

- B. The depth of pipe bedding material under the pipe bell shall not be less than three inches under normal trench conditions.
- C. The Contractor shall hand-grade bedding to proper grade ahead of the pipe laying operation. The bedding shall provide a firm, unyielding support along the entire pipe length.
- D. Should the Contractor excavate the trench below the required depth for pipe bedding material placement without direction from the County, the Contractor shall fill the excess depth with pipe bedding material as specified herein to the proper subgrade.
- E. The Contractor shall excavate bell holes at each joint to permit proper assembly and inspection of the entire joint.

3.05 DEWATERING

The Contractor shall prevent water from entering the trench during excavation and pipe laying operations to properly grade the bottom of the trench and allow for proper compaction of the backfill. Pipe shall not be laid in water.

3.06 LAYING AND JOINTING PIPE AND FITTINGS

- A. The Contractor shall lay pipe upgrade with spigot ends pointing in direction of flow. After a section of pipe has been lowered into the prepared trench, he shall clean the end of the pipe to be joined, the inside of the joint and, if applicable, the rubber ring immediately prior to joining the pipe. The Contractor shall assemble the joint in accordance with the recommendations of the manufacturer of the type of joint used. He shall provide all special tools and appliances required for the jointing assembly.
- B. The Contractor shall lay all pipe uniformly to line and grade so that the finished sewer shall present a uniform bore. Variations from line and grade in excess of the tolerances specified under LINE AND GRADE are not acceptable and the work shall be rejected.
- C. The Contractor shall check the pipe for alignment and grade after the joint has been made. The pipe bedding shall form a continuous and uniform bearing and support for the pipe barrel between joints. Sufficient pressure shall be applied to the joint to assure that the joint is "home" as defined in the standard installation instructions provided by the pipe manufacturer. The Contractor shall place sufficient pipe cover material to secure the pipe from movement prior to installing the next joint to assure proper pipe alignment and joint makeup.
- D. Pipe 21" and smaller intended to be in straight alignment shall be laid so that the inside joint space does not exceed 3/8" in width. If interior joints on 24" and larger pipe laid either in straight alignment or on a curve are greater than 3/8", the Contractor shall thoroughly clean the joint surfaces and fill and seal the entire joint with premixed mortar conforming to ASTM C-387 only after the trench has been backfilled, unless otherwise approved by the County. Trowel smooth on the inside surface. Water shall not be allowed to rise in or around, or pass over any joint before it has substantially set.
- E. When the Contractor lays pipe within a movable trench shield, he shall take all necessary precautions to prevent pipe joints from pulling apart when moving the shield ahead.
- F. The Contractor shall prevent excavated or other foreign material from getting into the pipe during the laying operation. He shall close and lock the open end of the last laid section of pipe to prevent entry of foreign material or creep of the gasketed joints when laying operations cease, at the close of the day's work, or whenever the workers are absent from the job.
- G. The Contractor shall plug or close off the pipes which are stubbed off with temporary plugs.
- H. The Contractor shall take all necessary precautions to prevent the "uplift" or floating of the line prior to the completion of the backfilling operation.
- I. The Contractor shall make connections of non-reinforced pipe to manholes or concrete structures, so that a standard pipe joint is located at a minimum of 18" outside the edge of structure.
- J. When field cutting and/or machining the pipe is necessary, the Contractor shall use only tools and methods recommended by the pipe manufacturer and approved by the County.
- K. Service lateral shall be constructed by the Contractor as shown on the standard sewer details and located approximately as shown on the Contract Drawings.

3.07 LAYING PLASTIC PIPE

- A. Polyvinyl chloride (PVC) pipe shall be installed by the Contractor in accordance with the instructions of the manufacturer, as shown on the Drawings and as called out in the Contract Documents.
- B. The Contractor shall lay the pipe, bedding and backfill to lines and grade shown on the Drawings and called out in the Contract Documents. Blocking under the pipe will not be permitted.
- C. The Contractor shall install a green metallic tape as shown in these Standards below finish grade along the entire pipeline PVC sewer main pipe route.
- D. The Contractor shall use care in the handling, storage and installation of pipe. Storage of pipe on the job site shall be done in accordance with the pipe manufacturer's recommendation.

3.08 BACKFILL IN THE PIPE ZONE

- A. The pipe zone shall be considered to include the full width of the excavated trench from the bottom of the trench to a point above the top outside surface of the barrel of the pipe.
- B. The Contractor shall pay particular attention to the area of the pipe zone from the flow line to the springline of the pipe to insure that firm support is obtained to prevent any lateral movement of the pipe during the final backfilling of the pipe zone.
- C. The Contractor shall take care to insure that the pipe does not rest directly on the bell or pipe joint, but is uniformly supported on the barrel throughout its entire length.
- D. After the pipe is laid by the Contractor to line and grade, he shall place and carefully compact pipe bedding material for the full width of the trench to the springline of the pipe. He shall place the material around the pipe in 6-inch layers and thoroughly hand tamp with approved tamping sticks supplemented by "walking in" and slicing with a shovel to assure that all voids are filled.
- E. The Contractor shall backfill and carefully compact the area above the pipe springline with pipe cover material to a point 12" above the top outside surface of the pipe barrel. Pipe bedding material may, at the Contractor's option, be substituted for pipe cover material.

3.09 EXCESS TRENCH WIDTH

- A. Normal trench widths shall be as shown on the Drawings. If the normal trench width below the top of the pipe is exceeded for any reason, the Contractor shall furnish an adequate support for the pipe. The County may determine that the pipe being used is strong enough for the actual trench width or the Contractor may furnish a stronger pipe or a concrete cradle for approval.
- B. Concrete thickness under the pipe shall be one-third of the nominal diameter of the pipe, but not less than four inches. Concrete block or brick may be used for adjusting and maintaining proper grade and elevation of pipe. After the pipe is laid to line and grade, the Contractor shall place 3,000 psi concrete under the pipe for the full width of the trench to form a cradle of the required length and thickness with the concrete brought up to a level equal to 1/4 of the inside pipe diameter below the springline of the pipe. Start and

terminate the concrete cradle at the face of a pipe bell or collar. Do not encase pipe joints at the ends of the concrete cradle.

- C. After the concrete has taken initial set, the Contractor shall place cover material over the concrete cradle and up to a level 12" above the pipe barrel and for the full width of the trench. Cover material shall be placed by hand or by equally careful means.

3.10 CONNECTING DISSIMILAR PIPE MATERIALS

The Contractor shall use the following method to connect dissimilar pipe materials. Use concrete closure collars only when approved by the County and then only to make connections between dissimilar pipe when standard rubber gasketed joints or flexible couplings are impracticable. Before the closure collars are poured, wash the pipe to remove all loose material and soil from the surface on which the concrete will be placed. Wet nonmetallic pipe thoroughly prior to pouring the collars. Wrap and securely fasten a light gauge of sheet metal or building-felt around the pipe to insure that no concrete shall enter the line. Place reinforcement as shown on the plans. Make entire collar in one pour using 3,000 psi concrete and extend a minimum 12" on each side of the joint. The minimum thickness around the outside diameter of the pipe shall be 6". No collar shall be poured in water. After the collars are poured and have taken their initial set, cure by covering with well-moistened earth.

3.11 PIPE BULKHEADS

- A. Connections for future sewers shall be bulkheaded by the Contractor in the following manner:
 - 1. All wyes and bell-and-spigot pipe sewers 18" in diameter or smaller shall be bulkheaded with caps or disc stoppers with factory-fabricated resilient joints. The disk or cap shall be banded or otherwise secured to withstand all test pressures without leakage.
 - 2. Connections 21" and 24" in diameter shall be bulkheaded with a four-inch brick wall, using clay brick or concrete brick. The wall shall be capable of withstanding all test pressures without leakage.
 - 3. Connections 27" in diameter and larger shall be bulkheaded with an eight-inch wall, using clay brick or concrete brick. The wall shall be capable of withstanding all test pressures without leakage.

3.12 AIR TEST FOR GRAVITY SEWERS - GENERAL

- A. Gravity sewers shall be required to pass the low pressure air test described herein.
- B. Air loss rates may be measured by the County. These tests shall be performed by the Contractor under the observation of the County Inspector.
- C. The groundwater height above the installed pipe shall be determined by attaching a transparent plastic tube to a pipe nipple in the manhole and using the plastic tube as a manometer. A test hole may be dug directly above the sewer main for visual inspection.
- D. The ends of branches, laterals, tees, wyes and stubs included in a test section shall be plugged to prevent air leakage. All plugs shall be secured to prevent blowout due to internal pressure. A test section is defined as the length of sewer between manholes.

- E. The Contractor shall repair all visible leaks in manholes and pipe, even if the leakage test requirements are met.

3.13 LAMP TEST FOR GRAVITY SEWER MAINS

- A. Prior to testing, the Contractor shall prepare the lines for testing. All lines shall be thoroughly cleaned.
- B. The Contractor shall furnish all equipment necessary for testing including, but not limited to, ladders, a lamping light and a vehicle to use as power source.
- C. Gravity lines shall be lamped from both the upstream and downstream ends between the manholes.
- D. A minimum image of 75% shall be acceptable.
- E. Failure to meet the 75% image requirement shall result in the Contractor having to video tape the line at his own expense. The County or his representative shall be present while the line is video taped. The tape shall be submitted to Manatee County for evaluation.
- F. The Contractor shall relay or otherwise correct any line deemed unacceptable by the County. This work shall be done entirely at the Contractor's expense.
- G. Grouting of sewer lines or re-rounding machines are not approved corrective measures.
- H. Sewer lines shall be re-lamped and may be required by Manatee County to be video taped again.

3.14 FINAL SEWER CLEANING

- A. Prior to final acceptance and final manhole-to-manhole inspection of the sewer system by the County, the Contractor shall flush and clean all parts of the system, remove all accumulated construction debris, rocks, gravel, sand, silt and other foreign material from the sewer system at or near the closest downstream manhole.
- B. During the final manhole-to-manhole inspection of the sewer system, the County may require the Contractor to reflush and clean any section or portion of the line if any foreign matter is still present in the system.

END OF SECTION

SECTION 02640 VALVES AND APPURTENANCES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required and install complete and ready for operation all valves and appurtenances as shown on the Drawings and as specified herein.
- B. All valves and appurtenances shall be of the size shown on the Drawings and, to the extent possible, all equipment of the same type on the Project shall be from one manufacturer.
- C. All valves and appurtenances shall have the name of the manufacturer and the working pressure for which they are designed cast in raised letters upon some appropriate part of the body.
- D. All valves shall have a factory applied, fusion bonded epoxy coating on interior and exterior unless noted otherwise in the plans or this specification.
- E. The equipment shall include, but not be limited to, the following:
 - 1. Gate valves (Sec. 2.01)
 - 2. Pressure Sustaining and Check Valves (Sec. 2.02)
 - 3. Ball Valves for PVC Pipe (Sec. 2.03)
 - 4. Butterfly Valves (Sec. 2.04)
 - 5. Plug Valves (Sec. 2.05)
 - 6. Valve Actuators (Sec. 2.06)
 - 7. Air Release Valves (Sec. 2.07)
 - 8. Valves Boxes (Sec. 2.08)
 - 9. Corporation Cocks (Sec. 2.09)
 - 10. Flange Adapter Couplings (Sec. 2.10)
 - 11. Flexible Couplings (Sec. 2.11)
 - 12. Hose Bibs (Sec. 2.12)
 - 13. Slow Closing Air and Vacuum Valves (Sec. 2.13)
 - 14. Surge Anticipator Valve (Sec. 2.14)
 - 15. Check Valves (Sec. 2.15)
 - 16. Hydrants (Sec. 2.16)
 - 17. Restraining Clamps (Sec. 2.17)
 - 18. Tapping Sleeves and Tapping Valves (Sec. 2.18)
 - 19. Single Acting Altitude Valves (Sec. 2.19)

1.02 DESCRIPTION OF SYSTEMS

All of the equipment and materials specified herein are intended to be standard for use in controlling the flow of potable water, reclaim water, wastewater, etc., depending on the applications.

1.03 QUALIFICATIONS

All of the types of valves and appurtenances shall be products of well established reputable firms who are fully experienced and qualified in the manufacture of the particular

equipment to be furnished. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these Specifications as applicable. Valves shall be as covered under mechanical devices in Section 8 of ANSI/NSF Standard 61.

1.04 SUBMITTALS

- A. Submit to the County within 30 days after execution of the contract a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
- B. Complete shop drawings of all valves and appurtenances shall be submitted to the County for approval in accordance with the Specifications.

1.05 TOOLS

Special tools, if required for normal operation and maintenance shall be supplied with the equipment.

PART 2 PRODUCTS

2.01 GATE VALVES

- A. All buried valves shall have cast or ductile iron three (3) piece valve bodies.
- B. Where indicated on the drawings or necessary due to locations, size, or inaccessibility, chain wheel operators shall be furnished with the valves. Such operators shall be designed with adequate strength for the valves with which they are supplied and provide for easy operation of the valve. Chains for valve operators shall be galvanized.
- C. Where required, gate valves shall be provided with a box cast in a concrete slab and a box cover. Length of box shall include slab thickness. Box cover opening shall be for valve stem and nut. Valve wrenches and extension stems shall be provided by the manufacturer to actuate the valves. The floor box and cover shall be equal to those manufactured by Rodney Hunt Machine Company, Orange, Massachusetts, Clow, DeZurik or approved equal.
- D. Gate valves with 3"-20" diameters shall be resilient seated, manufactured to meet or exceed the requirements of AWWA C509 or C515 and UL/FM of latest revision and in accordance with the following specifications. Valves shall have an unobstructed waterway equal to or greater than the full nominal diameter of the valve.
- E. Wrench nut shall be provided for operating the valve.
- F. Valves shall be suitable for an operating pressure of 200 psi and shall be tested in accordance with AWWA C509 or C515. Mueller, Kennedy, M&H, and Clow are acceptable valves.
- G. All bonnet bolts, nuts and studs shall be stainless steel.

2.02 PRESSURE SUSTAINING AND CHECK VALVE

- A. Pressure sustaining and check valve shall be pilot operated diaphragm actuated valve with cast iron body, bronze trim, and 125-pound flanged ends. The valve shall be

hydraulically operated, diaphragm type globe valve. The main valve shall have a single removable seat and a resilient disc, of rectangular cross section, surrounded on three and a half sides. The stainless steel stem shall be fully guided at both ends by a bearing in the valve cover, and an integral bearing in the valve seat. It shall be sleeved at both ends with delrin. No external packing glands are permitted and there shall be no pistons operating the main valve or any controls. The valve shall be equipped with isolation cocks to service the pilot system while permitting flow if necessary. Main valve and all pilot controls shall be manufactured in the United States of America. Valve shall be single chamber type, with seat cut to 5 degrees taper.

- B. Valve shall maintain a minimum (adjustable) upstream pressure to a preset (adjustable) maximum. The pilot system shall consist of two direct acting, adjustable, spring loaded diaphragm valves.
- C. Valve shall be cast iron (ASTM A48) with main valve trim of brass (QQB-B-626) and bronze (ASTM B61). The pilot control valves shall be cast brass (ASTM B62) with 303 stainless steel trim. All ferrous surfaces inside and outside shall have a 2-part epoxy coating. Valve shall be similar in all respects to CLA-VAL Company, Model 692G-01ABKG, as manufactured by CLA-VAL Company, Winter Park, Florida, or similar pressure sustaining and check valve as manufactured by Golden Alderson; or approved equal.

2.03 BALL VALVES FOR PVC PIPE

- A. Ball valves for PVC pipe shall be of PVC Type 1 with union, socket, threaded or flanged ends as required. Ball valves shall be full port, full flow, all plastic construction, 150 psi rated with teflon seat seals and T-handles. PVC ball valves shall be as manufactured by Celanese Piping Systems, Inc., Wallace and Tiernan, Inc., Plastiline, Inc., or approved equal.
- B. All valves shall be mounted in such a position that valve position indicators are plainly visible when standing on the floor.

2.04 BUTTERFLY VALVES

- A. Butterfly valves shall conform to the AWWA Standard Specifications for Rubber Seated Butterfly Valves, Designated C504, except as hereinafter specified. Valves, except as specified hereinafter, shall be Class 150A or B, except that valves furnished downstream of the high service pumps shall be Class 250 and equal to those manufactured by Henry Pratt Company, DeZurik, Mueller, or approved equal. M&H/Kennedy/Clow are not generally approved equals. Ductile iron conforming to ASTM A536, Grade 65-45-12 shall be provided for all Class 250 valves. All valves shall be leak tested at 200 psi.
- B. The face-to-face dimensions of flanged end valves shall be in accordance with Table 1 of above mentioned AWWA Specification for short-body valve. Adequate two-way thrust bearings shall be provided. Flange drilling shall be in accordance with ANSI B16.1.
- C. Valve seats shall be an EPDM elastomer. Valve seats 24 inches and larger shall be field adjustable and replaceable without dismounting operator disc or shaft and without removing the valve from the line. All retaining segments and adjusting devices shall be of corrosion resistant material with stainless Nylock screws and be capable of the 1/8-inch adjustment. Valves 20 inches and smaller shall have bonded or mechanically restrained seats as outlined in AWWA C 504. Where the EPDM seat is mounted on the valve body,

the mating edge of the valve disc shall be 18-8 stainless steel or Nickel-Chrome, 80-20%. Where the EPDM seat is mounted on the valve disc, the valve body shall be fitted with an 18-8 stainless steel seat offset from the shaft, mechanically restrained and covering 360 degrees of the peripheral opening or seating surface.

- D. The valve body shall be constructed of ductile iron or close grain cast iron per ASTM A126, Class B with integrally cast hubs for shaft bearing housings of the through boss-type. Butterfly valves of the "wafer" or "spool" type will not be accepted.
- E. The valve shaft shall be turned, ground, and polished constructed of 18-8, ASTM A-276, Type 304 stainless steel and designed for both torsional and shearing stresses when the valve is operated under its greatest dynamic or seating torque. Shaft shall be of either a one piece unit extending full size through the valve disc and valve bearing or it may be of a stub shaft design. Shaft bearings shall be teflon or nylon, self-lubricated type.
- F. All valves shall be subject to hydrostatic and leakage tests at the point of manufacture. The hydrostatic test for Class 250 valves shall be performed with an internal hydrostatic pressure equal to 500 psi applied to the inside of the valve body of each valve for a period of five minutes. During the hydrostatic test, there shall be no leakage through the metal, the end joints or the valve shaft seal. The leakage test for the Class 250 valves shall be performed at a differential pressure of 230 psi and against both sides of the valve. No adjustment of the valve disc shall be necessary after pressure test for normal operation of valve. The Class 150 valves shall be tested in conformance with AWWA C-504.
- G. In general, the butterfly valve operators shall conform to the requirements of Section 3.8 of the AWWA Standard Specifications for Rubber Seated Butterfly Valves, Designation C504, insofar as applicable, and as herein specified.
- H. Gearing for the operators shall be totally enclosed in a gear case in accordance with paragraph 3.8.3 of the above mentioned AWWA Standard Specification.
- I. Operators shall be capable of seating and unseating the disc against the full design pressure of velocity, as specified for each class, into a dry system downstream and shall transmit a minimum torque to the valve. Operators shall be rigidly attached to the valve body.
- J. The manufacturer shall certify that the required tests on the various materials and on the completed valves have been satisfactory and that the valves conform with all requirements of this Specification and the AWWA standard.
- K. Where indicated on the Drawings, extension stems, floor stands, couplings, stem guides, and floor boxes as required shall be furnished and installed.

2.05 PLUG VALVES

- A. All plug valves shall be eccentric plug valves capable of sustaining 150 psi in either direction without leaking.

Exception: Single direction plug valves may be used if it is clearly demonstrated they will never be required to resist pressure in both directions either in service or during pipe line testing.

- B. Plug valves shall be tested in accordance with current AWWA Standard C-504-80 Section

5. Each valve shall be performance tested in accordance with paragraph 5.2 and shall be given a leakage test and hydrostatic test as described in paragraphs 5.3 and 5.4. Plug valves shall be Kennedy or Dezurik.
- C. Plug valves shall be of the non-lubricated eccentric type with resilient faced plugs and shall be furnished with end connections as shown on the Plans. Flanged valves shall be faced and drilled to the ANSI 150 lb. standard. Mechanical joint ends shall be to the AWWA Standard C111-72. Bell ends shall be to the AWWA Standard C100-55 Class B. Screwed ends shall be to the NPT standard.
- D. Plug valve bodies shall be of ASTM A126 Class B Semi-steel, 31,000 psi tensile strength minimum in compliance with AWWA Standard C507-73, Section 5.1 and AWWA Standard C504-70 Section 6.4. Port areas for valves 20-inches and smaller shall be 80 percent of full pipe area. Valves 24 inch and larger shall have a minimum port area between 80 and 100 percent of full nominal pipe area. All exposed nuts, bolts, springs, washers, etc. shall be zinc or cadmium plated. Resilient plug facings shall be of Hycar or Neoprene.
- E. Plug valves shall be furnished with permanently lubricated stainless steel or oil-impregnated bronze upper and lower plug stem bushings. These bearings shall comply with current AWWA Standards.

2.06 VALVE ACTUATORS

A. General

1. All valve actuators shall conform to Section 3.8 of the AWWA Standard Specification and shall be either manual or motor operated.
2. Actuators shall be capable of seating and unseating the disc against the full design pressure and velocity, as specified for each class, into a dry system downstream, and shall transmit a minimum torque to the valve. Actuators shall be rigidly attached to the valve body.
3. Butterfly valve actuators shall conform to the requirements of Section 3.8 of the AWWA Standard specifications for Rubber Seated Butterfly Valves, Designated C504, insofar as applicable and as herein specified.

B. Manual Actuators

1. Manual actuators shall have permanently lubricated, totally enclosed gearing with handwheel and gear ratio sized on the basis of actual line pressure and velocities. Actuators shall be equipped with handwheel, position indicator, and mechanical stop-limiting locking devices to prevent over travel of the disc in the open and closed positions. They shall turn counter-clockwise to open valves. Manual actuators shall be of the traveling nut, self-locking type and shall be designed to hold the valve in any intermediate position between fully open and fully closed without creeping or fluttering. Actuators shall be fully enclosed and designed to produce the specified torque with a maximum pull of 80 pounds on the handwheel or chainwheel. Actuator components shall withstand an input of 450 foot pounds for 30" and smaller and 300 foot pounds for larger than 30" size valves at extreme actuator positions without damage. Valves located above grade shall have handwheel and position indicator, and valves located below grade shall be equipped with a two inch (2") square AWWA operating nut located at ground level and cast iron extension type valve box. Valve actuators shall conform to AWWA C504, latest revision.

C. Motor Actuators (Modulating)

1. The motor actuated valve controller shall include the motor, actuator unit gearing, limit switch gearing, limit switches, position transmitter which shall transmit a 4-20 mA DC signal, control power transformer, electronic controller which will position the valve based on a remote 4-20 milliamp signal, torque switches, bored and keywayed drive sleeve for non-rising stem valves, declutch lever and auxiliary handwheel as a self-contained unit.
2. The motor shall be specifically designed for valve actuator service using 480 volt, 60 Hertz, three phase power as shown, on the electrical drawings. The motor shall be sized to provide an output torque and shall be the totally enclosed, non-ventilated type. The power gearing shall consist of helical gears fabricated from heat treated alloy steel forming the first stage of reduction. The second reduction stage shall be a single stage worm gear. The worm shall be of alloy steel with carburized threads hardened and ground for high efficiency. The worm gear shall be of high tensile strength bronze with hobbled teeth. All power gearing shall be grease lubricated. Ball or roller bearings shall be used throughout. Preference will be given to units having a minimum number of gears and moving parts. Spur gear reduction shall be provided as required.
3. Limit switches and gearing shall be an integral part of the valve control. The limit switch gearing shall be made of bronze and shall be grease lubricated, intermittent type and totally enclosed to prevent dirt and foreign matter from entering the gear train. Limit switches shall be of the adjustable type capable of being adjusted to trip at any point between fully opened valve and fully closed valve.
4. The speed of the actuator shall be the responsibility of the system supplier with regard to hydraulic requirements and response compatibility with other components within the control loop. Each valve controller shall be provided with a minimum of two rotor type gear limit switches, one for opening and one for closing. The rotor type gear limit switch shall have two normally open and two normally closed contacts per rotor. Gear limit switches must be geared to the driving mechanism and in step at all times whether in motor or manual operation. Provision shall be made for two additional rotors as described above, each to have two normally open and two normally closed contacts. Each valve controller shall be equipped with a double torque switch. The torque switch shall be adjustable and will be responsive to load encountered in either direction of travel. It shall operate during the complete cycle without auxiliary relays or devices to protect the valve, should excessive load be met by obstructions in either direction of travel. The torque switch shall be provided with double-pole contacts.
5. A permanently mounted handwheel shall be provided for manual operation. The handwheel shall not rotate during electric operations, but must be responsive to manual operation at all times except when being electrically operated. The motor shall not rotate during hand operation nor shall a fused motor prevent manual operation. When in manual operating position, the unit will remain in this position until motor is energized at which time the valve operator will automatically return to electric operation and shall remain in motor position until handwheel operation is desired. This movement from motor operation to handwheel operation shall be accomplished by a positive declutching lever which will disengage the motor and motor gearing mechanically, but not electrically. Hand operation must be reasonably fast. It shall be impossible to place the unit in manual operation when the motor is running. The gear limit switches and torque switches shall be housed in a single easily accessible compartment integral with the power compartment of the valve control. All wiring shall be accessible through this compartment.

- Stepping motor drives will not be acceptable.
6. The motor with its control module must be capable of continuously modulating over its entire range without interruption by heat protection devices. The system, including the operator and control module must be able to function, without override protection of any kind, down to zero dead zone.
 7. All units shall have strip heaters in both the motor and limit switch compartments.
 8. The actuator shall be equipped with open-stop-close push buttons, an auto-manual selector switch, and indicating lights, all mounted on the actuator or on a separate locally mounted power control station.
 9. The electronics for the electric operator shall be protected against temporary submergence.
 10. Actuators shall be Limitorque L120 with Modutronic Control System containing a position transmitter with a 4-20MA output signal or equal.

D. Motor Actuators (Open-Close)

1. The electronic motor-driven valve actuator shall include the motor, actuator gearing, limit switch gearing, limit switches, torque switches, fully machined drive sleeve, declutch lever, and auxiliary handwheel as a self-contained unit.
2. The motor shall be specifically designed for valve actuator service and shall be of high torque totally enclosed, nonventilated construction, with motor leads brought into the limit switch compartment without having external piping or conduit box.
 - (a) The motor shall be of sufficient size to open or close the valve against maximum differential pressure when voltage to motor terminals is 10% above or below nominal voltage.
 - (b) The motor shall be prelubricated and all bearings shall be of the anti-friction type.
3. The power gearing shall consist of helical gears fabricated from heat treated steel and worm gearing. The worm shall be carburized and hardened alloy steel with the threads ground after heat treating. The worm gear shall be of alloy bronze accurately cut with a hobbing machine. All power gearing shall be grease lubricated. Ball or roller bearings shall be used throughout.
4. Limit switches and gearing shall be an integral part of the valve actuator. The switches shall be of the adjustable rotor type capable of being adjusted to trip at any point between fully opened valve and fully closed valve. Each valve controller shall be provided with a minimum of two rotor type gear limit switches, one for opening and one for closing (influent valves require additional contacts to allow stopping at an intermediate position). The rotor type gear limit switch shall have two normally open and two normally closed contacts per rotor. Additional switches shall be provided if shown on the control and/or instrumentation diagrams. Limit switches shall be geared to the driving mechanism and in step at all times whether in motor or manual operation. Each valve actuator shall be equipped with a double torque switch. The torque switch shall be adjustable and will be responsive to load encountered in either direction of travel. It shall operate during the complete cycle without auxiliary relays or devices to protect the valve should excessive load be met by obstructions in either direction of travel. Travel and thrusts shall be independent of wear in valve disc or seat rings.
5. A permanently mounted handwheel shall be provided for manual operation. The handwheel shall not rotate during electric operation except when being electrically operated. The motor shall not rotate during hand operation, nor shall a fused motor prevent manual operation. When in manual operating position, the unit will remain in this position until motor is energized at which time the valve actuator will automatically return to electric operation and shall remain in motor position until

handwheel operation is desired. Movement from motor operation to handwheel operation shall be accomplished by a positive declutching lever which will disengage the motor and motor gearing mechanically, but not electrically. Hand operation must be reasonably fast. It shall be impossible to place the unit in manual operation when the motor is running.

6. Valve actuators shall be equipped with an integral reversing controller and three phase overload relays, Open-Stop-Close push buttons, local-remote-manual selector switch, control circuit transformer, three-phase thermal overload relays and two pilot lights in a NEMA 4X enclosure. In addition to the above, a close coupled air circuit breaker or disconnect switch shall be mounted and wired to the valve input power terminals for the purpose of disconnecting all underground phase conductors.
7. The valve actuator shall be capable of being controlled locally or remotely via a selector switch integral with the actuator. In addition, an auxiliary dry contact shall be provided for remote position feedback.
8. Valve A.C. motors shall be designed for operation on a 480 volt, 3-phase service. Valve control circuit shall operate from a fuse protected 120 volt power supply.
9. Motor operators shall be as manufactured by Limitorque Corporation, Type L120 or approved equal.

2.07 AIR RELEASE VALVES

The air release valves for use in water or force mains shall be installed as shown on the Drawings. The valves shall have a cast iron body cover and baffle, stainless steel float, bronze water diffuser, Buna-N or Viton seat, and stainless steel trim. The fittings shall be threaded. The air release valves shall be Model 200A or 400A as manufactured by APCO Valve and Primer Corporation, Schaumburg, Illinois; or approved equal.

2.08 VALVE BOXES

- A. Buried valves shall have cast-iron three piece valve boxes or HDPE adjustable valve boxes. Cast iron valve boxes shall be provided with suitable heavy bonnets and shall extend to such elevation at or slightly above the finished grade surface as directed by the County. The barrel shall be two-piece, screw type, having a 5-1/4 inch shaft. The upper section shall have a flange at the bottom with sufficient bearing area to prevent settling and shall be complete with cast iron covers. Covers shall have WATER, SEWER, or RECLAIM, as applicable, cast into the top. Lids will be painted "safety" blue for potable, purple for reclaimed, and green for sanitary sewer.
- B. All valves shall have actuating nuts extended to within four (4) feet of the top of the valve box. All valve extensions will have a centering guide plate two (2) inches maximum below the actuating nut. The valve extension shall be fastened to the existing nut with a set screw. Valve boxes shall be provided with a concrete base and a valve nameplate engraved with lettering 1/8-inch deep as shown on the Drawings.
- C. HDPE adjustable valve boxes shall be one complete assembled unit composed of the valve box and extension stem. All moving parts of the extension stem shall be enclosed in a housing to prevent contact with the soil. Valve box assembly shall be adjustable to accommodate variable trench depths.
- D. The entire assembly shall be made of heavy wall high density polyethylene. All exterior components shall be joined with stainless steel screws. The valve box top section shall be adaptable to fit inside a valve box upper section.

- E. The stem assembly shall be of a telescoping design that allows for variable adjustment length. The stem material shall be of plated steel square tubing. The stem assembly shall have a built-in device that keeps the stem assembly from disengaging at its fully extended length. The extension stem must be torque tested to 1000 foot pounds. Covers shall have WATER, SEWER or RECLAIMED clearly and permanently impressed into the top surface.

2.09 CORPORATION COCKS

Corporation cocks for connections to cast-iron, ductile iron or steel piping shall be all brass or bronze suitable for 180 psi operating pressure and similar to Mueller Co. H-10046 or approved equal by Clow Corp., and shall be of sizes required and/or noted on the Drawings.

2.10 FLANGE ADAPTER COUPLINGS

Flange adapter couplings shall be of the size and pressure rating required for each installation and shall be suitable for use on either cast iron or ductile iron pipe. They shall be similar or approved equal to Dresser Company, Style 128. All couplings shall have a sufficient number of factory installed anchor studs to meet or exceed a minimum test pressure rating of 230 psi minimum.

2.11 FLEXIBLE COUPLINGS

Flexible couplings shall be either the split type or the sleeve type as shown on the Drawings.

1. Split type coupling shall be used with all interior piping and with exterior pipings noted on the Drawings. The couplings shall be mechanical type for radius groove piping. The couplings shall mechanically engage and lock grooved pipe ends in a positive couple and allow for angular deflection and contracting and expansion.
2. Couplings shall consist of malleable iron, ASTM Specification A47, Grade 32510 housing clamps in two or more parts, a single chlorinated butyl composition sealing gasket with a "C" shaped cross-section and internal sealing lips projecting diagonally inward, and two or more oval track head type bolts with hexagonal heavy nuts conforming to ASTM Specification A 183 and A194 to assemble the housing clamps. Bolts and nuts shall be hot dipped galvanized after fabrication.
3. Victaulic type couplings and fittings may be used in lieu of flanged joints. Pipes shall be radius grooved as specified for use with the Victaulic couplings. Flanged adapter connections at fittings, valves, and equipment shall be Victaulic Vic Flange Style 741, equal by Gustin-Bacon Group, Division of Certain-Teed Products, Kansas City, Kansas, or approved equal.
4. Sleeve type couplings shall be used with all buried piping. The couplings shall be of steel and shall be Dresser Style 38 or 40, as shown on the Drawings, or equal. The coupling shall be provided with hot dipped galvanized steel bolts and nuts unless indicated otherwise.
5. All couplings shall be furnished with the pipe stop removed.
6. Couplings shall be provided with gaskets of a composition suitable for exposure to the liquid within the pipe.
7. If the Contractor decides to use victaulic couplings in lieu of flanged joints, he shall be responsible for supplying supports for the joints.

2.12 HOSE BIBS

Hose bibs shall be 3/4" or 1" brass, polished chromium plated brass, with vacuum breaker as noted on the drawings.

2.13 SLOW CLOSING AIR AND VACUUM VALVES

- A. The Contractor shall furnish and install slow closing air and vacuum valves as shown on the Drawings which shall have two (2) independent valves bolted together. The air and vacuum valve shall have all stainless steel float, guided on both ends with stainless shafts. The air and vacuum valve seat shall be Buna-N to insure drop tight closure. The Buna-N seat shall be fastened to the cover stainless shoulder screws in a manner to prevent distortion of the seat. The float shall be guided at both ends with stainless steel bushings.
- B. The valve cover shall have a male lip designed to fit into the body register for accurate alignment of the float into the Buna-N seat. The valve cover shall have 250-pound class flanged outlet connection.
- C. The surge check valve shall be bolted to the inlet of the air and vacuum valve and consist of a body, seat, disc, and compression spring. A surge check unit shall operate on the interphase between the kinetic energy and relative velocity flows of air and water, so that after air passes through, and water rushes into the surge check, the disc starts to close, reducing the rate of flow of water into the air valve by means of throttling orifices in the disc to prevent water hammer in the air valves. The surge check orifices must be adjustable type for regulation in the field to suit operating conditions. Valve shall be rated for 250-pound class working pressure.
- D. The complete slow closing air and vacuum valve with air release valve shall have been flow tested in the field, substantiated with test data to show reduction of surge pressure in the valve. Flow test data shall be submitted with initial shop drawings for approval.
- E. Valve exterior to be painted Red Oxide, Phenolic TT-P86, Primer or approved equal for high resistance to corrosion.
- F. All materials of construction shall be certified in writing to conform to ASTM specifications as follows:

Air Valve Cover, Body, and Surge Check Body	Cast Iron	ASTM A48, Class 30
Float	Stainless Steel	ASTM A240
Surge Check Seat and Disc	Stainless Steel	ASTM A582
Air Valve Seat	Buna-N	
Spring	Stainless Steel	T302

2.14 SURGE ANTICIPATOR VALVES

- A. Surge anticipator valves shall be furnished for the pumping systems as shown on the

Drawings. The valve shall be hydraulically operated, pilot controlled, and diaphragm or piston actuated. The main valve shall be cast iron conforming to ASTM A48 with bronze trim conforming to ASTM B61 and flanged ends conforming to ANSI B161.1. The main valve shall be globe type with a single removable seat and a resilient disc.

- B. The diaphragm actuated valve shall have a stainless steel stem guided at both ends by a bearing in the valve cover and an integral bearing surface in the seat. No external packing glands shall be permitted. The valve shall be fully serviceable without removing it from the line. The pilot system shall be of noncorrosive construction and provided with isolation cocks.
- C. The piston actuated valve shall operate on the differential piston principle. The valve piston shall be guided on its outside diameter. The valve shall be able to operate in any position and shall be fully serviceable without removing it from the line. The pilot system shall be provided with isolation cocks, and be of noncorrosive materials of construction.
- D. The valve shall be designed specifically to minimize the effects of water hammer, resulting from power failure at the pumping station, or from normal stopping and starting of pumping operators. The valve shall open hydraulically on a down surge, or low pressure wave created when the pump stops, remain open during the low pressure cycle in order to be open when the high pressure wave returns. The high pressure pilot shall be adjustable over a 20 to 200 psi range and the low pressure pilot shall be adjustable over a 15 to 75 psi range. The valve shall be the 250 Class.

2.15 CHECK VALVES

- A. Check valves for cast iron and ductile iron pipe lines shall be swing type and shall meet the material requirements of AWWA Specification C508. The valves shall be iron body, bronze mounted, single disc, 175 psi working water pressure and nonshock. Valves shall be as manufactured by Mueller, Clow, Kennedy, or M&H. Valves 8" and larger shall be air cushioned to reduce valve slam.
- B. When there is no flow through the line, the disc shall hang lightly against its seat in practically a vertical position. When open, the disc shall swing clear of the waterway.
- C. Check valves shall have bronze seat and body rings, extended bronze hinge pins and bronze nuts on the bolts of bolted covers. The interior and exterior of the valve body shall have a factory applied fusion bonded or 10 mil 2 part epoxy coating (Protecto 401 or approved equal).
- D. Valves shall be so constructed that disc and body seat may easily be removed and replaced without removing the valve from the line. Valves shall be fitted with an extended hinge arm with outside lever and weight. Weights provided and approved by the County shall be installed.

2.16 HYDRANTS

Hydrants shall be AVK Series 2780 Barrel (nostalgic style with stainless steel bolts) American Darling B-84-B or Mueller Super Centurian 250, or approved equal and shall conform to the "Standard Specification for Fire Hydrants for Ordinary Water Works Service", AWWA C502, and UL/FM certified, and shall in addition meet the specific requirements and exceptions which follow:

1. Hydrants shall be according to manufacturer's standard pattern and of standard size, and shall have one 4-1/2" steamer nozzle and two 2-1/2" hose nozzles.
2. Hydrant inlet connections shall have mechanical joints for 6" ductile-iron pipe.
3. Hydrant valve opening shall have an area at least equal to that area of a 5-1/4" minimum diameter circle and be obstructed only by the valve rod. Each hydrant shall be able to deliver 500 gallons minimum through its two 2-1/2" hose nozzles when opened together with a loss of not more than 2 psi in the hydrants.
4. Each hydrant shall be designed for installation in a trench that will provide 5-ft. cover.
5. Hydrants shall be hydrostatically tested as specified in AWWA C502.
6. Hydrants shall be rated at 200 psi.
7. All nozzle threads shall be American National Standard.
8. Each nozzle cap shall be provided with a Buna N rubber washer.
9. Hydrants shall be so arranged that the direction of outlets may be turned 90 degrees without interference with the drip mechanism and without the mechanism obstructing the discharge from any outlet.
10. Hydrants must be capable of being extended without removing any operating parts.
11. Hydrants shall have bronze-to-bronze seatings as per AWWA C502-85.
12. Hydrant main valve closure shall be of the compression type opening against the pressure and closing with the pressure. The resilient seat material shall meet the requirements of AWWA C-509 and shall preferably be EPDM Elastomer.
13. Internal and below ground iron parts (bonnet, nozzle section and base) shall have a fusion bonded epoxy coating per AWWA C550. Aboveground external hydrant parts (cap, bonnet and nozzle section) shall be either epoxy coated together with a UV resistant polyester coating or have two shop coats of paint per AWWA C502. The lower stand pipe or barrel shall be protected with asphaltic coatings per AWWA C502.
14. Exterior nuts, bolts and washer shall be stainless steel. Bronze nuts may be used below grade.
15. All internal operating parts shall be removable without requiring excavation.

2.17 RESTRAINING CLAMPS

Restraining clamp assemblies as detailed in the drawings for use at hydrant connections to water mains, or at fittings where shown on the Drawings, shall be as manufactured by American Cast Iron Pipe, Star Pipe Products, U.S. Pipe; or approved equal.

2.18 TAPPING SLEEVES AND GATE VALVES

- A. Tapping valves shall meet the requirement of AWWA C500. The valves shall be flanged, shall be mechanical joint outlet with nonrising stem, designed for vertical burial and shall open left or counterclockwise. Stuffing boxes shall be the "O-ring" type. Operating nut shall be AWWA Standard 2" square for valves 2" and up. The valves shall be provided with an overload seat to permit the use of full size cutters. Gaskets shall cover the entire area of flange surfaces and shall be supplied with EPDM wedges up to 30" diameter.
- B. Tapping sleeves and saddles shall seal to the pipe by the use of a confined "O" ring gasket, and shall be able to withstand a pressure test of 180 psi for one hour with no leakage in accordance with AWWA C110, latest edition. A stainless steel 3/4" NPT test plug shall be provided for pressure testing. All bolts joining the two halves shall be stainless steel and shall be included with the sleeve or saddle. Sleeves and saddles shall be protected from corrosion by being fusion applied epoxy coated, or be made of 18-8

Type 304 stainless steel. Saddle straps shall be 18-8 Type 304 stainless steel.

2.19 SINGLE ACTING ALTITUDE VALVES

A. Function

1. The altitude control valve shall be of the single acting type, closing off tightly when the water reaches the maximum predetermined level in the tank to prevent overflow; and opening to permit replenishing of the tank supply when the water level drops approximately 6" to 12" below the maximum level.
2. A hand operated valve in the power water line to the top of the piston shall permit adjustment of the speed of valve closing. The tank water level control shall be by means of a diaphragm operated, spring loaded, three way pilot which directs power water to or from the top of the main valve piston. The three way pilot shall be of bronze construction. The diaphragm surface exposed to the tank head shall be not less than 57 sq. inches. It shall be possible to adjust the spring above the diaphragm for water level control approximately 20% above or below the factory setting.

B. Description

1. The main valve shall operate on the differential piston principle such that the area on the underside of the piston is no less than the pipe area on the upper surface of the piston is of a greater area than the underside of the piston.
2. The valve piston shall be guided on its outside diameter by long stroke stationary Vee ports which shall be downstream of the seating surface to minimize the consequences of throttling. Throttling shall be done by the valve Vee ports and not the valve seating surfaces.
3. The valve shall be capable of operating in any position and shall incorporate only one flanged cover at the valve top from which all internal parts shall be accessible. There shall be no stems, stem guides, or spokes within the waterway. There shall be no springs to assist the valve operation.

C. Construction

1. The valve body shall be of cast iron ASTM A-126 with flanges conforming to the latest ANSI Standards. The valve shall be extra heavy construction throughout. The valve interior trim shall be bronze B-62 as well as the main valve operation.
2. The valve seals shall be easily renewable while no diaphragm shall be permitted within the main valve body.
3. All controls and piping shall be of non-corrosive construction.
4. A visual valve position indicator shall be provided for observing the valve piston position at any time.

D. Figure Number

The valves shall be the 20" Globe type (Fig. 3200-D) as manufactured by GA Industries of Mars, Pennsylvania, or approved equal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. All valves and appurtenances shall be installed in the location shown, true to alignment and rigidly supported. Any damage occurring to the above items before they are installed shall be repaired to the satisfaction of the County.
- B. After installation, all valves and appurtenances shall be tested at least two hours at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint proves to be defective, it shall be repaired to the satisfaction of the County.
- C. Install all floor boxes, brackets, extension rods, guides, the various types of operators and appurtenances as shown on the Drawings that are in masonry floors or walls, and install concrete inserts for hangers and supports as soon as forms are erected and before concrete is poured. Before setting these items, the Contractor shall check all plans and figures which have a direct bearing on their location and he shall be responsible for the proper location of these valves and appurtenances during the construction of the structures.
- D. Pipe for use with flexible couplings shall have plain ends as specified in the respective pipe sections.
- E. Flanged joints shall be made with high strength, low alloy Corten bolts, nuts and washers. Mechanical joints shall be made with mild corrosion resistant alloy steel bolts and nuts. All exposed bolts shall be painted the same color as the pipe. All buried bolts and nuts shall be heavily coated with two (2) coats of bituminous paint comparable to Inertol No. 66 Special Heavy.
- F. Prior to assembly of split couplings, the grooves as well as other parts shall be thoroughly cleaned. The ends of the pipes and outside of the gaskets shall be moderately coated with petroleum jelly, cup grease, soft soap or graphite paste, and the gasket shall be slipped over one pipe end. After the other pipe has been brought to the correct position, the gasket shall be centered properly over the pipe ends with the lips against the pipes. The housing sections then shall be placed. After the bolts have been inserted, the nuts shall be tightened until the housing sections are firmly in contact, metal-to-metal, without excessive bolt tension.
- G. Prior to the installation of sleeve-type couplings, the pipe ends shall be cleaned thoroughly for a distance of 8". Soapy water may be used as a gasket lubricant. A follower and gasket, in that order, shall be slipped over each pipe to a distance of about 6" from the end.
- H. Valve boxes with concrete bases shall be installed as shown on the Drawings. Mechanical joints shall be made in the standard manner. Valve stems shall be vertical in all cases. Place cast iron box over each stem with base bearing on compacted fill and the top flush with final grade. Boxes shall have sufficient bracing to maintain alignment during backfilling. Knobs on cover shall be parallel to pipe. Remove any sand or undesirable fill from valve box.

3.02 HYDRANTS

- A. Hydrants shall be set at the locations designated by the County and/or as shown on the Drawings and shall be bedded on a firm foundation. A drainage pit on crushed stone as shown on the Drawings shall be filled with gravel or crushed stone and satisfactorily compacted. During backfilling, additional gravel or crushed stone shall be brought up

around and 6" over the drain port. Each hydrant shall be set in true vertical alignment and shall be properly braced. Concrete thrust blocks shall be placed between the back of the hydrant inlet and undisturbed soil at the end of the trench. Minimum bearing area shall be as shown on the plans. Felt paper shall be placed around the hydrant elbow prior to placing concrete. CARE MUST BE TAKEN TO INSURE THAT CONCRETE DOES NOT PLUG THE DRAIN PORTS. Concrete used for backing shall be as specified herein.

- B. When installations are made under pressure, the flow of water through the existing main shall be maintained at all times. The diameter of the tap shall be a minimum of 2" less than the inside diameter of the branch line.
- C. The entire operation shall be conducted by workmen thoroughly experienced in the installation of tapping sleeves and valves, and under the supervision of qualified personnel furnished by the manufacturer. The tapping machine shall be furnished by the Contractor if tap is larger than 12" in diameter.
- D. The Contractor shall determine the locations of the existing main to be tapped to confirm the fact that the proposed position for the tapping sleeve will be satisfactory and no interference will be encountered such as the occurrence of existing utilities or of a joint or fitting at the location proposed for the connection. No tap will be made closer than 30" from a pipe joint.
- E. Tapping valves shall be set in vertical position and be supplied with a 2" square operating nut for valves 2" and larger. The valve shall be provided with an oversized seat to permit the use of full sized cutters.
- F. Tapping sleeves and valves with boxes shall be set vertically or horizontally as indicated on the Drawings and shall be squarely centered on the main to be tapped. Adequate support shall be provided under the sleeve and valve during the tapping operation. Sleeves shall be no closer than 30" from water main joints. Thrust blocks shall be provided behind all tapping sleeves. Proper tamping of supporting earth around and under the valve and sleeve is mandatory. After completing the tap, the valve shall be flushed to ensure that the valve seat is clean.

3.03 SHOP PAINTING

Ferrous surfaces of valves and appurtenances shall receive a coating of rust-inhibitive primer. All pipe connection openings shall be capped to prevent the entry of foreign matter prior to installation.

3.04 FIELD PAINTING

All metal valves and appurtenances specified herein and exposed to view shall be painted.

All above ground potable water main valves shall be painted safety blue.

3.05 INSPECTION AND TESTING

Completed pipe shall be subjected to hydrostatic pressure test for two hours at 180 psi. All leaks shall be repaired and lines retested as approved by the County. Prior to testing, the pipelines shall be supported in an approved manner to prevent movement during tests.

END OF SECTION

SECTION 02720 SANITARY SEWER BYPASS PUMPING

PART 1 GENERAL

1.01 SCOPE

The Contractor shall furnish all labor, materials, equipment and incidentals required to maintain existing and anticipated flows within the affected portion of the collection system throughout the construction period.

1.02 PUBLIC IMPACTS

The contractor shall not create a public nuisance due to excessive noise or dust, nor impact the public with flooding of adjacent lands, discharge of raw sewage, or release of other potential hazards, nor shall he encroach on or limit access to adjacent lands. No extra charge may be made for increased costs to the contractor due to any of the above.

1.03 SUBMITTALS

- A. The Contractor shall, within 30 days of the date of the Notice to Proceed, submit to the Project Manager a detailed Pumping Plan for each site by-pass pumping will be needed. The Pumping Plan shall address all measures and systems to prevent a sanitary sewer overflow (SSO) as defined by the EPA. The Plan shall include as a minimum:
1. Working drawings and sketches showing work location, pump location, piping layout & routing. Show all proposed encroachment and access impacts on adjacent properties or facilities.
 2. Pump, control, alarm and pipe specifications or catalog cuts. Detailed sketch of controls and alarm system.
 3. Power requirements and details on methods to provide by-pass power or fueling.
 4. Calculation and determination of response times to prevent an SSO after a high water alarm. If anticipated peak flows are 750 G.P.M. or greater, an operator is required on site at all times pump is in service. If the anticipated peak flows are less than 750 G.P.M. an operator may not be required to be on site at all times; show operator on-site schedule.
 5. Procedures to be taken in case of power, pump, or piping failures; including contact names and numbers for emergency notifications.
 6. Frequency and specific responsibility for monitoring pump operation, fuel levels, pump maintenance and entire length of piping.

PART 2 PRODUCTS

2.01 EQUIPMENT

- A. Pumps:
1. By-pass pumping system shall consist of at least a primary pump and a backup pump. Each pump shall have a minimum pumping capacity of 150% of the anticipated peak flows. If a lift station by-pass, 150% of the lift station capacity (G.P.M. & T.D.H) for the lift station being by-passed.
 2. Pumps shall be low noise or sound attenuated. The noise level at any operating condition, in any direction, shall not exceed 70dBA at a distance of twenty three

(23) feet (7 meters) from the pump and/or power source.

B. Controls:

The by-pass pump system shall be equipped with automatic controls and an alarm system. The automatic controls will automatically start the backup pump in the event of a high water condition or failure of the primary pump. The alarm system will immediately notify the Contractor of a pump failure or high water condition.

C. Pipe:

Pipe shall be of adequate size and capacity to match the pumps. Pipe type and materials will depend on the particulars of the site conditions, and shall be detailed in the Pumping Plan. Contractor will provide all connections.

PART 3 EXECUTION

3.01 SITE CONDITIONS

Site conditions will vary by site. Contractor is responsible to determine and address requirements such as traffic control, excavation, connections & fittings, impacts on access to adjacent properties, routing and support of by-pass piping, etc., in the Pumping Plan.

3.02 ON-SITE MONITORING

- A. All by-pass operations where the anticipated flow rates are 750 G.P.M or greater shall require an employee on-site at all times (full-time on-site monitoring attended by personnel experienced with the pumps and controls, with demonstrated ability to monitor, turn on & off, and switch between pumps while the by-pass pump system is in service.
- B. By-pass operations where the anticipated flow rates are less than 750 G.P.M may not require an employee on-site at all times while the by-pass pump system is in operation. The Contractor shall have personnel experienced with the pumps and controls on site within the calculated response time to prevent an SSO after a high water alarm.
- C. During by-pass operations, the Contractor shall have posted on site with the permit, a copy of the approved Plan and the name and 24 hour contact number of the primary response person, the job site superintendent, and the construction company owner.

3.03 OPERATIONS

- A. The Contractor is responsible for securing and providing power, fuel, site security, traffic control and all other supplies, materials and permits required for the by-pass pumping.
- B. Contractor shall demonstrate automatic pump switching and alarm system to the satisfaction of: the County inspector, Project Manager, or Lift Stations Superintendent prior to beginning by-pass pumping. Satisfactory demonstration shall be documented by the inspector's, PM's or Lift Station Superintendent's dated signature on the posted copy of the approved Pumping Plan.

3.04 DAMAGE RESTORATION & REMEDIATION

- A. The Contractor shall be responsible for any pre-pump notifications, all restoration of pre-pump conditions and any damage caused by by-pass operations.
- B. Should there be an SSO caused by or as a direct result of the by-pass pumping, the contractor is responsible for all immediate & long term response, notifications, clean up, mitigation, etc. Copies of all written response plans, notifications, documentation, mitigation plans, etc., shall be submitted to the County Project Manager.

END OF SECTION

SECTION 02999 MISCELLANEOUS WORK AND CLEANUP

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This Section includes items and operations which are not specified in detail as separate items, but may be sufficiently described as to the kind and extent of work involved. The Contractor shall furnish all labor, materials, equipment and incidentals necessary to complete all work under this Section.
- B. The work of this Section may include, but is not limited to the following:
 - 1. Restoration of roads, sidewalks, driveways, curbing and gutters, fences, guardrails, lawns, shrubbery and any other existing items damaged or destroyed.
 - 2. Crossing utilities.
 - 3. Relocation of existing water, reclaim water, or sewer lines less than four inches diameter, water and sanitary sewer services, low pressure gas lines, telephone lines, electric lines, cable TV lines as shown on the Contract Drawings.
 - 4. Restoring easements (servitudes) and rights-of-way.
 - 5. Clean up.
 - 6. Incidental work (project photographs, testing, shop drawings, traffic control, record drawings, etc.).
 - 7. Excavation and Embankment - As defined in the Florida Department of Transportation Standard Specifications for Road and Bridge Construction (1991 Edition or latest revision).
 - 8. Stormwater and erosion control devices.

1.02 SUBMITTAL OF LUMP SUM BREAKDOWN

Contractor shall submit to the County, a breakdown of the lump sum bid for Miscellaneous Work and Cleanup Item in the Proposal within 10 days after date of Notice to Proceed.

1.03 WORK SPECIFIED UNDER OTHER SECTIONS

All work shall be completed in a workmanlike manner by competent workmen in full compliance with all applicable sections of the Contract Documents.

PART 2 PRODUCTS

2.01 MATERIALS

Materials required for this Section shall equal or exceed materials that are to be restored. The Contractor may remove and replace or reuse existing materials with the exception of paving.

PART 3 EXECUTION

3.01 RESTORING OF SIDEWALKS, ROADS, CURBING, FENCES AND GUARDRAILS

- A. The Contractor shall protect existing sidewalks & curbing. If necessary, sidewalks & curbing shall be removed from joint to joint and replaced after backfilling. Curbing damaged during construction because of the Contractor's negligence or convenience,

shall be replaced with sidewalks & curbing of equal quality and dimension at no cost to the County.

- B. At the locations necessary for the Contractor to remove, store and replace existing fences and guardrails during construction, the sections removed shall be only at the direction of the County. If any section of fence is damaged due to the Contractor's negligence, it shall be replaced at no cost to the County with fencing equal to or better than that damaged and the work shall be satisfactory to the County.
- C. Guardrails in the vicinity of the work shall be protected from damage by the Contractor. Damaged guardrails shall be replaced in a condition equal to those existing
- D. Road crossings shall be restored in accordance with the Contract Documents and current FDOT Standards. Compensation for road restoration shall be included under the Road Restoration Bid Item if specified or under Miscellaneous Cleanup if it is not specified.

3.02 CROSSING UTILITIES

This item shall include any extra work required in crossing culverts, water courses, drains, water mains and other utilities, including all sheeting and bracing, extra excavation and backfill, or any other work required or implied for the proposed crossing, whether or not shown on the Drawings.

3.03 RELOCATIONS OF EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES AND CABLE TV LINES

The Contractor shall notify the proper utility involved when relocation of these utility lines is required. The Contractor shall coordinate all relocation work by the utility so that construction shall not be hindered.

3.04 RESTORING THE EASEMENTS AND RIGHTS-OF-WAY

The Contractor shall be responsible for all damage to private property due to his operations. He shall protect from injury all walls, fences, cultivated shrubbery, pavement, underground facilities, including water, sewer and reclaimed water lines and services, or other utilities which may be encountered along the easement. If removal and replacement is required, it shall be done in a workmanlike manner, at his expense, so that the replacement are equivalent to that which existed prior to construction.

3.05 STORMWATER AND EROSION CONTROL DEVICES

The Contractor shall be responsible for, provide, and install all stormwater and erosion control devices necessary to insure satisfactory compliance with the Florida Department of Environmental Protection Stormwater, Erosion, and Sedimentation Control Inspector's Manual.

END OF SECTION

DIVISION 3 CONCRETE

SECTION 03200 CONCRETE REINFORCEMENT

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Reinforcing steel bars and welded steel wire fabric for cast-in-place concrete, complete with tie wire.
- B. Support chairs, bolsters, bar supports and spacers, for reinforcing.

1.02 QUALITY ASSURANCE

Perform concrete reinforcing work in accordance with ACI 318 unless specified otherwise in this Section.

1.03 REFERENCES

- A. ACI 318 - Building Code Requirements for Reinforced Concrete.
- B. ASTM A185 - Welded Steel Wire Fabric for Concrete Reinforcement.
- C. ASTM A615 - Deformed and Plain Billet Steel Bars for Concrete Reinforcement.
- D. CRSI 63 - Recommended practice for placing reinforcing bars.
- E. CRSI 65 - Recommended practice for placing bar supports, specifications and nomenclature.
- F. ACI 315 - American Concrete Institute - Manual of Standard Practice.

1.04 SHOP DRAWINGS

- A. Submit shop drawings in accordance with Contract Documents.
- B. Indicate bar sizes, spacings, locations and quantities of reinforcing steel and wire fabric, bending and cutting schedules and supporting and spacing devices.
- C. Manufacturer's Literature: Manufacturer's specifications and installation instructions for splice devices.

PART 2 PRODUCTS

2.01 REINFORCING

- A. Reinforcing steel: Grade 60, Minimum Yield Strength 60,000 psi, deformed billet steel bars, ASTM A615; plain finish.
- B. Welded steel wire fabric: Deformed wire, ASTM A497; smooth wire ASTM A185 in flat

sheets; plain finish.

2.02 ACCESSORY MATERIALS

- A. Tie wire: Minimum 16 gauge annealed type, or patented system accepted by County.
- B. Chairs, bolsters, bar supports, spacers: Sized and shaped for strength and support of reinforcing during construction conditions.
- C. Special chairs, bolsters, bar supports, spacers (where adjacent to architectural concrete surfaces): Stainless steel type sized and shaped as required.

2.03 FABRICATION

- A. Fabricate concrete reinforcing in accordance with ACI 315.
- B. Locate reinforcing splices, not indicated on Drawings, at points of minimum stress. Location of splices shall be reviewed by County.
- C. Where indicated, weld reinforcing bars in accordance with AWS D12.1.

PART 3 EXECUTION

3.01 PLACEMENT

- A. Reinforcing shall be supported and secured against displacement. Do not deviate from true alignment.
- B. Before placing concrete, ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings which would reduce bond to concrete.

3.02 QUALITY ASSURANCE

- A. Acceptable Manufacturers: Regularly engaged in manufacture of steel bar and welded wire fabric reinforcing.
- B. Installer Qualifications: Three years experience in installation of steel bar and welded wire fabric reinforcing.
- C. Allowable Tolerances:
 - 1. Fabrication:
 - a. Sheared length: ± 1 in.
 - b. Depth of truss bars: $+0, -1/2$ in.
 - c. Stirrups, ties and spirals: $\pm 1/4$ in.
 - d. All other bends: ± 1 in.
 - 2. Placement:
 - a. Concrete cover to form surfaces: $\pm 1/4$ in.
 - b. Minimum spacing between bars: 1 in.
 - c. Top bars in slabs and beams:
 - (1) Members 8 in. deep or less: $\pm 1/4$ in.
 - (2) Members more than 8 in.: $\pm 1/2$ in.
 - d. Crosswise of members: Spaced evenly within 2 in. of stated separation.

- e. Lengthwise of members: Plus or minus 2 in.
- 3. Maximum bar movement to avoid interference with other reinforcing steel, conduits, or embedded items: 1 bar diameter.

3.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver reinforcement to project site in bundles marked with metal tags indicating bar size and length.
- B. Handle and store materials to prevent contamination.

3.05 INSTALLATION

- A. Placement:
 - 1. Bar Supports: CRSI 65.
 - 2. Reinforcing Bars: CRSI 63.
- B. Steel Adjustment:
 - 1. Move within allowable tolerances to avoid interference with other reinforcing steel, conduits, or embedded items.
 - 2. Do not move bars beyond allowable tolerances without concurrence of County.
 - 3. Do not heat, bend, or cut bars without concurrence of County.
- C. Splices:
 - 1. Lap splices: Tie securely with wire to prevent displacement of splices during placement of concrete.
 - 2. Splice devices: Install in accordance with manufacturer's written instructions.
 - 3. Do not splice bars without concurrency of County, except at locations shown on Drawings.
- D. Wire Fabric:
 - 1. Install in longest practicable length.
 - 2. Lap adjoining pieces one full mesh minimum, and lay splices with 16 gauge wire.
 - 3. Do not make end laps midway between supporting beams, or directly over beams of continuous structures.
 - 4. Offset end laps in adjacent widths to prevent continuous laps.
- E. Cleaning: Remove dirt, grease, oil, loose mill scale, excessive rust, and foreign matter that will reduce bond with concrete.
- F. Protection During Concreting: Keep reinforcing steel in proper position during concrete placement.

END OF SECTION

SECTION 03300 CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 WORK INCLUDED

Poured-in-place concrete slabs, thrust blocks, pile caps and pipe support cradles.

1.02 QUALITY ASSURANCE

Perform cast-in-place concrete work in accordance with ACI 318, unless specified otherwise in this Section.

1.03 TESTING LABORATORY SERVICES

- A. Inspection and testing will be performed by the testing laboratory currently under contract to Manatee County in accordance with the Contract Documents.
- B. Provide free access to work and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of work.
- D. Tests of cement and aggregates may be performed to ensure conformance with requirements stated herein.
- E. Three concrete test cylinders will be taken for every 100 cu. yds. or part thereof of each class of concrete placed each day. Smaller pours shall have cylinders taken as directed by the County.
- F. One slump test will be taken for each set of test cylinders taken.

1.04 REFERENCES

- A. ASTM C33 - Concrete Aggregates
- B. ASTM C150 - Portland Cement
- C. ACI 318 - Building Code Requirements for Reinforced Concrete
- D. ASTM C260 - Air Entraining Admixtures for Concrete
- E. ASTM C94 - Ready-Mixed Concrete
- F. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete
- G. ACI 305 - Recommended Practice for Hot Weather Concreting

PART 2 PRODUCTS

2.01 CONCRETE MATERIALS

- A. Cement: Moderate-Type II, High early strength-Type III, Portland type, ASTM C150.
- B. Fine and Coarse Aggregates: ASTM C33.
- C. Water: Clean and free from injurious amounts of oil, alkali, organic matter, or other deleterious material.

2.02 ADMIXTURES

- A. Air Entrainment: ASTM C260.
- B. Chemical: ASTM C494 Type A - water reducing admixture.

2.03 ACCEPTABLE MANUFACTURERS

Acceptable Products:

- 1. Pozzolith
- 2. WRDA

2.04 ACCESSORIES

Non-shrink grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2400 psi in 2 days and 7000 psi in 28 days.

2.05 CONCRETE MIXES

- A. Mix concrete in accordance with ASTM C94.
- B. Provide concrete of following strength:
 - 1. Required concrete strengths as determined by 28 day cylinders shall be as shown on the Drawings, but shall not be less than 3000 psi.
 - 2. Select proportions for normal weight concrete in accordance with ACI 301 3.8 Method 1, Method 2, or Method 3. Add air entraining agent to concrete to entrain air as indicated in ACI 301 Table 3.4.1.
 - 3. All mixes shall be in accordance with FDOT Specifications.
- C. Use set-retarding admixtures during hot weather only when accepted by County.
- D. Add air entraining agent to concrete mix for concrete work exposed to exterior.

2.06 FORMS

- A. Forms shall be used for all concrete masonry, including footings. Form shall be so constructed and placed that the resulting concrete will be of the shape, lines, dimensions, appearance and to the elevations indicated on the Drawings.
- B. Forms shall be made of wood, metal, or other approved material. Wood forms shall be constructed of sound lumber or plywood of suitable dimensions, free from knotholes and loose knots; where used for expose surfaces, boards shall be dressed and matched. Plywood shall be sanded smooth and fitted with tight joints between panels. Metal forms

shall be of an approved type for the class of work involved and of the thickness and design required for rigid construction.

- C. Edges of all form panels in contact with concrete shall be flush within 1/32-inch and forms for plane surfaces shall be such that the concrete will be plane within 1/16-inch in four feet. Forms shall be tight to prevent the passage of mortar and water and grout.
- D. Forms for walls shall have removable panels at the bottom for cleaning, inspection and scrubbing-in of bonding paste. Forms for walls of considerable height shall be arranged with tremies and hoppers for placing concrete in a manner that will prevent segregation and accumulation of hardened concrete on the forms or reinforcement above the fresh concrete.
- E. Molding or bevels shall be placed to produce a 3/4-inch chamfer on all exposed projecting corners, unless otherwise shown on the Drawings. Similar chamfer strips shall be provided at horizontal and vertical extremities of all wall placements to produce "clean" separation between successive placements as called for on the Plans.
- F. Forms shall be sufficiently rigid to withstand vibration, to prevent displacement or sagging between supports and constructed so the concrete will not be damaged by their removal. The Contractor shall be entirely responsible for their adequacy.
- G. Forms, including new pre-oiled forms, shall be oiled before reinforcement is placed, with an approved nonstaining oil or liquid form coating having a non-paraffin base.
- H. Before form material is re-used, all surfaces in contact with concrete shall be thoroughly cleaned, all damaged places repaired, all projecting nails withdrawn, all protrusions smoothed and in the case of wood forms pre-oiled.
- I. Form ties encased in concrete shall be designed so that after removal of the projecting part, no metal shall be within 1-inch of the face of the concrete. That part of the tie to be removed shall be at least 1/2-inch diameter or be provided with a wood or metal cone at least 1/2-inch in diameter and 1-inch long. Form ties in concrete exposed to view shall be the cone-washer type equal to the Richmond "Tyscru". Throughbolts or common wire shall not be used for form ties.

PART 3 EXECUTION

3.01 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304.
- B. Notify County minimum 24 hours prior to commencement of concreting operations.
- C. Verify anchors, seats, plates and other items to be cast into concrete are placed, held securely and will not cause hardship in placing concrete. Rectify same and proceed with work.
- D. Maintain records of poured concrete items. Record date, location of pour, quantity, air temperature and test samples taken.
- E. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints are not disturbed during concrete placement.

- F. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Apply bonding agent in accordance with manufacturer's recommendations.
- G. Pour concrete continuously between predetermined construction and control joints. Do not break or interrupt successive pours such that cold joints occur.
- H. In locations where new concrete is dowelled to existing work, drill holes in existing concrete, insert steel dowels and pack solidly with non-shrink grout.
- I. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify County upon discovery.
- J. Conform to ACI 305 when concreting during hot weather.

3.02 SCREEDING

Screed surfaces level, maintaining flatness within a maximum deviation of 1/8" in 10 feet.

3.03 PATCHING

Allow County to inspect concrete surfaces immediately upon removal of forms. Patch imperfections as directed. All patching procedures shall be submitted to and approved by the County prior to use.

3.04 DEFECTIVE CONCRETE

- A. Modify or replace concrete not conforming to required lines, details and elevations.
- B. Repair or replace concrete not properly placed resulting in excessive honeycomb and other defects. Do not patch, fill, touch-up, repair, or replace exposed architectural concrete except upon express direction of County for each individual area.

3.05 CONCRETE FINISHING

Provide concrete surfaces to be left exposed, columns, beams and joists with smooth rubbed finish.

3.06 CURING AND PROTECTION

Beginning immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures and mechanical injury. Maintain concrete with minimal moisture loss at relatively constant temperature for a period of 7 days or until concrete strengths reaches 75% of the 28 day design strength.

Protection against moisture loss may be obtained with spray on curing compounds or plastic sheets. Protection against heat or cold may be obtained with insulated curing blankets or forms.

3.07 CONCRETE DRIVEWAY RESTORATION

Concrete driveways shall be restored with 6 inches of 3,000 psi concrete with W2.5 X W2.5, 6X6 wire mesh. Place ½ inch expansion joint between back of curb and new

concrete. Area beneath restoration shall be mechanically tamped prior to placing concrete.

3.08 CONCRETE SIDEWALK RESTORATION

Concrete sidewalks across driveways shall be restored with 6 inches of 3,000 psi concrete with W2.5 X W2.5, 6X6 wire mesh. Place ½ inch expansion joint between back of curb and new concrete. Area beneath restoration shall be mechanically tamped prior to placing concrete.

Concrete sidewalks outside of driveways shall be restored with 4 inches of 3,000 psi concrete per FDOT Design Standards, Sections 522 & 310

END OF SECTION

SECTION 03350 CONCRETE FINISHES

PART 1 GENERAL

1.01 SCOPE OF WORK

Furnish all labor, materials, equipment and incidentals required to finish cast-in-place concrete surfaces as specified herein.

1.02 SUBMITTALS

Submit to the County as provided in the Contract Documents, the proposed chemical hardener manufacturer's surface preparation and application procedures.

1.03 SCHEDULE OF FINISHES

- A. Concrete for the Project shall be finished in the various specified manners either to remain as natural concrete or to receive an additional applied finish or material under another Section.
- B. The base concrete for the following conditions shall be finished as noted and as further specified herein:
 - 1. Exterior, exposed concrete slabs and stairs - broomed finish.
 - 2. Interior, exposed concrete slabs - steel trowel finish.
 - 3. Concrete on which process liquids flow or in contact with sludge - steel trowel finish.
 - 4. Concrete where not exposed in the finished work and not scheduled to receive an additional applied finish or material - off-form finish.
 - 5. Provide concrete surfaces to be left exposed such as walls, columns, beams and joists with smooth rubbed finish.

1.04 RESPONSIBILITY FOR CHANGING FINISHES

- A. The surface finishes specified for concrete to receive additional applied finishes or materials are the finishes required for the proper application of the actual products specified under other Sections. Where different products are approved for use, it shall be the Contractor's responsibility to determine if changes in finishes are required and to provide the proper finishes to receive these products.
- B. Changes in finishes made to accommodate product different from those specified shall be performed at no additional cost to the County. Submit the proposed new finishes and their construction methods to the County for approval.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Portland cement and component materials required for finishing the concrete surfaces shall be as specified in the Contract Documents.
- B. Hardener shall be Lapidolith as manufactured by Sonneborn Building Products or approved equal. Hardener shall be used on all floors, stair treads and platforms.

PART 3 EXECUTION

3.01 FORMED SURFACES

- A. Forms shall not be stripped before the concrete has attained a strength of at least 50 percent of the ultimate design strength. This is equivalent to approximately five "100 day-degrees" of moist curing.
- B. Care shall be exercised to prevent damaging edges or obliterating the lines of chamfers, rustications, or corners when removing the forms or doing any work adjacent thereto.
- C. Clean all exposed concrete surfaces and adjoining work stained by leakage of concrete, to the satisfaction of the County.
- D. Off-form finish. Fins and other projections shall be removed as approved. Tie cone holes and other minor defects shall be filled with non-shrink grout specified under the Contract Documents.

3.02 FLOORS AND SLABS

- A. Floors and slabs shall be screeded to the established grades and shall be level with a tolerance of 1/8-inch when checked with a 10 foot straight edge, except where drains occur, in which case floors shall be pitched to drains as indicated. Failure to meet either of above shall be cause for removal, grinding, or other correction as approved by the County.
- B. Following screeding as specified above, power steel trowel as follows:
 - 1. Immediately after final screeding, a dry cement/sand shake in the proportion of 2-sacks of portland cement to 350-pounds of coarse natural concrete sand shall be sprinkled evenly over the surface at the rate of approximately 500 pounds per 1,000 square feet of floor. Neat, dry cement shall not be sprinkled on the surface. This shake shall be thoroughly floated into the surface with an approved disc type power compacting machine weighing at least 200 pounds if a 20-inch disc is used or 300 pounds if a 24-inch disc is used (such as a "Kelly Float" as manufactured by the Weisner-Rapp Corporation of Buffalo, New York). A mechanical blade-type float or trowel is not acceptable for this work.
NOTE: This operation (application of the cement/sand shake) may be eliminated at the discretion of the County if the base slab concrete exhibits adequate fattiness and homogeneity.
 - 2. In lieu of power steel troweling, small areas as defined by the County shall be compacted by hand steel troweling with the dry cement/sand shake as ordered.
 - 3. The floor or slab shall be compacted to a smooth surface and the floating operation continued until sufficient mortar is brought to the surface to fill all voids. The surfaces shall be tested with a straight edge to detect high and low spots which shall be eliminated.
 - 4. Compaction shall be continued only until thorough densification is achieved and a small amount of mortar is brought to the surface. Excessive floating shall be avoided.
- C. After Paragraph 3.02 A and B procedures are accomplished, floors and slabs for particular conditions shall be completed as scheduled in one of the following finishes:

1. Wood float finish. Hand wood float, maintaining the surface tolerance to provide a grained, nonslip finish as approved.
 2. Broomed finish. Hand wood float maintaining the surface tolerance and then broom with a stiff bristle broom in the direction of drainage to provide a nonslip finish as approved.
 3. Steel trowel finish. Hand steel trowel to a perfectly smooth, hard even finish free from high or low spots or other defects as approved.
- D. Floors, stair treads and platforms shall be given a floor hardener. Application shall be according to manufacturer's instructions.

3.03 APPROVAL OF FINISHES

- A. All concrete surfaces will be inspected during the finishing process by the County.
- B. Surfaces which, in the opinion of the County, are unsatisfactory shall be refinished or reworked until approved by the County.

END OF SECTION

SECTION 03410 PRECAST CONCRETE STRUCTURES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all materials, labor and equipment and construct valve vaults, meter vaults, concrete pipe and accessory items, consisting of precast sections as shown on the Drawings and as specified herein.
- B. The forms, dimensions, concrete and construction methods shall be approved by the County in advance of construction.
- C. These Specifications are intended to give a general description of what is required, but do not purport to cover all of the structural design details which will vary in accordance with the requirements of the plans. It is, however, intended to cover the furnishing, shop testing, delivery and complete installation of all precast structures whether specifically mentioned in these Specifications or not.
- D. The supplier of the precast items shall coordinate his work with that of the Contractor to insure that the units will be delivered and installed in the excavation provided by the Contractor, in accordance with the Contractor's construction schedule.
- E. The Contractor will ensure coordination of the precast structures fabrication with the supplier to achieve the proper structural top slab openings, spacings and related dimensions for the selected equipment frames and covers. The top slabs, frames, covers, and subsurface structures outside of roadways shall be capable of live load of 300 pounds per square foot unless noted otherwise.
- F. All interior surfaces of valve vaults and meter vaults shall be painted with two coats of coal tar epoxy paint dry film thickness of 8 mils each coat, as approved by the County.

1.02 SUBMITTALS

- A. Submit to the County in accordance with the Contract Documents, shop drawings showing details of construction, reinforcing, and joints.
- B. Shop Drawings
 - 1. Content
 - a. Dimensions and finishes.
 - b. Estimated camber.
 - c. Reinforcing and connection details.
 - d. Lifting and erection inserts.
 - e. Other items cast into members.
 - 2. Show location of unit by same identification mark placed on member.
 - 3. Include design calculations.
- C. Manufacturer's Literature: Manufacturer's recommended installation instructions.
- D. Manufacturer's certificates of material conformance with Specifications.
- E. Test Reports: Reports of tests on concrete. A minimum of three compression test

cylinders will be required for each pour.

1.03 INSPECTION

- A. The quality of all materials, the process of manufacture and the finished sections shall be subject to inspection and approval by the County, or other representatives of the County. Such inspection may be made at the place of manufacture, or at the site after delivery, or at both places and the sections shall be subject to rejection at any time due to failure to meet any of the Specification requirements; even though sample sections may have been accepted as satisfactory at the place of manufacture. Sections rejected after delivery to the project site shall be marked for identification and shall be removed from the project site at once. All sections which have been damaged after delivery will be rejected and if already installed, shall be acceptably repaired, if permitted, or removed and replaced entirely at the Contractor's expense.
- B. At the time of inspection, the sections will be carefully examined for compliance with the applicable ASTM designation and these Specifications and with the approved manufacturer's drawings.
1. All sections shall be inspected for general appearance, dimension, "scratch-strength", blisters, cracks, roughness, soundness, etc. The surface shall be dense and close-textured.
 2. All sections shall meet the manufacturing tolerance requirements of ASTM C-478 or the following casting tolerances, whichever are more severe:

Wall Thickness	$\pm 3/8"$
Inside Diameter	$\pm 3/8"$
Outside Diameter	$\pm 1/2"$
Height or Length	$\pm 3/8"$
- C. Imperfections may be repaired, subject to the approval of the County, after demonstration by the manufacturer that strong and permanent repairs result. Repairs shall be carefully inspected before final approval. Cement mortar used for repairs shall have a minimum compressive strength of 4,000 psi at the end of 7 days and 5,000 psi at the end of 28 days, when tested in 3-inch by 6-inch cylinders stored in the standard manner. Epoxy mortar may be utilized for repairs subject to the approval of the County.

PART 2 PRODUCTS

2.01 PRECAST CONCRETE SECTIONS

- A. Joints between precast concrete sections shall be set by plastic shims and filled with non-metallic non-shrink grout as specified in the Contract Documents and shown on the Drawings.
- B. The top slab sections shall be fitted with water tight hatches as specified in the Construction Drawings. The frames and covers will be sized for the openings shown on the Contract Drawings.
- C. The various precast sections shall have the inside dimensions and minimum thickness of concrete as indicated on the Drawings. All precast and cast-in-place concrete members shall conform to the Building Code Requirements for Reinforced Concrete ACI 318 and applicable ASTM Standards.

- D. Fillets shall be provided and installed in the wet wells as shown on the Drawings. They shall be constructed using concrete fill and shall conform to the Contract Documents.
- E. Precast structures shall be constructed to the dimensions as shown on the Drawings and as specified in these Specifications. Flow channels, inverts, and benches in manholes shall be precast, not constructed after installation. Provide a true curve of the largest radius possible for changes in direction of sewer and entering branch or branches.
- F. Type II cement shall be used, typically at a compressive strength of 4,000 psi, except as otherwise approved.
- G. The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on the inside of each precast section.
- H. Sections shall be cured by an approved method and shall not be shipped until at least seven (7) days after having been fabricated.
- I. Each precast section manufactured in accordance with the Drawings shall be clearly marked to indicate the intended installation location. The Contractor shall be responsible for the installation of the correct precast sections in their designated locations.
- J. Wet wells, and manholes receiving flow from lift stations shall be precast with a cast in place PVC protective liner.
 - 1. The prefabricated wetwell or manhole liner shall be a non-load bearing component installed and adequately anchored inside a new precast concrete wetwell or manhole riser during the concrete casting process at the concrete precaster's manufacturing facility. The liner must be fully supported during the casting process.
 - 2. The liners shall be resistant to the chemical environment normally found in the gravity wastewater transmission systems to which they will be exposed.
 - 3. The liner shall have a warranty against defect in material and workmanship for a period of three years.
 - 4. After assembly and installation, in the field, all internal seams are to be sealed by bonding or welding per the manufacturer's standard method and details.
 - 5. Any repairs or other modifications to the liner, such as patching or sealing PVC sleeves used for pipe penetrations of the structure, shall sealed by bonding or welding per the PVC liner manufacturer's standard methods and details.

PART 3 EXECUTION

3.01 INSTALLATION

- A. The Contractor shall be responsible for handling ground water to provide firm, dry subgrade for the structure, shall prevent water rising on new poured-in-place concrete or grouted joint sections within 24 hours after placing and shall guard against flotation or other damage resulting from ground water or flooding.
- B. A minimum of an 8-inch shell base compacted layer of washed shell or crushed stone shall be placed as a foundation for the wet well base slabs and valve and/or meter vault pits.

- C. Backfill materials around the wet well and above the pipe bedding shall be select material as specified in the Contract Documents.
- D. Precast bases, conforming to all requirements of ASTM C478 and above listed requirements for precast sections, may be used.
- E. The structure shall not be set into the excavation until the installation procedure and excavation have been approved by the County.
- F. The base may be cast-in-place concrete placed on a thoroughly compacted crushed rock subbase. The tops of the cast-in-place bases shall be shaped to mate with the precast barrel section and shall be adjusted in grade so that the top slab section is at the approximately correct elevation.
- G. Precast concrete structure sections shall be set so as to be vertical and with sections in true alignment with a 1/4-inch maximum tolerance to be allowed. The outside and inside joint shall be filled with a non-shrink grout and finished flush with the adjoining surfaces. Allow joints to set for 24 hours before backfilling. Backfilling shall be done in a careful manner, bringing the fill up evenly on all sides. The Contractor shall install the precast sections in a manner that will result in a watertight joint. Leaking joints are not acceptable.
- H. Holes in the concrete sections required for handling or other purposes shall be plugged with a non-shrink grout or by grout in combination with concrete plugs.
- I. Where holes must be cut in the precast sections to accommodate pipes, cutting shall be done prior to setting them in place to prevent any subsequent jarring which may loosen the mortar joints.
- J. Frames and hatches specified and furnished shall be cast in the cover slab prior to setting. Normal installation shall include 6" to 12" of concrete grade rings between the top of the cone section and the cover plate ring slab.

ASTM A48-74, or most recent revision, Specification for Gray Iron Castings, Class 30 or Grade 60-45-10 Ductile Iron meeting the requirements of ASTM A536-72, or most recent revision, Specification for Ductile Iron Castings. Cast in a true symmetrical pattern of tough, dense and even grained iron, free from warping, scales, lumps, blisters, sandholes, or any defects of any kind. Provide indented pattern lids with lettering as shown on the Drawings. Machine or grind frames and lids at touching surfaces to provide firm seats and prevent rocking. Remove and replace any set not matching perfectly. All frames and covers shall be designed to withstand an HS20-44 wheel loading as defined by AASHTO specifications.

- K. Manhole inserts: Watertight manhole inserts shall be required for all sanitary sewer manholes installed. Inserts shall be as manufactured by FRW Industries, Conroe, Texas, or approved equal. Inserts shall be complete with a self-cleaning relief valve. Relief valves shall operate on a pressure differential of 1/2 psi. Neoprene gaskets shall be installed under the insert lip to insure a leakproof seal.
- L. Penetrations and connections into precast or existing structures shall be accomplished by rotary core boring.
- M. Cast in place liners shall be repaired, fitted around penetrations, sealed at joints, etc. in accordance with the manufacturer's recommendations for that liner. As a general rule,

repairs, sleeves and patches shall be welded in place, glues and sealants shall not be used unless approved by the manufacturer.

3.04 TESTING

- A. After constructed to its finished height and before being backfilled, each manhole shall be tested for water tightness.
1. Plug pipe lines and perform vacuum test. Observing all recommended safety measures induce a backpressure of 5.0 p.s.i. equivalent to 10" Hg (mercury). The manhole assembly is considered satisfactory if the vacuum loss is less than 1" Hg for the length of time listed in the following table:

Time of Test in Seconds			
Depth Feet	Manhole Diameter in Feet		
	4	5	6
4	10	13	16
8	20	26	32
12	30	39	48
16	40	52	64
20	50	65	80
24	60	78	96
T	5	6.5	8

Note: Add "T" seconds for each additional 2'- of depth.

- B. Failure to pass this test requires the Contractor to correct the problems and retest. The Contractor will replace leaking gaskets and/or concrete sections and retest the completed manhole. No manhole will be accepted without successfully passing this test.

END OF SECTION

SECTION 05550 AIR RELEASE ENCLOSURE

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish all labor, materials, equipment and incidentals required to install the above ground air release enclosure as listed in the specifications and as shown on the Drawings.

1.02 RELATED WORK

The contractor shall be responsible for any related work necessary for the proper installation of enclosure. This shall include, but is not limited to, any required bypass pumping, any required earthwork and any required concrete work.

1.03 SUBMITTALS

- A. Submit to the County shop drawings and schedules of all enclosure systems and appurtenances required. Submit design data and specification data sheets listing all parameters used in the enclosure system design.
- B. Submit to the County the name of the enclosure supplier and a list of materials to be furnished.

1.04 REFERENCE STANDARDS

- A. American Water Works Association (AWWA).
- B. American Society for Testing and Materials (ASTM).
- C. Where reference is made to the above standard, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

The enclosure manufacturer shall be a company specializing in the manufacture of such enclosures with at least five (5) years of successful field experience and being lab certified as meeting A.S.S.E 1060 requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Care shall be taken in shipping, handling and placing to avoid damaging. Any material damaged in shipment shall be replaced as directed by the County.
- B. Any material showing deterioration, or which has been exposed to any other adverse storage condition that may have caused damage, even though no such damage can be seen, shall be marked as rejected and removed at once from the work.

PART 2 PRODUCTS

2.01 GENERAL

All enclosures shall comply with the standard detail for shape and size and shall include a 24"W x 30"H access door with a hasp for a padlock. The enclosure shall be securely attached to a concrete base with anchor brackets installed on the interior of the enclosure, through the flange base of the enclosure itself or through a stainless steel anchor hinge.

2.02 ALUMINUM ENCLOSURE

- A. The roof, walls and access panels shall be constructed of mill finish aluminum, ASTM B209, solid sheet construction, with a wall thickness of one eighth inch.
- B. All structural members shall be aluminum. No wood or "particle board" shall be allowed in assembly.
- C. Multi-sectional enclosures shall fit together with overlapping "tongue and groove" joints and be secured internally with mechanical fasteners.
- D. All assembly fasteners shall be stainless steel or aluminum.

2.03 STAINLESS STEEL ENCLOSURE

- A. The roof, walls and access panels shall be constructed stainless steel, type 316, solid sheet construction, with a wall thickness of one eighth inch.
- B. All structural members shall be stainless steel. No wood or "particle board" shall be allowed in assembly.
- C. Multi-sectional enclosures shall fit together with overlapping "tongue and groove" joints and be secured internally with mechanical fasteners.
- D. All assembly fasteners shall be stainless steel.

2.04 FIBERGLASS ENCLOSURE

- A. Enclosure shall be a 1 piece molded fiberglass enclosure with a base flange for mounting to the concrete slab and a full recessed door opening with a lip. Enclosure shall be by Allied Molded Products, or approved equal. Color shall be as directed by the County.
- B. Full length piano style hinge, door latch, padlock hasp and all bolts and other hardware shall be of stainless steel.

PART 3 EXECUTION

3.01 INSTALLATION

Enclosure shall be assembled and mounted plumb, level and square on the concrete pad according to the manufacturer's instructions and the contract drawings.

END OF SECTION

SECTION 09970 SURFACE PROTECTION SPRAY SYSTEM

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required to install and test the coating system complete and ready for operation for the structures listed in the specifications and as shown on the Drawings.
- B. The work includes coating of all surfaces as shown and specified on the Drawings. This includes, but is not limited to stairs, walls, floors, concrete divider, concrete slabs, manholes, wet wells, and all other work obviously required to be coated unless otherwise specified herein or on the Drawings. The omission of minor items in the Schedule of Work shall not relieve the Contractor of his obligation to include such items where they come within the general intent of the Specification as stated herein.

1.02 RELATED WORK

- A. Bypass pumping is the responsibility of the General Contractor.
- B. Concrete surface cleaning in each lift station is the responsibility of the General contractor.
- C. Removal and offsite disposal of rubble is the responsibility of the General Contractor.

1.03 SUBMITTALS

- A. Submit to the County shop drawings and schedules of all surfacing systems and appurtenances required. Submit design data and specification data sheets listing all parameters used in the surfacing system design and thickness calculations based on applicable provisions of ASTM.
- B. Submit to the County the name of the surfacing supplier, a list of materials to be furnished, and the qualification (per 1.05 A) of the application contractor.

1.04 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM)

ASTM D-638
ASTM D-790
- B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALIFICATIONS

- A. The Contractor performing the surfacing work shall be fully qualified, experienced a minimum of seven years and equipped to complete this work expeditiously and in a satisfactory manner. The Contractor shall submit the following information to the County for review and approval before any surfacing work is performed.

1. The number of years of experience in performing this type of specialized work

must be seven years minimum.

2. Name of the surfacing manufacturer and supplier for this work and previous work listed below. The Contractor shall be an approved installer as certified and licensed by the surfacing manufacturer and equipment supplier.
 3. A list of clients that the Contractor has performed this type of work.
 - a. The list shall contain names and telephone numbers of persons who can be called to verify previous satisfactory performance.
 - b. Installation dates and a description of the actual work performed.
 - c. The surfacing manufacturer shall provide an installation list of his product used for similar sewer rehabilitation projects. The list shall provide the same information as required in paragraphs 3.a and 3.b above.
- B. The County reserves the right to approve or disapprove the Contractor, based on the submitted qualifications.

1.06 GUARANTEE

All surfacing shall be guaranteed by the Contractor for a period of five years from the date of acceptance. During this period, all defects discovered in the surfacing, as determined by the County, shall be repaired or replaced in a satisfactory manner at no cost to the County, this shall include, but is not limited to, all work and costs associated with the shut down of any pump stations and all bypass operations needed for the proper repairs to be made.

1.07 QUALITY ASSURANCE

- A. All surfacing products shall be from a single manufacturer. The supplier shall be responsible for the provisions of all test requirements specified in ASTM Standards D-638 and D-790 as applicable.
- B. The Contractor shall employ specialty workers who have proven ability to perform the Work included herein. This will consist of a minimum of two years or two project experiences installing this product. This is a requirement for each and every employee.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Care shall be taken in shipping, handling and placing to avoid damaging. Any material damaged in shipment shall be replaced as directed by the County.
- B. Any material showing deterioration, or which has been exposed to any other adverse storage condition that may have caused damage, even though no such damage can be seen, shall be marked as rejected and removed at once from the work.

PART 2 PRODUCTS

2.01 GENERAL

- A. The material sprayed onto the surface shall be a urethane resin system formulated for the

application within a sanitary sewer environment. The urethane will exhibit suitable corrosion resistance to corrosive gases and fluids found within domestic sanitary sewage. Unless dictated by varying effluent, the spray system shall be a urethane and exhibit the cured physical strengths specified herein.

- B. When cured, the surface coating shall form a continuous, tight-fitting, hard, impermeable surfacing data which is suitable for sewer system service and chemically resistant to any chemicals or vapors normally found in domestic sewage.
- C. The surface shall be an integral part of the structure being rehabilitated after being placed and cured. The surface shall cover the complete interior of the existing structure. The surface shall provide a continuous watertight seal or barrier.
 - 1. The surface shall effectively seal the interior surfaces of the structure and prevent any penetration or leakage of groundwater infiltration.
 - 2. Provide water resistance data on surface based on ASTM Standards.
 - 3. The surface shall be compatible with the thermal conditions of existing sewer lift stations and manholes. Surface temperature will range from 30 to 80 degrees F. Provide test data on thermal compatibility based on ASTM Standards.

2.02 MATERIALS

- A. Approved materials include
 - 1. Aquatapoxy A-6 and Raven 405 epoxy by Raven Lining Systems
 - 2. Green Monster
 - 3. IET System 3
 - 4. Rubberseal
 - 5. Sauereisen 210 system
 - 6. SpectraShield system
 - 7. Spraywall Urethane by Sprayroq
 - 8. Warren Environmental 301-18
- B. Polyurethane spray application shall comply with the following specifications:

The cured urethane system shall conform to the minimum physical standards, as listed below. The long-term data is for a 50-year design life of the process.

<u>Cured Urethane</u>	<u>Standard</u>	<u>Long-Term Data</u>
Tensile Stress	ASTM D-638	5,000 psi
Flexural Stress	ASTM D-790	10,000 psi
Flexural Modulus	ASTM D-790	550,000 psi

- C. Epoxy spray application shall be 100% VOC free / 100% solids.

PART 3 EXECUTION

3.01 SURFACE PREPARATION

- A. The contractor shall clean each structure and shall dispose of any resulting material.
- B. All contaminants including: oils, grease, incompatible existing coatings, waxes, form release, curing compounds, efflorescence, sealers, salts, or other contaminants shall be removed.
- C. All concrete or mortar that is not sound or has been damaged by chemical exposure shall be removed to a sound concrete surface or replaced.
- D. Surface preparation method(s) should be based upon the conditions of the substrate, service environment and the requirements of the protective coating to be applied.
- E. Surfaces to receive protective coating shall be cleaned and abraded to produce a sound surface with adequate profile and porosity to provide a strong bond between the protective coating and the substrate. Generally, this can be achieved with a high pressure water cleaning using equipment capable of 5,000 psi at 4 gpm. Other methods such as abrasive blasting, shotblasting, grinding, scarifying or acid etching may also be used. Detergent water cleaning and hot water blasting may be necessary to remove oils, grease or other hydrocarbon residues from the concrete. Whichever method(s) are used, they shall be performed in a manner that provides a uniform, sound clean neutralized surface that is not excessively damaged.
- F. Infiltration shall be stopped by using a material which is compatible with and is suitable for topcoating with the specified protective coating.
- G. The area between the manhole and the manhole ring and any other area that might exhibit movement or cracking due to expansion and contraction, shall be grouted with a flexible grout or gel before surface coating spray application.
- H. All surfaces should be inspected by the Inspector during and after preparation and before the repair material is applied.
- I. No separate payment shall be made for any preparatory work required prior to application of the surface coating.

3.02 INSTALLATION

- A. The Contractor shall notify the Project Manager at least 48 hours in advance, giving the date, start time and estimated completion time for the work being conducted.
- B. The Contractor shall provide bypass pumping of sewage flows (as required) where and when the rehabilitation work is being performed. No flows will be permitted in the structure until the spray coating has properly cured to the manufactures specifications.
- C. The installation of the surface coating shall be in complete accordance with the applicable provisions of ASTM and the manufacturer's specifications. A representative of the manufacturer shall be present during the actual installation.
 - 1. Prior to placing the surface coating, the manufacturer's representative must approve the surface preparation work and installation conditions including temperatures.
 - 2. All surfaces shall be sufficiently smooth and even, to ensure good flow handling

characteristics when complete.

3. All surfaces shall have the surface coating applied to the required thickness by spray application.
- D. Application procedures shall conform to the recommendations of the protective coating manufacturer, including material handling, mixing, environmental controls during application, safety, and spray equipment.
- E. The spray equipment shall be specifically designed to accurately ratio and apply the specified protective coating materials and shall be regularly maintained and in proper working order.
- F. The protective coating material must be spray applied by a Certified Applicator of the protective coating manufacturer.
- G. Polyurethane spray application shall be applied such that all surfaces shall be coated in accordance with the manufactures recommended thickness but not be less than 125 mils.
- H. Epoxy spray application shall be applied such that all surfaces shall be coated in accordance with the following:

1. Specified surfaces shall be coated by spray application of a moisture tolerant, solvent-free, 100% solids, epoxy protective coating as further described herein. Spray application shall be to a minimum wet film thickness in accordance with the following table:

Concrete, New/Smooth	80-100 mils for immersion, 60-80 mils for atmospheric, splash and spill exposure
Concrete, Rough	100-125+ mils
Masonry/Brick	125-150+ mils
Steel	16-80 mils for immersion, 16-40 mils for atmospheric, splash and spill exposure; also profile dependent
Fiberglass Systems	40-60 mils tack coat, 9 oz/yd ² fabric, 40-60 mils top coat. Varies with circumstances

2. Airless spray application equipment approved by the coating manufacturer shall be used to apply each coat of the protective coating. Air assisted spray application equipment may be acceptable, especially for thinner coats (<10 mils), only if the air source is filtered to completely remove all oil and water.
3. If necessary, subsequent topcoating or additional coats of the protective coating should occur as soon as the basecoat becomes tack free, ideally within 12 hours but no later than the recoat window for the specified products. Additional surface preparation procedures will be required if this recoat window is exceeded.

3.03 FIELD TESTING AND ACCEPTANCE

- A. Field acceptance of surface coatings shall be based on the County's evaluation of the proper surfacing of the structure and the appropriate installation and curing test data along with review of the structure inspections.
- B. The surface coatings shall provide a continuous monolithic surfacing with uniform thickness throughout the structure interior. If the thickness of the coating surface is not uniform or is less than specified, it shall be repaired or replaced at no additional cost to the County.
 - 1. The County will measure the surface cured thickness from a specimen retrieved by the Contractor. The Contractor shall retrieve the specimen by physically cutting through the surfacing (by drilling or coring). There will be up to three thickness measurement locations in each structure. A suitable non-destructive type of thickness measurement may also be used.
 - 2. All the surface coating thickness measurement locations shall be repaired by the Contractor in accordance with the manufacturer's recommendations. These repairs shall be included in the five year surface coating guarantee.
- C. All pipe connections shall be open and clear.
- D. There shall be no cracks, voids, pinholes, uncured spots, dry spots, lifts, delaminations or other type defects.
- E. If any defective surface coating is discovered after it has been installed, it shall be repaired or replaced in a satisfactory manner within 72 hours and at no additional cost to the County. This requirement shall apply for the entire five year guarantee period.

END OF SECTION



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Southwest Florida Water Management District

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)
SUNCOM 578-2070

Bartow Service Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)
SUNCOM 572-6200

048 110.000 TAB
RS
M.LIMBGE
2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
SUNCOM 628-4150 TDD only 1-800-231-6103 (FL only)
On the Internet at: WaterMatters.org

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)
SUNCOM 531-6900

Lecanto Service Office
3600 West Sovereign Path
Suite 226
Lecanto, Florida 34461-8070
(352) 527-8131
SUNCOM 667-3271

November 19, 2002

ATTACHMENT 'F'

Board of County Commissioners, Manatee County
c/o Director, Transportation Department
4410 66th Street West
Bradenton, FL 34210

Subject: Notice of Final Agency Action for Approval
ERP General Construction
Permit No: 44020046.000
Project Name: Manatee County - 44th Avenue East Improvements
Project
County: Manatee
Sec/Twp/Rge: 1,2,11,12/35S/17E

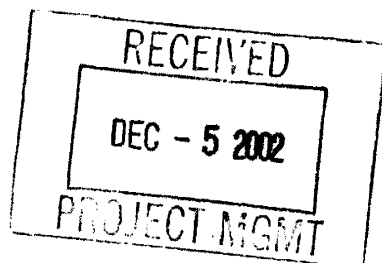
Dear Commissioners:

This letter constitutes notice of Final Agency Action for **approval** of the permit application referenced above. Final approval is contingent upon no objection to the District's action being received by the District within the time frames described below.

You or any person whose substantial interests are affected by the District's action regarding a permit may request an administrative hearing in accordance with Sections 120.569 and 120.57, F.S., and Chapter 28-106, Florida Administrative Code (F.A.C.), of the Uniform Rules of Procedure. *A request for hearing must: (1) explain how the substantial interests of each person requesting the hearing will be affected by the District's action, or proposed action, (2) state all material facts disputed by the person requesting the hearing or state that there are no disputed facts, and (3) otherwise comply with Chapter 28-106, F.A.C.* Copies of Sections 28-106.201 and 28-106.301, F.A.C. are enclosed for your reference. A request for hearing must be filed with (received by) the Agency Clerk of the District at the District's Brooksville address within 21 days of receipt of this notice. Receipt is deemed to be the fifth day after the date on which this notice is deposited in the United States mail. Failure to file a request for hearing within this time period shall constitute a waiver of any right you or such person may have to request a hearing under Sections 120.569 and 120.57, F.S. Mediation pursuant to Section 120.573, F.S., to settle an administrative dispute regarding the District's action in this matter is not available prior to the filing of a request for hearing.

Enclosed is a "Noticing Packet" that provides information regarding the District Rule 40D-1.1010, F.A.C., which addresses the notification of persons whose substantial interests may be affected by the District's action in this matter. The packet contains guidelines on how to provide notice of the District's action, and a notice that you may use.

The enclosed approved construction plans are part of the permit, and construction must be in accordance with these plans.



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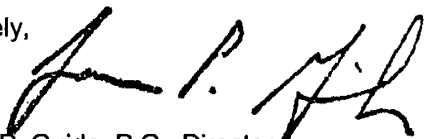
E. D. "Sonny" Vergara
Executive Director
Gene A. Heath
Assistant Executive Director
William S. Bilenky
General Counsel

Ronnie E. Duncan
Chair, Pinellas
Thomas G. Dabney, II
Vice Chair, Sarasota
Heidi B. McCree
Secretary, Hillsborough
Watson L. Haynes, II
Treasurer, Pinellas
Edward W. Chance
Manatee
Monroe "Al" Coogler
Citrus
Maggie N. Dominguez
Hillsborough
Pamela L. Fentress
Highlands
Ronald C. Johnson
Polk
Janet D. Kovach
Hillsborough
John K. Renke, III
Pasco

Board of County Commissioners, Manatee County
c/o Director, Transportation Department
Page 2
November 19, 2002

If you have questions concerning the permit, please contact Christopher S. Wright, E.I., at the Sarasota Service Office, extension 6547. For assistance with environmental concerns, please contact Pamela J. Fetterman, extension 6515.

Sincerely,



James P. Guida, P.G., Director
Sarasota Regulation Department

JPG:CSW:PJF:mt

Enclosures: Approved Permit w/Conditions Attached
 Approved Construction Drawings
 Statement of Completion
 Notice of Authorization to Commence Construction
 Noticing Packet (42.00-039)
 Sections 28-106.201 and 28-106.301, F.A.C.
cc/enc: File of Record 44020046.000
 Rick Schappacher, P.E., Kimley-Horn and Associates, Inc.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
GENERAL CONSTRUCTION
PERMIT NO. 44020046.000

EXPIRATION DATE: November 19, 2007

PERMIT ISSUE DATE: November 19, 2002

This permit is issued under the provisions of Chapter 373, Florida Statutes (F.S.), and the Rules contained in Chapters 40D-4 and 40, Florida Administrative Code (F.A.C.). The permit authorizes the Permittee to proceed with the construction of a surface water management system in accordance with the information outlined herein and shown by the application, approved drawing(s), plans, specifications, and other documents, attached hereto and kept on file at the Southwest Florida Water Management District (District). All construction, operation and maintenance of the surface water management system authorized by this permit shall occur in compliance with Florida Statutes and Administrative Code and the conditions of this permit.

PROJECT NAME: Manatee County - 44th Avenue East Improvements Project

GRANTED TO: Board of County Commissioners, Manatee County
Post Office Box 1000
Bradenton, FL 34206

ABSTRACT: This permit authorizes the construction of a surface water management system serving a 33.04 acre public works improvement project in Manatee County, known as Manatee County - 44th Avenue East Road Improvements. The proposed scope of construction is for the widening and paving of 44th Avenue East from U.S. Highway 41 and State Road 70A, and on segments of U.S. Highway 301. Five water management areas provide water quality treatment and peak attenuation storage as identified in the tables below. Authorized activities result in the placement of fill within the limits of a designated FEMA floodplain. Compensating storage volumes hydraulically connected to the floodplain are provided in a linear ditch excavated from upland areas directly south of Ponds D and E. There are no wetlands located within the project area. A total of 0.23 acre of other surface water ditches are located within the project area boundary limits that will be permanently impacted by filling for roadway widening. Wetland mitigation to offset the 0.23 acre permanent filling impacts will not be required pursuant to Subsection 3.2.2.2 of the Basis of Review (BOR).

OP. & MAINT. ENTITY: Manatee County Transportation Department

PROPERTY LOCATION: Manatee County

SEC/TWP/RGE: 1,2,11,12/35S/17E

**TOTAL ACRES OWNED
OR UNDER CONTROL:** N/A

PROJECT SIZE: 33.04 Acres

LAND USE: Government

DATE APPLICATION FILED: October 6, 1999

AMENDED DATE: N/A

Permit No. 44020046.000
 Project Name: Manatee County - 44th Avenue East Improvements Project
 Page 2

I. Water Quantity/Quality

POND NO.	AREA ACRES AT TOP OF BANK	TREATMENT TYPE
A	1.00	Wet Detention
B	0.20	N/A
C	0.50	Wet Detention
D	2.30	Wet Detention
E	5.60	N/A
TOTAL	9.60	

Mixing Zone required: YES () NO (X)

Variance required: YES () NO (X)

II. 100-Year Floodplain

Encroachment (Acre-Feet of fill)	Compensation (Acre-Feet of excavation)	Compensation Type*	Encroachment Result**(feet)
		NE []	Depth [N/A]
1.34	1.39	EE [XX]	Depth [N/A]
		SM []	Depth [N/A]
		MI []	Depth [N/A]

*Codes [X] for the type or method of compensation provided are as follows:

NE = No Encroachment

EE = Equivalent Excavation to offset project filling per Section 4.4 of the District's Basis of Review;

SM = Storage Modeling hydrographs of pond and receiving stages indicate timing separation;

MI = Minimal Impact based on modeling of existing stages vs. post-project encroachment.

N/A = Not Applicable

**Depth of change in flood stage (level) over existing receiving water stage resulting from floodplain encroachment caused by a project that claims MI type of compensation.

III. Environmental Considerations

Comments: There are no wetlands located within the project area. A total of four other surface water ditches, referenced as OSW-1 (0.09 acre), OSW-2 (0.02 acre), OSW-3 (0.04 acre) and OSW-4 (0.08 acre), totaling 0.23 acre are located within the project area boundary limits and will be permanently impacted by filling for roadway widening. Wetland mitigation to offset the 0.23 acre other surface water permanent filling impacts will not be required pursuant to Subsection 3.2.2.2 of the BOR.

Permit No. 44020046.000
Project Name: Manatee County - 44th Avenue East Improvements Project
Page 3

Watershed name(s): Manatee River

A regulatory conservation easement is not required.

A proprietary conservation easement is not required.

SPECIFIC CONDITIONS

1. If the ownership of the project area covered by the subject permit is divided, with someone other than the Permittee becoming the owner of part of the project area, this permit shall terminate, pursuant to Section 40D-1.6105, F.A.C. In such situations, each land owner shall obtain a permit (which may be a modification of this permit) for the land owned by that person. This condition shall not apply to the division and sale of lots or units in residential subdivisions or condominiums.
2. The discharges from this system shall meet state water quality standards as set forth in Chapter 62-302 and Section 62-4.242, F.A.C., for class waters equivalent to the receiving waters.
3. Unless specified otherwise herein, two copies of all information and reports required by this permit shall be submitted to:

Sarasota Regulation Department
Southwest Florida Water Management District
6750 Fruitville Road
Sarasota, FL 34240-9711

The permit number, title of report or information and event (for recurring report or information submittal) shall be identified on all information and reports submitted.
4. The Permittee shall retain the design engineer, or other professional engineer registered in Florida, to conduct on-site observations of construction and assist with the as-built certification requirements of this project. The Permittee shall inform the District in writing of the name, address and phone number of the professional engineer so employed. This information shall be submitted prior to construction.
5. Within 30 days after completion of construction of the permitted activity, the Permittee shall submit to the Sarasota Service Office a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1, F.A.C., and signed, dated, and sealed as-built drawings. The as-built drawings shall identify any deviations from the approved construction drawings.
6. The District reserves the right, upon prior notice to the Permittee, to conduct on-site research to assess the pollutant removal efficiency of the surface water management system. The Permittee may be required to cooperate in this regard by allowing on-site access by District representatives, by allowing the installation and operation of testing and monitoring equipment, and by allowing other assistance measures as needed on site.
7. All construction is prohibited within the permitted project area until the Permittee acquires legal ownership or legal control of the project area as delineated in the permitted construction drawings.
8. The operation and maintenance entity shall submit inspection reports in the form required by the District, in accordance with the following schedule:

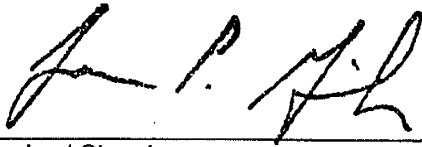
Permit No. 44020046.000
Project Name: Manatee County - 44th Avenue East Improvements Project
Page 4

For systems utilizing retention or wet detention, the inspections shall be performed two (2) years after operation is authorized and every two (2) years thereafter.

9. The removal of littoral shelf vegetation (including cattails) from wet detention ponds is prohibited unless otherwise approved by the District. Removal includes dredging, the application of herbicide, cutting, and the introduction of grass carp. Any questions regarding authorized activities within the wet detention ponds shall be addressed to the District's Regulation Manager, Sarasota Service Office.
10. Refer to GENERAL CONDITION No. 15 herein.

GENERAL CONDITIONS

1. The general conditions attached hereto as Exhibit "A" are hereby incorporated into this permit by reference and the Permittee shall comply with them.



Authorized Signature

EXHIBIT "A"

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
4. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the District as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.
5. District staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the District as a permit prior to the dewatering event as a permit modification. A water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.
6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
7. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operating schedules satisfactory to the District.
8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading, mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

18. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.
19. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
20. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
21. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40D-4.351, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
22. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with District rules, regulations and conditions of the permits.
23. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District and the Florida Department of State, Division of Historical Resources.
24. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
GENERAL CONSTRUCTION
PERMIT NO. 44020046.000

FILE OF RECORD
PERMIT NO. _____

EXPIRATION DATE: November 19, 2007

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GRANTED TO: Board of County Commissioners, Manatee County
Post Office Box 1000
Bradenton, FL 34206

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OP. & MAINT. ENTITY: Manatee County Transportation Department

PROPERTY LOCATION: Manatee County

SEC/TWP/RGE: 1,2,11,12/35S/17E

**TOTAL ACRES OWNED
OR UNDER CONTROL:** N/A

PROJECT SIZE: 33.04 Acres

LAND USE: Government

DATE APPLICATION FILED: October 6, 1999

AMENDED DATE: N/A

FILED ON 11/2/03 - BY [Signature]

Permit No. 44020046.000
 Project Name: Manatee County - 44th Avenue East Improvements Project
 Page 2

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TOTAL	9.60	

Mixing Zone required: YES () NO (X)

Variance required: YES () NO (X)

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Encroachment (Acre-Feet of fill)	Compensation (Acre-Feet of excavation)	Compensation Type*	Encroachment Result**(feet)
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1.34	1.39	EE [XX]	Depth [N/A]
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*Codes [X] for the type or method of compensation provided are as follows:

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Permit No. 44020046.000
Project Name: Manatee County - 44th Avenue East Improvements Project
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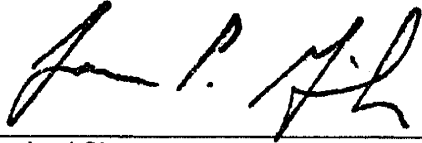
Permit No. 44020046.000
Project Name: Manatee County - 44th Avenue East Improvements Project
Page 4

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10. Refer to GENERAL CONDITION No. 15 herein.

GENERAL CONDITIONS

1. The general conditions attached hereto as Exhibit "A" are hereby incorporated into this permit by reference and the Permittee shall comply with them.



Authorized Signature

EXHIBIT "A"

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2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
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6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
7. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operating schedules satisfactory to the District.
8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading, mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

ERP General Conditions

Individual (Construction, Conceptual, Mitigation Banks), General, Minor Systems

18. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.
19. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
20. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
21. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40D-4.351, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
22. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with District rules, regulations and conditions of the permits.
23. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District and the Florida Department of State, Division of Historical Resources.
24. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

PERMIT NO. _____

SWFWMD ENGINEERING WORKSHEET

Page 1 of 2

PERMIT NO. _____

PERMIT NAME: _____

4420046000

44th Ave East Road IMP.

TOTALS

BASIN NO. - POND NO.		O or C	A	B	C	TOTALS
POND DATA	POND BOTTOM ELEVATION		116.5	38.0	26.0	
	SEASONAL HIGH WATER ELEVATION		22.5	37.0	36.0	
	CONTROL DEVICE ELEVATION		22.5	37.0	36.0	
	DESIGN LOW WATER ELEVATION		22.5	37.0	36.0	
	WEIR INVERT ELEVATION		22.5	37.0	36.0	
	DESIGN HIGH WATER ELEVATION		24.1	38.7	37.20	
	TOP OF BANK ELEVATION		25.5	39.7	38.20	
	AREA AT TOP OF BANK (Ac.)		1.00	0.20	0.50	
	VOLUME AT DHW (Ac.-Ft.)		1.40	0.10	0.50	
	VOLUME AT TOB (Ac.-Ft.)		2.70	0.30	0.90	
QUANTITY	25YR/24HR DISCHARGE RATES	WEIR WIDTH (FT)	1.0	0.25	0.25	
		PRE-DEVELOPED (CFS)	←	33.80	→	
		POST-DEVELOPED (CFS)	←	33.57	→	
	100YR/24HR RETENTION VOLUMES	PROVIDED (Ac.-Ft.)				
REQUIRED (Ac.-Ft.)						
QUALITY	TREATMENT AREA	OFW? Y OR N	8.55 N	SPE C	2.83 N	
	TREATMENT VOL. REQUIRED (Ac.-Ft.)		1.85		0.91	
	TREATMENT VOL. PROVIDED (Ac.-Ft.)		5.50		1.94	
	METHOD OF TREATMENT		WETDET	N/A	WETDET	
	CONTROL DEVICE TYPE		NOTED		NOTED	
	CONTROL DEVICE DIMENSIONS		1.0		0.25	
	RECOVERY TIME (Hrs.)		24hr/14041	—	24hr/14041	
100-YEAR FLOODPLAIN	ENCROACHMENT (Ac.-Ft.)					
	COMPENSATION (Ac.-Ft.)					
	COMPENSATION TYPE					
	ENCROACHMENT RESULT (feet)					

COMMENTS: _____

FILED ON 1/2/03

SWFWMD ENGINEERING WORKSHEET

Page 2 of 2PERMIT NO. 4420046.000PERMIT NAME: 44th AVE EAST ROAD IMP.

TOTALS

BASIN NO. - POND NO.		O or C	D	E				
P O N D D A T A	POND BOTTOM ELEVATION		21.0	23.0				
	SEASONAL HIGH WATER ELEVATION		29.00	31.0				
	CONTROL DEVICE ELEVATION		29.00	31.00				
	DESIGN LOW WATER ELEVATION		29.00	31.00				
	WEIR INVERT ELEVATION		29.00	31.00				
	DESIGN HIGH WATER ELEVATION		30.70	34.00				
	TOP OF BANK ELEVATION		31.50	35.00				
	AREA AT TOP OF BANK (Ac.)		2.30	5.60				9.60
	VOLUME AT DHW (Ac.-Ft.)		2.50	15.30				
VOLUME AT TOB (Ac.-Ft.)		5.40	20.80					
Q U A N T I T Y	25YR/24HR DISCHARGE RATES	WEIR WIDTH (FT)	10.0	1.50				
		PRE-DEVELOPED (CFS)	← 88.70	→				
		POST-DEVELOPED (CFS)	← 43.47	→				
	100YR/24HR RETENTION VOLUMES	PROVIDED (Ac.-Ft.)						
		REQUIRED (Ac.-Ft.)						
Q U A L I T Y	TREATMENT AREA		OFW? Y OR N	10.68 W				
	TREATMENT VOL. REQUIRED (Ac.-Ft.)		3.37					
	TREATMENT VOL. PROVIDED (Ac.-Ft.)		14.38					
	METHOD OF TREATMENT		WET DET	N/A				
	CONTROL DEVICE TYPE		WOTH					
	CONTROL DEVICE DIMENSIONS		2-7 FT					
	RECOVERY TIME (Hrs.)		1 DAY/2 Hrs					
100-YEAR FLOODPLAIN	ENCROACHMENT (Ac.-Ft.)		1.34					
	COMPENSATION (Ac.-Ft.)		1.39					
	COMPENSATION TYPE		EE					
	ENCROACHMENT RESULT (feet)		0					

COMMENTS:

FILE OF RECORD
PERMIT NO. _____

Table 1. Wetlands Report

PROJECT NAME: Manatee County - 44 th Avenue East Improvements Project	
PERMIT NUMBER	44020046.000
COUNTY	Manatee
PROPOSED LAND USE	Government
TOTAL PROJECT ACREAGE	33.04 Acres
TOTAL WETLAND ACREAGE	0.00
WETLAND ACREAGE NOT IMPACTED	0.00
WETLAND ACREAGE TEMPORARILY DISTURBED	0.00
WETLAND ACREAGE PERMANENTLY DESTROYED	0.00
WETLAND ACREAGE CREATED/RESTORED	0.00
WETLAND ACREAGE NET CHANGE	+0.00
WETLAND ACREAGE ENHANCED	0.00
OTHER MITIGATION ACREAGE	0.00

FILED ON 1/2/03 BY 

FILE OF RECORD
PERMIT NO. _____

**PROFESSIONAL CERTIFICATION
FOR THE ENGINEERING EVALUATION REPORT**

MSSW/ERP Permit Number: 44020046.000
Date Application Received: October 6, 1999
Permittee's Name: Board of County Commissioners, Manatee County
c/o Director, Transportation Department
Address: 4410 66th Street West
Bradenton, FL 34210
Project Name: Manatee County - 44th Avenue East Improvements Project
Project Description: Government
Project Size: 33.04 Acres
Activity: Construction
Section(s)/Township/Range: 1,2,11,12/35S/17E

I HEREBY CERTIFY that the engineering features described in the referenced application to construct and/or operate a surface water management system associated with the indicated project have been evaluated regarding provision of reasonable assurance of compliance with Part IV, Chapter 373, Florida Statutes, and Chapters 40D-4, 40D-40 or 40D-400, Florida Administrative Code (F.A.C.), as applicable. I have not evaluated and do not make any certifications as to other aspects of the proposal.

_____(Seal)
Daryl R. Flatt, P.E.
FL P.E. #37646
November 19, 2002
Sarasota Regulation Department
Southwest Florida Water Management District

* When required by Section 61G15-26.001(1), F.A.C., a professional engineer's seal, signature and date (i.e., "Professional Certification") means that the work indicated has been conducted under the responsible supervision, direction or control of a person licensed by the State to practice engineering, who by authority of their license is required to have some specialized knowledge of engineering. Professional Certification is not a guaranty or warranty of fitness or suitability, either explicit or implied.

FILED ON 1/2/03 BY [Signature]

EMINENT DOMAIN CHARTER

PERMIT ROUTING SHEET

FOR ALL SW PERMITS/WUP LETTER MODS/O&M

Please mark through lines you do not need. Thank you.

FILE OF RECORD
PERMIT NO. _____

PERMIT NO./CT NO. & TYPE: <u>14020046-000</u>		PROJECT NAME: <u>MANATHE CO. - 4th AVE</u>		
COMPLETE DATE: <u>9/12/02</u>	INTENDED ISSUE DATE: <u>11/14/02</u>	DEFAULT DATE: <u>12/10/02</u>		
TO:	REASON:	INITIALS	DATE	TIME
ENG/HYDRO/TECH REVIEWER	REVIEW & SIGN OFF	<u>CHW</u>	<u>11/12/02</u>	<u>11:00</u>
ENV REVIEWER	REVIEW & SIGN OFF	<u>RJH</u>	<u>11/12/02</u>	<u>13:05</u>
DARYL/CHERYL/SCOTT L.	REVIEW/REVISE/SIGN OFF	<u>RJH</u>	<u>11/14/02</u>	<u>11:30</u>
HUGH	REVIEW/REVISE/SIGN OFF	<u>HDS</u>	<u>11/13/02</u>	<u>08:05</u>
ADMIN	TYPE	<u>M9</u>	<u>11/15</u>	<u>3:45</u>
ADMIN <u>Alison Jumper</u>	PROOF #1	<u>CHW</u>	<u>11/15/02</u>	<u>3:45</u>
ENG/HYDRO/TECH REVIEWER	PROOF	<u>CHW</u>	<u>11/18/02</u>	<u>3:15</u>
ENV REVIEWER	PROOF	<u>RJH</u>	<u>11/19/02</u>	<u>08:21</u>
IF FOR BOARD - DARYL	PROOF AGAIN			
IF FOR BOARD - HUGH	PROOF AGAIN			
IF FOR BOARD - JIM	SIGN OFF/REVISE			
ADMIN	REVISIONS IF NEEDED	<u>M9</u>	<u>11/19</u>	<u>11:00</u>
IF PE CERT & E.I.: DARYL	SIGN & SEAL			
IF FOR BOARD - TO ADMIN	PROCESS & SKIP THE REST			
BONNIE	GET SIGNED/STAMP	<u>BIC</u>	<u>11/19</u>	<u>2:10</u>
MARY	PROCESS	<u>M9</u>	<u>11/19/02</u>	<u>2:30</u>
MAIL ROOM	DISTRIBUTION	<u>GR</u>	<u>11-19-02</u>	<u>2:50</u>
IF IN YELLOW FOLDER: Admin must prioritize, and goes by default date first. If your permit is in a yellow folder but does not default in the next few days, please give reason why:				
COMMENTS/SPECIAL INSTRUCTIONS: EMINENT DOMAIN CHARTER TO BE MAILED				
IF FOR BOARD: DATE DUE TO JIM:		P&R DUE DATE:		
IF O&M: W/Q CODE:	DATE RECEIVED IN HOUSE:	INSPECTION DATE(S):		
INSPECTION INTERVAL:				
Construction Code: <u>3</u>	Coastal Zone Noticing Due Date:			

FILED ON 11/2/03 CHW



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On the Internet at WaterMatters.org

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170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

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Chair, Pinellas

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Hernando

David L. Moore
Executive Director

William S. Bilenky
General Counsel

ATTACHMENT 'G'

December 17, 2009

H. Wayne Roberts, P.E.
Manatee County Board of County
Commissioners
Manatee County Public Works Department
1022 26th Avenue East
Bradenton, FL 34208

Subject: **Final Agency Action Transmittal Letter**
ERP General Construction
Permit No.: 44020046.004
Project Name: Manatee County - 44th Avenue East Improvements
County: Manatee
Sec/Twp/Rge: 01, 12/35S/17E; 06, 07/35S/18E

Dear Mr. Roberts:

This letter constitutes notice of Final Agency Action for **approval** of the permit referenced above. Final approval is contingent upon no objection to the District's action being received by the District within the time frames described below.

You or any person whose substantial interests are affected by the District's action regarding a permit may request an administrative hearing in accordance with Sections 120.569 and 120.57, Florida Statutes, (F.S.), and Chapter 28-106, Florida Administrative Code, (F.A.C.), of the Uniform Rules of Procedure. *A request for hearing must: (1) explain how the substantial interests of each person requesting the hearing will be affected by the District's action, or proposed action, (2) state all material facts disputed by the person requesting the hearing or state that there are no disputed facts, and (3) otherwise comply with Chapter 28-106, F.A.C.* Copies of Sections 28-106.201 and 28-106.301, F.A.C. are enclosed for your reference. A request for hearing must be filed with (received by) the Agency Clerk of the District at the District's Brooksville address within 21 days of receipt of this notice. Receipt is deemed to be the fifth day after the date on which this notice is deposited in the United States mail. Failure to file a request for hearing within this time period shall constitute a waiver of any right you or such person may have to request a hearing under Sections 120.569 and 120.57, F.S. Mediation pursuant to Section 120.573, F.S., to settle an administrative dispute regarding the District's action in this matter is not available prior to the filing of a request for hearing.

Enclosed is a "Noticing Packet" that provides information regarding the District Rule 40D-1.1010, F.A.C., which addresses the notification of persons whose substantial interests may be affected by the District's action in this matter. The packet contains guidelines on how to provide notice of the District's action, and a notice that you may use.

The enclosed approved construction plans are part of the permit, and construction must be in accordance with these plans.

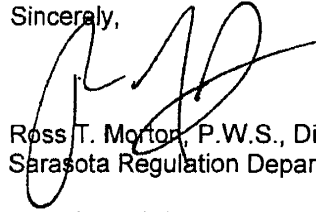
RECEIVED
DEC 23 2009
PUBLIC WORKS
ENGINEERING DIVISION



December 17, 2009

If you have questions concerning the permit, please contact Steven J. Lopes, P.E., at the Sarasota Service Office, extension 6506. For assistance with environmental concerns, please contact David W. Jenkins, extension 6545.

Sincerely,



Ross T. Morton, P.W.S., Director
Sarasota Regulation Department

RTM:SXL:DWJ:dgp

Enclosures: Approved Permit w/Conditions Attached
 Approved Construction Drawings
 Statement of Completion
 Notice of Authorization to Commence Construction
 Noticing Packet (42.00-039)
 Sections 28-106.201 and 28-106.301, F.A.C.

cc/enc: File of Record 44020046.004

H. Wayne Roberts, P.E., Manatee County Board of County Commissioners
Ron Schulhofer, Manatee County Public Works
Terri L. Behling, Southwest Florida Water Management District

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
GENERAL CONSTRUCTION
PERMIT NO. 44020046.004

Expiration Date: December 17, 2014

PERMIT ISSUE DATE: December 17, 2009

This permit is issued under the provisions of Chapter 373, Florida Statutes, (F.S.), and the Rules contained in Chapters 40D-4 and 40, Florida Administrative Code, (F.A.C.). The permit authorizes the Permittee to proceed with the construction of a surface water management system in accordance with the information outlined herein and shown by the application, approved drawings, plans, specifications, and other documents, attached hereto and kept on file at the Southwest Florida Water Management District (District). Unless otherwise stated by permit specific condition, permit issuance constitutes certification of compliance with state water quality standards under Section 401 of the Clean Water Act, 33 U.S.C. 1341. All construction, operation and maintenance of the surface water management system authorized by this permit shall occur in compliance with Florida Statutes and Administrative Code and the conditions of this permit.

PROJECT NAME: Manatee County - 44th Avenue East Improvements

GRANTED TO: Manatee County Board of County Commissioners
Manatee County Public Works Department, 1022 26th Avenue East
Bradenton, FL 34208

ABSTRACT: This permit authorizes the construction of a surface water management system designed to serve a 1.36-mile public road improvement project located in Manatee County. The surface water management system has been designed to provide water quality treatment and peak attenuation storage for the development. The method of water quality treatment is wet detention and on-line treatment system.

OP. & MAINT. ENTITY: Manatee County Public Works Department

COUNTY: Manatee

SEC/TWP/RGE: 01, 12/35S/17E; 06, 07/35S/18E

**TOTAL ACRES OWNED
OR UNDER CONTROL:** 35.7

PROJECT SIZE: 30.4 Acres

LAND USE: Road Project

DATE APPLICATION FILED: February 6, 2009

AMENDED DATE: N/A

I. Water Quantity/Quality

POND NO.	AREA ACRES @ TOP OF BANK	TREATMENT TYPE
A	0.40	Wet Detention
B	3.94	Wet Detention
Dry Pond	1.07	On-line Treatment System
TOTAL	5.41	

Comments: The proposed public road improvement project consists of widening 44th Avenue East from two-lanes to three-lanes, extending approximately 1.36 miles from 1st Street to 19th Street Court East.

A portion of the project area is located within the watershed of Bowlees Creek, which is verified as impaired (for nutrients and fecal coliforms) under 62-303, F.A.C. On-line treatment system 'Dry Pond' has been included in a "treatment train", to provide treatment of contributory runoff prior to discharging to wet detention Pond A, in order to meet Basis of Review 3.2.4.5 and 3.3.1.4 net improvement criteria.

As shown on the construction drawings this permit (ERP No. 44020046.004) approves modifications to the previously permitted surface water management system for ERP No. 44020046.001 entitled Manatee County – 44th Avenue East and issued May 14, 2004.

A mixing zone is not required.

A variance is not required.

II. 100-Year Floodplain

Encroachment (Acre-Feet of fill)	Compensation (Acre-Feet of excavation)	Compensation Type	Encroachment Result (feet)
1.37	3.25	EE	N/A

EE = Equivalent Excavation to offset project filling per Section 4.4 of the District's Basis of Review
N/A = Not Applicable

Comments: According to FEMA floodplain determinations portions of the project lie within Flood Zone A. A 100-year floodplain elevation 30.10' was used based on a floodplain study dated June 2002 entitled Manatee County - Bowlees Creek Stormwater Master Plan.

III. Environmental Considerations

Wetland/Surface Water Information

Count of Wetlands: 3

Wetland Name	Total Acres	Not Impacted Acres	Permanent Impacts		Temporary Impacts	
			Acres	Functional Loss*	Acres	Functional Loss*
OSW 1	0.59	0.00	0.59	0.00	0.00	0.00
OSW 2	0.36	0.00	0.36	0.00	0.00	0.00
Wetland 1	0.05	0.00	0.00	0.00	0.05	0.00
Total:	1.00	0.00	0.95	0.00	0.05	0.00

* For impacts that do not require mitigation, their functional loss is not included.

Wetland Comments: The project area contains two upland cut ditches totaling 0.95 acres and one wetland totaling 0.05 acre. This permit authorizes 0.95 acre of permanent filling impacts to the upland cut ditches, and 0.05 acre of temporary impact to wetlands due to roadway construction.

Mitigation Comments: Wetland mitigation is not required for impacts to upland-cut ditches pursuant to Subsection 3.2.2.2 of the Basis of Review. Under this Subsection, wetland mitigation is not required for impacts to upland-cut ditches that do not provide significant habitat for threatened or endangered species and were not constructed to divert natural stream flow.

SPECIFIC CONDITIONS

1. If the ownership of the project area covered by the subject permit is divided, with someone other than the Permittee becoming the owner of part of the project area, this permit shall terminate, pursuant to Section 40D-1.6105, F.A.C. In such situations, each land owner shall obtain a permit (which may be a modification of this permit) for the land owned by that person. This condition shall not apply to the division and sale of lots or units in residential subdivisions or condominiums.

2. Unless specified otherwise herein, two copies of all information and reports required by this permit shall be submitted to:

Sarasota Regulation Department
Southwest Florida Water Management District
6750 Fruitville Road
Sarasota, FL 34240-9711

The permit number, title of report or information and event (for recurring report or information submittal) shall be identified on all information and reports submitted.

3. The Permittee shall retain the design engineer, or other professional engineer registered in Florida, to conduct on-site observations of construction and assist with the as-built certification requirements of this project. The Permittee shall inform the District in writing of the name, address and phone number of the professional engineer so employed. This information shall be submitted prior to construction.
4. ① Within 30 days after completion of construction of the permitted activity, the Permittee shall submit to the Sarasota Service Office a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1.659, F.A.C., and signed, dated and sealed as-built drawings. The as-built drawings shall identify any deviations from the approved construction drawings.
5. The District reserves the right, upon prior notice to the Permittee, to conduct on-site research to assess the pollutant removal efficiency of the surface water management system. The Permittee may be required to cooperate in this regard by allowing on-site access by District representatives, by allowing the installation and operation of testing and monitoring equipment, and by allowing other assistance measures as needed on site.
6. All construction is prohibited within the permitted project area until the Permittee acquires legal ownership or legal control of the project area as delineated in the permitted construction drawings.
7. The operation and maintenance entity shall submit inspection reports in the form required by the District, in accordance with the following schedule.

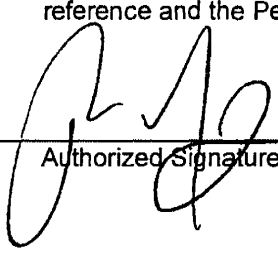
②

For systems utilizing retention or wet detention, the inspections shall be performed two (2) years after operation is authorized and every two (2) years thereafter.
8. The removal of littoral shelf vegetation (including cattails) from wet detention ponds is prohibited unless otherwise approved by the District. Removal includes dredging, the application of herbicide, cutting, and the introduction of grass carp. Any questions regarding authorized activities within the wet detention ponds shall be addressed to the District's Surface Water Regulation Manager, Sarasota Service Office.

9. For dry bottom detention systems, the detention areas shall become dry within 72 hours after a rainfall event. If a detention area is regularly wet, this situation shall be deemed to be a violation of this permit.
10. Certification of compliance with state water quality standards under Section 401 of the Clean Water Act, 33 U.S.C. 1341 is waived.
11. The District, upon prior notice to the Permittee, may conduct on-site inspections to assess the effectiveness of the erosion control barriers and other measures employed to prevent violations of state water quality standards and avoid downstream impacts. Such barriers or other measures should control discharges, erosion, and sediment transport during construction and thereafter. The District will also determine any potential environmental problems that may develop as a result of leaving or removing the barriers and other measures during construction or after construction of the project has been completed. The Permittee must provide any remedial measures that are needed.
12. This permit is issued based upon the design prepared by the Permittee's consultant. If at any time it is determined by the District that the Conditions for Issuance of Permits in Rules 40D-4.301 and 40D-4.302, F.A.C., have not been met, upon written notice by the District, the Permittee shall obtain a permit modification and perform any construction necessary thereunder to correct any deficiencies in the system design or construction to meet District rule criteria. The Permittee is advised that the correction of deficiencies may require re-construction of the surface water management system and/or mitigation areas.
13. Prior to commencing any dewatering activities, a plan shall be submitted and approved by the District in writing. The Permittee's Contractor shall submit two (2) sets of dewatering plans, with supporting calculations, signed and sealed by a Florida Professional Engineer. The plans shall include, at a minimum, sediment sump locations and sizes, pump sizes and locations, discharge point(s) locations and the expected duration of dewatering.

GENERAL CONDITIONS

1. The general conditions attached hereto as Exhibit "A" are hereby incorporated into this permit by reference and the Permittee shall comply with them.



Authorized Signature

EXHIBIT "A"

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. For general permits authorizing incidental site activities, the following limiting general conditions shall also apply:
 - a. If the decision to issue the associated individual permit is not final within 90 days of issuance of the incidental site activities permit, the site must be restored by the permittee within 90 days after notification by the District. Restoration must be completed by re-contouring the disturbed site to previous grades and slopes re-establishing and maintaining suitable vegetation and erosion control to provide stabilized hydraulic conditions. The period for completing restoration may be extended if requested by the permittee and determined by the District to be warranted due to adverse weather conditions or other good cause. In addition, the permittee shall institute stabilization measures for erosion and sediment control as soon as practicable, but in no case more than 7 days after notification by the District.
 - b. The incidental site activities are commenced at the permittee's own risk. The Governing Board will not consider the monetary costs associated with the incidental site activities or any potential restoration costs in making its decision to approve or deny the individual environmental resource permit application. Issuance of this permit shall not in any way be construed as commitment to issue the associated individual environmental resource permit.
4. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
5. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the District as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.

15. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area(s), may constitute grounds for revocation or enforcement action by the District, unless a modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.
16. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the District determines the system to be in compliance with the permitted plans, and the entity approved by the District accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the District until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the District, if different from the permittee. Until a transfer is approved by the District, the permittee shall be liable for compliance with the terms of the permit.
17. Should any other regulatory agency require changes to the permitted system, the District shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.
18. This permit does not eliminate the necessity to obtain any required federal, state, local and special District authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.
19. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.
20. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
21. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
22. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40D-4.351, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
23. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with District rules, regulations and conditions of the permits.
24. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District and the Florida Department of State, Division of Historical Resources.
25. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

ERP General Conditions
Individual (Construction, Conceptual, Mitigation Banks), General,
Incidental Site Activities, Minor Systems

PART II HEARINGS INVOLVING DISPUTED ISSUES OF MATERIAL FACT

28-106.201 Initiation of Proceedings.

(1) Unless otherwise provided by statute, initiation of proceedings shall be made by written petition to the agency responsible for rendering final agency action. The term "petition" includes any document that requests an evidentiary proceeding and asserts the existence of a disputed issue of material fact. Each petition shall be legible and on 8 ½ by 11 inch white paper. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced.

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

(3) Upon receipt of a petition involving disputed issues of material fact, the agency shall grant or deny the petition, and if granted shall, unless otherwise provided by law, refer the matter to the Division of Administrative Hearings with a request that an administrative law judge be assigned to conduct the hearing. The request shall be accompanied by a copy of the petition and a copy of the notice of agency action.

(4) A petition shall be dismissed if it is not in substantial compliance with subsection (2) of this rule or it has been untimely filed. Dismissal of a petition shall, at least once, be without prejudice to petitioner's filing a timely amended petition curing the defect, unless it conclusively appears from the face of the petition that the defect cannot be cured.

(5) The agency shall promptly give written notice to all parties of the action taken on the petition, shall state with particularity its reasons if the petition is not granted, and shall state the deadline for filing an amended petition if applicable.

Specific Authority 120.54(3), (5) F.S. Law Implemented 120.54(5), 120.569, 120.57 F.S. History—New 4-1-97, Amended 9-17-98.

PART III PROCEEDINGS AND HEARINGS NOT INVOLVING DISPUTED ISSUES OF MATERIAL FACT

28-106.301 Initiation of Proceedings

(1) Initiation of a proceeding shall be made by written petition to the agency responsible for rendering final agency action. The term "petition" includes any document which requests a proceeding. Each petition shall be legible and on 8 ½ by 11 inch white paper or on a form provided by the agency. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced.

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;

(e) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and

(f) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

(3) If the petition does not set forth disputed issues of material fact, the agency shall refer the matter to the presiding officer designated by the agency with a request that the matter be scheduled for a proceeding not involving disputed issues of material fact. The request shall be accompanied by a copy of the petition and a copy of the notice of agency action.

(4) A petition shall be dismissed if it is not in substantial compliance with subsection (2) of this Rule or it has been untimely filed. Dismissal of a petition shall, at least once, be without prejudice to petitioner's filing a timely amended petition curing the defect, unless it conclusively appears from the face of the petition that the defect cannot be cured.

(5) The agency shall promptly give written notice to all parties of the action taken on the petition, shall state with particularity its reasons if the petition is not granted, and shall state the deadline for filing an amended petition if applicable.

Specific Authority 120.54(5) F.S. Law Implemented 120.54(5), 120.569, 120.57 F.S. History—New 4-1-97, Amended 9-17-98.



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Southwest Florida Water Management District

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(863) 534-1448 or
1-800-492-7862 (FL only)

Lecanto Service Office
Suite 226
3600 West Sovereign Path
Lecanto, Florida 34461-8070
(352) 527-8131

2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
TDD only 1-800-231-6103 (FL only)
On the Internet at: WaterMatters.org

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Service Office
7801 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

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Chair, Polk

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Hernando

David L. Moore
Executive Director

William S. Bilonky
General Counsel

June 10, 2009

ATTACHMENT 'H'

H. Wayne Roberts, P.E.
Board of County Commissioners, Manatee County
Manatee County Public Works
1022 26th Avenue East
Bradenton, FL 34208-3926

**Subject: Notice of Final Agency Action - Approval
Modification of Permit by Short Form**
Project Name: Manatee County - 44th Avenue East
Permit No.: 44020046.005
County: Manatee
Sec/Twp/Rge: 07/35S/18E
Letter Received: March 4, 2009
Expiration Date: May 14, 2014

References: Chapters 40D-4 and 40, Florida Administrative Code (F.A.C.)
Sections 373.4141 and 120.60, Florida Statutes (F.S.)

Dear Mr. Roberts:

Your request to modify Permit No. 44020046.001 by Short Form has been approved. This modification authorizes:

1. An extension to the permit duration. The new expiration date is May 14, 2014.
2. All other terms and conditions of Permit No. 44020046.001, dated May 14, 2004, and entitled Manatee County-44th Avenue East, apply.

Plans and information you submitted to support your request to modify this permit will be kept on file.

Final approval is contingent upon no objection to the District's action being received by the District within the time frames described below.

You or any person whose substantial interests are affected by the District's action regarding a permit may request an administrative hearing in accordance with Sections 120.569 and 120.57, Florida Statutes, (F.S.), and Chapter 28-106, Florida Administrative Code, (F.A.C.), of the Uniform Rules of Procedure. A request for hearing must: (1) explain how the substantial interests of each person requesting the hearing will be affected by the District's action, or proposed action, (2) state all material facts disputed by the person requesting the hearing or state that there are no disputed facts, and (3) otherwise comply with Chapter 28-106, F.A.C. Copies of Sections 28-106.201 and 28-106.301, F.A.C. are enclosed for your reference. A request for hearing must be filed with (received by) the Agency Clerk of the District at the District's Brooksville address within 21 days of receipt of this notice. Receipt is deemed to be the fifth day after the date on which this notice is deposited in the United States mail.

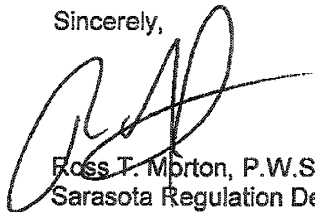
RECEIVED
JUN 11 2009
PUBLIC WORKS
ENGINEERING DIVISION

Failure to file a request for hearing within this time period shall constitute a waiver of any right you or such person may have to request a hearing under Sections 120.569 and 120.57, F.S. Mediation pursuant to Section 120.573, F.S., to settle an administrative dispute regarding the District's action in this matter is not available prior to the filing of a request for hearing.

Enclosed is a "Noticing Packet" that provides information regarding the District Rule 40D-1.1010, F.A.C., which addresses the notification of persons whose substantial interests may be affected by the District's action in this matter. The packet contains guidelines on how to provide notice of the District's action, and a notice that you may use.

If you have questions regarding this Short Form modification, please contact Steven J. Lopes, P.E., at the Sarasota Service Office, extension 6506.

Sincerely,



Ross T. Morton, P.W.S., Director
Sarasota Regulation Department

RTM:SXL:mt

Enclosure: Noticing Packet (42.00-039)
Sections 28-106.201 and 28-106.301, F.A.C.

cc: File of Record 44020046.005
Ron Schulhofer, Manatee County Public Works
H. Wayne Roberts, Manatee County Public Works Department

SOUTHWEST FLORIDA
WATER MANAGEMENT DISTRICT
**NOTICE OF
AUTHORIZATION**
TO COMMENCE CONSTRUCTION

Manatee County - 44th Avenue East

PROJECT NAME

Government

PROJECT TYPE

Manatee

COUNTY

07/35S/18E

SEC(s)/TWP(s)/RGE(s)

Manatee County Board of County Commissioners

PERMITTEE

APPLICATION NO.: 44020046.005

DATE ISSUED: June 10, 2009



A handwritten signature in black ink, consisting of stylized, overlapping loops and strokes, positioned above a horizontal line.

Issuing Authority

**THIS NOTICE SHOULD BE CONSPICUOUSLY
DISPLAYED AT THE SITE OF THE WORK**



An Equal
Opportunity
Employer

Southwest Florida Water Management District

Bartow Service Office
170 Century Boulevard
Bartow, Florida 33830-7700
(883) 534-1448 or
1-800-492-7862 (FL only)
SUNCOM 572-6200

Lecanto Service Office
Suite 226
3600 West Sovereign Path
Lecanto, Florida 34461-8070
(352) 527-8131

2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
SUNCOM 628-4150 TDD only 1-800-231-6103 (FL only)
On the Internet at: WaterMatters.org

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)
SUNCOM 531-6900

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)
SUNCOM 578-2070

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Hillsborough

H. Paul Senft, Jr.
Polk

Patsy C. Symons
DeSoto

David L. Moore
Executive Director

William S. Bilenky
General Counsel

NOTICING PACKET PUBLICATION INFORMATION

PLEASE SEE THE REVERSE SIDE OF THIS NOTICE FOR A LIST OF FREQUENTLY ASKED QUESTIONS (FAQ)

The District's action regarding the issuance or denial of a permit, a petition or qualification for an exemption only becomes closed to future legal challenges from members of the public ("third parties"), if 1.) "third parties" have been properly notified of the District's action regarding the permit or exemption, and 2.) no "third party" objects to the District's action within a specific period of time following the notification.

Notification of "third parties" is provided through publication of certain information in a newspaper of general circulation in the county or counties where the proposed activities are to occur. Publication of notice informs "third parties" of their right to challenge the District's action. If proper notice is provided by publication, "third parties" have a 21-day time limit in which to file a petition opposing the District's action. A shorter 14-day time limit applies to District action regarding Environmental Resource Permits linked with an authorization to use Sovereign Submerged Lands. However, if no notice to "third parties" is published, there is no time limit to a party's right to challenge the District's action. The District has not published a notice to "third parties" that it has taken or intends to take final action on your application. If you want to ensure that the period of time in which a petition opposing the District's action regarding your application is limited to the time frames stated above, you may publish, at your own expense, a notice in a newspaper of general circulation. A copy of the Notice of Agency Action the District uses for publication and guidelines for publishing are included in this packet.

Guidelines for Publishing a Notice of Agency Action

1. Prepare a notice for publication in the newspaper. The District's Notice of Agency Action, included with this packet, contains all of the information that is required for proper noticing. However, you are responsible for ensuring that the form and the content of your notice comply with the applicable statutory provisions.
2. Your notice must be published in accordance with Chapter 50, Florida Statutes. A copy of the statute is enclosed.
3. Select a newspaper that is appropriate considering the location of the activities proposed in your application, and contact the newspaper for further information regarding their procedures for publishing.
4. You only need to publish the notice for one day.
5. Obtain an "affidavit of publication" from the newspaper after your notice is published.
6. Immediately upon receipt send the **ORIGINAL** affidavit to the District at the address below, for the file of record. **Retain a copy of the affidavit for your records.**

Southwest Florida Water Management District
Records and Data Supervisor
2379 Broad Street
Brooksville, Florida 34604-6899

Note: If you are advertising a notice of the District's proposed action, and the District's final action is different, publication of an additional notice may be necessary to prevent future legal challenges. If you need additional assistance, please contact us at ext. 4360, at the Brooksville number listed above. (Your question may be on the FAQ list).

FAQ ABOUT NOTICING

1. **Q.** Do I have to do this noticing, and what is this notice for?
A. You do not have to do this noticing. You need to publish a notice if you want to ensure that a "third party" cannot challenge the District's action on your permit, exemption, or petition at some future date. If you choose not to publish, there is no time limit to a third party's right to challenge the District's action.
2. **Q.** What do I need to send to the newspaper?
A. The enclosed one page notice form entitled "Notice of Final Agency Action (or Proposed Agency Action) By The Southwest Florida Water Management District." You must fill in the blanks before sending it.
3. **Q.** Do I have to use the notice form, or can I make up my own form?
A. You do not have to use our form. However, your notice must contain all information that is in the form.
4. **Q.** Do I send the newspaper the whole form (one page) or just the top portion that has blanks?
A. Send the full page form which includes the **NOTICE OF RIGHTS** section on the bottom half.
5. **Q.** Do I type or print the information in the blanks? Or will the newspaper fill in the blanks?
A. You are required to fill in the blanks on the form before sending it to the newspaper. Contact your selected newspaper for instructions on printing or typing the information in the blanks.
6. **Q.** The section 50.051, F.S. (enclosed) proof of publication form of uniform affidavit has blanks in the text. Do I fill in these blanks and send that to the newspaper?
A. No. That section shows the affidavit the newspaper will send you. They will fill in the blanks.
7. **Q.** If someone objects, is my permit or exemption no good?
A. If you publish a notice and a "third party" files a request for administrative hearing within the allotted time, the matter is referred to an administrative hearing. While the case is pending, generally, you may not proceed with activities under the challenged agency action. When the hearing is complete, the administrative law judge's (ALJ) recommendation is returned to the District Governing Board, and the Governing Board will take final action on the ALJ's recommendation. There is no time limit for a "third party" to object and file a request for administrative hearing if you do not publish a notice.
8. **Q.** I don't understand what I should put in the blanks on the Notice form?
A.
 1. **County, Section/Township/Range, application No., permit No., proposed permit No., petition No., Exemption No., or permit inquiry No.** is on your Permit, Petition, Exemption, or Denial document.
 2. **Permit Type or Application Type** is Environmental Resource Permit, Water Use Permit, Work of the District, etc.
 3. **# of Acres** is the project acres. This is listed on the Environmental Resource Permit documents. For Water Use Permits, Exemptions, etc., you may put "Not Applicable" if unknown.
 4. **Rule or Statute reference** (Exemptions only). The rule and/or statute reference is at the top of page one in the reference line of the Exemption. For all others, put "Not Applicable" in this blank.
 5. **Type of Project** describes your project activity. Environmental Resource Permit = Agriculture, Commercial, Government, Industrial, Mining, Road Projects, Residential, Semi-Public or Water Quality Treatment. Water Use Permit = Agricultural (if irrigating, state that it is irrigation and specify what is being irrigated), Industrial Commercial, Recreation Aesthetic, Mining Dewatering, or Public Supply. Work of the District = pipeline, etc.
 6. **Project Name** is the name of your project, if applicable. If there is no project name, put "Not Applicable" in this blank.

**NOTICE OF FINAL AGENCY ACTION BY
THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT**

Notice is given that the District's Final Agency Action is approval of the _____
(Permit Type)

on _____ acres to serve _____ known as _____
(Total Acres) (Type of Project) (Project Name)

The project is located in _____ County, Section(s) _____
(County Name) (Section)

Township _____ South, Range _____ East. The permit applicant
(Township) (Range)

is _____ whose address is _____
(Name) (Address)

The permit No. is _____
(Permit #)

The file(s) pertaining to the project referred to above is available for inspection Monday through Friday except for legal holidays, 8:00 a.m. to 5:00 p.m., at the Southwest Florida Water Management District (District) _____
(Address of District Office Issuing Permit)

NOTICE OF RIGHTS

Any person whose substantial interests are affected by the District's action regarding this permit may request an administrative hearing in accordance with Sections 120.569 and 120.57, Florida Statutes (F.S.), and Chapter 28-106, Florida Administrative Code (F.A.C.), of the Uniform Rules of Procedure. *A request for hearing must (1) explain how the substantial interests of each person requesting the hearing will be affected by the District's action, or final action; (2) state all material facts disputed by each person requesting the hearing or state that there are no disputed facts; and (3) otherwise comply with Chapter 28-106, F.A.C.* A request for hearing must be filed with and received by the Agency Clerk of the District at the District's Brooksville address, 2379 Broad Street, Brooksville, FL 34604-6899 within 21 days of publication of this notice (or within 14 days for an Environmental Resource Permit with Proprietary Authorization for the use of Sovereign Submerged Lands). Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Sections 120.569 and 120.57, F.S.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the District's final action may be different from the position taken by it in this notice of final agency action. Persons whose substantial interests will be affected by any such final decision of the District on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation pursuant to Section 120.573, F.S., to settle an administrative dispute regarding the District's final action in this matter is not available prior to the filing of a request for hearing.

CHAPTER 50, FLORIDA STATUTES

LEGAL AND OFFICIAL ADVERTISEMENTS

<u>50.011</u>	Where and in what language legal notices to be published.
<u>50.021</u>	Publication when no newspaper in county.
<u>50.031</u>	Newspapers in which legal notices and process may be published.
<u>50.041</u>	Proof of publication; uniform affidavits required.
<u>50.051</u>	Proof of publication; form of uniform affidavit.
<u>50.061</u>	Amounts chargeable.
<u>50.071</u>	Publication costs; court docket fund.

50.011 Where and in what language legal notices to be published.*

Whenever by statute an official or legal advertisement or a publication, or notice in a newspaper has been or is directed or permitted in the nature of or in lieu of process, or for constructive service, or in initiating, assuming, reviewing, exercising or enforcing jurisdiction or power, or for any purpose, including all legal notices and advertisements of sheriffs and tax collectors, the contemporaneous and continuous intent and meaning of such legislation all and singular, existing or repealed, is and has been and is hereby declared to be and to have been, and the rule of interpretation is and has been, a publication in a newspaper printed and published periodically once a week or oftener, containing at least 25 percent of its words in the English language, entered or qualified to be admitted and entered as ¹second-class matter at a post office in the county where published, for sale to the public generally, available to the public generally for the publication of official or other notices and customarily containing information of a public character or of interest or of value to the residents or owners of property in the county where published, or of interest or of value to the general public.

History.—s. 2, ch. 3022, 1877; RS 1296; GS 1727; s. 1, ch. 5610, 1907; RGS 2942; s. 1, ch. 12104, 1927; CGL 4666, 4901; s. 1, ch. 63-387; s. 6, ch. 67-254.

¹Note.—Redesignated as "Periodicals" by the United States Postal Service, see 61 F.R. 10123-10124, March 12, 1996.

Note.—Former s. 49.01.

50.021 Publication when no newspaper in county.—

When any law, or order or decree of court, shall direct advertisements to be made in any county and there be no newspaper published in the said county, the advertisement may be made by posting three copies thereof in three different places in said county, one of which shall be at the front door of the courthouse, and by publication in the nearest county in which a newspaper is published.

History.—RS 1297; GS 1728; RGS 2943; CGL 4667; s. 6, ch. 67-254.

Note.—Former s. 49.02.

50.031 Newspapers in which legal notices and process may be published.—

No notice or publication required to be published in a newspaper in the nature of or in lieu of process of any kind, nature, character or description provided for under any law of the state, whether heretofore or hereafter enacted, and whether pertaining to constructive service, or the initiating, assuming, reviewing, exercising or enforcing jurisdiction or power, by any court in this state, or any notice of sale of property, real or personal, for taxes, state, county or municipal, or sheriff's, guardian's or administrator's or any sale made pursuant to any judicial order, decree or statute or any other publication or notice pertaining to any affairs of the state, or any county, municipality or other political subdivision thereof, shall be deemed to have been published in accordance with the statutes providing for such publication, unless the same shall have been published for the prescribed period of time required for such publication, in a newspaper which at the time of such publication shall have been in existence for 1 year and shall have been entered as ¹second-class mail matter at a post office in the county where published, or in a newspaper which is a direct successor of a newspaper which together have been so published; provided, however, that nothing herein contained shall apply where in any county there shall be no newspaper in existence which shall have been published for the length of time above prescribed. No legal publication of any kind, nature or description, as herein defined, shall be valid or binding or held to be in compliance with the statutes providing for such publication unless the same shall have been published in accordance with the provisions of this section. Proof of such publication shall be made by uniform affidavit.

History.—ss. 1-3, ch. 14830, 1931; CGL 1936 Supp. 4274(1); s. 7, ch. 22858, 1945; s. 6, ch. 67-254; s. 1, ch. 74-221.

¹Note.—Redesignated as "Periodicals" by the United States Postal Service, see 61 F.R. 10123-10124, March 12, 1996.

Note.—*Former s. 49.03.

50.041 Proof of publication; uniform affidavits required.—

(1) All affidavits of publishers of newspapers (or their official representatives) made for the purpose of establishing proof of publication of public notices or legal advertisements shall be uniform throughout the state.

(2) Each such affidavit shall be printed upon white bond paper containing at least 25 percent rag material and shall be 8½ inches in width and of convenient length, not less than 5½ inches. A white margin of not less than 2½ inches shall be left at the right side of each affidavit form and upon or in this space shall be substantially pasted a clipping which shall be a true copy of the public notice or legal advertisement for which proof is executed.

(3) In all counties having a population in excess of 450,000 according to the latest official decennial census, in addition to the charges which are now or may hereafter be established by law for the publication of every official notice or legal advertisement, there may be a charge not to exceed \$2 for the preparation and execution of each such proof of publication or publisher's affidavit.

History.—s. 1, ch. 19290, 1939; CGL 1940 Supp. 4668(1); s. 1, ch. 63-49; s. 26, ch. 67-254; s. 1, ch. 76-58.

Note.—*Former s. 49.04.

50.051 Proof of publication; form of uniform affidavit.*

The printed form upon which all such affidavits establishing proof of publication are to be executed shall be substantially as follows:

NAME OF NEWSPAPER
Published (Weekly or Daily)
(Town or City) (County) FLORIDA

STATE OF FLORIDA
COUNTY OF _____:

Before the undersigned authority personally appeared _____, who on oath says that he or she is _____ of the _____, a _____ newspaper published at _____ in _____ County, Florida; that the attached copy of advertisement, being a _____ in the matter of _____ in the _____ Court, was published in said newspaper in the issues of _____.

Affiant further says that the said _____ is a newspaper published at _____, in said _____ County, Florida, and that the said newspaper has heretofore been continuously published in said _____ County, Florida, each _____ and has been entered as 'second-class mail matter at the post office in _____, in said _____ County, Florida, for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant further says that he or she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper. Sworn to and subscribed before me this _____ day of _____, 19____, by _____, who is personally known to me or who has produced (type of identification) as identification.

_____(Signature of Notary Public)_____

_____(Print, Type, or Stamp Commissioned Name of Notary Public)_____

_____(Notary Public)_____

History.-s. 2, ch. 19290, 1939; CGL 1940 Supp. 4668(2); s. 6, ch. 67-254; s. 1, ch. 93-62; s. 291, ch. 95-147.

Note.¥Redesignated as "Periodicals" by the United States Postal Service, *see* 61 F.R. 10123-10124, March 12, 1996.

Note.-Former s. 49.05.

50.061 Amounts chargeable.¥

(1) The publisher of any newspaper publishing any and all official public notices or legal advertisements shall charge therefore the rates specified in this section without rebate, commission or refund.

(2) The charge for publishing each such official public notice or legal advertisement shall be 70 cents per square inch for the first insertion and 40 cents per square inch for each subsequent insertion, except that:

(a) In all counties having a population of more than 304,000 according to the latest official decennial census, the charge for publishing each such official public notice or legal advertisement shall be 80 cents per square inch for the first insertion and 60 cents per square inch for each subsequent insertion.

(b) In all counties having a population of more than 450,000 according to the latest official decennial census, the charge for publishing each such official public notice or legal advertisement shall be 95 cents per square inch for the first insertion and 75 cents per square inch for each subsequent insertion.

(3) Where the regular established minimum commercial rate per square inch of the newspaper publishing such official public notices or legal advertisements is in excess of the rate herein stipulated, said minimum commercial rate per square inch may be charged for all such legal advertisements or official public notices for each insertion, except that a governmental agency publishing an official public notice or legal advertisement may procure publication by soliciting and accepting written bids from newspapers published in the county, in which case the specified charges in this section do not apply.

(4) All official public notices and legal advertisements shall be charged and paid for on the basis of 6-point type on 6-point body, unless otherwise specified by statute.

(5) Any person violating a provision of this section, either by allowing or accepting any rebate, commission, or refund, commits a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083.

(6) Failure to charge the rates prescribed by this section shall in no way affect the validity of any official public notice or legal advertisement and shall not subject same to legal attack upon such grounds.

History.-s. 3, ch. 3022, 1877; RS 1298; GS 1729; RGS 2944; s. 1, ch. 12215, 1927; CGL 4668; ss. 1, 2, 2A, 2B, ch. 20264, 1941; s. 1, ch. 23663, 1947; s. 1, ch. 57-160; s. 1, ch. 63-50; s. 1, ch. 65-569; s. 6, ch. 67-254; s. 15, ch. 71-136; s. 35, ch. 73-332; s. 1, ch. 90-279.

Note.¥Former s. 49.06.

50.071 Publication costs; court docket fund.¥

(1) There is established in Broward, Dade, and Duval Counties a court docket fund for the purpose of paying the cost of the publication of the fact of the filing of any civil case in the circuit court in those counties by their counties by their style and of the calendar relating to such cases. A newspaper qualified under the terms of s. 50.011 shall be designated as the record newspaper for such publication by an order of a majority of the judges in the judicial circuit in which the subject county is located and such order shall be filed and recorded with the clerk of the circuit court for the subject county. The court docket fund shall be funded by a service charge of \$1 added to the filing fee for all civil actions, suits, or proceedings filed in the circuit court of the subject county. The clerk of the circuit court shall maintain such funds separate and apart, and the aforesaid fee shall not be diverted to any other fund or for any purpose other than that established herein. The clerk of the circuit court shall dispense the fund to the designated record newspaper in the county on a quarterly basis. The designated record newspaper may be changed at the end of any fiscal year of the county by a majority vote of the judges of the judicial circuit of the county so ordering 30 days prior to the end of the fiscal year, notice of which order shall be given to the previously designated record newspaper.

(2) The board of county commissioners or comparable or substituted authority of any county in which a court docket fund is not specifically established in subsection (1) may, by local ordinance, create such a court docket fund on the same terms and conditions as established in subsection (1).

(3) The publishers of any designated record newspapers receiving the court docket fund established in subsection (1) shall, without charge, accept legal advertisement for the purpose of service of process by publication under s. 49.011(4), (10), and (11) when such publication is required of persons authorized to proceed as insolvent and poverty-stricken persons under s. 57.081.

History.-s. 1, ch. 75-206.

PART II HEARINGS INVOLVING DISPUTED ISSUES OF MATERIAL FACT

28-106.201 Initiation of Proceedings.

(1) Unless otherwise provided by statute, initiation of proceedings shall be made by written petition to the agency responsible for rendering final agency action. The term "petition" includes any document that requests an evidentiary proceeding and asserts the existence of a disputed issue of material fact. Each petition shall be legible and on 8 ½ by 11 inch white paper. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced.

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

(3) Upon receipt of a petition involving disputed issues of material fact, the agency shall grant or deny the petition, and if granted shall, unless otherwise provided by law, refer the matter to the Division of Administrative Hearings with a request that an administrative law judge be assigned to conduct the hearing. The request shall be accompanied by a copy of the petition and a copy of the notice of agency action.

(4) A petition shall be dismissed if it is not in substantial compliance with subsection (2) of this rule or it has been untimely filed. Dismissal of a petition shall, at least once, be without prejudice to petitioner's filing a timely amended petition curing the defect, unless it conclusively appears from the face of the petition that the defect cannot be cured.

(5) The agency shall promptly give written notice to all parties of the action taken on the petition, shall state with particularity its reasons if the petition is not granted, and shall state the deadline for filing an amended petition if applicable.

Specific Authority 120.54(3), (5) F.S. Law Implemented 120.54(5), 120.569, 120.57 F.S. History—New 4-1-97, Amended 9-17-98.

PART III PROCEEDINGS AND HEARINGS NOT INVOLVING DISPUTED ISSUES OF MATERIAL FACT

28-106.301 Initiation of Proceedings

(1) Initiation of a proceeding shall be made by written petition to the agency responsible for rendering final agency action. The term "petition" includes any document which requests a proceeding. Each petition shall be legible and on 8 ½ by 11 inch white paper or on a form provided by the agency. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced.

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;

(e) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and

(f) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

(3) If the petition does not set forth disputed issues of material fact, the agency shall refer the matter to the presiding officer designated by the agency with a request that the matter be scheduled for a proceeding not involving disputed issues of material fact. The request shall be accompanied by a copy of the petition and a copy of the notice of agency action.

(4) A petition shall be dismissed if it is not in substantial compliance with subsection (2) of this Rule or it has been untimely filed. Dismissal of a petition shall, at least once, be without prejudice to petitioner's filing a timely amended petition curing the defect, unless it conclusively appears from the face of the petition that the defect cannot be cured.

(5) The agency shall promptly give written notice to all parties of the action taken on the petition, shall state with particularity its reasons if the petition is not granted, and shall state the deadline for filing an amended petition if applicable.

Specific Authority 120.54(5) F.S. Law Implemented 120.54(5), 120.569, 120.57 F.S. History—New 4-1-97, Amended 9-17-98.



An Equal
Opportunity
Employer

Southwest Florida Water Management District

2379 Broad Street, Brooksville, Florida 34604-6899

(352) 796-7211 or 1-800-423-1476 (FL only)

SUNCOM 628-4150 TDD only 1-800-231-6103 (FL only)

On the Internet at: WaterMatters.org

Bartow Service Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

September 20, 2012

ATTACHMENT 'I'

Manatee County Board of County Commissioners
Attn: Sia Mollanazar, P.E., Manatee County Public Works Dept.
P.O. Box 1000
Bradenton, FL 34206

Subject: **Notice of Final Agency Action for Approval
ERP General Construction Modification**
Project Name: Manatee County - 44th Avenue East Improvements
App ID/Permit No: 668721 / 44020046.006
County: MANATEE
Sec/Twp/Rge: S07/T35S/R18E, S06/T35S/R18E

Dear Permittee(s):

This letter constitutes notice of Final Agency Action for **approval** of the permit referenced above. Final approval is contingent upon no objection to the District's action being received by the District within the time frames described in the enclosed Notice of Rights.

Approved construction plans are part of the permit, and construction must be in accordance with these plans. These drawings are available for viewing or downloading through the District's Application and Permit Search Tools located at www.WaterMatters.org/permits.

The District's action in this matter only becomes closed to future legal challenges from members of the public if such persons have been properly notified of the District's action and no person objects to the District's action within the prescribed period of time following the notification. The District does not publish notices of agency action. If you wish to limit the time within which a person who does not receive actual written notice from the District may request an administrative hearing regarding this action, you are strongly encouraged to publish, at your own expense, a notice of agency action in the legal advertisement section of a newspaper of general circulation in the county or counties where the activity will occur. Publishing notice of agency action will close the window for filing a petition for hearing. Legal requirements and instructions for publishing notice of agency action, as well as a noticing form that can be used is available from the District's website at www.WaterMatters.org/permits/noticing.

If you publish notice of agency action, a copy of the affidavit of publishing provided by the newspaper should be sent to the Regulation Division at the District Service Office that services this permit.

If you have questions, please contact Steven Lopes, at the Tampa Service Office, extension 6506. For assistance with environmental concerns, please contact Tasha Bowers, extension 6538.

Sincerely,

Michelle K. Hopkins, P.E.
Bureau Chief
Environmental Resource Permit Bureau
Regulation Division

Enclosures: Approved Permit w/Conditions Attached
 Statement of Completion
 Notice of Authorization to Commence Construction
 Notice of Rights
cc: John Pari, P.E.
 Christopher Mowbray, P.E.

**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
GENERAL CONSTRUCTION MODIFICATION
PERMIT NO. 44020046.006**

EXPIRATION DATE: September 20, 2017

PERMIT ISSUE DATE: September 20, 2012

This permit is issued under the provisions of Chapter 373, Florida Statutes, (F.S.), and the Rules contained in Chapters 40D-4 and 40D-40, Florida Administrative Code, (F.A.C.). The permit authorizes the Permittee to proceed with the construction of a surface water management system in accordance with the information outlined herein and shown by the application, approved drawings, plans, specifications, and other documents, attached hereto and kept on file at the Southwest Florida Water Management District (District). Unless otherwise stated by permit specific condition, permit issuance constitutes certification of compliance with state water quality standards under Section 401 of the Clean Water Act, 33 U.S.C. 1341. All construction, operation and maintenance of the surface water management system authorized by this permit shall occur in compliance with Florida Statutes and Administrative Code and the conditions of this permit.

PROJECT NAME: Manatee County - 44th Avenue East Improvements

GRANTED TO: Manatee County Board of County Commissioners
Attn: Sia Mollanazar, P.E., Manatee County Public Works Dept.
P.O. Box 1000
Bradenton, FL 34206

OTHER PERMITTEES: N/A

ABSTRACT: This permit authorizes modifications to Environmental Resource Permit (ERP) No. 44020046.004 entitled Manatee County - 44th Avenue East Improvements and issued on December 17, 2009. The modifications approved in this permit are as follows:

1. The proposed 44th Avenue East roadway profile and drainage conveyance system (from station 33+14 to 43+00) is modified as shown on the construction plans.
2. Pond B area at top of bank is increased from 3.94 acres to 7.80 acres as shown on the construction plans.

Information regarding the surface water management system, 100-year floodplain, wetlands and/or surface waters is stated below and on the permitted construction drawings for the project.

OP. & MAIN. ENTITY: Manatee County Public Works Department

OTHER OP. & MAIN. ENTITY: N/A

COUNTY: MANATEE

SEC/TWP/RGE: S07/T35S/R18E, S06/T35S/R18E

**TOTAL ACRES OWNED
OR UNDER CONTROL:** 35.70

PROJECT SIZE: 3.81 Acres

LAND USE: Road Projects

DATE APPLICATION FILED: August 09, 2012

AMENDED DATE: N/A

I. Water Quantity/Quality

I. Water Quantity/Quality

POND No.	Area Acres @ Top of Bank	Treatment Type
B	7.80	MAN-MADE WET DETENTION
	Total: 7.80	

A mixing zone is not required.

A variance is not required.

II. 100-Year Floodplain

Encroachment (Acre-Feet of fill)	Compensation (Acre-Feet of excavation)	Compensation Type	Encroachment Result* (feet)
5.43	10.92	Equivalent Excavation	N/A

ERP 44020046.004 previously permitted 1.37 acre-feet encroachment and 3.25 acre-feet compensation. This modification therefore results in an additional 4.06 acre-feet of encroachment and an additional 7.67 acre-feet compensation.

*Depth of change in flood stage (level) over existing receiving water stage resulting from floodplain encroachment caused by a project that claims Minimal Impact type of compensation.

III. Environmental Considerations

No wetlands or other surface waters exist within the project area.

Specific Conditions

1. If the ownership of the project area covered by the subject permit is divided, with someone other than the Permittee becoming the owner of part of the project area, this permit shall terminate, pursuant to Rule 40D-1.6105, F.A.C. In such situations, each land owner shall obtain a permit (which may be a modification of this permit) for the land owned by that person. This condition shall not apply to the division and sale of lots or units in residential subdivisions or condominiums.
2. Unless specified otherwise herein, two copies of all information and reports required by this permit shall be submitted to the Regulation Department at the District Service Office that services this permit. The permit number, title of report or information and event (for recurring report or information submittal) shall be identified on all information and reports submitted.
3. The Permittee shall retain the design engineer, or other professional engineer registered in Florida, to conduct on-site observations of construction and assist with the as-built certification requirements of this project. The Permittee shall inform the District in writing of the name, address and phone number of the professional engineer so employed. This information shall be submitted prior to construction.
4. Within 30 days after completion of construction of the permitted activity, the Permittee shall submit to the Regulation Department at the District Service Office that services this permit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1, F.A.C., and signed, dated, and sealed as-built drawings. The as-built drawings shall identify any deviations from the approved construction drawings.
5. The District reserves the right, upon prior notice to the Permittee, to conduct on-site research to assess the pollutant removal efficiency of the surface water management system. The Permittee may be required to cooperate in this regard by allowing on-site access by District representatives, by allowing the installation and operation of testing and monitoring equipment, and by allowing other assistance measures as needed on site.
6. All construction is prohibited within the permitted project area until the Permittee acquires legal ownership or legal control of the project area as delineated in the permitted construction drawings.
7. The operation and maintenance entity shall submit inspection reports in the form required by the District, in accordance with the following schedule: for systems utilizing retention or wet detention, the inspections shall be performed five (5) years after operation is authorized and every five (5) years thereafter.
8. This modification, Construction Permit No. 44020046.006, amends the previously issued Construction Permit No. 44020046.004, replaces condition 7 with condition 7 of this permit, and adds conditions. All other original permit conditions remain in effect.
9. This permit is issued based upon the design prepared by the Permittee's consultant. If at any time it is determined by the District that the Conditions for Issuance of Permits in Rules 40D-4.301 and 40D-4.302, F.A.C., have not been met, upon written notice by the District, the Permittee shall obtain a permit modification and perform any construction necessary thereunder to correct any deficiencies in the system design or construction to meet District rule criteria. The Permittee is advised that the correction of deficiencies may require re-construction of the surface water management system.

10. The Permitted Plan Set for this project includes the set received by the District on August 9, 2012.

GENERAL CONDITIONS

1. The general conditions attached hereto as Exhibit "A" are hereby incorporated into this permit by reference and the Permittee shall comply with them.

Michelle K. Hopkins, P.E.

Authorized Signature

EXHIBIT A

GENERAL CONDITIONS:

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. For general permits authorizing incidental site activities, the following limiting general conditions shall also apply:
 - a. If the decision to issue the associated individual permit is not final within 90 days of issuance of the incidental site activities permit, the site must be restored by the permittee within 90 days after notification by the District. Restoration must be completed by re-contouring the disturbed site to previous grades and slopes re-establishing and maintaining suitable vegetation and erosion control to provide stabilized hydraulic conditions. The period for completing restoration may be extended if requested by the permittee and determined by the District to be warranted due to adverse weather conditions or other good cause. In addition, the permittee shall institute stabilization measures for erosion and sediment control as soon as practicable, but in no case more than 7 days after notification by the District.
 - b. The incidental site activities are commenced at the permittee's own risk. The Governing Board will not consider the monetary costs associated with the incidental site activities or any potential restoration costs in making its decision to approve or deny the individual environmental resource permit application. Issuance of this permit shall not in any way be construed as commitment to issue the associated individual environmental resource permit.
4. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
5. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the District as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume dis-charged from the property or into surface waters of the state.
6. District staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the District as a permit prior to the dewatering event as a permit modification. A water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.

7. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
8. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operating schedules satisfactory to the District.
9. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading, mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.
10. The following shall be properly abandoned and/or removed in accordance with the applicable regulations:
 - a. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor.
 - b. Any existing septic tanks on site shall be abandoned at the beginning of construction.
 - c. Any existing fuel storage tanks and fuel pumps shall be removed at the beginning of construction.
11. All surface water management systems shall be operated to conserve water in order to maintain environmental quality and resource protection; to increase the efficiency of transport, application and use; to decrease waste; to minimize unnatural runoff from the property and to minimize dewatering of offsite property .
12. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District a written notification of commencement indicating the actual start date and the expected completion date.
13. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the occupation of the site or operation of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.
14. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1, F.A.C. Additionally, if deviation from the approved drawings are discovered during the certification process the certification must be accompanied by a copy of the approved permit drawings with deviations noted.
15. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area(s), may constitute grounds for revocation or enforcement action by the District, unless a modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.
16. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the District determines the system to be in compliance with the permitted plans, and the entity approved by the District accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the

District until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the District, if different from the permittee. Until a transfer is approved by the District, the permittee shall be liable for compliance with the terms of the permit.

17. Should any other regulatory agency require changes to the permitted system, the District shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.
18. This permit does not eliminate the necessity to obtain any required federal, state, local and special District authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.
19. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.
20. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
21. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
22. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40D-4.351, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
23. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with District rules, regulations and conditions of the permits.
24. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District and the Florida Department of State, Division of Historical Resources.
25. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

SOUTHWEST FLORIDA
WATER MANAGEMENT DISTRICT

**NOTICE OF
AUTHORIZATION
TO COMMENCE CONSTRUCTION**

Manatee County - 44th Avenue East Improvements

PROJECT NAME

Road Projects

PROJECT TYPE

MANATEE

COUNTY

S07/T35S/R18E, S06/T35S/R18E

SEC(S)/TWP(S)/RGE(S)

Manatee County Board of County Commissioners

PERMITTEE

APPLICATION ID/PERMIT NO: 668721 / 44020046.006

DATE ISSUED: September 20, 2012



Michelle K. Hopkins, P.E.

Issuing Authority

**THIS NOTICE SHOULD BE CONSPICUOUSLY
DISPLAYED AT THE SITE OF THE WORK**

Notice of Rights

ADMINISTRATIVE HEARING

1. You or any person whose substantial interests are or may be affected by the District's action may request an administrative hearing on that action by filing a written petition in accordance with Sections 120.569 and 120.57, Florida Statutes (F.S.), Uniform Rules of Procedure Chapter 28-106, Florida Administrative Code (F.A.C.) and District Rule 40D-1.1010, F.A.C. Unless otherwise provided by law, a petition for administrative hearing must be filed with (received by) the District within 21 days of receipt of written notice of agency action. "Written notice" means either actual written notice, or newspaper publication of notice, that the District has taken or intends to take agency action. "Receipt of written notice" is deemed to be the fifth day after the date on which actual notice is deposited in the United States mail, if notice is mailed to you, or the date that actual notice is issued, if sent to you by electronic mail or delivered to you, or the date that notice is published in a newspaper, for those persons to whom the District does not provide actual notice.
2. Pursuant to Subsection 373.427(2)(c), F.S., for notices of agency action on a consolidated application for an environmental resource permit and use of sovereignty submerged lands concurrently reviewed by the District, a petition for administrative hearing must be filed with (received by) the District within 14 days of receipt of written notice.
3. Pursuant to Rule 62-532.430, F.A.C., for notices of intent to deny a well construction permit, a petition for administrative hearing must be filed with (received by) the District within 30 days of receipt of written notice of intent to deny.
4. Any person who receives written notice of an agency decision and who fails to file a written request for a hearing within 21 days of receipt or other period as required by law waives the right to request a hearing on such matters.
5. Mediation pursuant to Section 120.573, F.S., to settle an administrative dispute regarding District action is not available prior to the filing of a petition for hearing.
6. A request or petition for administrative hearing must comply with the requirements set forth in Chapter 28.106, F.A.C. A request or petition for a hearing must: (1) explain how the substantial interests of each person requesting the hearing will be affected by the District's action or proposed action, (2) state all material facts disputed by the person requesting the hearing or state that there are no material facts in dispute, and (3) otherwise comply with Rules 28-106.201 and 28-106.301, F.A.C. Chapter 28-106, F.A.C. can be viewed at www.flrules.org or at the District's website at www.WaterMatters.org/permits/rules.
7. A petition for administrative hearing is deemed filed upon receipt of the complete petition by the District Agency Clerk at the District's Tampa Service Office during normal business hours, which are 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding District holidays. Filings with the District Agency Clerk may be made by mail, hand-delivery or facsimile transfer (fax). The District does not accept petitions for administrative hearing by electronic mail. Mailed filings must be addressed to, and hand-delivered filings must be delivered to, the Agency Clerk, Southwest Florida Water Management District, 7601 US Hwy. 301, Tampa, FL 33637-6759. Faxed filings must be transmitted to the District Agency Clerk at (813) 987-6746. Any petition not received during normal business hours shall be filed as of 8:00 a.m. on the next business day. The District's acceptance of faxed petitions for filing is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation, available for viewing at www.WaterMatters.org/about.

JUDICIAL REVIEW

1. Pursuant to Sections 120.60(3) and 120.68, F.S., a party who is adversely affected by final District action may seek judicial review of the District's final action. Judicial review shall be sought in the Fifth District Court of Appeal or in the appellate district where a party resides or as otherwise provided by law.
2. All proceedings shall be instituted by filing an original notice of appeal with the District Agency clerk within 30 days after the rendition of the order being appealed, and a copy of the notice of appeal, accompanied by any filing fees prescribed by law, with the clerk of the court, in accordance with Rules 9.110 and 9.190 of the Florida Rules of Appellate Procedure (Fla. R. App. P.). Pursuant to Fla. R. App. P. 9.020(h), an order is rendered when a signed written order is filed with the clerk of the lower tribunal.

Manatee County Board of County Commisioners
Attn: Sia Mollanazar, P.E., Manatee County Public Works Dept.
P.O. Box 1000
Bradenton, FL 34206

John Pari, P.E.
Manatee County Public Works Department
1022 26th Avenue East
Bradenton, FL 34208

Christopher Mowbray, P.E.
Manatee County Public Works Department
1022 26th Avenue East
Bradenton, FL 34208

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**PROPOSED STATE HIGHWAY ACCESS CONNECTION
NOTICE OF INTENT TO ISSUE PERMIT**

Important: This Notice does not authorize construction to begin and is not a final permit.

ALSO NOTE: THIS NOTICE OF INTENT IS ONLY VALID FOR 1 YEAR FROM SIGNING DATE IN PART 6.

PART 1: APPLICANT INFORMATION

APPLICATION NUMBER: 2009-A-194-40

ATTACHMENT 'J'

Project Name: 15th Street East Improvements at 44th Avenue East

State Road Name/Number: 70A

Section Number: 13120001

Maintenance Office: Valerie Everts-Sarasota Operations Permits

Permit Staff Representative

Applicant: Manatee County

Responsible Office: Chris Mowbray

Mailing Address: 1022 26th Avenue East
Street

Bradenton
City

Florida
State

34208
Zip

Telephone: 941-708-7462

PART 2: NOTICE OF INTENT TO ISSUE PERMIT**YOU ARE HEREBY ADVISED:**

The Florida Department of Transportation has completed its review of the subject connection permit Application received October 8, 2009 for consistency with Rule Chapters 14-96 and 14-97, F.A.C., and current Department spacing, location, and design criteria and hereby issues this "Notice of Intent" to:

- ☐ Issue the subject permit consistent with the permit Application.
- ☒ Issue the subject permit consistent with the permit Application and subject to the attached provisions.

IMPORTANT

This notice of intent to issue a permit does NOT constitute Department permit issuance. The permit will be issued after the permittee shows proof that a valid local government development approval or development order has been given to the sites served by the connection and special provisions of the approval consistent with the permit applications and conditions previously noted.

No connection work on the right of way shall be initiated until the Department permit is actually issued. Any changes to the site(s) plan will require re-evaluation of the connection(s). This notice is valid for one year, from the date of issuance, and can only be extended with approval by the Department for problems outside the control of the applicant pursuant to Rule Chapter 14-96, F.A.C. This Notice of Intent is transferable as specified only in Rule Chapter 14-96, F.A.C.

Continued Next Page

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED STATE HIGHWAY ACCESS CONNECTION
NOTICE OF INTENT TO ISSUE PERMIT

PART 3: CONDITIONS

Conditions to be met before Permit will be issued:

Standard:

1. Development approval from the appropriate local government consistent with the Notice of Intent to Permit;
2. Assurance of performance pursuant to Section 334.187, Florida Statutes (if required);
3. Notification of all known right of way users affected by the connection(s);
4. Compliance with drainage requirements in Rule Chapter 14-86, F.A.C.

Other Conditions:

1. Prior to issuance of the above referenced permit no work shall be performed within the FDOT right of way until all right of way donations are approved and completed.

Continued Next Page

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**PROPOSED STATE HIGHWAY ACCESS CONNECTION
NOTICE OF INTENT TO ISSUE PERMIT****PART 4: NOTICE OF DEPARTMENT AUTHORITY**

1. All approved connection(s) and turning movements are subject to the Department's continuing authority to modify such connection(s) or turning movements in order to protect safety and traffic operations on the state highway or State Highway System.
2. **Transportation Control Features and Devices in the State Right of Way.** Transportation control features and devices in the Department's right of way, including, but not limited to, traffic signals, medians, median openings, or any other transportation control features or devices in the state right of way, are operational and safety characteristics of the State Highway and are not means of access. The Department may install, remove, or modify any present or future transportation control feature or devices in the state right of way to make changes to promote safety in the right of way or efficient traffic operations on the highway.

PART 5: DEPARTMENT CONTACTNAME: Valerie EvertsADDRESS: 1840 61st StreetSarasota, Florida 34234243PHONE: 941-359-7305**PART 6: SIGNATURE OF DEPARTMENT AUTHORITY**SIGNATURE OF DEPARTMENT OFFICIAL: PRINT OR TYPE NAME: Albert RosensteinPRINT OR TYPE POSITION: Engineering ManagerDATE: 8/16/2012PHONE: 941-359-7300

Continued Next Page

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED STATE HIGHWAY ACCESS CONNECTION
NOTICE OF INTENT TO ISSUE PERMIT

PART 4: APPEAL PROCEDURES

You may petition for an administrative hearing pursuant to sections 120.569 and 120.57, Florida Statutes. If you dispute the facts stated in the foregoing Notice of Intended Department Action (hereinafter Notice), you may petition for a formal administrative hearing pursuant to section 120.57(1), Florida Statutes. If you agree with the facts stated in the Notice, you may petition for an informal administrative hearing pursuant to section 120.57(2), Florida Statutes. You must file the petition with:

Clerk of Agency Proceedings
Department of Transportation
Haydon Burns Building
605 Suwannee Street, M.S. 58
Tallahassee, Florida 32399-0458

The petition for an administrative hearing must conform to the requirements of Rule 28-106.201(2) or Rule 28-106.301(2), Florida Administrative Code, and be filed with the Clerk of Agency Proceedings by 5:00 p.m. no later than 21 days after you received the Notice. The petition must include a copy of the Notice, be legible, on 8 1/2 by 11 inch white paper, and contain:

1. Your name, address, telephone number, any Department of Transportation identifying number on the Notice, if known, the name and identification number of each agency affected, if known, and the name, address, and telephone number of your representative, if any, which shall be the address for service purposes during the course of the proceeding.
2. An explanation of how your substantial interests will be affected by the action described in the Notice;
3. A statement of when and how you received the Notice;
4. A statement of all disputed issues of material fact. If there are none, you must so indicate;
5. A concise statement of the ultimate facts alleged, including the specific facts you contend warrant reversal or modification of the agency's proposed action, as well as an explanation of how the alleged facts relate to the specific rules and statutes you contend require reversal or modification of the agency's proposed action;
6. A statement of the relief sought, stating precisely the desired action you wish the agency to take in respect to the agency's proposed action.

If there are disputed issues of material fact a formal hearing will be held, where you may present evidence and argument on all issues involved and conduct cross-examination. If there are no disputed issues of material fact an informal hearing will be held, where you may present evidence or a written statement for consideration by the Department.

Mediation, pursuant to section 120.573, Florida Statutes, may be available if agreed to by all parties, and on such terms as may be agreed upon by all parties. The right to an administrative hearing is not affected when mediation does not result in a settlement.

Your petition for an administrative hearing shall be dismissed if it is not in substantial compliance with the above requirements of Rule 28-106.201(2) or Rule 28-106.301(2), Florida Administrative Code. If you fail to timely file your petition in accordance with the above requirements, you will have waived your right to have the intended action reviewed pursuant to chapter 120, Florida Statutes, and the action set forth in the Notice shall be conclusive and final.

End

MANATEE COUNTY GOVERNMENT

LETTER OF TRANSMITTAL

ATTACHMENT 'K'

DATE: October 7, 2004

TO: Mr. Jeffrey D. Trim, P.E.
Wade-Trim, Inc.
4919 Memorial Highway, Suite 200
Tampa, Florida 33634

RECEIVED

OCT 12 2004

WADE-TRIM, INC.

SUBJECT: 44th Avenue East - 15th to 18th Street East

COPIES	DESCRIPTION
1	Notice of Intent to Permit the Opening of a Public Highway-Rail Grade Crossing at 44 th Avenue East. From: Jan Bordelon, Rail Specialist FDOT

COPIES ARE TRANSMITTED FOR REASON(S) CHECKED BELOW:

☐ FOR YOUR RECORDS ☒ FOR YOUR INFORMATION
☐ AS PER YOUR REQUEST ☐ SIGN AND RETURN
☐ FOR YOUR REVIEW & COMMENTS ☐ FOR YOUR ACTION

REMARKS: _____


Mike Limoge, Project Manager

cc: Dave Rothfuss, Assistant County Administrator
Timothy A. Hochuli, P.E., Director, Project Management
Larry R. Mau, P.E., Director, Transportation Department
Lincoln Leverage, County Attorney's Office
Project File: 6045661 (2.0)

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PROJECT MANAGEMENT DEPARTMENT



Florida Department of Transportation

JEB BUSH
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JOSÉ ABREU
SECRETARY

October 6, 2004

Mr. Mike Limoge, Project Manager
Manatee County
1026 26th Street East
Bradenton, FL 34208

Re: Notice of Intent to Permit the Opening of a Public Highway-Rail Grade Crossing at 44th Avenue East, Manatee County, Florida

Dear Mr. Limoge:

Enclosed is the Department of Transportation's Notice of Intent (NOI) to permit the opening of a public highway-rail grade crossing at 44th Avenue East, Manatee County, Florida.

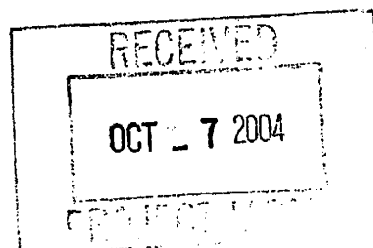
The Notice of Intent to permit will become final unless an appropriate petition for an Administrative Hearing pursuant to the provisions of Section 120.57, Florida Statutes, is filed by an affected party within twenty-one (21) days from receipt of this notice. Failure to file a request for a hearing within this time period will constitute a waiver of any right to a hearing under Section 120.57, Florida Statutes, and the Department action will become final.

If you have any questions, concerning this matter, please contact Bruce Conroy, Administrative Law Attorney, at (850) 414-5372.

Sincerely,


Jan Bordelon
Rail Specialist

Enclosure



**BEFORE THE STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION**

TO: Manatee County
Manatee County Project Management
1026 26th Avenue East
Bradenton, FL 34208

DOCKET #: _____

INTENT TO PERMIT

The Department of Transportation (Department) received an application from the County of Manatee, November 21, 2002, for a permit to open a public highway-rail grade crossing at 44th Avenue East, between railroad mile posts SW 912.27 and SW 911.87, to cross over the CSX Transportation rail line. The Department hereby gives notice of its INTENT TO ISSUE A PERMIT to allow the opening of a highway rail grade crossing at 44th Avenue East, Manatee County, Florida, pursuant to Section 335.141, Florida Statutes, and Rule 14-57.012, Florida Administrative Code (F.A.C.). The Department, however, recommends the closure of highway-rail grade crossing candidates within this rail corridor, and/or other rail crossings under County jurisdiction, that meet the criteria for rail crossing closure, Rule 14-57.012, Florida Administrative Code, to offset the opening of 44th Avenue East highway-rail grade crossing.

REGULATORY AUTHORITY

Section 335.141(1)(a), Florida Statutes, provides the Florida Department of Transportation with regulatory authority over all public highway-railroad grade crossings in the State, including the authority to issue permits, which shall be required for the opening of such crossings. Rule 14-57.012, Florida Administrative Code, provides specific criteria that must be considered by the Department when determining whether to issue a permit to open such a crossing.

FINDINGS OF FACT

Application of the criteria established by Rule 14-57.012, Florida Administrative Code, requires findings of fact. The facts relating to the crossing are:

General Data on Proposed Crossing:

Location: Manatee County

Local Name of Street: 44th Avenue East

Date of Construction: Tentative Schedule 2004 -2005

Approximate Railroad Mile Post: SW 874.25

Jurisdiction of Maintenance: County

Approximate Annual Average Daily Traffic: 2,000

Design Speed of Road: 45 mph

School Buses: 8 buses twice a day for 180 school days per year

Pedestrians/Bicycle Riders: Minimal at crossing area due to industrial zoning

Percent of Trucks: 9.0% or 180 vehicles per day

Emergency Rescue Vehicles: 3-4 calls per month to the Manasota Industrial Park

Number of Lanes: Four-lane divided roadway with raised, landscaped medians, bike lanes, and sidewalks.

Functional Class of Road: Urban Arterial

Type / Number of Railroad Tracks: One Main Line

Number of Trains: 2 to 4 train movements per week

Maximum Train Speed: 25 miles per hour

Land Use of Surrounding Areas: Southwest – Light Manufacturing and Warehousing (Southdown Concrete Company); Northwest – Light Manufacturing (Bluegrass Industrial, Inc.; Commercial Equipment Repair), Northeast – Light Manufacturing (Oshkosh Trucking Corporation); Southeast – Vacant Industrial

Major Traffic Generators: Manasota Industrial Park - .2 miles east of proposed crossing

Southeast High School - .6 miles northwest of proposed crossing

Samoset Elementary - .6 miles northeast of proposed crossing

Johnson Middle School – 1.1 miles northeast of proposed crossing

DeSoto Square Mall – 1.3 miles west of proposed crossing

FLORIDA ADMINISTRATIVE CODE CRITERIA:

In considering an application to open a public railroad-highway grade crossing, the following criteria will apply. Rule 14-57.012, Florida Administrative Code, states as follows:

1. Safety.

Safety of vehicular transportation will be improved through the construction of the extension of 44th Avenue East. The reduction of traffic congestion from the Manasota Industrial Park and the intersections at 38th Avenue East / 15th Street and 38th Avenue East / 19th Street Court East will improve the free flow of traffic in the area, thus decreasing the potential for vehicular accidents. The number of train movements, which are determined to be two to four movements per week, contributes to the determination that the extension of 44th Avenue East will reduce the hazards of traffic congestion within the area without proportionately creating a hazardous environment at the proposed crossing.

All safety signalization for the intersection of 44th Avenue East and the rail line will be in accordance with current Manual of Uniform Traffic Control Devices (MUTCD), American Association of State Highway and Transportation Officials (AASHTO) Policy, and the Department's Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (Florida's Green Book). A safety concern regarding the distance of the highway-rail grade crossing from the intersection of 15th Street and 44th Avenue East, which is 280 feet, has been addressed by the County through the acceptance of the Railroad's recommendation of pre-emption between the signalized intersection and the crossing safety signalization.

At this time, pedestrian and bicycle rider safety is not considered a significant safety issue due to the minimal use by pedestrians and bicycle riders generated at the location of the industrial park. The plans, however, call for sidewalks and bike lanes to safely accommodate this mode of travel, if increases occur in the future.

A safety concern noted in a review of the proposed crossing plans is the angle at which the extension of 44th Avenue East intersects with the rail line. The extension of 44th Avenue East crosses the rail line at a 17.32 degrees skew. Generally, the length and angle of a skewed crossing reduces visibility for motorists and increases the potential for crossing accidents. Yet,

an analysis of the Department Rail Highway Crossing Inventory of the crossing immediately north of the subject crossing (15th Street East / SR 70 highway-rail grade crossing), which runs north/south at an even more extreme angle than the proposed 44th Avenue East crossing, ranks the safety index at this crossing as 2820 out of 6000, and identifies no accidents. However, the Department recommends full protective closure of the crossing with a minimum of 200 feet of 9 inch non-mountable curb and standard gates with cantilever flashing lights.

Acknowledging the Federal Railroad Administration's guidance regarding crossings with skewed angles, it is essential that measures also be taken to enhance the safety of motorists and cyclists traversing the subject highway-rail grade crossing. To mitigate the potential of cyclists and low-boy trucks getting hung on the rails, it is recommended that a mini-flange filler be added to the crossing material.

With respect to overall crossing safety, the Department and Federal Railroad Administration support the closure of redundant and unsafe crossings that meet the criteria established by the Florida Administrative Code and Federal guidelines. "Guidance on Traffic Control Devices at Highway-Rail Grade Crossings" issued November 2002 by the U.S. Department of Transportation Federal Highway Administration states that "new grade crossings should not be permitted unless no other viable alternatives exist and, even in those instances, consideration should be given to closing one or more existing crossings."

Therefore, as part of the Notice of Intent to Permit the crossing at 44th Avenue East, the Department recommends the County pursue the consolidation of unnecessary rail crossings, paying special attention to those crossings that do not serve as a main arterial route for emergency vehicles; have less than 2,000 vehicles per day; have more than two trains crossing per day; and have an alternative crossing within 0.25 miles.

2. Necessity for rail and vehicle traffic.

Rail: The proposed rail crossing is not necessary for rail traffic at this time. However, the land use immediately southeast of the proposed crossing is designated for industrial use, which may have need of rail service in the future.

Vehicle: According to the County's transportation plan, the extension of 44th Avenue East is necessary to provide an east-west arterial that will allow a direct route to US 301 in the future.

The Conceptual Design Report of the extension of 44th Avenue East from 15th Street to 18th Street East has been approved by the Board of County Commissioners. 38th Avenue East currently serves as the only means of access for Manasota Industrial Park. The extension of 44th Avenue East would provide an alternate route out of the Manasota Industrial Park, thus helping to alleviate the congestion, lengthy queues, and delays at the intersection of 38th Avenue East and 19th Street Court East. The extension project of 44th Avenue East has been adopted by the Sarasota-Manatee Metropolitan Organization's Year 2025 Financially Feasible Transportation Plan.

The County has also identified lengthy queues and delays at the intersection of 38th Avenue East and 15th Street. The construction of 44 Avenue East will lessen the southbound and westbound left turn demand currently experienced at the intersection of 38th Avenue East and 15 Street East.

3. Alternate routes.

An alternate route for east/west travel is 38th Avenue East and 53rd Avenue East. However, the County states that future traffic indicators make this route unable to accommodate the amount of traffic in this part of the county. An additional east-west arterial is needed, which accounts for the proposal of the 44th Avenue East extension. The County also identifies high levels of congestion on 38th Avenue East at 15th and 19th Streets. The County is considering a second phase of the project, extending 44th Avenue East to US 301, which will allow traffic from the Manasota Industrial Park area a more direct route to US 301.

In 1994 the National Conference of State Railway Officials Railroad Industry Ad Hoc Committee on Crossing Consolidation identified specific situations that support consolidation of rail crossings. The Committee recommended consolidating crossings where there are more than four crossings per mile in urban areas, and more than one crossing per mile in rural areas, where an alternate route is available. The addition of this crossing would give a total of six crossings on the Palmetto corridor operating from 26th Avenue East to the location of the subject crossing on 44th Avenue East. Therefore, it is the Department's recommendation that, with the opening of the 44th Avenue East crossing, the County pursue consolidation of crossings within this corridor.

4. Effect on rail operations and expenses.

The opening of a new highway-rail grade crossing inevitably impacts the Railroad's operations and expenses through the increase of liability and maintenance. Costly and sophisticated circuitry to interconnect grade crossing warning devices and highway traffic signals is necessary which impacts the Railroad's operations and costs. A new crossing increases the cost of maintaining the signalization for the County and the Railroad. A frequent cause of signal malfunction is vandalism. A subsequent result of opening a new crossing is the need for enforcement to deter violators. This, too, effects rail operations and expenses for the Railroad.

5. Design of the grade crossing and road approaches.

The alignment of the approaching roadway is a critical factor in developing a safe grade crossing. The intersection of a highway and railroad should be made as near to the right angle (90 degrees) as possible. Intersections less than 70 degrees should be avoided and intersections less than 30 degrees are not advisable. The extension of 44th Avenue East crosses the rail line at a 17.32 degrees skew. Therefore, it is recommended that the crossing be designed and constructed to minimize the "flange area opening" of the tracks. The road approaches should include a 9 inch non-mountable curb extending 200 feet for full protective closure of the crossing.

6. Presence of multiple tracks and their effect upon railroad and highway operations.

CSX Transportation has only one track at this location; therefore, passing tracks are not applicable to railroad or highway operations at this site. There are no train switching movements at the proposed crossing location. Thus, extensive traffic delays for trains are not anticipated.

CONCLUSION OF LAW

Wherefore, based on the foregoing findings of fact, the County of Manatee, Florida Administrative Code, is permitted to open a public highway-railroad grade crossing located at the extension of 44th Avenue East and the CSX Transportation line.

Based on the findings of facts, the application to open a crossing at the extension of 44th Avenue East meets the requirements of the Florida Administrative Code criteria to merit the recommended Notice of Intent to permit the opening:

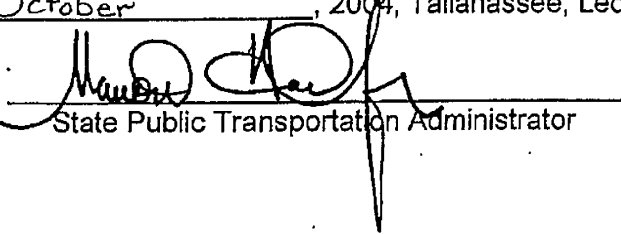
1. Safety. Safety is accommodated through the full protective closure of the crossing during the passage of a train and the inclusion of Standard Traffic Interconnect/Pre-emption signalization.
2. Necessity for rail and vehicle traffic. The proposed crossing is not a necessity to rail; however, based on the county transportation plan the extension of 44th Avenue East will reduce AADT on 15th Street East by approximately 24%, thus, decreasing the lengthy queues and delays at the intersection of 15th Street and 38th Avenue. The 44th Avenue extension will also reduce congestion at 19th Street Court and 38th Avenue East and provide an alternative route to and from the Manasota Industrial Park.
3. Alternate routes. The alternate routes that are available have been determined by the County's traffic plan to be incapable of handling the predicted future traffic. The extension of 44th Avenue East has been adopted by the Manatee County 2020 Comprehensive Plan and the Sarasota/Manatee MPO's Year 2025 Financially Feasible Transportation Plan as providing an east/west arterial connector.
4. Effect on rail operations and expenses. The addition of the proposed crossing would impact operations and increase liability and costs for the Railroad; as well as financially impact the County. However, such costs will be assumed by the County and are offset by the necessity of the crossing.
5. Design of the grade crossing and road approaches. The design of the road approach, which is at a skewed 17.32 degree angle to the tracks, must be mitigated to ensure safety.
6. Presence of multiple tracks and their effect upon railroad and highway operations. There are single tracks at the proposed crossing site.

This NOTICE OF INTENT TO PERMIT the opening of a highway-railroad grade crossing at the extension of 44th Avenue East, Manatee County, shall become final, unless an appropriate petition for a hearing, pursuant to the provisions of Chapter 120, Florida Statutes, is filed within twenty-one (21) days from receipt of this NOTICE OF INTENT TO PERMIT. The petition must comply with the requirements of the Florida Administrative Code Rule 28-106 and the attached Notice of Administrative Hearing Rights.

Failure to file a request for a hearing within this time period shall constitute a waiver of any right to a hearing under Chapter 120, Florida Statutes, and this agency action shall be final.

EXECUTION

This NOTICE OF INTENT TO PERMIT the opening of a highway-rail grade crossing at the extension of 44th Avenue East, Manatee County, is executed this 5TH day October, 2004, Tallahassee, Leon County, Florida.

By: 

State Public Transportation Administrator

Legal Review:

By: 

FDOT Attorney

Date: 10/5/04

Attachment: Notice of Administrative Hearing Rights

Copies to: CSX Transportation, Inc.
City of Bradenton

NOTICE OF ADMINISTRATIVE HEARING RIGHTS

You may petition for an administrative hearing pursuant to sections 120.569 and 120.57, Florida Statutes. If you disagree with the facts stated in the foregoing Notice of Intended Department Action (hereinafter Notice), you may petition for a formal administrative hearing pursuant to section 120.57(1), Florida Statutes. If you agree with the facts stated in the Notice, you may petition for an informal administrative hearing pursuant to section 120.57(2), Florida Statutes. You must file the petition with:

Clerk of Agency Proceedings
Department of Transportation
Haydon Burns Building
605 Suwannee Street, MS 58
Tallahassee, Florida 32399-0458

The petition for an administrative hearing must conform to the requirements of section 120.54(5)(b)4, Florida Statutes, and either Rule 28-106.201(2) or Rule 28-106.301(2), Florida Administrative Code, and must be filed with the Clerk of Agency Proceedings by 5:00 p.m., no later than 21 days after you received the Notice. The petition for an administrative hearing should include a copy of the Notice, and must be legible, on 8½ by 11 inch white paper, and contain:

1. Your name, address, telephone number, any Department of Transportation identifying number on the Notice, if known, the name and identification number of each agency affected, ~~if known, and name, address, and telephone number of your representative, if any,~~ which shall be the address for service purposes during the course of the proceeding;
2. An explanation of how your substantial interests will be affected by the action described in the Notice;
3. A statement of when and how you received the Notice;
4. A statement of all disputed issues of material fact. If there are none, you must so indicate;
5. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; as well as an explanation of how the alleged facts relate to the specific rules and statutes the petitioner contends require reversal or modification of the agency's proposed action;
6. A statement of the relief sought, stating precisely the desired action the petitioner wishes the agency should take in respect to the agency's proposed action.

If there are disputed issues of material fact a formal hearing will be held, where you may present evidence and argument on all issues involved and conduct cross-examination. If there are no disputed issues of material fact an informal hearing will be held, where you may present evidence or a written statement for consideration by the Department.

Mediation, pursuant to section 120.573, Florida Statutes, may be available if agreed to by all parties, and on such terms as may be agreed upon by all parties. The right to an administrative hearing is not affected when mediation does not result in a settlement.

A petition for an administrative hearing shall be dismissed, if it is not in substantial compliance with the requirements of either Rule 28-106.201(2) or Rule 28-106.301(2), Florida Administrative Code, or if the petition has not been timely filed. If your petition is dismissed you will have waived your right to have the intended action reviewed pursuant to chapter 120, Florida Statutes, and the action set forth in the Notice shall be conclusive and final:

ATTACHMENT 'L'

PS - FORM 1001-G
REVISED APRIL 29, 2008
AGREEMENT NO. CSX646784

FACILITY ENCROACHMENT AGREEMENT

THIS AGREEMENT, made and effective as of February 3, 2011, by and between CSX TRANSPORTATION, INC., a Virginia corporation, whose mailing address is 500 Water Street, Jacksonville, Florida 32202, hereinafter called "Licensor," and MANATEE COUNTY GOVERNMENT, a municipal corporation, political subdivision or state agency, under the laws of the State of Florida, whose mailing address is 1022 26th Avenue East, Bradenton, Florida 34208, hereinafter called "Licensee," WITNESSETH:

WHEREAS, Licensee desires to construct (unless previously constructed and designated as existing herein), use and maintain the below described facility(ies), hereinafter called "Facilities," over, under or across property owned or controlled by Licensor, at the below described location(s):

1. One (1) twenty-four inch (24") diameter sub-grade pipeline crossing, solely for the conveyance of stormwater, located at or near Bradenton, Manatee County, Florida, Jacksonville Division, Palmetto Subdivision, Milepost SW-874.77,
2. One (1) thirty-six inch (36") diameter sub-grade pipeline crossing, solely for the conveyance of stormwater, located at or near Bradenton, Manatee County, Florida, Jacksonville Division, Palmetto Subdivision, Milepost SW-874.77,

hereinafter, collectively, called the "Encroachment," as shown on print(s) labeled Exhibit "B" attached hereto and made a part hereof; other details and data pertaining to said Facilities being as indicated on Exhibit "A," also attached hereto and made a part hereof;

NOW, THEREFORE, in consideration of the mutual covenants, conditions, terms and agreements herein contained, the parties hereto agree and covenant as follows:

1. LICENSE:

1.1 Subject to Article 17, Licensor, insofar as it has the legal right, power and authority to do so, and its present title permits, and subject to:

(A) Licensor's present and future right to occupy, possess and use its property within the area of the Encroachment for any and all purposes;

(B) All encumbrances, conditions, covenants, easements, and limitations applicable to Licensor's title to or rights in the subject property; and

(C) Compliance by Licensee with the terms and conditions herein contained;

does hereby license and permit Licensee to construct, maintain, repair, renew, operate, use, alter or change the Facilities at the Encroachment above for the term herein stated, and to remove same upon termination.

1.2 The term Facilities, as used herein, shall include only those structures and ancillary facilities devoted exclusively to the transmission usage above within the Encroachment, and as shown on attached Facility Application Form and plan(s).

1.3 No additional structures or other facilities shall be placed, allowed, or maintained by Licensee in, upon or on the Encroachment except upon prior separate written consent of Licensor.

2. ENCROACHMENT FEE; TERM:

2.1 Licensee shall pay Licensor a one-time nonrefundable Encroachment Fee of ONE THOUSAND AND 00/100 U.S. DOLLARS (\$1,000.00) upon execution of this Agreement. Licensee agrees that the Encroachment Fee applies only to the original Licensee under this Agreement. In the event of a successor (by merger, consolidation, reorganization and/or assignment) or if the original Licensee changes its name, then Licensee shall be subject to payment of Licensor's current administrative and document preparation fees for the cost incurred by Licensor in preparing and maintaining this Agreement on a current basis.

2.2 However, Licensee assumes sole responsibility for, and shall pay directly (or reimburse Licensor), any additional annual taxes and/or periodic assessments levied against Licensor or Licensor's property solely on account of said Facilities or Encroachment.

2.3 This Agreement shall terminate as herein provided, but shall also terminate upon: (a) Licensee's cessation of use of the Facilities or Encroachment for the purpose(s) above; (b) removal of the Facilities; (c) subsequent mutual consent; and/or (d) failure of Licensee to complete installation within five (5) years from the effective date of this Agreement.

2.4 In further consideration for the license or right hereby granted, Licensee hereby agrees that Licensor shall not be charged or assessed, directly or indirectly, with any part of the cost of the installation of said Facilities and appurtenances, and/or maintenance thereof, or for any public works project of which said Facilities is a part.

3. CONSTRUCTION, MAINTENANCE AND REPAIRS:

3.1 Licensee shall construct, maintain, relocate, repair, renew, alter, and/or remove the Facilities, in a prudent, workmanlike manner, using quality materials and complying with any applicable standard(s) or regulation(s) of Licensor (A.R.E.M.A. Specifications), or Licensee's particular industry, National Electrical Safety Code, or any governmental or regulatory body having jurisdiction over the Encroachment.

3.2 Location and construction of Facilities shall be made strictly in accordance with design(s) and specifications furnished to and approved by Licensor and of material(s) and size(s) appropriate for the purpose(s) above recited.

3.3 All of Licensee's work, and exercise of rights hereunder, shall be undertaken at time(s) satisfactory to Licensor, and so as to eliminate or minimize any impact on or interference with the safe use and operation of Licensor's property and appurtenances thereto.

3.4 In the installation, maintenance, repair and/or removal of said Facilities, Licensee shall not use explosives of any type or perform or cause any blasting without the separate express written consent of Licensor. As a condition to such consent, a representative will be assigned by Licensor to monitor blasting, and Licensee shall reimburse Licensor for the entire cost and/or expense of furnishing said monitor.

3.5 Any repairs or maintenance to the Facilities, whether resulting from acts of Licensee, or natural or weather events, which are necessary to protect or facilitate Licensor's use of its property, shall be made by Licensee promptly, but in no event later than thirty (30) days after Licensee has notice as to the need for such repairs or maintenance.

3.6 Licensor, in order to protect or safeguard its property, rail operations, equipment and/or employees from damage or injury, may request immediate repair or renewal of the Facilities, and if the same is not performed, may make or contract to make such repairs or renewals, at the sole risk, cost and expense of Licensee.

3.7 Neither the failure of Licensor to object to any work done, material used, or method of construction or maintenance of said Encroachment, nor any approval given or supervision exercised by Licensor, shall be construed as an admission of liability or responsibility by Licensor, or as a waiver by Licensor of any of the obligations, liability and/or responsibility of Licensee under this Agreement.

3.8 All work on the Encroachment shall be conducted in accordance with Licensor's safety rules and regulations.

3.9 Licensee hereby agrees to reimburse Licensor any loss, cost or expense (including losses resulting from train delays and/or inability to meet train schedules) arising from any failure of Licensee to make repairs or conduct maintenance as required by Section 3.5 above or from improper or incomplete repairs or maintenance to the Facilities or Encroachment.

4. PERMITS, LICENSES:

4.1 Before any work hereunder is performed, or before use of the Encroachment for the contracted purpose, Licensee, at its sole cost and expense, shall obtain all necessary permit(s) (including but not limited to zoning, building, construction, health, safety or environmental matters), letter(s) or certificate(s) of approval. Licensee expressly agrees and warrants that it shall conform and limit its activities to the terms of such permit(s), approval(s) and authorization(s), and shall comply with all applicable ordinances, rules, regulations, requirements and laws of any governmental authority (State, Federal or Local) having jurisdiction over Licensee's activities, including the location, contact, excavation and protection regulations of the Occupational Safety and Health Act (OSHA) (29 CFR 1926.651(b)), et al., and State "One Call" – "Call Before You Dig" requirements.

4.2 Licensee assumes sole responsibility for failure to obtain such permit(s) or approval(s), for any violations thereof, or for costs or expenses of compliance or remedy.

5. MARKING AND SUPPORT:

5.1 With respect to any subsurface installation or maintenance upon Licensor's property, Licensee, at its sole cost and expense, shall:

- (A) support track(s) and roadbed in a manner satisfactory to Licensor;
- (B) backfill with satisfactory material and thoroughly tamp all trenches to prevent settling of surface of land and roadbed of Licensor; and
- (C) either remove any surplus earth or material from Licensor's property or cause said surplus earth or material to be placed and distributed at location(s) and in such manner Licensor may approve.

5.2 After construction or maintenance of the Facilities, Licensee shall:

- (A) Restore any track(s), roadbed and other disturbed property; and
- (B) Erect, maintain and periodically verify the accuracy of aboveground markers, in a form approved by Licensor, indicating the location, depth and ownership of any underground Facilities or related facilities.

5.3 Licensee shall be solely responsible for any subsidence or failure of lateral or subjacent support in the Encroachment area for a period of three (3) years after completion of installation.

6. TRACK CHANGES:

6.1 In the event that rail operations and/or track maintenance result in changes in grade or alignment of, additions to, or relocation of track(s) or other facilities, or in the event future use of Licensor's rail corridor or property necessitate any change of location, height or depth in the Facilities or Encroachment, Licensee, at its sole cost and expense and within thirty (30) days after notice in writing from Licensor, shall make changes in the Facilities or Encroachment to accommodate such track(s) or operations.

6.2 If Licensee fails to do so, Licensor may make or contract to make such changes at Licensee's cost.

7. FACILITY CHANGES:

7.1 Licensee shall periodically monitor and verify the depth or height of the Facilities or Encroachment in relation to the existing tracks and facilities, and shall relocate the Facilities or change the Encroachment, at Licensee's expense, should such relocation or change be necessary to comply with the minimum clearance requirements of Licensor.

7.2 If Licensee undertakes to revise, renew, relocate or change in any manner whatsoever all or any part of the Facilities (including any change in voltage or gauge of wire or any change in circumference, diameter or radius of pipe or change in materials transmitted in and through said pipe), or is required by any public agency or court order to do so, plans therefor shall be submitted to Licensor for approval before such change. After approval, the terms and conditions of this Agreement shall apply thereto.

8. INTERFERENCE WITH RAIL FACILITIES:

8.1 Although the Facilities/Encroachment herein permitted may not presently interfere with Licensor's railroad or facilities, in the event that the operation, existence or maintenance of said Facilities, in the sole judgment of Licensor, causes: (a) interference (including, but not limited to, physical or interference from an electromagnetic induction, or interference from stray or other currents) with Licensor's power lines, communication, signal or other wires, train control system, or electrical or electronic apparatus; or (b) interference in any manner, with the operation, maintenance or use of the rail corridor, track(s), structures, pole line(s), devices, other property, or any appurtenances thereto; then and in either event, Licensee, upon receipt of written notice from Licensor of any such interference, and at Licensee's sole risk, cost and expense, shall promptly make such changes in its Facilities or installation, as may be required in the reasonable judgment of the Licensor to eliminate all such interference. Upon Licensee's failure to remedy or change, Licensor may do so or contract to do so at Licensee's sole cost.

8.2 Without assuming any duty hereunder to inspect the Facilities, Licensor hereby reserves the right to inspect same and to require Licensee to undertake repairs, maintenance or adjustments to the Facilities, which Licensee hereby agrees to make promptly, at Licensee's sole cost and expense.

9. RISK, LIABILITY, INDEMNITY:

With respect to the relative risk and liabilities of the parties, it is hereby agreed that:

9.1 To the fullest extent permitted by State law (constitutional or statutory, as amended), Licensee hereby agrees to, defend, indemnify, and hold Licensor harmless from and against any and all liability, loss, claim, suit, damage, charge or expense which Licensor may suffer, sustain, incur or in any way be subjected to, on account of death of or injury to any person whomsoever (including officers, agents, employees or invitees of Licensor), and for damage to or loss of or destruction of any property whatsoever, arising out of, resulting from, or in any way connected with the construction, repair, maintenance, replacement, presence, existence,

operations, use or removal of the Facilities or any structure in connection therewith, or restoration of premises of Licensor to good order or condition after removal, EXCEPT when proven to have been caused solely by the willful misconduct or gross negligence of Licensor. HOWEVER, to the fullest extent permitted by State law, during any period of actual construction, repair, maintenance, replacement or removal of the Facilities, wherein agents, equipment or personnel of Licensee are on the railroad rail corridor, Licensee's liability hereunder shall be absolute, irrespective of any joint, sole or contributory fault or negligence of Licensor.

9.2 Use of Licensor's rail corridor involves certain risks of loss or damage as a result of the rail operations. Notwithstanding Section 9.1, Licensee expressly assumes all risk of loss and damage to Licensee's Property or the Facilities in, on, over or under the Encroachment, including loss of or any interference with use or service thereof, regardless of cause, including electrical field creation, fire or derailment resulting from rail operations. For this Section, the term "Licensee's Property" shall include property of third parties situated or placed upon Licensor's rail corridor by Licensee or by such third parties at request of or for benefit of Licensee.

9.3 To the fullest extent permitted by State law, as above, Licensee assumes all responsibility for, and agrees to defend, indemnify and hold Licensor harmless from: (a) all claims, costs and expenses, including reasonable attorneys' fees, as a consequence of any sudden or nonsudden pollution of air, water, land and/or ground water on or off the Encroachment area, arising from or in connection with the use of this Encroachment or resulting from leaking, bursting, spilling, or any escape of the material transmitted in or through the Facilities; (b) any claim or liability arising under federal or state law dealing with either such sudden or nonsudden pollution of air, water, land and/or ground water arising therefrom or the remedy thereof; and (c) any subsidence or failure of lateral or subjacent support of the tracks arising from such Facilities leakage.

9.4 Notwithstanding Section 9.1, Licensee also expressly assumes all risk of loss which in any way may result from Licensee's failure to maintain either required clearances for any overhead Facilities or the required depth and encasement for any underground Facilities, whether or not such loss(es) result(s) in whole or part from Licensor's contributory negligence or joint fault.

9.5 Obligations of Licensee hereunder to release, indemnify and hold Licensor harmless shall also extend to companies and other legal entities that control, are controlled by, subsidiaries of, or are affiliated with Licensor, as well as any railroad that operates over the rail corridor on which the Encroachment is located, and the officers, employees and agents of each.

9.6 If a claim is made or action is brought against Licensor, and/or its operating lessee, for which Licensee may be responsible hereunder, in whole or in part, Licensee shall be notified to assume the handling or defense of such claim or action; but Licensor may participate in such handling or defense.

9.7 Notwithstanding anything contained in this Agreement, the limitation of liability contained in the state statutes, as amended from time to time, shall not limit Licensor's ability to collect under the insurance policies required to be maintained under this Agreement.

10. INSURANCE:

10.1 Prior to commencement of surveys, installation or occupation of premises pursuant to this Agreement, Licensee shall procure and shall maintain during the continuance of this Agreement, at its sole cost and expense, a policy of Commercial General Liability Insurance (CGL), naming Licensor, and/or its designee, as additional insured and covering liability assumed by Licensee under this Agreement. A coverage limit of not less than THREE MILLION AND 00/100 U.S. DOLLARS (\$3,000,000.00) Combined Single Limit per occurrence for bodily injury liability and property damage liability is currently required as a prudent minimum to protect Licensee's assumed obligations. The evidence of insurance coverage shall be endorsed to provide for thirty (30) days' notice to Licensor, or its designee, prior to cancellation or modification of any policy. Mail CGL certificate, along with agreement, to CSX Transportation, Inc., Speed Code J180, 500 Water Street, Jacksonville, FL 32202. On each successive year, send certificate to Speed Code C907 at the address listed above.

10.2 If Licensee's existing CGL policy(ies) do(es) not automatically cover Licensee's contractual liability during periods of survey, installation, maintenance and continued occupation, a specific endorsement adding such coverage shall be purchased by Licensee. If said CGL policy is written on a "claims made" basis instead of a "per occurrence" basis, Licensee shall arrange for adequate time for reporting losses. Failure to do so shall be at Licensee's sole risk.

10.3 Licensor, or its designee, may at any time request evidence of insurance purchased by Licensee to comply with this Agreement. Failure of Licensee to comply with Licensor's request shall be considered a default by Licensee.

10.4 Securing such insurance shall not limit Licensee's liability under this Agreement, but shall be security therefor.

10.5 (A) In the event Licensee finds it necessary to perform construction or demolition operations within fifty feet (50') of any operated railroad track(s) or affecting any railroad bridge, trestle, tunnel, track(s), roadbed, overpass or underpass, Licensee shall: (a) notify Licensor; and (b) require its contractor(s) performing such operations to procure and maintain during the period of construction or demolition operations, at no cost to Licensor, Railroad Protective Liability (RPL) Insurance, naming Licensor, and/or its designee, as Named Insured, written on the current ISO/RIMA Form (ISO Form No. CG 00 35 01 96) with limits of FIVE MILLION AND 00/100 U.S. DOLLARS (\$5,000,000.00) per occurrence for bodily injury and property damage, with at least TEN MILLION AND 00/100 U.S. DOLLARS (\$10,000,000.00) aggregate limit per annual policy period, with Pollution Exclusion Amendment (ISO CG 28 31 11 85) if an older ISO Form CG 00 35 is used. The original of such RPL policy shall be sent to and approved by Licensor prior to commencement of such construction or demolition. Licensor reserves the right to demand higher limits.

(B) At Licensor's option, in lieu of purchasing RPL insurance from an insurance company (but not CGL insurance), Licensee may pay Licensor, at Licensor's current rate at time of request, the cost of adding this Encroachment, or additional construction and/or demolition activities, to Licensor's Railroad Protective Liability (RPL) Policy for the period of actual construction. This coverage is offered at Licensor's discretion and may not be available under all circumstances.

10.6 Notwithstanding the provisions of Sections 10.1 and 10.2, Licensee, pursuant to State Statute(s), may self-insure or self-assume, in any amount(s), any contracted liability arising under this Agreement, under a funded program of self-insurance, which fund will respond to liability of Licensee imposed by and in accordance with the procedures established by law.

11. GRADE CROSSINGS; FLAGGING:

11.1 Nothing herein contained shall be construed to permit Licensee or Licensee's contractor to move any vehicles or equipment over the track(s), except at public road crossing(s), without separate prior written approval of Licensor (CSXT Form 7422).

11.2 If Licensor deems it advisable, during any construction, maintenance, repair, renewal, alteration, change or removal of said Facilities, to place watchmen, flagmen, inspectors or supervisors for protection of operations of Licensor or others on Licensor's rail corridor at the Encroachment, and to keep persons, equipment or materials away from the track(s), Licensor shall have the right to do so at the expense of Licensee, but Licensor shall not be liable for failure to do so.

11.3 Subject to Licensor's consent and to Licensor's Railroad Operating Rules and labor agreements, Licensee may provide flagmen, watchmen, inspectors or supervisors during all times of construction, repair, maintenance, replacement or removal, at Licensee's sole risk and expense; and in such event, Licensor shall not be liable for the failure or neglect of such watchmen, flagmen, inspectors or supervisors.

12. LICENSOR'S COSTS:

12.1 Any additional or alternative costs or expenses incurred by Licensor to accommodate Licensee's continued use of Licensor's property as a result of track changes or wire changes shall also be paid by Licensee.

12.2 Licensor's expense for wages ("force account" charges) and materials for any work performed at the expense of Licensee pursuant hereto shall be paid by Licensee within thirty (30) days after receipt of Licensor's bill therefor. Licensor may, at its discretion, request an advance deposit for estimated Licensor costs and expenses.

12.3 Such expense shall include, but not be limited to, cost of railroad labor and supervision under "force account" rules, plus current applicable overhead percentages, the actual cost of materials, and insurance, freight and handling charges on all material used. Equipment

rentals shall be in accordance with Licensor's applicable fixed rate. Licensor may, at its discretion, require advance deposits for estimated costs of such expenses and costs.

13. DEFAULT, BREACH, WAIVER:

13.1 The proper and complete performance of each covenant of this Agreement shall be deemed of the essence thereof, and in the event Licensee fails or refuses to fully and completely perform any of said covenants or remedy any breach within thirty (30) days after receiving written notice from Licensor to do so (or within forty-eight (48) hours in the event of notice of a railroad emergency), Licensor shall have the option of immediately revoking this Agreement and the privileges and powers hereby conferred, regardless of encroachment fee(s) having been paid in advance for any annual or other period. Upon such revocation, Licensee shall make removal in accordance with Article 14.

13.2 No waiver by Licensor of its rights as to any breach of covenant or condition herein contained shall be construed as a permanent waiver of such covenant or condition, or any subsequent breach thereof, unless such covenant or condition is permanently waived in writing by Licensor.

13.3 Neither the failure of Licensor to object to any work done, material used, or method of construction or maintenance of said Encroachment, nor any approval given or supervision exercised by Licensor, shall be construed as an admission of liability or responsibility by Licensor, or as a waiver by Licensor of any of the obligations, liability and/or responsibility of Licensee under this Agreement.

14. TERMINATION, REMOVAL:

14.1 All rights which Licensee may have hereunder shall cease upon the date of (a) termination, (b) revocation, or (c) subsequent agreement, or (d) Licensee's removal of the Facility from the Encroachment. However, neither termination nor revocation of this Agreement shall affect any claims and liabilities which have arisen or accrued hereunder, and which at the time of termination or revocation have not been satisfied; neither party, however, waiving any third party defenses or actions.

14.2 Within thirty (30) days after revocation or termination, Licensee, at its sole risk and expense, shall (a) remove the Facilities from the rail corridor of Licensor, unless the parties hereto agree otherwise, (b) restore the rail corridor of Licensor in a manner satisfactory to Licensor, and (c) reimburse Licensor any loss, cost or expense of Licensor resulting from such removal.

15. NOTICE:

15.1 Licensee shall give Licensor at least thirty (30) days written notice before doing any work on Licensor's rail corridor, except that in cases of emergency shorter notice may be given. Licensee shall provide proper notification as follows:

a. For non-emergencies, Licensee shall complete and submit Licensors Outside Party Number Request Form (Form # OP) by facsimile, to facsimile numbers: (904) 245-3692 and (904) 633-3450. Licensee may also scan and email a completed form to email address: OP_Request@csx.com. A blank form, as well as additional instructions and information, can be obtained from Licensors web site, via web link: http://www.csx.com/fuseaction=aboutproperty_corridor%20#scheduling.

b. For emergencies, Licensee shall complete all of the steps outlined in Section 15.1 a. above, and shall also include detailed information of the emergency. Licensee shall also call and report details of the emergency to Licensors Rail Operations Emergency Telephone Number: 1-800-232-0144. In the event Licensors needs to contact Licensee concerning an emergency involving Licensees Facility(ies), the emergency phone number for Licensee is: _____.

15.2 All other notices and communications concerning this Agreement shall be addressed to Licensee at the address above, and to Licensors at the address shown on Page 1, c/o CSXT Contract Management, J180; or at such other address as either party may designate in writing to the other.

15.3 Unless otherwise expressly stated herein, all such notices shall be in writing and sent via Certified or Registered Mail, Return Receipt Requested, or by courier, and shall be considered delivered upon: (a) actual receipt, or (b) date of refusal of such delivery.

16. ASSIGNMENT:

16.1 The rights herein conferred are the privileges of Licensee only, and Licensee shall obtain Licensors prior written consent to any assignment of Licensees interest herein; said consent shall not be unreasonably withheld.

16.2 Subject to Sections 2 and 16.1, this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors or assigns.

16.3 Licensee shall give Licensors written notice of any legal succession (by merger, consolidation, reorganization, etc.) or other change of legal existence or status of Licensee, with a copy of all documents attesting to such change or legal succession, within thirty (30) days thereof.

16.4 Licensors expressly reserves the right to assign this Agreement, in whole or in part, to any grantee, lessee, or vendee of Licensors underlying property interests in the Encroachment, upon written notice thereof to Licensee.

16.5 In the event of any unauthorized sale, transfer, assignment, sublicense or encumbrance of this Agreement, or any of the rights and privileges hereunder, Licensors, at its option, may revoke this Agreement by giving Licensee or any such assignee written notice of such revocation; and Licensee shall reimburse Licensors for any loss, cost or expense Licensors may incur as a result of Licensees failure to obtain said consent.

17. TITLE:

17.1 Licensee understands that Licensor occupies, uses and possesses lands, rights-of-way and rail corridors under all forms and qualities of ownership rights or facts, from full fee simple absolute to bare occupation. Accordingly, nothing in this Agreement shall act as or be deemed to act as any warranty, guaranty or representation of the quality of Licensor's title for any particular Encroachment or segment of Rail Corridor occupied, used or enjoyed in any manner by Licensee under any rights created in this Agreement. It is expressly understood that Licensor does not warrant title to any Rail Corridor and Licensee will accept the grants and privileges contained herein, subject to all lawful outstanding existing liens, mortgages and superior rights in and to the Rail Corridor, and all leases, licenses and easements or other interests previously granted to others therein.

17.2 The term "license," as used herein, shall mean with regard to any portion of the Rail Corridor which is owned by Licensor in fee simple absolute, or where the applicable law of the State where the Encroachment is located otherwise permits Licensor to make such grants to Licensee, a "permission to use" the Rail Corridor, with dominion and control over such portion of the Rail Corridor remaining with Licensor, and no interest in or exclusive right to possess being otherwise granted to Licensee. With regard to any other portion of Rail Corridor occupied, used or controlled by Licensor under any other facts or rights, Licensor merely waives its exclusive right to occupy the Rail Corridor and grants no other rights whatsoever under this Agreement, such waiver continuing only so long as Licensor continues its own occupation, use or control. Licensor does not warrant or guarantee that the license granted hereunder provides Licensee with all of the rights necessary to occupy any portion of the Rail Corridor. Licensee further acknowledges that it does not have the right to occupy any portion of the Rail Corridor held by Licensor in less than fee simple absolute without also receiving the consent of the owner(s) of the fee simple absolute estate. Further, Licensee shall not obtain, exercise or claim any interest in the Rail Corridor that would impair Licensor's existing rights therein.

17.3 Licensee agrees it shall not have nor shall it make, and hereby completely and absolutely waives its right to, any claim against Licensor for damages on account of any deficiencies in title to the Rail Corridor in the event of failure or insufficiency of Licensor's title to any portion thereof arising from Licensee's use or occupancy thereof.

17.4 Licensee agrees to fully and completely indemnify and defend all claims or litigation for slander of title, overburden of easement, or similar claims arising out of or based upon the Facilities placement, or the presence of the Facilities in, on or along any Encroachment(s), including claims for punitive or special damages.

17.5 Licensee shall not at any time own or claim any right, title or interest in or to Licensor's property occupied by the Encroachments, nor shall the exercise of this Agreement for any length of time give rise to any right, title or interest in Licensee to said property other than the license herein created.

17.6 Nothing in this Agreement shall be deemed to give, and Licensor hereby expressly waives, any claim of ownership in and to any part of the Facilities.

17.7 Licensee shall not create or permit any mortgage, pledge, security, interest, lien or encumbrances, including without limitation, tax liens and liens or encumbrances with respect to work performed or equipment furnished in connection with the construction, installation, repair, maintenance or operation of the Facilities in or on any portion of the Encroachment (collectively, "Liens or Encumbrances"), to be established or remain against the Encroachment or any portion thereof or any other Licensor property.

17.8 In the event that any property of Licensor becomes subject to such Liens or Encumbrances, Licensee agrees to pay, discharge or remove the same promptly upon Licensee's receipt of notice that such Liens or Encumbrances have been filed or docketed against the Encroachment or any other property of Licensor; however, Licensee reserves the right to challenge, at its sole expense, the validity and/or enforceability of any such Liens or Encumbrances.

18. GENERAL PROVISIONS:

18.1 This Agreement, and the attached specifications, contains the entire understanding between the parties hereto.

18.2 Neither this Agreement, any provision hereof, nor any agreement or provision included herein by reference, shall operate or be construed as being for the benefit of any third person.

18.3 Except as otherwise provided herein, or in any Rider attached hereto, neither the form of this Agreement, nor any language herein, shall be interpreted or construed in favor of or against either party hereto as the sole drafter thereof.

18.4 This Agreement is executed under current interpretation of applicable Federal, State, County, Municipal or other local statute, ordinance or law(s). However, each separate division (paragraph, clause, item, term, condition, covenant or agreement) herein shall have independent and severable status for the determination of legality, so that if any separate division is determined to be void or unenforceable for any reason, such determination shall have no effect upon the validity or enforceability of each other separate division, or any combination thereof.

18.5 This Agreement shall be construed and governed by the laws of the state in which the Facilities and Encroachment are located.

18.6 If any amount due pursuant to the terms of this Agreement is not paid by the due date, it will be subject to Licensor's standard late charge and will also accrue interest at eighteen percent (18%) per annum, unless limited by local law, and then at the highest rate so permitted.

18.7 Licensee agrees to reimburse Licensor for all reasonable costs (including attorney's fees) incurred by Licensor for collecting any amount due under the Agreement.

18.8 The provisions of this License are considered confidential and may not be disclosed to a third party without the consent of the other party(s), except: (a) as required by statute, regulation or court order, (b) to a parent, affiliate or subsidiary company, (c) to an auditing firm or legal counsel that are agreeable to the confidentiality provisions, or (d) to Lessees of Licensor's land and/or track who are affected by the terms and conditions of this Agreement and will maintain the confidentiality of this Agreement.

18.9 Licensor shall refund to Licensee any overpayments collected, plus any taxes paid in advance; PROVIDED, however, such refund shall not be made when the cumulative total involved is less than One Hundred Dollars (\$100.00).

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate
(each of which shall constitute an original) as of the effective date of this Agreement.

Witness for Licenser:

CSX TRANSPORTATION, INC.

_____ By: _____

Print/Type Name: _____

Print/Type Title: _____

Witness for Licensee:

MANATEE COUNTY GOVERNMENT

_____ By: _____

Who, by the execution hereof, affirms that he/she has
the authority to do so and to bind the Licensee to the
terms and conditions of this Agreement.

Print/Type Name: _____

Print/Type Title: _____

Tax ID No.: _____

Authority under Ordinance or

Resolution No. _____,

Dated _____.

ATTACHMENT 'M'

Project: Bradenton, Manatee County, FL
New at-grade crossing at 44th Avenue East,
including full width concrete surface and
automatic warning devices, DOT# 928 622U
Jacksonville Division, Palmetto S.D. SW-874.77

CSXT OP# FL 1399

CONSTRUCTION AGREEMENT

This Construction Agreement ("Agreement") is made as of _____, 20__ by and between CSX TRANSPORTATION, INC., a Virginia corporation with its principal place of business in Jacksonville, Florida ("CSXT"), and Manatee County Board of County Commissioners, a body corporate and political subdivision of the State of Florida ("Agency").

EXPLANATORY STATEMENT

1. Agency has proposed to construct, or to cause to be constructed, Bradenton, Manatee County, FL. New at grade crossing at 44th Avenue East, including full width concrete surface and CFLS&G (Cantilever, Flashing Light Signals and Gates) with simultaneous pre-exemption, Milepost SW-874.77, DOT# 928 622U, Jacksonville Division, Palmetto S.D. (the "Project").
2. Agency has obtained, or will obtain, all authorizations, permits and approvals from all local, state and federal agencies (including Agency), and their respective governing bodies and regulatory agencies, necessary to proceed with the Project and to appropriate all funds necessary to construct the Project.
3. Agency acknowledges that: (i) by entering into this Agreement, CSXT will provide services and accommodations to promote public interest in this Project, without profit or other economic inducement typical of other Agency contractors; (ii) neither CSXT nor its affiliates (including their respective directors, officers, employees or agents) will incur any costs, expenses, losses or liabilities in excess of payments made to CSXT, by or on behalf of Agency or its contractors, pursuant to this Agreement; and (iii) CSXT retains the paramount right to regulate all activities affecting its property and operations.
4. It is the purpose of this Agreement to provide for the terms and conditions upon which the Project may proceed.

NOW, THEREFORE, in consideration of the foregoing Explanatory Statement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged by the parties, the parties agree as follows:

1. Project Plans and Specifications

- 1.1 Preparation and Approval. Pursuant to Exhibit A of this Agreement, all plans, specifications, drawings and other documents necessary or appropriate to the design and construction of the Project shall be prepared, at Agency's sole cost and expense, by Agency or CSXT or their respective contractors. Project plans, specifications and drawings prepared by or on behalf of Agency shall be subject, at CSXT's election, to the review and approval of CSXT. Such plans, specifications and drawings, as prepared or approved by CSXT, are referred to as the "Plans",

and shall be incorporated and deemed a part of this Agreement. Plans prepared or submitted to and approved by CSXT as of the date of this Agreement are set forth in Exhibit B to this Agreement.

- 1.2 Effect of CSXT Approval or Preparation of Plans. By its review, approval or preparation of Plans pursuant to this Agreement, CSXT signifies only that such Plans and improvements constructed in accordance with such Plans satisfy CSXT's requirements. CSXT expressly disclaims all other representations and warranties in connection with the Plans, including, but not limited to, the integrity, suitability or fitness for the purposes of Agency or any other persons of the Plans or improvements constructed in accordance with the Plans.

- 1.3 Compliance with Plans. The Project shall be constructed in accordance with the Plans.

2. Allocation and Conduct of Work

Work in connection with the Project shall be allocated and conducted as follows:

- 2.1 CSXT Work. Subject to timely payment of Reimbursable Expenses as provided by Section 4, CSXT shall provide, or cause to be provided, the services as set forth by Exhibit A to this Agreement. Agency agrees that CSXT shall provide all services that CSXT deems necessary or appropriate (whether or not specified by Exhibit A) to preserve and maintain its property and operations, without impairment or exposure to liability of any kind and in compliance with all applicable federal, state and local regulations and CSXT's contractual obligations, including, but not limited to, CSXT's existing or proposed third party agreements and collective bargaining agreements.

- 2.2 Agency Work. Agency shall perform, or cause to be performed, all work as set forth by Exhibit A, at Agency's sole cost and expense.

- 2.3 Conduct of Work. CSXT shall commence its work under this Agreement following: (i) delivery to CSXT of a notice to proceed from Agency; (ii) payment of Reimbursable Expenses (as provided by Section 4.1) as required by CSXT prior to the commencement of work by CSXT; (iii) issuance of all permits, approvals and authorizations necessary or appropriate for such work; and (iv) delivery of proof of insurance acceptable to CSXT, as required by Section 9. The initiation of any services by CSXT pursuant to this Agreement, including, but not limited to, the issuance of purchase orders or bids for materials or services, shall constitute commencement of work for the purposes of this Section. The parties intend that all work by CSXT or on CSXT property shall conclude no later than April, 25, 2012, unless the parties mutually agree to extend such date.

3. Special Provisions. Agency shall observe and abide by, and shall require its contractors ("Contractors") to observe and abide by the terms, conditions and provisions set forth in Exhibit C to this Agreement (the "Special Provisions"). To the extent that Agency performs Project work itself; Agency shall be deemed a Contractor for purposes of this Agreement. Agency further agrees that, prior to the commencement of Project work by any third party Contractor, such Contractor shall execute and deliver to CSXT Schedule I to this Agreement to acknowledge Contractor's agreement to observe and abide by the terms and conditions of this Agreement.

4. Cost of Project and Reimbursement Procedures

- 4.1 Reimbursable Expenses. Agency shall reimburse CSXT for all costs and expenses incurred by CSXT in connection with the Project, including, without limitation: (1) all out of pocket expenses, (2) travel and lodging expenses, (3) telephone, facsimile, and mailing expenses, (4) costs for equipment, tools, materials and supplies, (5) sums paid to CSXT's consultants and subcontractors, and (6) CSXT labor in connection with the Project, together with CSXT labor overhead percentages established by CSXT pursuant to applicable law (collectively, "**Reimbursable Expenses**"). Reimbursable Expenses shall also include expenses incurred by CSXT prior to the date of this Agreement to the extent identified by the Estimate provided pursuant to Section 4.2.
- 4.2 Estimate. CSXT has estimated the total Reimbursable Expenses for the Project as shown on Exhibit D (the "**Estimate**", as amended or revised). In the event CSXT anticipates that actual Reimbursable Expenses for the Project may exceed such Estimate, it shall provide Agency with the revised Estimate of the total Reimbursable Expenses, together with a revised Payment Schedule (as defined by Section 4.3.1), for Agency's approval and confirmation that sufficient funds have been appropriated to cover the total Reimbursable Expenses of such revised Estimate. CSXT may elect, by delivery of notice to Agency, to immediately cease all further work on the Project, unless and until Agency provides such approval and confirmation.
- 4.3 Payment Terms.
- 4.3.1 Agency shall pay CSXT for Reimbursable Expenses in the amounts and on the dates set forth in the Payment Schedule as shown on Exhibit E (the "**Payment Schedule**", as revised pursuant to Section 4.2). CSXT agrees to submit invoices to Agency for such amounts and Agency shall remit payment to CSXT at the later of thirty (30) days following delivery of each such invoice to Agency or, the payment date (if any) set forth in the Payment Schedule.
- 4.3.2 Following completion of the Project, CSXT shall submit to Agency a final invoice that reconciles the total Reimbursable Expenses incurred by CSXT against the total payments received from Agency. Agency shall pay to CSXT the amount by which Reimbursable Expenses exceed total payments as shown by the final invoice, within thirty (30) days following delivery of such invoice to Agency. In the event that the payments received by CSXT from Agency exceed the Reimbursable Expenses, CSXT shall remit such excess to Agency.
- 4.3.3 In the event that Agency fails to pay CSXT any sums due CSXT under this Agreement: (i) Agency shall pay CSXT interest at the lesser of 1.0% per month or the maximum rate of interest permitted by applicable law on the delinquent amount until paid in full; and (ii) CSXT may elect, by delivery of notice to Agency: (A) to immediately cease all further work on the Project, unless and until Agency pays the entire delinquent sum, together with accrued interest; and/or (B) to terminate this Agreement.
- 4.3.4 All invoices from CSXT shall be delivered to Agency in accordance with Section 16 of this Agreement. All payments by Agency to CSXT shall be made by certified check and mailed to the following address or such other address as designated by CSXT's notice to Agency:

CSX Transportation, Inc.
P.O. Box 116651
Atlanta, GA 30368-6651

- 4.4 Effect of Termination. Agency's obligation to pay to CSXT Reimbursable Expenses in accordance with Section 4 shall survive termination of this Agreement for any reason.
5. Appropriations: Agency represents to CSXT that: (i) Agency has appropriated funds sufficient to reimburse CSXT for the Reimbursable Expenses encompassed by the Estimate attached as Exhibit D; (ii) Agency shall use its best efforts to obtain appropriations necessary to cover Reimbursable Expenses encompassed by subsequent Estimates approved by Agency; and (iii) Agency shall promptly notify CSXT in the event that Agency is unable to obtain such appropriations.
6. Easements and Licenses
- 6.1 Agency Obligation. Agency shall acquire all necessary licenses, permits and easements required for the Project.
- 6.2 Temporary Construction Licenses. Insofar as it has the right to do so, CSXT hereby grants Agency a nonexclusive license to access and cross CSXT's property, to the extent necessary for the construction of the Project (excluding ingress or egress over public grade crossings), along such routes and upon such terms as may be defined and imposed by CSXT and such temporary construction easements as may be designated on the Plans approved by CSXT.
- 6.3 Permanent Easements. Insofar as it has the right to do so, CSXT shall grant, without warranty to Agency, easements for the use and maintenance of the Project wholly or partly on CSXT property as shown on the Plans approved by CSXT, if any, on terms and conditions and at a price acceptable to the parties. Upon request by CSXT, Agency shall furnish to CSXT descriptions and plat plans for the easements.
7. Permits: At its sole cost and expense, Agency shall procure all permits and approvals required by any federal, state, or local governments or governmental agencies for the construction, maintenance and use of the Project, copies of which shall be provided to CSXT.
-
8. Termination
- 8.1 By Agency. For any reason, Agency may, as its sole remedy, terminate this Agreement by delivery of notice to CSXT. Agency shall not be entitled to otherwise pursue claims for consequential, direct, indirect or incidental damages or lost profits as a consequence of CSXT's default or termination of this Agreement or Work on the Project by either party.
- 8.2 By CSXT. In addition to the other rights and remedies available to CSXT under this Agreement, CSXT may terminate this Agreement by delivery of notice to Agency in the event Agency or its Contractors fail to observe the terms or conditions of this Agreement and such failure continues more than ten (10) business days following delivery of notice of such failure by CSXT to Agency.
- 8.3 Consequences of Termination. If the Agreement is terminated by either party pursuant to this Section or any other provision of this Agreement, the parties understand that it may be impractical for them to immediately stop the Work. Accordingly, they agree that, in such instance a party may continue to perform Work until it has reached a point where it may reasonably and safely suspend the Work. Agency shall reimburse CSXT pursuant to this Agreement for the Work performed, plus all costs reasonably incurred by CSXT to discontinue the Work and protect the Work upon full suspension of the same, the cost of returning CSXT's

property to its former condition, and all other costs of CSXT incurred as a result of the Project up to the time of full suspension of the Work. Termination of this Agreement or Work on the Project, for any reason, shall not diminish or reduce Agency's obligation to pay CSXT for Reimbursable Expenses incurred in accordance with this Agreement. In the event of the termination of this Agreement or the Work for any reason, CSXT's only remaining obligation to Agency shall be to refund to Agency payments made to CSXT in excess of Reimbursable Expenses in accordance with Section 4.

9. Insurance In addition to the insurance that Agency requires of its Contractor, Agency shall acquire or require its Contractor to purchase and maintain insurance in compliance with CSXT's insurance requirements attached to this Agreement as Exhibit F. Neither Agency nor Contractor shall commence work on the Project until such policy or policies have been submitted to and approved by CSXT's Risk Management Department.

10. Ownership and Maintenance

- 10.1 By Agency. Agency shall maintain and repair, at its sole cost and expense, all parts comprising the permanent aspects of the Project, as shown by the Plans, consisting of roadway pavement up to the outer ends of the railroad cross ties, sidewalks, guardrails, and curbs, in good and safe condition to CSXT's satisfaction. In the event Agency fails to do so after reasonable notice from CSXT (unless an emergency condition exists or is imminent in the opinion of CSXT, that requires immediate action), CSXT may perform such maintenance and repair, at Agency's sole cost and expense.
- 10.2 By CSXT. CSXT shall maintain and repair the crossing surface between the ends of its cross ties and its signal facilities at the crossing, at Agency's sole cost and expense.
- 10.3 Alterations. Agency shall not undertake any alteration, modification or expansion of the Project, without the prior written approval of CSXT, which may be withheld for any reason, and the execution of such agreements as CSXT may require. CSXT may undertake alterations of its property, track or facilities and shall be reimbursed by Agency for the expenses incurred by CSXT with respect to the removal and restoration of the crossing in connections with such alteration.

11. Indemnification

- 11.1 Generally. To the maximum extent permitted by applicable law, Agency and its Contractors shall indemnify, defend, and hold CSXT and its affiliates harmless from and against all claims, demands, payments, suits, actions, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages), for any injury to or death to any person(s) (including, but not limited to the employees of CSXT, its affiliates, Agency or its Contractors), for the loss of or damage to any property whatsoever (including but not limited to property owned by or in the care, custody, or control of CSXT, its affiliates, Agency or its Contractors, and environmental damages and any related remediation brought or recovered against CSXT and its affiliates), arising directly or indirectly from the negligence, recklessness or intentional wrongful misconduct of the Contractors, Agency, and their respective agents, employees, invitees, contractors, or its contractors' agents, employees or invitees in the performance of work in connection with the Project or activities incidental thereto, or from their presence on or about CSXT's property. The foregoing indemnification obligation shall not be limited to the insurance coverage required by this

Agreement, except to the extent required by law or otherwise expressly provided by this Agreement.

- 11.2 Compliance with Laws. Agency shall comply, and shall require its Contractors to comply, with any federal, state, or local laws, statutes, codes, ordinances, rules, and regulations applicable to its construction and maintenance of the Project. Agency's Contractors shall indemnify, defend, and hold CSXT and its affiliates harmless with respect to any fines, penalties, liabilities, or other consequences arising from breaches of this Section.
- 11.3 "CSXT Affiliates". For the purpose of this Section 11, CSXT's affiliates include CSX Corporation and all entities, directly or indirectly, owned or controlled by or under common control of CSXT or CSX Corporation and their respective officers, directors, employees and agents.
- 11.4 Notice of Incidents. Agency and its Contractor shall notify CSXT promptly of any loss, damage, injury or death arising out of or in connection with the Project work.
- 11.5 Survival. The provisions of this Section 11 shall survive the termination or expiration of this Agreement.
12. Independent Contractor: The parties agree that neither Agency nor its Contractors shall be deemed either agents or independent contractors of CSXT. Except as otherwise provided by this Agreement, CSXT shall exercise no control whatsoever over the employment, discharge, compensation of, or services rendered by Agency or Agency's Contractors, or the construction practices, procedures, and professional judgment employed by Agency or its Contractor to complete the Project. Notwithstanding the foregoing, this Section 12 shall in no way affect the absolute authority of CSXT to prohibit Agency or its Contractors or anyone from entering CSXT's property, or to require the removal of any person from its property, if it determines, in its sole discretion, that such person is not acting in a safe manner or that actual or potential hazards in, on or about the Project exist.
-
13. "Entire Agreement" This Agreement embodies the entire understanding of the parties, may not be waived or modified except in a writing signed by authorized representatives of both parties, and supersedes all prior or contemporaneous written or oral understandings, agreements or negotiations regarding its subject matter. In the event of any inconsistency between this Agreement and the Exhibits, the more specific terms of the Exhibits shall be deemed controlling.
14. Waiver: If either party fails to enforce its respective rights under this Agreement, or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.
15. Assignment: CSXT may assign this Agreement and all rights and obligations herein to a successor in interest, parent company, affiliate, or future affiliate. Upon assignment of this Agreement by CSXT and the assumption of CSXT's assignee of CSXT's obligations under this Agreement, CSXT shall have no further obligation under this Agreement. Agency shall not assign its rights or obligations under this Agreement without CSXT's prior consent, which consent may be withheld for any reason.
16. Notices: All notices, consents and approvals required or permitted by this Agreement shall be in writing and shall be deemed delivered upon personal delivery, upon the expiration of three (3) days following mailing by first class U.S. mail, or upon the next business day following mailing by a nationally recognized overnight carrier, to the parties at the addresses set forth below, or such other addresses as either party may designate by delivery of prior notice to the other party:

If to CSXT:

CSX Transportation, Inc.
500 Water Street J-301
Jacksonville, FL 32202
Attention: Hal Gibson

If to Agency:

17. Severability The parties agree that if any part, term or provision of this Agreement is held to be illegal, unenforceable or in conflict with any applicable federal, state, or local law or regulation, such part, term or provision shall be severable, with the remainder of the Agreement remaining valid and enforceable.
18. Applicable Law: This Agreement shall be governed by the laws of the State of Florida, exclusive of its choice of law rules. The parties further agree that the venue of all legal and equitable proceedings related to disputes under this Agreement shall be situated in Duval County, Florida, and the parties agree to submit to the personal jurisdiction of any State or Federal court situated in Duval County, Florida.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate, each by its duly authorized officers, as of the date of this Agreement.

MANATEE COUNTY, FLORIDA
by and through its BOARD OF COUNTY
COMMISSIONERS

By: _____
Carol Whitmore, Chairman

Date: _____

ATTEST: R. B. SHORE
CLERK OF THE CIRCUIT COURT

By: _____
Deputy Clerk

CSX TRANSPORTATION, INC.

By: _____
Dale Ophardt
Assistant VP - Engineering

EXHIBIT A
ALLOCATION OF WORK

Subject to Section 2.1, work to be performed in connection with the Project is allocated as follows:

- A. Agency shall let by contract to its Contractors:
 - 1. Installation of all storm water pipes and headwalls at crossing – by separate agreement
 - 2. Installation of jack and bore pipes – by separate agreement
 - 3. Asphaltic “underlayment” under proposed crossing location
 - 4. Asphaltic paving to edge of installed railroad crossing
- B. CSXT shall perform or cause to be performed:
 - 1. Railroad flagging for the project
 - 2. Build and insert new track panel at crossing location
 - 3. Line and surface track
 - 4. Install concrete crossing panels
 - 5. Installation of CFLS&G (simultaneous pre-exemption circuit by separate agreement)

EXHIBIT B

PLANS AND SPECIFICATIONS

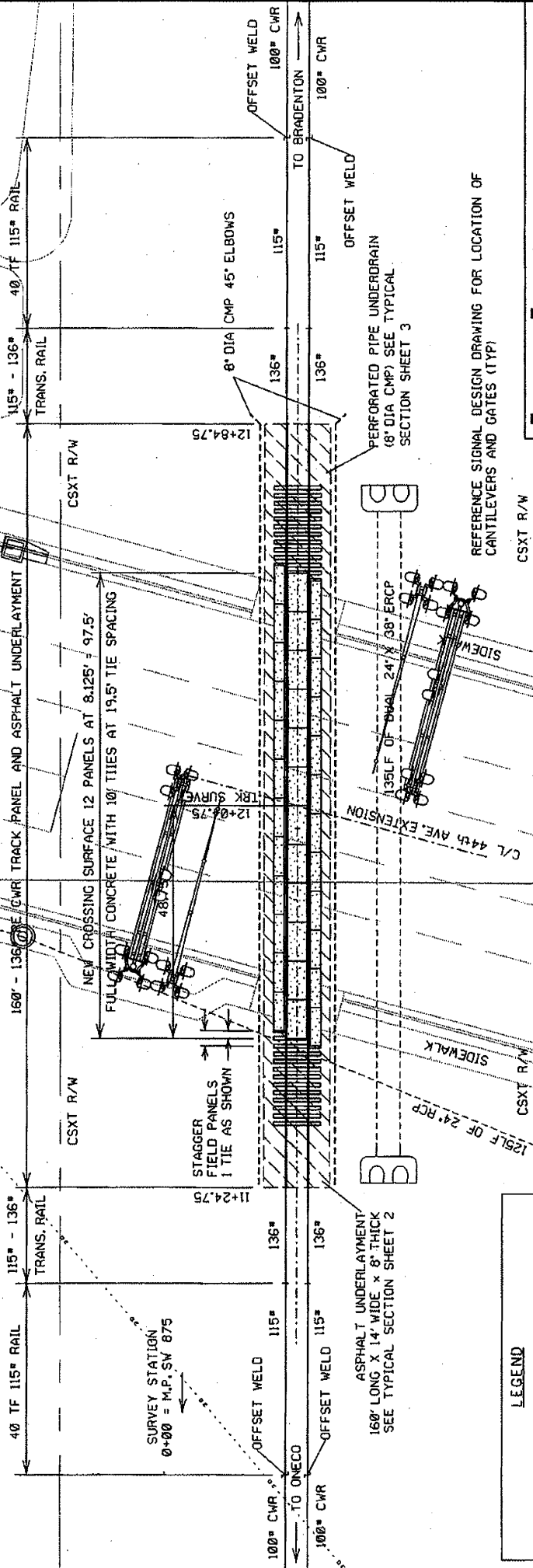
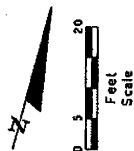
Plans, Specifications and Drawings:

As of the date of this Agreement, the following plans, specifications and drawings have been submitted by Agency to CSXT for its review and approval:

- Exhibit B-1 – HDR/CSX plan view of proposed crossing Drawing # 928622U
- Exhibit B-2 – Profile of track
- Exhibit B-3 – Details
- Exhibit B-4 – Signal Plans
- Exhibit B-5 – Manatee County Plans ~ *ON FILE*

- NOTES:
1. THESE PLANS ARE NOT BASED ON A CERTIFIED SURVEY. FIELD DATA WAS COLLECTED TO AID IN THE DESIGN OF THE TRACK PROFILE ONLY. ALL EXISTING DATA SHOWN ON THESE PLANS SHALL BE VERIFIED BY A PROFESSIONAL LAND SURVEYOR.
 2. ALL NEW ASPHALT PAVING LIMITS AND MIX DESIGN ARE TO BE PROVIDED BY THE FDOT.
 3. ALL NEW ASPHALT PAVING, SIDEWALKS AND CURBING ARE TO BE PROVIDED BY THE FDOT.
 4. THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

NOTE: NEW ROADWAY AND PAVEMENT BY AGENCY.



LEGEND

- EXIST. TRACK
- NEW TRACK PANEL
- NEW TRANSITION RAILS
- OFFSET WELDS
- BURIED FIBER OPTIC CABLE
- 8\"/>

CROSSING DATA
 NAME: 44TH AVENUE
 DOT# 928 622 U
 MP: SW 874.77
 OP: FL 1399
 RR ALIGN.: TANGENT

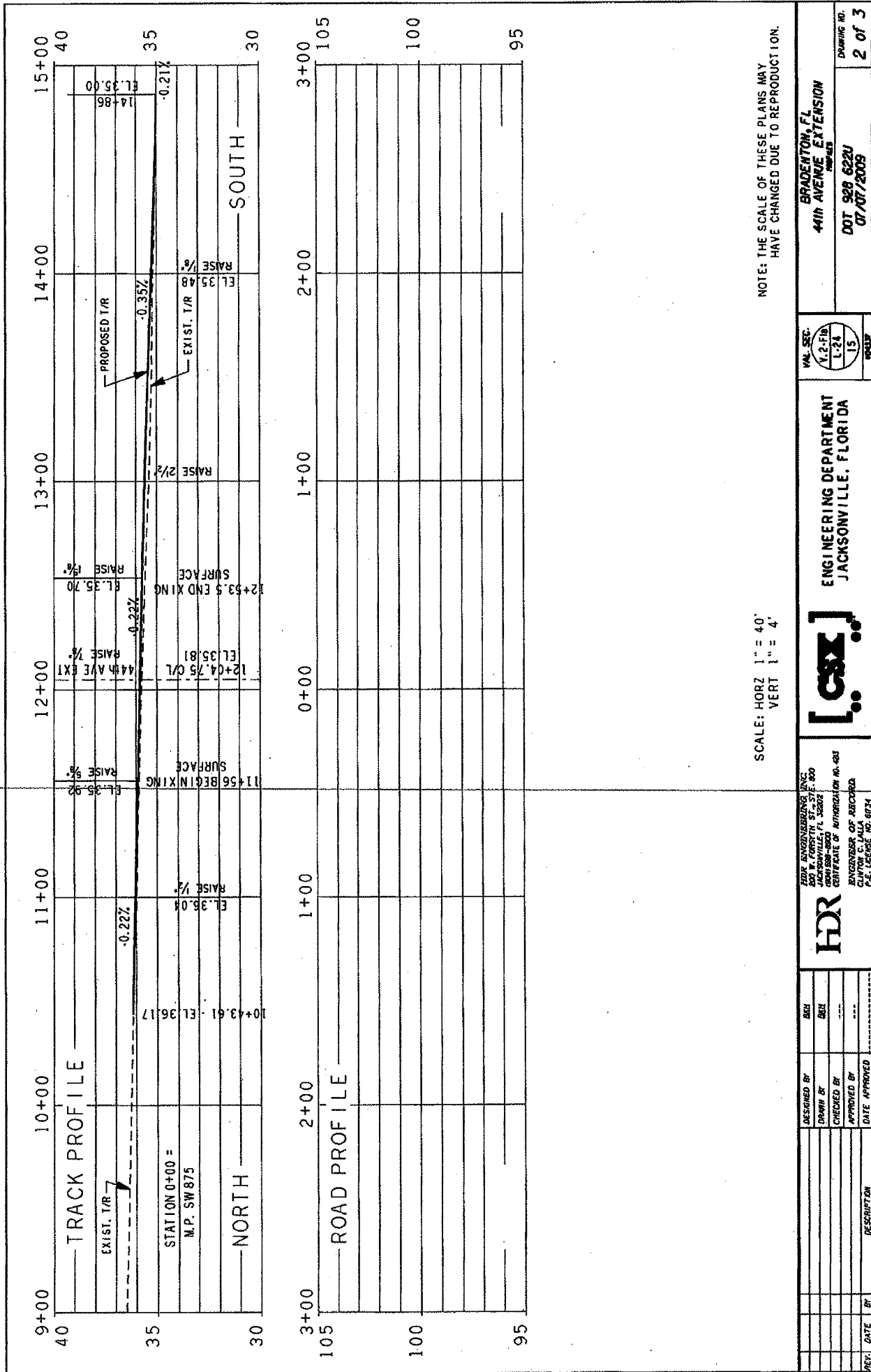
NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

HDR ENGINEERING, INC.
 200 W. FORSTH ST., STE. 800
 JACKSONVILLE, FL 32202
 904/580-8800
 CERTIFICATE OF AUTHORIZATION NO. 4213
 ENGINEER OF RECORD
 CLINTON G. LALLA
 P.E. LICENSE NO. 61734

[CSX] ENGINEERING DEPARTMENT
 TRANSPORTATION PROJECTS
 JACKSONVILLE, FLORIDA

NEW FULL WIDTH CONCRETE SURFACE
BRADENTON
 44th AVENUE EXTENSION

BRADENTON	FLORIDA
DIVISION: JACKSONVILLE	SUBDIVISION: PALMETTO
SCALE: NOTED	VAL. MAP
DATE: 07/02/09	V.2-FB
DRAWN: BUCHHEI	L-24
CHECKED: RL/CL	15
Y04337	
DRAWING NO.	928 622U
SHEET	1 OF 3



HDR
 HDR ENGINEERING, INC.
 1000 JACKSONVILLE PIKE, SUITE 200
 JACKSONVILLE, FL 32225
 (904) 998-8800
 CERTIFICATE OF AUTHORIZATION NO. 403
 CLYTON C. LALLA
 P.E. LICENSE NO. 8734

ENGINEER OF RECORD

DESIGNED BY: ☐ **SK**
 DRAWN BY: ☐ **SK**
 CHECKED BY: ☐ **---**
 APPROVED BY: ☐ **---**
 DATE APPROVED: ☐ **---**

REV.	DATE	BY	DESCRIPTION

ENGINEERING DEPARTMENT
JACKSONVILLE, FLORIDA

VAL. SEC.
 1-2-FB
 1-24
 15

BRADENTON, FL
4th AVENUE EXTENSION
DOT 928 622U
07/07/2009

DRAWING NO.
2 of 3

EXHIBIT "B-2"

10'-0" TIMBER TIE

3/4" x 12" L.G. TIMBER SCREW

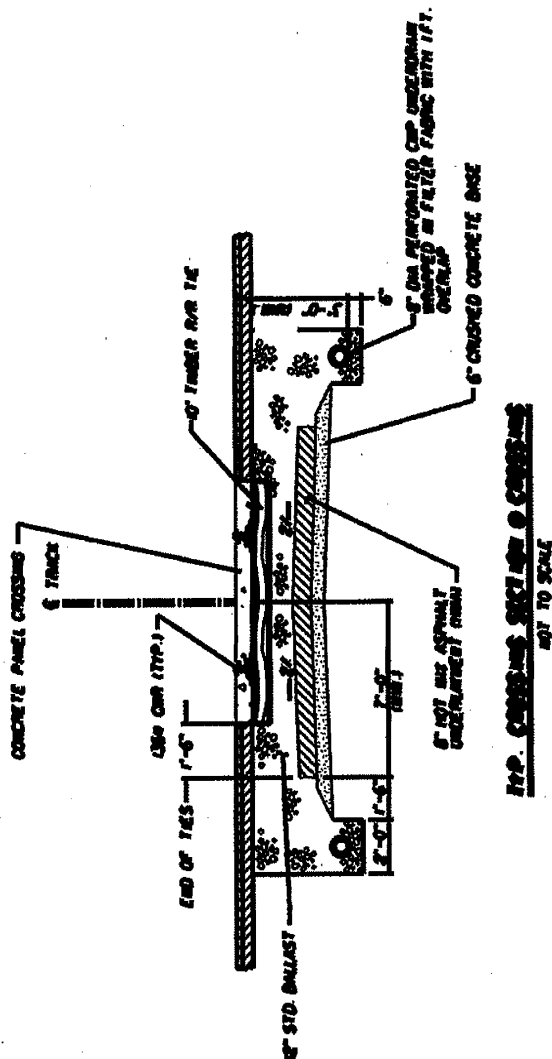
2x8

2x12 TRACK GAUGE

2x3 FIELD PANEL

BATH (1260)

CSX STANDARD CONCRETE SURFACE PANEL
NOT TO SCALE



TOP. CONTAINS SECRET AND IS CONFIDENTIAL
NOT TO SCALE

[illegible]

Exhibit "B-3"



EXHIBIT C

CSXT SPECIAL PROVISIONS

DEFINITIONS:

As used in these Special Provisions, all capitalized terms shall have the meanings ascribed to them by the Agreement, and the following terms shall have the meanings ascribed to them below:

"CSXT" shall mean CSX Transportation, Inc., its successors and assigns.

"CSXT Representative" shall mean the authorized representative of CSX Transportation, Inc.

"Agreement" shall mean the Agreement between CSXT and Agency dated as of _____, as amended from time to time.

"Agency" shall mean the **Manatee County Board of County Commissioners**.

"Agency Representative" shall mean the authorized representative of **Manatee County Board of County Commissioners**.

"Contractor" shall have the meaning ascribed to such term by the Agreement.

"Work" shall mean the Project as described in the Agreement.

I. AUTHORITY OF CSXT ENGINEER

The CSXT Representative shall have final authority in all matters affecting the safe maintenance of CSXT operations and CSXT property, and his or her approval shall be obtained by the Agency or its Contractor for methods of construction to avoid interference with CSXT operations and CSXT property and all other matters contemplated by the Agreement and these Special Provisions.

II. INTERFERENCE WITH CSXT OPERATIONS

- A. Agency or its Contractor shall arrange and conduct its work so that there will be no interference with CSXT operations, including train, signal, telephone and telegraphic services, or damage to CSXT's property, or to poles, wires, and other facilities of tenants on CSXT's Property or right-of-way. Agency or its Contractor shall store materials so as to prevent trespassers from causing damage to trains, or CSXT Property. Whenever Work is likely to affect the operations or safety of trains, the method of doing such Work shall first be submitted to the CSXT Representative for approval, but such approval shall not relieve Agency or its Contractor from liability in connection with such Work.
- B. If conditions arising from or in connection with the Project require that immediate and unusual provisions be made to protect train operation or CSXT's property, Agency or its Contractor shall make such provision. If the CSXT Representative determines that such provision is insufficient, CSXT may, at the expense of Agency or its Contractor, require or provide such provision as may be deemed necessary, or cause the Work to cease immediately.

III. NOTICE OF STARTING WORK. Agency or its Contractor shall not commence any work on CSXT Property or rights-of-way until it has complied with the following conditions:

- A. Notify CSXT in writing of the date that it intends to commence Work on the Project. Such notice must be received by CSXT at least ten business days in advance of the date Agency or its Contractor proposes to begin Work on CSXT property. The notice must refer to this Agreement by date. If flagging service is required, such notice shall be submitted at least thirty (30) business days in advance of the date scheduled to commence the Work.
- B. Obtain authorization from the CSXT Representative to begin Work on CSXT property, such authorization to include an outline of specific conditions with which it must comply.
- C. Obtain from CSXT the names, addresses and telephone numbers of CSXT's personnel who must receive notice under provisions in the Agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

IV. WORK FOR THE BENEFIT OF THE CONTRACTOR

- A. No temporary or permanent changes to wire lines or other facilities (other than third party fiber optic cable transmission systems) on CSXT property that are considered necessary to the Work are anticipated or shown on the Plans. If any such changes are, or become, necessary in the opinion of CSXT or Agency, such changes will be covered by appropriate revisions to the Plans and by preparation of a force account estimate. Such force account estimate may be initiated by either CSXT or Agency, but must be approved by both CSXT and Agency. Agency or Contractor shall be responsible for arranging for the relocation of the third party fiber optic cable transmission systems, at no cost or expense to CSXT.

-
- B. Should Agency or Contractor desire any changes in addition to the above, then it shall make separate arrangements with CSXT for such changes to be accomplished at the Agency or Contractor's expense.

V. HAUL ACROSS RAILROAD

- A. If Agency or Contractor desires access across CSXT property or tracks at other than an existing and open public road crossing in or incident to construction of the Project, the Agency or Contractor must first obtain the permission of CSXT and shall execute a license agreement or right of entry satisfactory to CSXT, wherein Agency or Contractor agrees to bear all costs and liabilities related to such access.
- B. Agency and Contractor shall not cross CSXT's property and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be permitted pursuant to this section.

VI. COOPERATION AND DELAYS

- A. Agency or Contractor shall arrange a schedule with CSXT for accomplishing stage construction involving work by CSXT. In arranging its schedule, Agency or Contractor shall ascertain, from CSXT, the lead time required for assembling crews and materials and shall make due allowance therefor

- B. Agency or Contractor may not charge any costs or submit any claims against CSXT for hindrance or delay caused by railroad traffic; work done by CSXT or other delay incident to or necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these Special Provisions.
- C. Agency and Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.
- D. Agency and Contractor understand and agree that CSXT does not assume any responsibility for work performed by others in connection the Project. Agency and Contractor further understand and agree that they shall have no claim whatsoever against CSXT for any inconvenience, delay or additional cost incurred by Agency or Contractor on account of operations by others.

VII. STORAGE OF MATERIALS AND EQUIPMENT

Agency and Contractor shall not store their materials or equipment on CSXT's property or where they may potentially interfere with CSXT's operations, unless Agency or Contractor has received CSXT Representative's prior written permission. Agency and Contractor understand and agree that CSXT will not be liable for any damage to such materials and equipment from any cause and that CSXT may move, or require Agency or Contractor to move, such material and equipment at Agency's or Contractor's sole expense. To minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

VIII. CONSTRUCTION PROCEDURES

A. General

- 1. Construction work on CSXT property shall be subject to CSXT's inspection and approval.
- 2. Construction work on CSXT property shall be in accord with CSXT's written outline of specific conditions and with these Special Provisions.
- 3. Contractor shall observe the terms and rules of the CSXT Safe Way manual, which Agency and Contractor shall be required to obtain from CSXT, and in accord with any other instructions furnished by CSXT or CSXT's Representative.

B. Blasting

- 1. Agency or Contractor shall obtain CSXT Representative's and Agency Representative's prior written approval for use of explosives on or adjacent to CSXT property. If permission for use of explosives is granted, Agency or Contractor must comply with the following:
 - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of Agency or Contractor.

- b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
- c. No blasting shall be done without the presence of an authorized representative of CSXT. At least 10 days' advance notice to CSXT Representative is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
- d. Agency or Contractor must have at the Project site adequate equipment, labor and materials, and allow sufficient time, to (i) clean up (at Agency's expense) debris resulting from the blasting without any delay to trains; and (ii) correct (at Agency's expense) any track misalignment or other damage to CSXT's property resulting from the blasting, as directed by CSXT Representative, without delay to trains. If Agency's or Contractor's actions result in delay of any trains, including Amtrak passenger trains, Agency shall bear the entire cost thereof.
- e. Agency and Contractor shall not store explosives on CSXT property.

2. CSXT Representative will:

- a. Determine the approximate location of trains and advise Agency or Contractor of the approximate amount of time available for the blasting operation and clean-up.
- b. Have the authority to order discontinuance of blasting if, in his or her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

IX. MAINTENANCE OF DITCHES ADJACENT TO CSXT TRACKS

Agency or Contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from their operations. Agency or Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to Agency's or Contractor's operations shall be performed at Agency's expense.

X. FLAGGING / INSPECTION SERVICE

- A. CSXT has sole authority to determine the need for flagging required to protect its operations and property. In general, flagging protection will be required whenever Agency or Contractor or their equipment are, or are likely to be, working within fifty (50) feet of live track or other track clearances specified by CSXT, or over tracks.
- B. Agency shall reimburse CSXT directly for all costs of flagging that is required on account of construction within CSXT property shown in the Plans, or that is covered by an approved plan revision, supplemental agreement or change order.

- C. Agency or Contractor shall give a minimum of 10 days' advance notice to CSXT Representative for anticipated need for flagging service. No work shall be undertaken until the flag person(s) is/are at the job site. If it is necessary for CSXT to advertise a flagging job for bid, it may take up to 90-days to obtain this service, and CSXT shall not be liable for the cost of delays attributable to obtaining such service.
- D. CSXT shall have the right to assign an individual to the site of the Project to perform inspection service whenever, in the opinion of CSXT Representative, such inspection may be necessary. Agency shall reimburse CSXT for the costs incurred by CSXT for such inspection service. Inspection service shall not relieve Agency or Contractor from liability for its Work.
- E. CSXT shall render invoices for, and Agency shall pay for, the actual pay rate of the flagpersons and inspectors used, plus standard additives, whether that amount is above or below the rate provided in the Estimate. If the rate of pay that is to be used for inspector or flagging service is changed before the work is started or during the progress of the work, whether by law or agreement between CSXT and its employees, or if the tax rates on labor are changed, bills will be rendered by CSXT and paid by Agency using the new rates. Agency and Contractor shall perform their operations that require flagging protection or inspection service in such a manner and sequence that the cost of such will be as economical as possible.

XI. UTILITY FACILITIES ON CSXT PROPERTY

Agency shall arrange, upon approval from CSXT, to have any utility facilities on or over CSXT Property changed as may be necessary to provide clearances for the proposed trackage.

XII. CLEAN-UP

Agency or Contractor, upon completion of the Project, shall remove from CSXT's Property any temporary grade crossings, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to Agency or Contractor. Agency or Contractor, upon completion of the Project, shall leave CSXT Property in neat condition, satisfactory to CSXT Representative.

XIII. FAILURE TO COMPLY

If Agency or Contractor violate or fail to comply with any of the requirements of these Special Provisions, (a) CSXT may require Agency and/or Contractor to vacate CSXT Property; and (b) CSXT may withhold monies due Agency and/or Contractor; (c) CSXT may require Agency to withhold monies due Contractor; and (d) CSXT may cure such failure and the Agency shall reimburse CSXT for the cost of curing such failure.

EXHIBIT E

PAYMENT SCHEDULE

Advance Payment in Full

Upon execution and delivery of notice to proceed with the Project, Agency will deposit with CSXT a sum equal to the Reimbursable Expenses, as shown by the Estimate. If CSXT anticipates that it may incur Reimbursable Expenses in excess of the deposited amount, CSXT will request an additional deposit equal to the then remaining Reimbursable Expenses which CSXT estimates that it will incur. CSXT shall request such additional deposit by delivery of invoices to Agency. Agency shall make such additional deposit within 30 days following delivery of such invoice to Agency.

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

Page 1

ACCT. CODE : 709 - FL1399

ESTIMATE SUBJECT TO REVISION AFTER:		4/17/2012	DOT NO.: 928622U
CITY: Bradenton	COUNTY: Manatee		STATE: FL
DESCRIPTION: New Concrete crossing for 44th Avenue Extension and installation of new FLS/G - (Pre-emption circuit not included)			
DIVISION: Jacksonville	SUB-DIV: Palmetto	MILE POST: SW 847.77	
AGENCY PROJECT NUMBER: 6045661		Manatee County	

PRELIMINARY ENGINEERING:

200 Labor (Non Contract)	Days @	\$ 270.00	\$ -
200 Additive 31.34%			\$ -
230 Expenses			\$ -
212 Contracted & Administrative Engineering Services			\$ -
Subtotal			\$ -

CONSTRUCTION ENGINEERING/INSPECTION:

200 Labor (Non Contract)	Days @	\$ 270.00	\$ -
200 Additive 31.34%			\$ -
230 Expenses			\$ -
212 Contracted & Administrative Engineering Services			\$ 10,928
Subtotal			\$ 10,928

FLAGGING SERVICE: (Contract Labor)

070 Labor (Conductor-Flagman)	Days @	\$ 350.00	\$ -
050 Labor (Foreman/Inspector)	15 Days @	\$ 336.00	\$ 5,040
070 Additive 71.09% (Transportation Department)			\$ -
050 Additive 95.98% (Engineering Department)			\$ 4,837
230 Per Diem (Engineering Department)	15 Weeks @	\$ 75.00	\$ 1,125
230 Expenses	15 Days @	\$ 45.00	\$ 675
Subtotal			\$ 11,677

<u>SIGNAL & COMMUNICATIONS WORK:</u>	(Details Attached)	\$ 199,702

<u>TRACK WORK:</u>	(Details Attached)	\$ 202,912

ACCOUNTING & BILLING:

040 Labor	\$ 5,400
040 Additive 63.03%	\$ 3,404
Subtotal	\$ 8,804

PROJECT SUBTOTAL

900 <u>CONTINGENCIES:</u>	10.00%	\$ 43,402

GRAND TOTAL	*****	\$ 477,425

DIVISION OF COST:

Agency	100.00%	\$ 477,425
Railroad		\$ -
TOTAL	*****	\$ 477,425

NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces.

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for CSXT work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work

Office of Assistant Chief Engineer Public Projects--Jacksonville, Florida

Estimated prepared by: RL Ice

DATE: 10/19/2011

REVISED: 10/20/2011

Approved by:

DATE:

CSXT Public Project Group

Project Summary Sheet

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

Page 1 of 3

ACCT. CODE : 709 - FL1399
Pub EB - FL EB3 (FL)

ESTIMATE SUBJECT TO REVISION AFTER:		4/17/2012	DOT NO.: 928622U
CITY: Bradenton		COUNTY: Manatee	STATE: FL
DESCRIPTION:	New Concrete crossing for 44th Avenue Extension and installation of new FLS/G - (Pre-emption circuit not included)		
DIVISION: Jacksonville	SUB-DIV: Palmetto	MILEPOST: SW 847.77	
DRAWING NO.: 928622U	DRAWING DATE: 7/2/2009		
AGENCY PROJECT NUMBER:	6045661	Manatee County	

PRELIMINARY ENGINEERING: provided under separate PE agreement

200	Labor (Non Contract)	0	Days @	\$ 270.00	\$	-
200	Additive	31.34%			\$	-
230	Expenses				\$	-
212	Contracted & Administrative Engineering Services				\$	-
	Subtotal				\$	-

CONSTRUCTION ENGINEERING/INSPECTION:

200	Labor (Non Contract)	0	Days @	\$ 270.00	\$	-
200	Additive	31.34%			\$	-
230	Expenses				\$	-
212	Contracted & Administrative Engineering Services				\$	10,928
	Subtotal				\$	10,928

FLAGGING SERVICE: (Contract Labor)

70	Labor (Conductor-Flagman)	0	Days @	\$ 350.00	\$	-
50	Labor (Foreman/Inspector)	15	Days @	\$ 336.00	\$	5,040
70	Additive	71.09% (Transportation Department)			\$	-
50	Additive	95.98% (Engineering Department)			\$	4,837
230	Expenses	(Engineering Department)	15	Days @	\$ 75.00	\$ 1,125
230	Expenses	(Transportation Department)	15	Days @	\$ 45.00	\$ 675
	Subtotal				\$	11,677

COMMUNICATIONS WORK:

Temporary (Details Attached)	\$	-
Permanent (Details Attached)	\$	-
Subtotal	\$	-

TRACK: LABOR

50	Unload work train	24	MAN-HRS	\$ 36.00	\$	864
50	Remove Existing Crossing	200	MAN-HRS	\$ 36.00	\$	7,200
50	Renew Cross Ties approach	20	MAN-HRS	\$ 36.00	\$	720
50	Renew Rail	0	MAN-HRS	\$ 36.00	\$	-
50	Install OTM	16	MAN-HRS	\$ 36.00	\$	576
50	Install Field Welds	56	MAN-HRS	\$ 36.00	\$	2,016
50	Install Geo-Textile Fabric	9	MAN-HRS	\$ 36.00	\$	324
50	Install Sub-Drains 8" perf	24	MAN-HRS	\$ 36.00	\$	864
50	Install Ballast	28	MAN-HRS	\$ 36.00	\$	1,008
50	Line and Surface	98	MAN-HRS	\$ 36.00	\$	3,528
50	Install Crossing Materials HD concrete	122	MAN-HRS	\$ 36.00	\$	4,392
50	Install Buffer Rail 115#	16	MAN-HRS	\$ 36.00	\$	576
50	Install joint /offset bars	14	MAN-HRS	\$ 36.00	\$	504
50	install transition rail 115/136	48	MAN-HRS	\$ 36.00	\$	1,728
50	construct/install track panel	307	MAN-HRS	\$ 36.00	\$	11,052

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

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Pub EB - FL EB3 (FL)

50	Clean-Up			20	MAN-HRS	\$ 36.00	\$ 720
50	Additive	95.98%					\$ 34,622
230	Per Diem			101	MAN-DAY	\$ 90.00	\$ 9,090
	Subtotal						\$ 79,784

TRACK: MATERIAL

220	Cross Ties, Main Line			0	EA	\$ 39.00	\$ -
220	Cross tie - borate	track panel		18	EA	\$ 83.50	\$ 1,503
220	Cross-tie - Borate	approach		20	EA	\$ 56.00	\$ 1,120
220	Crossties, 10' Length	borate		82	EA	\$ 46.00	\$ 3,772
220	Tie plates	222 #136(50) 124 #115(100)		150	EA	\$ 10.51	\$ 1,577
220	Rail, 136RE, New			320	LF	\$ 21.00	\$ 6,720
220	Misc. OTM			1	LOT	\$ 1,200.00	\$ 1,200
210	Geo-Textile Fabric			2	RL	\$ 210.00	\$ 420
210	Sub-Drains	8" perf w/elbows		320	LF	\$ 6.20	\$ 1,984
220				0	NT	\$ 12.00	\$ -
220	Ballast - Trucked in			184	NT	\$ 45.00	\$ 8,280
220	Field Welds	(4) 136# (4) 115# (4) 100/115		12	EA	\$ 100.00	\$ 1,200
220	Buffer rail	115# 4		160	LF	\$ 21.00	\$ 3,360
220	Pandrol Fast Clips/plates	136#		200	EA	\$ 25.00	\$ 5,000
210	Concrete Full Width	HD by Quote		97.5	TF	\$ 250.00	\$ 24,375
210	Lag Bolts, End Ramps, Abr pads			1	LS	\$ 2,662.00	\$ 2,662
210				0	TF	\$ 325.00	\$ -
210				0	TF	\$ 42.00	\$ -
210				0	NT		\$ -
210	Sales Tax on Material	0.00%					\$ -
210	Material Handling	5.00%					\$ 3,159
211	Freight (concrete Mat'l)			3	LS	\$5,700.00	\$ 17,100
	Subtotal						\$ 83,431

CONTRACT:

215	Asphalt Paving (In Place)	by others		107	NT	\$ -	\$ -
241	Disposal of Waste Materials	by CSX		1	LS	\$ 2,000.00	\$ 2,000
215	Maintenance of Traffic	by agency		0	DAY	\$ 350.00	\$ -
	Subtotal						\$ 2,000

EQUIPMENT RENTAL:

241	Subtotal						\$ 36,072

WORK TRAIN:

50				1	DAY	\$ 2,100.00	\$ 2,100
	Subtotal						\$ 2,100

SALVAGE:

228	Rail			5	NT	\$ 65.00	\$ (325)
228	OTM			2	NT	\$ 75.00	\$ (150)
	Subtotal						\$ (475)

SIGNAL WORK:

210	Material - Field & Consumables						\$ 102,630
210	Material - Sales Tax						\$ -
220	Material - Shop						\$ -
60	Construction Labor						\$ 22,799
65	Shop Labor						\$ 1,260
230	Per Diem						\$ 10,010
200	RR Engineering, Preliminary						\$ 4,800

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

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200	RR Engineering, Construction			\$	3,420
60	Additives to Construction Labor			\$	20,733
65	Additives to Shop Labor			\$	1,092
200	Additives to Engineering			\$	2,577
241	Equipment Expense			\$	11,050
241	Waste Management			\$	408
212	Contract Engineering			\$	9,007
211	Freight			\$	7,416
216	AC Power Service			\$	2,500
228	Salvage			\$	-
900	Other			\$	-
	Subtotal			\$	199,702

ACCOUNTING & BILLING:

40	Labor		27 Days @	\$ 200.00	\$	5,400
40	Additive	63.03%			\$	3,404
	Subtotal				\$	8,804

PROJECT SUBTOTAL:

900	<u>CONTINGENCIES:</u>	10.00%			\$	434,023

GRAND TOTAL	*****	\$	477,425

DIVISION OF COST:

Agency	100.00%	\$	477,425
Railroad	0.00%	\$	-
TOTAL	*****	\$	477,425

NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces.

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for CSXT work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work.

Office of Assistant Chief Engineer Public Projects--Jacksonville, Florida

Estimated prepared by: RL Ice

Approved by:

CSXT Public Project Group

DATE: 10/19/2011

REVISED: 10/20/2011

DATE:

Form Revised 05-05-2011-LLS

Estimate No. 119272
CSX Transportation

Install Cantilevered Flashing Lights & Gates w/PMD-3R at 44th Ave.
Bradenton, FL

DOT:

OP: FL1399

CSX Project: FL2009066

Summary

Material	\$ 102,630
Sales Tax	\$ 0

Labor:

Construction Labor (77 man-days).....	\$ 22,799
Shop Labor (6 man-days).....	\$ 1,260
Subsistence (77 man-days).....	\$ 10,010

Railroad Engineering, Preliminary	\$ 4,800
Railroad Engineering, Construction	\$ 3,420

Additives to Construction Labor	\$ 20,733
Additives to Shop Labor	\$ 1,092
Additives to Track Labor	\$ 0
Additives to Engineering	\$ 2,576

Equipment Expenses (17 work days).....	\$ 11,050

Waste Management (17 work days).....	\$ 408

Contract Engineering	\$ 9,007

Freight	\$ 7,416

Poleline Removal	\$ 0

AC Power Service	\$ 2,500

Salvage	\$ 0

TOTAL ESTIMATE COST	\$ 199,702

Date: 10/18/2011

Estimated By: Steve Spence

NOTE: This estimate should be considered void one year from date of estimate.

Estimate No. 119271
CSX Transportation

Install Simultaneous Traffic Preemption circuit only @ 44th Ave.
Bradenton, FL

DOT:

OP: FL1399

CSX Project: FL2009066

Summary

Material	\$ 974
Sales Tax	\$ 0
Labor:	
Construction Labor (2 man-days).....	\$ 589
Shop Labor (0 man-days).....	\$ 0
Subsistence (2 man-days).....	\$ 260
Railroad Engineering, Preliminary	\$ 0
Railroad Engineering, Construction	\$ 88
Additives to Construction Labor	\$ 536
Additives to Shop Labor	\$ 0
Additives to Track Labor	\$ 0
Additives to Engineering	\$ 28
Equipment Expenses (0 work days).....	\$ 0
Waste Management (0 work days).....	\$ 0
Contract Engineering	\$ 0
Freight	\$ 0
Poleline Removal	\$ 0
AC Power Service	\$ 0
Salvage	\$ 0

TOTAL ESTIMATE COST	\$ 2,475

Date: 10/18/2011

Estimated By: Steve Spence

NOTE: This estimate should be considered void one year from date of estimate.

EXHIBIT F

INSURANCE REQUIREMENTS

I. Insurance Policies:

Agency and Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured.
 2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than \$1,000,000, which insurance must contain a waiver of subrogation against CSXT and its affiliates.
 3. Commercial automobile liability insurance with limits of not less than \$500,000 combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured.
 4. Railroad protective liability insurance with limits of not less than \$5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of \$10,000,000, which insurance shall satisfy the following additional requirements:
 - a. The insurer must be financially stable and rated B+ or better in Best's Insurance Reports.
 - b. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.
-
- c. CSX Transportation must be named as the named insured on the Railroad Protective Insurance Policy.
 - d. Name and Address of Contractor and Agency must be shown on the Declarations page.
 - e. Description of operations must appear on the Declarations page and must match the Project description, including project or contract identification numbers.
 - f. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.
 - g. Authorized endorsements may include:
 - (i). Broad Form Nuclear Exclusion - IL 00 21
 - (ii) 30-day Advance Notice of Non-renewal or cancellation
 - (iii) Required State Cancellation Endorsement
 - (iv) Quick Reference or Index - CL/IL 240
 - h. Authorized endorsements may not include:
 - (i) A Pollution Exclusion Endorsement except CG 28 31

- (ii) A Punitive or Exemplary Damages Exclusion
- (iii) A "Common Policy Conditions" Endorsement
- (iv) Any endorsement that is not named in Section 4 (f) or (g) above.
- (v) Policies that contain any type of deductible

5. Such additional or different insurance as CSXT may require.

II. Additional Terms

1. Contractor must submit its original insurance policies and two copies and all notices and correspondence regarding the insurance policies to:

Jonathan_Macarthur@csx.com
Manager - Insurance
CSX Transportation, Inc.
500 Water Street C907
Jacksonville, FL 32202
Phone: 904.359.1247
E- fax: 904.245.2833

2. Neither Agency nor Contractor may begin work on the Project until it has received CSXT's written approval of the required insurance policies.

SCHEDULE I

CONTRACTOR'S ACCEPTANCE

To and for the benefit of CSX Transportation, Inc. ("CSXT") and to induce CSXT to permit Contractor on or about CSXT's property for the purposes of performing work in accordance with the Agreement dated _____, 20__, between **Manatee County Board of County Commissioners** and CSXT, Contractor hereby agrees to abide by and perform all applicable terms of the Agreement, including, but not limited to Exhibits C and F to the Agreement, and Sections 3, 9 and 11 of the Agreement.

Contractor: _____

By: _____

Name: _____

Title: _____

Date: _____

ATTACHMENT 'N'

Project: Bradenton, Manatee County, FL
Pre-emption interconnection at 44th Avenue,
Pre-emptive circuit warning devices, DOT# 928 622U
Jacksonville Division, Palmetto Subdivision SW-874.77

CSXT OP# FL 1399

PREEMPTION INTERCONNECTION AGREEMENT

This Preemption Interconnection Construction and Maintenance Agreement ("Agreement") is made as of _____, 20__, by and between CSX TRANSPORTATION, INC., a Virginia corporation with its principal place of business in Jacksonville, Florida ("CSXT") and **Manatee County by and through its Board of County Commissioners**, a body corporate and political subdivision of the State of Florida. ("Agency").

EXPLANATORY STATEMENT

1. CSXT has or will construct and maintain highway rail grade crossing warning devices, consisting of automatic flashing lights and gates (the "Grade Crossing Warning Devices"), at the grade crossing of 44th Avenue Extension of CSXT's mainline track at Railroad Milepost SW 847.77, in Bradenton, FL., (DOT 928 622U).
2. Agency has or proposes to erect certain highway traffic signals at the intersection of 44th Avenue Extension and 15th Street East ("Highway Traffic Signals") and to establish interconnection circuitry between such Highway Traffic Signals and the Grade Crossing Warning Devices.
3. ~~CSXT is willing to permit such interconnection (the "Project"), subject to the terms and conditions of this Agreement.~~
4. Agency proposes to use the interconnection circuitry to change the Highway Traffic Signals sequence of operation when a signal is received from the Grade Crossing Warning Devices. The interconnection will provide Simultaneous Preemption or Advanced Preemption of the Highway Traffic Signals as specified in the project plans and specification.
5. Agency has obtained, or will obtain all authorizations, permits and approvals from all local, state and federal agencies, and their respective governing bodies and regulatory agencies, necessary to proceed with the Project and will implement the Project at its sole cost and expense.
6. Agency and CSXT acknowledge that: (i) by entering into this Agreement, CSXT will provide services and accommodations to promote public interest in this Project, without profit or other economic inducement typical of other Agency contractors; (ii) neither CSXT nor its affiliates (including their respective directors, officers, employees or agents) will incur any costs, expenses, losses or liabilities in excess of payments made to CSXT, by or on behalf of Agency or Agency contractors, pursuant to this Agreement; and (iii) CSXT retains the paramount right to regulate all activities affecting its property and operations.

7. It is the purpose of this Agreement to provide for the terms and conditions upon which construction of the Project shall proceed and the parties' obligations with respect to the future maintenance and operation of the permanent aspects of the Project.

NOW, THEREFORE, in consideration of the foregoing Explanatory Statement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged by the parties, the parties agree as follows:

1. Project Plans and Specifications.

- 1.1. Preparation and Approval. Agency shall prepare, or cause to be prepared, all plans, specifications, drawings and other documents necessary or appropriate to the design and construction of the Project (including, but not limited to, a written or graphic description of the operation of the interconnection system both in the operational mode and failed mode), at Agency sole cost and expense, by Agency or its contractors. Project plans, specifications and drawings prepared by or on behalf of Agency shall be subject, at CSXT's election, to the review and approval of CSXT. Such plans, specifications and drawings, as approved by CSXT, are referred to as the "**Plans**", and shall be incorporated and deemed a part of this Agreement.

- 1.2. Effect of CSXT Approval or Review of Plans. By its review, approval or preparation of Plans pursuant to this Agreement, CSXT signifies only that such Plans and improvements constructed in accordance therewith satisfy CSXT's requirements for the interconnection of the Highway Traffic Signals and the Grade Crossing Warning Devices. CSXT expressly disclaims all other representations and warranties in connection with the Plans, including, but not limited to, the integrity, suitability or fitness for the purposes of Agency or any other persons of the Plans or improvements constructed in accordance with the Plans, and the suitability or fitness of the Grade Crossing Warning Devices for purposes of the Project. Accordingly, Agency acknowledges and agrees that CSXT assumes no responsibility for, and releases CSXT from all liability or losses arising from or related to, the timing or sequencing of the Highway Traffic Signals and the Grade Crossing Warning Devices, and the maintenance, operation, use, fitness or suitability of the Highway Traffic Signals and related cables connecting the Highway Traffic Signals to the Grade Crossing Warning Devices.

- 1.3. Other Approval or Review of Plans. The agency shall schedule and conduct a Diagnostic Review of the existing and proposed Highway-Rail Grade Crossing Devices, the proposed Highway Traffic Signals and the interconnection circuitry. The Plans and Specifications shall be approved in writing by the appropriate highway and/or regulatory authority. Project plan specifications and drawings prepared by or on behalf of Agency shall comply with current MUTCD requirements, use appropriate current AREMA recommended practices. The Plans must specify Simultaneous Preemption or Advance Preemption and the preemption timing in seconds.

- 1.4. Compliance with Plans. The Project shall be constructed in accordance with the Plans.

2. Allocation and Conduct of Work.

Work in connection with the Project shall be allocated and conducted as follows:

2.1. CSXT Work. Subject to timely payment of Reimbursable Expenses as provided by Section 3.1, CSXT shall furnish the following services, at Agency's sole cost and expense:

- 2.1.1. CSXT shall furnish one or more preemption interconnection circuits of a normally closed contact that is designed to open upon the approach or presence of a train and shall terminate the closed preemption interconnection circuit in the common cable junction box to be used for the interconnection of the Highway Traffic Signals and the Grade Crossing Warning Devices.
- 2.1.2. CSXT shall furnish additional preemption interconnection circuits of a normally closed contact designed to open to provide additional information for the Highway Traffic Signals as specified in the Plans for gate down, occupancy of the crossing island circuit or other purposes.
- 2.1.3. CSXT shall furnish flagging and other protective services, as CSXT deems necessary or appropriate during the construction of the Project;
- 2.1.4. CSXT shall furnish all other services that CSXT deems necessary or appropriate to preserve and maintain its property and operations, without impairment or exposure to liability of any kind and in compliance with all applicable federal, state and local regulations and CSXT's contractual obligations, including, but not limited to, CSXT's existing or proposed third party agreements and collective bargaining agreements.
- 2.1.5. Initial testing and placing in service.
- 2.1.6. Periodic testing initiated by the agency and periodic testing by CSXT in conformance with Federal Railroad Administration regulations in 49 CFR Part 234.

2.2. Agency Work. Agency shall perform, or cause to be performed, all other work in connection with the Project, at Agency's sole cost and expense, including:

- 2.2.1. Preparation of all Plans
- 2.2.2. Installation of all cables from the Highway Traffic Signals up to the preemption interconnection circuit at the common cable junction box;
- 2.2.3. Provide standby electric power for operation of the Highway Traffic Signals.
- 2.2.4. Configuration of the circuitry connection of the Highway Traffic Signals whereby a failure will not cause any unsafe condition
- 2.2.5. Initial testing and placing in service
- 2.2.6. Periodic testing

2.3. Conduct of Work. The parties shall not commence work under this Agreement unless and until: (i) delivery to CSXT of a notice to proceed from Agency; (ii) payment of Reimbursable Expenses (as provided by Section 3.1) as required by CSXT prior to the commencement of work by CSXT; (iii) issuance of all permits, approvals and authorizations necessary or appropriate for

such work; and (iv) delivery of proof of insurance acceptable to CSXT, as required by Section 7. The initiation of any services by CSXT pursuant to this Agreement, including, but not limited to, the issuance of purchase orders or bids for materials or services, shall constitute commencement of work for the purposes of this Section.

3. CSXT Rules and Procedures. Agency shall observe and abide by, and shall require its contractors ("Contractors") to observe and abide by the rules, procedures, directions and instructions of CSXT. To the extent that Agency performs Project work itself; Agency shall be deemed a Contractor for purposes of this Agreement. Agency further agrees that, prior to the commencement of Project work by any third party Contractor, such Contractor shall execute and deliver to CSXT Schedule I to this Agreement to acknowledge Contractor's agreement to observe and abide by the terms and conditions of this Agreement.

Reimbursement of CSXT Expenses:

- 3.1. Reimbursable Expenses. Agency shall reimburse CSXT for all costs and expenses incurred by CSXT in connection with construction and maintenance of the Project including, without limitation: (i) all out of pocket expenses, (ii) travel and lodging expenses, (iii) telephone, facsimile, and mailing expenses, (iv) costs for equipment, tools, materials and supplies, (v) sums paid to consultants and subcontractors, and (vi) labor, together with labor overhead percentages established by CSXT pursuant to applicable law (collectively, the "Reimbursable Expenses"). Reimbursable Expense shall also include expenses incurred by CSXT prior to the date of this agreement included in the estimate.
- 3.2. Estimate. CSXT has estimated the total Reimbursable Expenses for the construction of the Project as shown on Exhibit A (the "Estimate", as amended or revised). In the event CSXT anticipates that actual Reimbursable Expenses may exceed such Estimate, it shall provide Agency with the revised Estimate of the total Reimbursable Expenses for Agency's approval and confirmation that sufficient funds have been appropriated to cover the total Reimbursable Expenses as reflected in the revised Estimate. CSXT may elect, by delivery of notice to Agency, to immediately cease all further work on the Project, unless and until Agency provides such approval and confirmation.

3.3. Payment Terms.

- 3.3.1. Advance Payment in Full. Upon execution and delivery of this Agreement by Agency, Agency will deposit with CSXT a sum equal to the Reimbursable Expenses, as shown by the Estimate. Agency shall pay CSXT for Reimbursable Expenses in the amount set forth in CSXT Schedule PA attached hereto, a copy of which shall accompany the advance payment. If CSXT anticipates that it may incur Reimbursable Expenses in excess of the deposited amount, CSXT will request an additional deposit equal to the then remaining Reimbursable Expenses which CSXT estimates that it will incur. CSXT shall request such additional deposit by delivery of invoices to Agency. Agency shall make such additional deposit within thirty (30) days following delivery of such invoice to Agency.
- 3.3.2. Following completion of all Engineering Work, CSXT shall reconcile the total Reimbursable Expenses incurred by CSXT against the total payments received from Agency and shall submit to Agency a final invoice if required. Agency shall pay to CSXT the amount by which actual Reimbursable Expenses exceed total payments, as shown by the final invoice, within thirty (30) days following

delivery to Agency of the final invoice. CSXT will provide a refund of any unused deposits if the deposit exceeds the incurred Reimbursable Expenses for the Project.

- 3.3.3. In the event that Agency fails to pay CSXT any sums due CSXT under this Agreement: (i) Agency shall pay CSXT interest at the lesser of 1.0% per month or the maximum rate of interest permitted by applicable law on the delinquent amount until paid in full; and (ii) CSXT may elect, by delivery of notice to Agency: (A) to immediately cease all further work on the Project, unless and until Agency pays the entire delinquent sum, together with accrued interest; and/or (B) to terminate this Agreement.

4. Termination.

- 4.1. By Agency. Agency may terminate this Agreement, for any reason, by delivery of notice to CSXT. Such termination shall become effective upon the expiration of fifteen (15) calendar days following delivery of notice to CSXT or such later date designated by the notice.
- 4.2. By CSXT. CSXT may terminate this Agreement (i) as provided pursuant to Section 3.3.3(ii)(B), or (ii) upon Agency's breach of any of the terms of, or its obligations under, this Agreement and such breach continues without cure for a period of ten (10) days after written notification from CSXT to Agency of such breach.
- 4.3. If this agreement is terminated the Agency shall close and barricade the highway-rail grade crossing and prevent all vehicle traffic from entering the highway-rail grade crossing unless Highway and/or Regulatory Authority determines the preemption is no longer required and notifies CSXT in writing of this determination.
- 4.4. The Agency shall close and barricade crossing if Agency does not maintain and test the traffic signal and preemption operation to assure the Highway Traffic Signals and traffic signal preemption sequence operate in compliance with the design, or as may be modified from time to time by agreement between CSXT and Agency and provided Agency secures all appropriate approvals including from any regulatory entity having jurisdiction.
- 4.5. If Agency does not close and barricade the highway-rail grade crossing and prevent traffic from utilizing said crossing to the satisfaction of CSXT when required by this Agreement, the FRA or other Regulatory or Highway Agency, CSXT may close and barricade the crossing at the expense of the Agency. CSXT will not be required to reduce train speed, stop and flag the crossing or make other change in train operation to accommodate the operation of the traffic signal, preemption circuitry or failure of Agency to comply with any terms of this Agreement.
- 4.6. The Agency shall not reopen the highway-rail grade crossing or attempt to reopen or remove any barricades until the Highway Traffic Signal and preemption circuitry have been inspected, tested and operating according to the plans and specification or as may otherwise be determined between the parties hereto. In case of dispute over the status of the operating condition and compliance with the plans and specification the FRA, and appropriate highway or regulatory authority will be requested to inspect and observe appropriate testing to confirm proper operation.
- 4.7. Consequences of Termination. If the Agreement is terminated by either party pursuant to this Section or any other provision of this Agreement, the parties understand that it may be impractical for them to immediately stop the work. Accordingly, they agree that, in such instance

a party may continue to perform work until it has reached a point where it may reasonably and/or safely suspend the work. Agency shall reimburse CSXT pursuant to this Agreement for the work performed, plus all costs reasonably incurred by CSXT to discontinue the work and protect the work upon full suspension of the same, and all other costs of CSXT incurred as a result of the Project up to the time of full suspension of the work. In addition, Agency shall return CSXT's property to its former condition to the extent altered by Agency or its Contractors, and shall reimburse CSXT for all costs incurred by CSXT to return its property to its former condition to the extent altered by CSXT or its contractors. Termination of this Agreement or work on the Project, for any reason, shall not diminish or reduce Agency's obligation to pay CSXT for CSXT Costs incurred in accordance with this Agreement. In the event of the termination of this Agreement or the work for any reason, CSXT's only remaining obligation to Agency shall be to refund to Agency payments made to CSXT in excess of CSXT Costs in accordance with Section 3.3.2. Agency shall not be entitled to otherwise pursue claims for consequential, direct, indirect or incidental damages or lost profits as a consequence of CSXT's default or termination of this Agreement or work on the Project by either party.

5. Construction Easements and Licenses.

5.1. Agency Obligation. Agency shall acquire all necessary licenses, permits and easements required for the Project.

5.2. Temporary Construction Licenses. Insofar as it has the right to do so, CSXT hereby grants Agency, and upon execution and delivery to CSXT of Contractor's Acceptance (Schedule I), its Contractors, a nonexclusive license to access and cross CSXT's property, to the extent necessary for the construction of the Project (excluding ingress or egress over public grade crossings), along such routes and upon such terms as may be defined and imposed by CSXT and such temporary construction easements as may be designated on the Plans approved by CSXT. No work shall be performed on CSXT property by Agency or its Contractors, without the prior approval of CSXT.

5.3. Interconnection Cable License. CSXT hereby grants to Agency, insofar as CSXT has the right to do so, permission to place conduit and wire or cable on CSXT property, in accordance with the Plans, but has not permitted the placement of traffic signals or traffic light cabinets on CSXT property even where road across track is there by prior license or easement. The installation shall be in compliance with the term and conditions of Attachment B; Wire Line Requirements and Conditions.

6. Permits. At its sole cost and expense, Agency shall procure all permits and approvals required by any federal, state, or local governments or governmental agencies for the construction, maintenance and use of the Project, copies of which shall be provided to CSXT.

7. Insurance. In addition to the insurance that Agency requires of its Contractor, Agency shall acquire or require its Contractor to purchase and maintain insurance in compliance with CSXT's insurance requirements attached to this Agreement as Attachment C. Neither Agency nor Contractor shall commence work on the Project until such policy or policies have been submitted to and approved by CSXT's Risk Management Department.

8. Ownership and Maintenance.

8.1. By Agency. Agency shall own, maintain, inspect and repair, at its sole cost and expense, the Highway Traffic Signals and the interconnecting cable terminating at the common cable junction

box. Agency shall be solely responsible for the provision of electricity and all other utilities necessary to the operation of such facilities. Upon the cessation of use of the Highway Traffic Signals and the interconnecting cable terminating at the common cable junction box, Agency shall remove the interconnecting cable and restore CSXT's property to its original condition, at Agency's sole cost and expense, to CSXT's satisfaction. CSXT hereby grants to Agency, insofar as CSXT has the right to do so, permission to access CSXT's property for the purposes maintaining, inspecting and repairing the Agency's interconnection cable, upon reasonable advance notice to CSXT and CSXT's prior approval. Agency agrees to reimburse CSXT for all costs and expenses incurred by CSXT for flagging, testing and protective services provided by CSXT in connection with such activities, within thirty (30) days of delivery of an invoice for such costs and expenses to Agency.

8.2. By CSXT. CSXT shall possess, and shall inspect, test and maintain, at Agency's sole cost and expense, the preemption interconnection circuit only from the common cable junction box to the railroad cabinet. Agency agrees to reimburse CSXT for all such costs and expenses, within thirty (30) days following delivery of an invoice for such costs and expenses to Agency.

8.3. By Agency. Upon completion of the Project, Agency shall deliver notice of completion to CSXT and Agency. Agency and CSXT shall promptly inspect the Project. If either Agency or CSXT notify Agency of its determination that the Project requires further work to comply with the Plans, Agency shall promptly perform such work and notify CSXT and Agency upon completion of such work. Upon completion of the Project in accordance with the Plans and to the satisfaction of CSXT and Agency, Agency shall accept Agency's obligations under Section 1.2, Section 8.1, Section 8.1 and Section 8.2 of this Agreement.

8.4. Alterations. Neither Agency nor CSXT shall change the effective circuits or equipment without the prior written concurrence of the other.

9. Indemnification.

9.1. Generally. To the maximum extent permitted by applicable law, Agency and its Contractors shall indemnify, defend, and hold CSXT and its affiliates harmless from and against all claims, demands, payments, suits, actions, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages), for any injury to or death to any person(s) (including, but not limited to the employees of CSXT, its affiliates, Agency and its Contractors), for the loss of or damage to any property whatsoever (including but not limited to property owned by or in the care, custody, or control of CSXT, its affiliates, Agency and its Contractors, and environmental damages and any related remediation brought or recovered against CSXT and its affiliates), arising directly or indirectly from the negligence, recklessness or intentional wrongful misconduct of the Agency, and its Contractors, and their respective agents, employees, invitees, or its contractors' agents, employees or invitees in the performance of work in connection with the Project or activities incidental thereto, or from their presence on or about CSXT's property.

9.2. Compliance with Laws. Agency and its Contractors shall comply, and shall require its Contractors to comply, with any federal, state, or local laws, statutes, codes, ordinances, rules, and regulations applicable to its construction and maintenance of the Project. Agency's Contractors shall indemnify, defend, and hold CSXT and its affiliates harmless with respect to any fines, penalties, liabilities, or other consequences arising from breaches of this Section.

- 9.3. Operation of Preemption Interconnection. To the maximum extent permitted by applicable law, Agency and their Contractors shall indemnify, defend and hold harmless CSXT and its affiliates from and against, and releases CSXT and its affiliates from all liability for, all claims, demands, payments, suits, actions, judgments, settlements and damages of every nature, degree and kind (including direct, indirect, consequential, incidental and punitive damages), for the loss or damage to any property whatsoever (including, but not limited to, property owned by or in the care, custody or control of CSXT or its affiliates or Agency and/or their Contractors) and for any injury to or death of any person(s) (including, but not limited to, the employees of CSXT, its affiliates or Agency and/or their Contractors), arising directly or indirectly from: (1) the negligence, recklessness, or willful misconduct of Agency, their employees, agents or contractors in connection with the operation, inspection, testing and maintenance of the Highway Traffic Signals and the interconnecting cable pursuant to this Agreement; or (2) defects, faults or inaccuracies in the timing intervals, sequence chart or preemption aspects of the interconnection with the Grade Crossing Warning Devices.
- 9.4. "CSXT Affiliates". For the purpose of this Section 9, CSXT's affiliates include CSX Corporation and all entities, directly or indirectly, owned or controlled by or under common control of CSXT or CSX Corporation and their respective officers, directors, employees and agents.
- 9.5. Notice of Incidents. Agency and their Contractors shall notify CSXT promptly of any loss, damage, injury or death arising out of or in connection with the Project work.
- 9.6. No Insurance Limitations. The foregoing indemnification obligations of this Section 9 shall not be limited to the insurance coverage required by this Agreement, except to the extent required by law.
- 9.7. Survival. The provisions of this Section 9 shall survive the termination or expiration of this Agreement.
-
10. Independent Contractor. The parties agree that neither Agency nor its Contractors shall be deemed either agents or independent contractors of CSXT. Except as otherwise provided by this Agreement, CSXT shall exercise no control whatsoever over the employment, discharge, compensation of, or services rendered by Agency or their Contractors, or the construction practices, procedures, and professional judgment employed by Agency or its Contractors to complete the Project. Notwithstanding the foregoing, this Section 10 shall in no way affect the absolute authority of CSXT to prohibit Agency or their Contractors or anyone from entering CSXT's property, or to require the removal of any person from its property, if it determines, in its sole discretion, that such person is not acting in a safe manner or that actual or potential hazards in, on or about the Project exist.
11. Subcontracts. CSXT shall be permitted to engage outside consultants, counsel and subcontractors to perform all or any portion of the Engineering Work.
12. Notices. All notices, consents and approvals required or permitted by this Agreement shall be in writing and shall be deemed delivered upon personal delivery, upon the expiration of three (3) days following mailing by first class U.S. mail, or upon the next business day following mailing by a nationally recognized overnight carrier, to the parties at the addresses set forth below, or such other addresses as either party may designate by delivery of prior notice to the other party:

If to CSXT:

CSX Transportation, Inc.
500 Water Street, J301
Jacksonville, Florida 32202
Attention: Hal Gibson, Principal Engineer

If to Agency:

13. Severability. The parties agree that if any part, term or provision of this Agreement is held to be illegal, unenforceable or in conflict with any applicable federal, state, or local law or regulation, such part, term or provision shall be severable, with the remainder of the Agreement remaining valid and enforceable.
 14. Entire Agreement. This Agreement embodies the entire understanding of the parties, may not be waived or modified except in a writing signed by authorized representatives of both parties, and supersedes all prior or contemporaneous written or oral understandings, agreements or negotiations regarding its subject matter. In the event of any inconsistency between this Agreement and the Exhibits, the more specific terms of the Exhibits shall be deemed controlling.
 15. Waiver. If either party fails to enforce its respective rights under this Agreement, or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.
 16. Assignment. CSXT may assign this Agreement and all rights and obligations herein to a successor in interest, parent company, affiliate, or future affiliate. Upon assignment of this Agreement by CSXT and the assumption by CSXT's assignee of CSXT's obligations under this Agreement, CSXT shall have no further obligations under this Agreement. Agency shall not assign its rights or obligations under this Agreement without CSXT's prior written consent, which consent may be withheld for any reason.
-
17. Applicable Law. This Agreement shall be governed by the laws of the State of Florida, exclusive of its choice of law rules. The parties further agree that the venue of all legal and equitable proceedings related to disputes under this Agreement shall be situated in Duval County, Florida, and the parties agree to submit to the personal jurisdiction of any State or Federal court situated in Duval County, Florida.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate, each by its duly authorized officers, as of the date of this Agreement.

MANATEE COUNTY, FLORIDA
by and through its BOARD OF COUNTY
COMMISSIONERS

By: _____
Carol Whitmore, Chairman

Date: _____

ATTEST: R. B. SHORE
CLERK OF THE CIRCUIT COURT

By: _____
Deputy Clerk

CSX TRANSPORTATION, INC.

By: _____
Dale Ophardt
Assistant Vice President Engineer

EXHIBIT A

ESTIMATE

Using Standard CSXT Estimate Formats

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

Page 1

ACCT. CODE : 709 - FL1399

ESTIMATE SUBJECT TO REVISION AFTER: 4/17/2012
CITY: Bradenton **COUNTY:** Manatee
DESCRIPTION: Pre emption circuit for crossing at 44th Avenue Extension

DOT NO.: 928622U
STATE: FL

DIVISION: Jacksonville **SUB-DIV:** Palmetto **MILE POST:** SW 847.77
AGENCY PROJECT NUMBER: 6045661 **Manatee County**

PRELIMINARY ENGINEERING:

provided under separate PE agreement

200 Labor (Non Contract)	Days @	\$ 270.00	\$	-
200 Additive	31.34%		\$	-
230 Expenses			\$	-
212 Contracted & Administrative Engineering Services			\$	-
Subtotal			\$	-

CONSTRUCTION ENGINEERING/INSPECTION:

200 Labor (Non Contract)	Days @	\$ 270.00	\$	-
200 Additive	31.34%		\$	-
230 Expenses			\$	-
212 Contracted & Administrative Engineering Services			\$	3,000
Subtotal			\$	3,000

FLAGGING SERVICE: (Contract Labor)

070 Labor (Conductor-Flagman)	Days @	\$ 350.00	\$	-
050 Labor (Foreman/Inspector)	1 Days @	\$ 336.00	\$	336
070 Additive	71.09% (Transportation Department)		\$	-
050 Additive	95.98% (Engineering Department)		\$	322
230 Per Diem (Engineering Department)	1 Weeks @	\$ 75.00	\$	75
230 Expenses	1 Days @	\$ 45.00	\$	45
Subtotal			\$	778

SIGNAL & COMMUNICATIONS WORK: (Details Attached) \$ 2,475

TRACK WORK: (Details Attached) \$ -

ACCOUNTING & BILLING:

040 Labor		\$	100
040 Additive	63.03%	\$	63
Subtotal		\$	163

PROJECT SUBTOTAL

900 <u>CONTINGENCIES:</u>	10.00%	\$	6,417
		\$	642

GRAND TOTAL ***** \$ 7,058

DIVISION OF COST:

Agency	100.00%	\$	7,058
Railroad		\$	-
TOTAL *****		\$	7,058

NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces.

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for CSXT work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work

Office of Assistant Chief Engineer Public Projects--Jacksonville, Florida.

Estimated prepared by: RL Ice

DATE: 10/19/2011

Approved by:

REVISED: 10/20/2011

DATE:

CSXT Public Project Group

Project Summary Sheet

CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE

Page 1 of 3

ACCT. CODE : 709 - FL1399
Pub EB - FL EB3 (FL)

ESTIMATE SUBJECT TO REVISION AFTER:

4/17/2012

DOT NO.: 928622U

CITY: Bradenton

COUNTY: Manatee

STATE: FL

DESCRIPTION: Pre emption circuit for crossing at 44th Avenue Extension

DIVISION: Jacksonville

SUB-DIV: Palmetto

MILEPOST: SW 847.77

DRAWING NO.: 928622U

DRAWING DATE: 7/2/2009

AGENCY PROJECT NUMBER: 6045661 Manatee County

PRELIMINARY ENGINEERING: provided under separate PE agreement

200	Labor (Non Contract)	0	Days @	\$ 270.00	\$	-
200	Additive 31.34%				\$	-
230	Expenses				\$	-
212	Contracted & Administrative Engineering Services				\$	-
	Subtotal				\$	-

CONSTRUCTION ENGINEERING/INSPECTION:

200	Labor (Non Contract)	0	Days @	\$ 270.00	\$	-
200	Additive 31.34%				\$	-
230	Expenses				\$	-
212	Contracted & Administrative Engineering Services				\$	3,000
	Subtotal				\$	3,000

FLAGGING SERVICE: (Contract Labor)

70	Labor (Conductor-Flagman)	0	Days @	\$ 350.00	\$	-
50	Labor (Foreman/Inspector)	1	Days @	\$ 336.00	\$	336
70	Additive 71.09% (Transportation Department)				\$	-
50	Additive 95.98% (Engineering Department)				\$	322
230	Expenses (Engineering Department)	1	Days @	\$ 75.00	\$	75
230	Expenses (Transportation Department)	1	Days @	\$ 45.00	\$	45
	Subtotal				\$	778

COMMUNICATIONS WORK:

Temporary (Details Attached)	\$	-
Permanent (Details Attached)	\$	-
Subtotal	\$	-

TRACK: LABOR

50	Unload work train	0	MAN-HRS	\$ 36.00	\$	-
50	Remove Existing Crossing	0	MAN-HRS	\$ 36.00	\$	-
50	Renew Cross Ties approach	0	MAN-HRS	\$ 36.00	\$	-
50	Renew Rail	0	MAN-HRS	\$ 36.00	\$	-
50	Install OTM	0	MAN-HRS	\$ 36.00	\$	-
50	Install Field Welds	0	MAN-HRS	\$ 36.00	\$	-
50	Install Geo-Textile Fabric	0	MAN-HRS	\$ 36.00	\$	-
50	Install Sub-Drains 8" perf	0	MAN-HRS	\$ 36.00	\$	-
50	Install Ballast	0	MAN-HRS	\$ 36.00	\$	-
50	Line and Surface	0	MAN-HRS	\$ 36.00	\$	-
50	Install Crossing Materials HD concrete	0	MAN-HRS	\$ 36.00	\$	-
50	Install Buffer Rail 115#	0	MAN-HRS	\$ 36.00	\$	-
50	Install joint /offset bars	0	MAN-HRS	\$ 36.00	\$	-
50	install transition rail 115/136	0	MAN-HRS	\$ 36.00	\$	-
50	construct/install track panel	0	MAN-HRS	\$ 36.00	\$	-

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

Page 2 of 3

ACCT. CODE : 709 - FL1399
Pub EB - FL EB3 (FL)

50	Clean-Up				0	MAN-HRS	\$ 36.00	\$	-
50	Additive	95.98%						\$	-
230	Per Diem				0	MAN-DAY	\$ 90.00	\$	-
	Subtotal							\$	-
TRACK: MATERIAL									
220	Cross Ties, Main Line				0	EA	\$ 39.00	\$	-
220	Cross tie - borate	track panel			0	EA	\$ 83.50	\$	-
220	Cross-tie - Borate	approach			0	EA	\$ 56.00	\$	-
220	Crossties, 10' Length	borate			0	EA	\$ 46.00	\$	-
220	Tie plates	222 #136	124 #115		0	EA	\$ 10.51	\$	-
220	Rail, 136RE, New				0	LF	\$ 21.00	\$	-
220	Misc. OTM				0	LOT	\$ 1,200.00	\$	-
210	Geo-Textile Fabric				0	RL	\$ 210.00	\$	-
210	Sub-Drains	8" perf	w/elbows		0	LF	\$ 6.20	\$	-
220					0	NT	\$ 12.00	\$	-
220	Ballast - Trucked in				0	NT	\$ 45.00	\$	-
220	Field Welds	4 136#	4 115#	os 100/115	0	EA	\$ 100.00	\$	-
220	Buffer rail	115#	4		0	LF	\$ 21.00	\$	-
					0		\$ -	\$	-
210	Concrete Full Width	HD by Quote			0	TF	\$ 250.00	\$	-
210	Lag Bolts, End Ramps, Abr pads				0	LS	\$ 2,662.00	\$	-
210					0	TF	\$ 325.00	\$	-
210					0	TF	\$ 42.00	\$	-
210					0	NT		\$	-
210	Sales Tax on Material		0.00%					\$	-
210	Material Handling		5.00%					\$	-
	Subtotal							\$	-
CONTRACT:									
215	Asphalt Paving (In Place)	by others			0	NT	\$ 200.00	\$	-
241	Disposal of Waste Materials				0	TF	\$ 15.00	\$	-
215	Maintenance of Traffic	by agency			0	DAY	\$ 350.00	\$	-
	Subtotal							\$	-
241	EQUIPMENT RENTAL:							\$	-
	Subtotal							\$	-
50	WORK TRAIN:				0	DAY	\$ 2,100.00	\$	-
	Subtotal							\$	-
SALVAGE:									
228	Rail				0	NT	\$ 65.00	\$	-
228	OTM				0	NT	\$ 75.00	\$	-
	Subtotal							\$	-
SIGNAL WORK:									
210	Material - Field & Consumables							\$	974
210	Material - Sales Tax							\$	-
220	Material - Shop							\$	-
60	Construction Labor							\$	589
65	Shop Labor							\$	-
230	Per Diem							\$	260
200	RR Engineering, Preliminary							\$	-
200	RR Engineering, Construction							\$	88

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

Page 3 of 3

ACCT. CODE : 709 - FL1399
Pub EB - FL EB3 (FL)

60	Additives to Construction Labor		\$	536
65	Additives to Shop Labor		\$	-
200	Additives to Engineering		\$	28
241	Equipment Expense		\$	-
241	Waste Management		\$	-
212	Contract Engineering		\$	-
211	Freight		\$	-
216	AC Power Service		\$	-
228	Salvage		\$	-
900	Other		\$	-
	Subtotal		\$	2,475

ACCOUNTING & BILLING:

40	Labor	0.5 Days @ \$ 200.00	\$	100
40	Additive	63.03%	\$	63
	Subtotal		\$	163

PROJECT SUBTOTAL:

900	<u>CONTINGENCIES:</u>	10.00%	\$	6,417

GRAND TOTAL	*****	\$	7,058

DIVISION OF COST:

Agency	<u>100.00%</u>	\$	7,058
Railroad	<u>0.00%</u>	\$	-
TOTAL	*****	\$	7,058

NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces.

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for CSXT work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work.

Office of Assistant Chief Engineer Public Projects--Jacksonville, Florida

Estimated prepared by: RL Ice

DATE: 10/19/2011

REVISED: 10/20/2011

Approved by:

DATE:

CSXT Public Project Group

Form Revised 05-05-2011-LLS

EXHIBIT B

Wire Line Requirements and Conditions

EXHIBIT C
INSURANCE REQUIREMENTS

I. Insurance Policies:

Agency and Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured.
 2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than \$1,000,000, which insurance must contain a waiver of subrogation against CSXT and its affiliates.
 3. Commercial automobile liability insurance with limits of not less than \$500,000 combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured.
 4. Railroad protective liability insurance with limits of not less than \$5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of \$10,000,000, which insurance shall satisfy the following additional requirements:
 - a. The insurer must be financially stable and rated B+ or better in Best's Insurance Reports.
 - b. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.
-
- c. CSX Transportation must be named as the named insured on the Railroad Protective Insurance Policy.
 - d. Name and Address of Contractor and Agency must be shown on the Declarations page.
 - e. Description of operations must appear on the Declarations page and must match the Project description, including project or contract identification numbers.
 - f. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.
 - g. Authorized endorsements may include:
 - (i). Broad Form Nuclear Exclusion - IL 00 21
 - (ii). 30-day Advance Notice of Non-renewal or cancellation
 - (iii). Required State Cancellation Endorsement
 - (iv). Quick Reference or Index - CL/IL 240

EXHIBIT C
INSURANCE REQUIREMENTS

h. Authorized endorsements may not include:

- (i) A Pollution Exclusion Endorsement except CG 28 31
- (ii) A Punitive or Exemplary Damages Exclusion
- (iii) A "Common Policy Conditions" Endorsement
- (iv) Any endorsement that is not named in Section 4 (f) or (g) above.
- (v) Policies that contain any type of deductible

5. Such additional or different insurance as CSXT may require.

II. Additional Terms

1. Agency and/or Contractor must submit its original insurance policies and two copies and all notices and correspondence regarding the insurance policies to:

Jonathan MacArthur
Manager – Insurance
CSX Transportation, Inc.
500 Water Street, C907
Jacksonville, FL 32202

Phone: (904) 359-3394
Fax: (904) 306-5325
Email: Jonathan_MacArthur@csx.com

-
2. ~~Neither Agency nor Contractor may begin work on the Project until it has received CSXT's~~
written approval of the required insurance policies.

SCHEDULE I

CONTRACTOR'S ACCEPTANCE

To and for the benefit of CSX Transportation, Inc. ("CSXT") and to induce CSXT to permit Contractor on or about CSXT's property for the purposes of performing work in accordance with the Agreement dated _____, 20__, between _____ and CSXT, Contractor hereby agrees to abide by and perform all applicable terms of the Agreement, including, but not limited to, Exhibit C and Sections 3, 7 and 9 of the Agreement.

Contractor: _____

By: _____

Name: _____

Title: _____

Date: _____

ATTACHMENT 'O'

FACILITIES RELOCATION AGREEMENT (FPL - TRANSMISSION)

THIS AGREEMENT made and entered into this 18 day of December 2012 ("Agreement") by and between

Manatee County Board of County Commissioners with address P.O. Box 1000 Bradenton, FL 34206-1000, (hereinafter called the "Applicant"), and FLORIDA POWER & LIGHT COMPANY, a Florida corporation with its principal place of business in Palm Beach County, Florida (hereinafter called "FPL").

WITNESSETH:

WHEREAS the Applicant intends to construct The 442 Ave East Project and will require the relocation of certain incompatible and conflicting portions of FPL's Facilities and equipment, and

WHEREAS FPL will incur costs in the relocation of FPL's existing and proposed facilities which costs would not have occurred but for the Applicant's construction,

NOW THEREFORE, in consideration of the mutual promises of the Applicant and FPL and other good and valuable consideration, the Parties agree that FPL shall relocate the FPL facilities and the Applicant shall reimburse FPL for the actual cost of such relocation as follows:

ARTICLE 1 - DEFINITIONS

For the purposes of this Agreement the following terms, whether used in the singular or plural, shall have the meanings set forth below when used with initial capitalization:

- 1.1 Date Cost Estimate Received, for purposes of this Agreement, shall be deemed to be the day that the cost estimate was hand-delivered or transmitted by facsimile, or if mailed, five (5) days from the date of postmark.
- 1.2 FPL's Facility or Facilities shall be, but shall not be limited to, any structure consisting of manholes, conduits, poles, wires, cables, substations, system protection equipment or other appurtenances, and associated equipment, and used by FPL in connection with the transmission and/or distribution of electric power.
- 1.3 Relocation and/or Relocate includes the terms "rearrange or rearrangement" and is the work performed by FPL under this Agreement and any activity made necessary by Applicant's construction which conflicts with or affects FPL, its Facilities, or service. Relocations shall include, but shall not be limited to, permanent or temporary support, protection, relocation, rearrangement, design, redesign, abandonment or reconstruction of the FPL Facilities and all other work required to provide continuity of service to FPL's customers which is a result of a conflict.
- 1.4 Replacement FPL Facility is any facility which will be constructed under the terms of this Agreement as a consequence of Relocation of an FPL Facility or portion thereof.

ARTICLE II - IDENTIFICATION OF CONFLICTS

- 2.1 Known Conflicts. The Applicant shall reimburse FPL for costs associated with the Relocation of the FPL Facilities more particularly described and located on property described in Exhibit A attached hereto and incorporated herein ("Property").
- 2.2 Other Conflicts. The Identification of any other conflicting facilities of FPL requiring Relocation shall be undertaken by FPL pursuant to a subsequent written agreement between FPL and the Applicant.

ARTICLE III - DESIGN AND CONSTRUCTION OF REPLACEMENT FACILITIES

- 3.1 Design Standards. Engineering design standards and material specified shall meet FPL's Current Design Standards. In addition, the design of Relocations will be in conformity with all laws and regulations.
- 3.2 Construction Standards. Materials and construction procedures shall meet FPL's Current Construction Standards. In addition, Relocations or Replacement Facilities will be accomplished in conformance with all laws, codes and regulations.

ARTICLE IV - REPLACEMENT RIGHT-OF-WAY

- 4.1 Replacement Right-of-Way. The Applicant shall provide FPL with replacement rights-of-way in one of the following manners:
- ☐ (a) The Applicant shall reimburse FPL for costs associated with the identification and acquisition of replacement rights-of-way, including, but not limited to, FPL's attorney fees for costs in prosecuting or in connection with any condemnation actions for the acquisition of necessary rights-of-way.
 - ☒ (b) The Applicant shall convey or grant to FPL replacement rights-of-way sufficient to permit FPL to accomplish Relocations of the FPL Facilities and to operate and maintain the Replacement Facilities in accordance with FPL's customary practices. Such conveyances or grants of replacement rights-of-way shall be accomplished at no cost to FPL and in a form and substance satisfactory to FPL.
- 4.2 Location of Replacement Right-of-Way. The Location of the aforesaid replacement rights-of-way are generally set forth in Exhibit B attached hereto and shall be within the Property where conflicts are identified due to this project.

ARTICLE V - COST ESTIMATES, CREDITS AND BILLING

- 5.1 Full Cost. The Applicant shall pay FPL for the full cost of Relocation of the FPL Facilities. The work to be performed by FPL will be in accordance with the construction drawings attached hereto as Exhibit B.
- 5.2 Cost Estimate. The Applicant shall be responsible for the total cost of the project. The estimated cost to Relocate the FPL Facilities is as below:
- a. Relocation: \$340,767.96. This cost estimate is set out in detail in Exhibit C attached hereto
- Engineering deposit received: \$ 36,000
- Balance due: \$304,767.02. Applicant to send check for this amount to FPL along with two signed copies of this Agreement.

The Applicant understands and agrees that the amount set forth in Exhibit C is an estimate only. The Applicant shall be responsible for the total cost of the project. The cost for the Relocation portion shall not exceed 120% of a valid Relocation cost estimate based upon an actual labor bid, except as provided herein.

5.3 Duration of Cost Estimate.

The cost estimate in Section 5.2 is valid only for the time period which is:

- a. Ninety (90) days from the date the estimate is received by Applicant (this includes the estimate attached as Exhibit C and any subsequent estimate) or
- b. Subject to the terms and conditions set forth in Section 5.4.

5.4 Re-estimates, Scope of Work Changes.

- 5.4.1 Pre-construction. If the construction of the Relocation of the FPL Facilities has not commenced within one hundred eighty (180) days of the date that the latest cost estimate is received by Applicant or if the Applicant requests a change in the Relocation scope of work on any individual work order prior to any construction, the estimate is invalid. A new estimate is required. FPL shall provide a re-estimate of the work prior to commencement of the Relocation by FPL. The Applicant shall agree in writing to pay the re-estimated cost and shall be responsible for the full cost of Relocation, not to exceed 120% of the re-estimate.
- 5.4.2 After Start of Construction. If after the start of construction any of the following occurs: (a) Applicant requests a change in the Relocation scope of work of FPL Facilities; (b) FPL determines that there is a need for a change in the Relocation scope of work and such change causes the reimbursable cost of the project to change by 20% or more; or (c) there is an increase in costs due to unknown or unforeseen physical conditions at the site which differ materially from those originally encountered; FPL shall provide the Applicant with a new estimate as soon as practicable and the Applicant shall pay any increased costs in the revised estimate to FPL within thirty (30) days after receipt of the revised estimate.

5.5 Credits.

- 5.5.1 The Applicant shall receive a credit for the payment of any non-refundable deposit required for the design, engineering, and estimating of the Relocation of FPL Facilities (as shown in Section 5.2).

- 5.5.2 The Applicant shall receive a credit for payment made to FPL for a detailed cost estimate, if payment is received by FPL prior to issuing such estimate and if the Agreement has been entered into within ninety (90) days of the date that estimate was received by the Applicant and the Relocation performed.
- 5.5.3 The Applicant shall receive no credit for payment for an estimate, and such payment shall not be refunded: (a) if the Applicant has not executed the Agreement within ninety (90) days of the date that estimate was received by the Applicant, (b) if a subsequent estimate is required and not paid within thirty (30) days of the date Applicant receives the estimate; or (c) if the Applicant terminates the Agreement.
- 5.5.4 Any estimate provided to the Applicant after the initial, detailed estimate shall be done at additional cost and expense to Applicant. Applicant's payment for estimates shall be credited or retained by FPL as provided above.
- 5.6 Billing and Payment. Prior to the commencement of any Relocation of FPL Facilities under this Agreement, the Applicant shall pay in advance the full estimated cost of such Relocation per Sections 5.2 & 5.4.2 above.
- 5.7 Final Bill. Upon completion of the work, FPL shall at the earliest date practicable furnish to the Applicant a final billing of all outstanding costs, including any overhead costs, incurred in connection with performance of Relocation of the FPL Facilities less any prepaid credits for additional cost estimates. The Applicant shall have thirty (30) days from the date of an invoice to approve and pay the invoice. Failure to provide FPL with written notice to the contrary within the thirty (30) day period shall constitute approval by the Applicant of the invoice against which payment must be remitted in full to FPL within thirty (30) days of the date of the invoice. If payment by the Applicant is not postmarked within thirty (30) days of the date of the invoice, then a late payment charge shall be assessed in the amount of one and one-half percent (1½%) of the amount of the billing per month, charged on a daily basis or highest interest allowable under law.
- 5.8 Refund and Effect of Termination.
 - 5.8.1 Consistent with the terms of this Agreement, FPL shall refund to the Applicant any amounts which the Applicant has paid to FPL beyond the full cost of Relocation including any overhead costs.
 - 5.8.2 In the event that this Agreement is terminated due to the cancellation or indefinite suspension of work in furtherance of the Applicant's construction, the Applicant shall be responsible for the costs of Relocation already incurred, including but not limited to all engineering, design, equipment, and materials cost, labor costs, and if any, the costs of replacement facilities already installed, necessary to place FPL's Facilities into a permanent condition suitable to provide continuous, reliable electric service to the public in accordance with all applicable laws, regulations and FPL's usual practices as set forth in Article III herein. Nothing in this section shall be construed to modify or abrogate FPL's legal duty to mitigate damages.

ARTICLE VI - INSPECTIONS

- 6.0 Inspections. All cost records and accounts of FPL directly related to the work performed under this Agreement shall be subject to inspection by the Applicant for a period of one (1) year from the completion date of all work performed under this Agreement. Such inspections shall be performed by the Applicant and in accordance with the following considerations:
 - (a) The Applicant shall provide FPL with thirty (30) days written notice requesting an inspection,
 - (b) The specific time of inspection must be mutually agreed to,
 - (c) Information required for inspection purposes shall be accounts and records kept by FPL directly related to Relocation and reimbursable costs,
 - (d) The Applicant may request only information reasonably required by it concerning Relocation and such request for information shall be in writing and shall include the purpose of the inspection,
 - (e) FPL shall make available the requested information at its offices during normal business hours, Monday through Friday,
 - (f) The Applicant shall bear any costs associated with any inspections, including FPL costs, if any, and (g) information available under this Agreement shall not be used in violation of any law or regulation. FPL shall quote a deposit amount when such a request for inspection is made which the Applicant shall pay in advance.

ARTICLE VII - GENERAL CONDITIONS

- 7.1 Benefit of Agreement Assignment. The provisions of this Agreement shall inure to the benefit of and bind the successors and assigns of the Parties to this Agreement but shall not inure to the benefit of any third party or other person. This Agreement shall not be assigned by either Party except upon receipt of the prior written permission of the other Party. Such permission shall not be unreasonably withheld.
- 7.2 Nonwaiver. The failure of either Party at any time to require performance by the other Party of any provision hereof shall not affect the full right to require such performance at any time thereafter. Waiver by either Party of a breach of the same provision or any other provision shall not constitute a waiver of the provision itself.
- 7.3 Limitations of Liability. Neither Party shall be liable in contract, in tort (including negligence), or otherwise to the other Party for any incidental or consequential loss or damage whatsoever including but not limited to loss of profits or revenue on work not performed, for loss of use or underutilization of the Party's facilities, or loss of use of revenues or loss of anticipated profits resulting from either Party's performance, nonperformance, or delay in performance of its obligations under this Agreement.
- 7.4 Indemnification. The Applicant shall indemnify, defend and hold harmless FPL, its parent, subsidiaries or affiliates and their respective officers, directors and employees (collectively "FPL Entities") from and against any liabilities whatsoever, occasioned wholly or in part by the negligence of the Applicant, its contractors, subcontractors or employees, including attorney fees, for injury to or death of person(s), and property damage arising or resulting in connection with any activity associated with work or service under this Agreement. If the liability arises out of a claim made by an employee of the Applicant, its contractors or assigns, the Applicant shall indemnify FPL Entities whether or not the damage or liability is due to or caused by the sole negligence of FPL Entities. The Applicant's obligation to protect, defend and hold FPL Entities free and unharmed against such liabilities shall be subject to the limitation set forth in Section 768.28(5) Florida Statutes, except in the event the Applicant purchases insurance covering the liability with limits in excess of the statutory limits, the Applicant's obligation shall extend up to but shall not exceed the limits of that insurance.
- 7.5 Insurance. If the Applicant utilizes its own personnel in the construction or maintenance work around the FPL Facilities, the Applicant shall furnish FPL with evidence of insurance maintained by Applicant insuring FPL Entities from liabilities assumed under the above indemnification. Said insurance shall contain a broad form contractual endorsement or, alternatively, the Applicant shall cause FPL, its parent, subsidiaries and affiliates and their respective officers, directors and employees to be named as additional named insured on the Applicant's comprehensive general liability policy. Such liability coverage shall be primary to any liability coverage maintained by or on behalf of FPL up to the \$1,000,000 limit of liability.

In the event that the policy is on a "claims made" basis, the retroactive date of the policy shall be the effective date of this Agreement or such other date as to protect the interest of FPL and the coverage shall survive the termination of this Agreement until the expiration of the maximum statutory period of limitations in the State of Florida for actions based in contract or in tort (currently, five years). If coverage is on an "occurrence" basis, such insurance shall be maintained by the Applicant during the entire term of this Agreement. The policy shall not be canceled or materially altered without at least thirty (30) days written notice to FPL.

The Applicant shall provide FPL with evidence of such liability insurance coverage on the standard insurance industry form (ACORD) without modification. A copy of the policy shall be made available for inspection by FPL upon reasonable request.

- 7.6 Contractor Indemnification. The Applicant further agrees to include the following indemnification in all contracts between the Applicant and its general contractors who perform or are responsible for construction or maintenance work on or around the subject FPL Facilities:

"The Contractor hereby agrees to release, indemnify, defend, save and hold harmless the Applicant and FPL, its parent, subsidiaries, affiliates or their respective officers, directors, or employees, from all claims, demands, liabilities and suits whether or not due to or caused by negligence of the Applicant or FPL for bodily injuries or death to person(s) or damage to property resulting in connection with the performance of the described work by Contractor, its subcontractor, agents or employees. This indemnification shall extend up to but shall not exceed the sum of \$1,000,000.00 for bodily injury or death of person(s) or property damage combined single limit and \$3,000,000 occurrence aggregate. In the event the Contractor is insured for liability with limits in excess of these amounts, Contractor's said obligation shall extend up to but shall not exceed the limits of that insurance. Contractor's costs of defending Applicant and FPL, including attorneys' fees are excluded from and are in addition to the aforesaid limitation of liability for injury, death and property damage."

- 7.7 Contractor Insurance and Notice. The Applicant agrees to require its contractors to obtain insurance to cover the above indemnity and further agrees to verify with its contractors that such insurance is in full force and effect. The Applicant shall provide FPL Group Inc.'s Risk Management Department with notice of the name and address of Applicant's contractors as specified in Section 7.6 above, prior to the commencement of the Relocation of FPL Facilities by FPL.
- 7.8 Modification or Termination of Agreement. This Agreement may be modified, amended, or terminated at any time by written agreement of the Parties authorized and executed with the same formality as this Agreement.
- 7.9 Effect of Headings. The headings set forth herein are for convenience only and shall not be deemed to modify or affect the rights and obligations of the Parties to this Agreement.
- 7.10 FPL Consent to Relocations. FPL agrees to the Relocation of the FPL Facilities to the extent necessary to eliminate Conflicts with the Applicant's construction in accordance with the terms and conditions of this Agreement. The Applicant, at no expense to FPL, shall make all necessary arrangements and agreements with any person or entity which has facilities attached to the FPL poles for the relocation of those facilities.
- 7.11 Delegation of Power and Duties Notice. The following persons are designated as the authorized representatives of the Parties for the purposes of this Agreement and all notices or other communications to either Party by the other shall be made in writing and addressed as follows:

To the Applicant:

Sia Mollanazar, P.E. Deputy Director Engineering Services
(Name and Title)

1022 26th Ave E.
Bradenton, FL 34208

With Copies to:

Manatee County Public Works
1022 26th Ave E.
Bradenton, FL 34208

To FPL:

Peter H. Washio
Transmission Relocation Coordinator
Florida Power & Light Company
700 Universe Boulevard, TS4/JW
Juno Beach, FL 33408

7.12 Notification of FPL Facilities, Form 360. Applicant acknowledges that high voltage electric lines are located in the area of Applicant's project and agrees to warn its employees, agents, contractors and invitees, new and experienced alike, of the danger of holding on to or touching a cable or other piece of equipment that is located or working close to any overhead power line and to use all safety and precautionary measures when working under or near FPL's Facilities. Applicant acknowledges and agrees that he has read and will comply with the Notification of FPL Facilities attached hereto. Applicant shall sign and return two (2) copies of the attached Notification of FPL Facilities along with two (2) signed copies of this Agreement.

7.13 Force Majeure.

- (a) Neither Party shall be liable or responsible for any delay in the performance of, or the ability to perform, any duty or obligation required by this Agreement in the event of a Force Majeure occurrence. Such occurrence shall include, but shall not be limited to acts of civil or military authority (including courts or administrative agencies), acts of God, war, riot, or insurrection, inability to obtain required permits or licenses, blockades, embargoes, sabotage, epidemics, fires, unusually severe floods or weather (anywhere in the United States where FPL utility workers and contractors support restoration), strikes, lockouts or other labor disputes or difficulties. The obligation of either Party to pay money in a timely manner is absolute and shall not be subject to the force majeure provisions. Force Majeure as used herein means, without limitation, any cause or event not reasonably within the control of FPL or the Applicant.
- (b) In the event of any delay resulting from a Force Majeure circumstance, the time for performance hereunder shall be extended for a period of time reasonably necessary to overcome the effect of such delays.

(c) In the event of any delay or nonperformance caused by a Force Majeure circumstance, the Party affected shall promptly notify the other in writing.

- 7.14 Severability. In the event that any of the provisions or portions or applications thereof of this Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, the Applicant and FPL shall negotiate an equitable adjustment in the affected provisions of this Agreement. The validity and enforceability of the remaining Independent provisions shall not be affected.
- 7.15 Effective Date. This Agreement shall become effective upon execution by the Parties and shall continue in effect until completion of all Relocation work by FPL unless otherwise provided herein or earlier termination in accordance with this Agreement.
- 7.16 Complete Agreement. This Agreement shall be signed by the authorized representatives of both Parties and constitutes the final written expression of all the terms of the agreement between the Parties and is a complete and exclusive statement of those terms. Any and all prior or contemporaneous course of dealing, representations, promises, warranties or statements by the Parties or their agents, employees, or representatives that differ in any way from the terms of this written Agreement shall be given no force or effect.

IN WITNESS WHEREOF, the Parties have executed this Agreement, to be effective as of the date first above written.

APPLICANT:

FLORIDA POWER & LIGHT COMPANY:

John Chappie
By: John Chappie
Title: Chairman

Date: 12-18-12

Attest:

Debi Jessner (Seal) Title



David K. Weda
By: David K. Weda
Title: Transmission Engineering Manager
Date: 11/29/12

Manatee County Government Administrative Center
First Floor, Commission Chambers
9:00 a.m. - December 18, 2012

December 18, 2012 Regular Meeting
Agenda Item #21

Subject

44th Avenue East, from US 41 to 45th Street East Roadway Project, FPL Agreement

Briefings

None

Contact and/or Presenter Information

Sia Mollanazar, P.E., Dep. Director, Engineering Services Ext. 7487

Action Requested

Authorization for the Board to approve and the Chairman to sign the Facility Relocation Agreement with FPL for the 44th Avenue East from US 41 to 45th Street East Roadway Project.

Enabling/Regulating Authority

Chapter 12 -- Capital Improvement Element of the Comp Plan.

Background Discussion

- In support of the 44th Avenue East from US 41 to 45th Street East roadway project, FPL will be required to relocate several transmission poles west of 15th Street East along 44th Avenue East and east of 15th Street East along the future 44th Avenue East. Relocation of the transmission poles must occur prior to or concurrent with the project. FPL is requiring from Manatee County that a Facility Relocation Agreement be executed prior to the relocation of the facilities. While the County Attorney's Office suggested one change (and FPL rejected that change), it was offered by the County Attorney's Office that execution of the agreement could be done strictly as a business decision. It is recommended that we execute the agreement, as we need them to move the line and this is the least expensive alternative.
- In addition, FPL will not proceed without the payment of the reimbursement balance of the relocation costs, which totals \$304,767.02.

County Attorney Review

Formal Written Review (Opinion memo must be attached)

Explanation of Other

ATTACHMENT 'P'



Florida Department of
Environmental Protection
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

January 24, 2013

Dan Gray, Director, Utility Operations Director
Manatee County Utility Operations Department
4410 66th Street West
Bradenton, Florida 34210
dan.gray@mymanatee.org

Re: General Permit for Construction of Water Main Extensions for Public Water Systems
Project: 44th Avenue East Widening, 1st Street East to 15th Street East
FDEP Permit No.: 0133068-1016-DSGP/02
PWS ID No.: 641-1132
County: Manatee

Dear Mr. Gray:

The Department has received your Notice of Intent to Use the General Permit to construct a replacement water main to serve existing development as part of a road improvement project. This project consists of a new eight-inch and 24-inch diameter water mains. No additional flow will be provided by the Manatee County Utilities Department Public Water System. The Department received this Notice on January 16, 2012.

The Department has no objection to your use of a General Permit for the construction of a public water supply distribution system designed in accordance with the standards and criteria set forth in Rule 62-555.405, Florida Administrative Code (F.A.C.). In accordance with Rules 62-4.530(1) and 62-555.405(1)(a), F.A.C., construction on this project shall not begin until at least 30 days after the receipt date (referenced above) of Application Form 62-555.900(7). All General Permits are subject to the general conditions of Rule 62-4.540, F.A.C., (enclosed) and Rules 62-555.405 and 62-555.345, F.A.C. The construction activity must conform to the description contained in your Notice of Intent to Use the General Permit. Any deviation will subject the permittee to enforcement action and possible penalties.

If you have any questions or comments, please contact Tammy McWade at (813) 632-7600, extension 486, or via email at tammy.mcwade@dep.state.fl.us.

Sincerely,

Mauryn McDonald, P.E.
Water Facilities Program Administrator

MM/ttm

Enclosures: General Conditions
Instructions for Clearance

cc: Wayne R. Troxler, P.E., Manatee County Public Works Dept., wayne.troxler@mymanatee.org

General Permit Conditions

The permittee shall be aware of and operate under the Permit Conditions below. These applicable conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes. [F.A.C. Rule 62-555.533(1)]

- (1) The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- (2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- (3) As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
- (4) This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- (5) This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- (6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- (7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times (reasonable time may depend on the nature of the concern being investigated), access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
- (8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of noncompliance; and

- (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
- (9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- (10) The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
- (11) This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- (12) This permit or a copy thereof shall be kept at the work site of the permitted activity.
- (13) This permit also constitutes:
- (a) Determination of Best Available Control Technology (BACT)
 - (b) Determination of Prevention of Significant Deterioration (PSD)
 - (c) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)
 - (d) Compliance with New Source Performance Standards
- (14) The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - i. the date, exact place, and time of sampling or measurements;
 - ii. the person responsible for performing the sampling or measurements;
 - iii. the dates analyses were performed;
 - iv. the person responsible for performing the analyses;
 - v. the analytical techniques or methods used;
 - vi. the results of such analyses.
- (15) When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

GENERAL PERMIT

INSTRUCTIONS FOR CLEARANCE

Requirements for clearance upon completion of projects are as follows:

1. Submission of a fully completed Department of Environmental Protection (DEP) Form 62-555.900(9) "Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components into Operation".
2. The portion of record drawings showing deviations from the DEP construction permit, including preliminary design report or drawings and specifications, if there are any deviations from said permit. (Note that it is necessary to submit a copy of only the portion of record drawings showing deviations and not a complete set of record drawings.)
3. Copies of satisfactory bacteriological analysis, taken within sixty (60) days of completion of construction, from locations within the distribution system or water main extension to be cleared, and in accordance with American Water Works Association (AWWA) Standard C 651-92 and with any additional requirements stipulated by the permitting engineer, as may be needed under special circumstances. The following sampling locations will be required for all General Permit clearances:
 - Connection point to an existing system and at the end point of the proposed addition; and
 - Every 1,200 feet on straight run of pipes.

Each location shall be sampled on two consecutive days, with sample points and chlorine residual readings clearly indicated on the report. A sketch or description of all bacteriological sampling locations must also be provided.

4. Copy of satisfactory pressure test results demonstrating compliance with AWWA Standard requirements.

ATTACHMENT 'Q'



Charlie Crist
Governor

Ana M. Viamonte Ros, M.D., M.P.H.
State Surgeon General

November 09, 2010

Permit #: 0133068-960 DSGP

Mr. Sia Mollanazar, Deputy Director
Manatee County Public Works Department
1022 26th Avenue East
Bradenton, FL 34208

WATER SYSTEM: Manatee County
PROJECT NAME: 44th Avenue Water Line
Improvements Project No. 323-6045661
EXPIRES: November 08, 2015

Dear Mr. Mollanazar:

Our office received the Notice of Intent to Use a General Permit for construction of the referenced water distribution system on **November 08, 2010**.

Please be advised that the activity must conform to the description contained in your Notice of Intent to Use a General Permit and that any deviation may subject the system to enforcement action.

Upon completion of the project, please provide us with the following:

- (1) A "Request for Letter of Release to Place Water Supply System into Service" DEP Form 62-555.900(9).
- (2) Copies of satisfactory bacteriological test results taken on two consecutive days at points indicated on approved plans. **Please see sheet U/6.2 for sample locations (3) at end of line blowoff (1) and end of line connections (2).**
- (3) Pressure test results of the water system.

Following the receipt of this information we may then issue a clearance letter releasing the facilities for public use. This project may not be placed into service until a letter of clearance has been issued.

Manatee County Health Department

Environmental Health Services

410 Sixth Avenue East • Bradenton 34208-1928

PHONE (941) 748-0747 • FAX (941) 750-9364

44th Avenue Water Line Improvements
Project No. 323-6045661
November 9, 2010
Page 2

This General Permit does not relieve the permittee of the responsibility for obtaining a Dredge and Fill Permit where it is required.

If you have any questions, please call Harry Messick at (941)748-0747, ext. 1355.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian C. Dietz", with a stylized flourish at the end.

Brian C. Dietz, PE
Environmental Health Services

BCD/hm/bb

cc: Wayne Troxler, PE/MCPWD
Andy Fischer/MCPWD
James D. Stockwell, PE/MCPWD
Harry Messick



0133068-960 DSGP

**NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF
WATER MAIN EXTENSIONS FOR PWSs**

INSTRUCTIONS: This notice shall be completed and submitted by persons proposing to construct projects permitted under the "General Permit for Construction of Water Main Extensions for Public Water Systems" in Rule 62-555.405, F.A.C. AT LEAST 30 DAYS BEFORE BEGINNING CONSTRUCTION OF A WATER MAIN EXTENSION PROJECT, complete and submit one copy of this notice to the appropriate Department of Environmental Protection District Office or Approved County Health Department (ACHD) along with payment of the proper permit processing fee. (When completed, Part II of this notice serves as the preliminary design report for a water main extension project, and thus, it is unnecessary to submit a separate preliminary design report or drawings, specifications, and design data with this notice.) All information provided in this notice shall be typed or printed in ink. The permit processing fee for projects requiring the services of a professional engineer during design is \$250, and the permit processing fee for projects not requiring the services of a professional engineer during design is \$100.* Checks for permit processing fees shall be made payable to the Department of Environmental Protection or the appropriate ACHD. NOTE THAT A SEPARATE NOTIFICATION AND A SEPARATE PERMIT PROCESSING FEE ARE REQUIRED FOR EACH NON-CONTIGUOUS PROJECT.[†]

* Except as noted in paragraphs 62-555.520(3)(a) and (b), F.A.C., projects shall be designed under the responsible charge of one or more professional engineers licensed in Florida.

[†] Non-contiguous projects are projects that are neither interconnected nor located nearby one another (i.e., on the same site, on adjacent streets, or in the same neighborhood).

I. General Project Information

A. Name of Project: 44th Ave Water Line Improvements, Project No.: 323-6045661

B. Description of Project and Its Purpose: Construction of approximately 1,055 LF of 8" water main to replace and relocate existing waterline due to road construction.

Manatee CHD

NOV 08 2010

C. Location of Project

1. County Where Project Located: Manatee

2. Description of Project Location: 44th Ave from 18th to 19th St E

Env. Health Services

D. Estimate of Cost to Construct Project: \$146,000.00

E. Estimate of Dates for Starting and Completing Construction of Project: Start May 2011, Complete Jan 2012

F. Permittee

PWS/Company Name: <u>Manatee County Utility Operations Dept.</u>		PWS Identification No.: <u>* 6411132</u>		
PWS Type: *	☒ Community	☐ Non-Transient Non-Community	☐ Transient Non-Community	☐ Consecutive
Contact Person: <u>Dan Gray</u>		Contact Person's Title: <u>Director, Utility Operations</u>		
Contact Person's Mailing Address: <u>4410 66th Street West</u>				
City: <u>Bradenton</u>		State: <u>Florida</u>	Zip Code: <u>34210</u>	
Contact Person's Telephone Number: <u>(941) 792-8811</u>		Contact Person's Fax Number: <u>(941) 795-3488</u>		
Contact Person's E-Mail Address: <u>dan.gray@mymanatee.org</u>				

* This information is required only if the permittee is a public water system (PWS).

G. Public Water System (PWS) Supplying Water to Project

PWS Name: <u>Manatee County Utility Operations Dept.</u>		PWS Identification No.: <u>6411132</u>		
PWS Type:	☒ Community	☐ Non-Transient Non-Community	☐ Transient Non-Community	☐ Consecutive
PWS Owner: <u>Manatee County Government</u>				
Contact Person: <u>Dan Gray</u>		Contact Person's Title: <u>Director, Utility Operations</u>		
Contact Person's Mailing Address: <u>Bradenton</u>				
City: <u>Bradenton</u>		State: <u>Florida</u>	Zip Code: <u>34210</u>	
Contact Person's Telephone Number: <u>(941) 792-8811</u>		Contact Person's Fax Number: <u>(941) 795-3488</u>		
Contact Person's E-Mail Address: <u>dan.gray@mymanatee.org</u>				

NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSIONS FOR PWSs

Project Name: 44th Ave Water Line Improvements, Project Permittee: Manatee County Utility Operations Dept.

H. Public Water System (PWS) that Will Own Project After It Is Placed into Permanent Operation

PWS Name: Manatee County Utility Operations Dept.		PWS Identification No.: * 6411132	
PWS Type: *	☒ Community	☐ Non-Transient Non-Community	☐ Transient Non-Community
☐ Consecutive			
PWS Owner: Manatee County Government			
Contact Person: Dan Gray		Contact Person's Title: Director, Utility Operations	
Contact Person's Mailing Address: 4410 66th Street West			
City: Bradenton		State: Florida	Zip Code: 34210
Contact Person's Telephone Number: (941) 792-8811		Contact Person's Fax Number: (941) 795-3488	
Contact Person's E-Mail Address: dan.gray@mymanatee.org			

* This information is required only if the owner/operator is an existing PWS.

I. Professional Engineer(s) or Other Person(s) in Responsible Charge of Designing Project*

Company Name: Manatee County Public Works Department, Infrastructure Engineering Division		
Designer(s): James D. Stockwell, P.E.		Title(s) of Designer(s): Sr. Project Engineer
Qualifications of Designer(s):		
☒ Professional Engineer(s) Licensed in Florida – License Number(s): 67198		
☐ Public Officer(s) Employed by State, County, Municipal, or Other Governmental Unit of State†		
☐ Plumbing Contractor(s) Licensed in Florida – License Number(s): ^		
Mailing Address of Designer(s): 1022 26th Ave E		
City: Bradenton		State: Florida
Telephone Number of Designer(s): (941) 708-7450		Zip Code: 34208
E-Mail Address(es) of Designer(s): jim.stockwell@mymanatee.org		Fax Number of Designer(s): (941) 708-7475

* Except as noted in paragraphs 62-555.520(3)(a) and (b), F.A.C., projects shall be designed under the responsible charge of one or more professional engineers licensed in Florida.

† Attach a detailed construction cost estimate showing that the cost to construct this project is \$10,000 or less.

^ Attach documentation showing that this project will be installed by the plumbing contractor(s) designing this project, documentation showing that this project involves a public water system serving a single property and fewer than 250 fixture units, and a detailed construction cost estimate showing that the cost to construct this project is \$50,000 or less.

II. Preliminary Design Report for Project*

A. Service Area, Water Use, and Service Pressure Information

1. Design Type and Number of Service Connections, and Average Daily Water Demands and Maximum-Day Water Demands, in the Entire Area to Be Served by the Water Mains Being Constructed Under this Project:

A = Type of Service Connection	B = Number of Service Connections	C = Average Daily Water Demand Per Service Connection, gpd	D = Total Average Daily Water Demand ^a , gpd (Columns BxC for Residential Service Connections)	E = Total Maximum-Day Water Demand ^b , gpd
Single-Family Home	0	0	0	0
Mobile Home	0	0	0	0
Apartment	0	0	0	0
Commercial, Institutional, or Industrial Facility ^a	3		15,684	23,526
Total	3		0	0

a. Description of Commercial, Institutional, or Industrial Facilities and Explanation of Method(s) Used to Estimate Average Daily Water Demand for These Facilities: No new services. Existing commercial buildings allowance 0.12 gpd per square foot of floor area x 130,700 sq. ft. = 15,684 gpd

b. Explanation of Peaking Factor(s) or Method(s) Used to Estimate Maximum-Day Water Demand: System-wide historical average of 1.5 used.

**NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN
EXTENSIONS FOR PWSs**

Project Name: 44th Ave Water Line Improvements, Project Permittee: Manatee County Utility Operations Dept.

2. Explanation of Peaking Factor(s) or Method(s) Used to Estimate Design Peak-Hour Water Demand and, for Small Water Systems that Use Hydropneumatic Tanks or that Are Not Designed to Provide Fire Protection, Peak Instantaneous Water Demand: Harmon formula used per Ten State Standards.

3. Design Fire-Flow Rate and Duration: 1000gpm

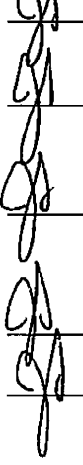
4. Design Service Pressure Range: 40-80 psig

B. Project Site Information

1. ATTACH A SITE PLAN OR SKETCH SHOWING THE SIZE AND APPROXIMATE LOCATION OF NEW OR ALTERED WATER MAINS, SHOWING THE APPROXIMATE LOCATION OF HYDRANTS, VALVES, METERS, AND BLOW-OFFS IN SAID MAINS, AND SHOWING HOW SAID MAINS CONNECT TO THE PUBLIC WATER SYSTEM SUPPLYING WATER FOR THE PROJECT.
2. Description of Any Areas Where New or Altered Water Mains Will Cross Above or Under Surface Water or Be Located in Soil that Is Known to Be Aggressive: N/A

C. Information About Compliance with Design and Construction Requirements

1. If this project is being designed to comply with the following requirements, initial before the requirements. If any of the following requirements do not apply to this project or if this project includes exceptions to any of the following requirements as allowed by rule, mark "NA" before the requirements and complete Part II.C.2 below. *RSWW = Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C.

-  a. This project is being designed to keep existing water mains and service lines in operation during construction or to minimize interruption of water service during construction. [RSWW 1.3.a; exceptions allowed under FAC 62-555.330]
- b. All pipe, pipe fittings, pipe joint packing and jointing materials, valves, fire hydrants, and meters installed under this project will conform to applicable American Water Works Association (AWWA) standards. [FAC 62-555.320(21)(b), RSWW 8.0, and AWWA standards as incorporated into FAC 62-555.330; exceptions allowed under FAC 62-555.320(21)(c)]
- c. All public water system components, excluding fire hydrants, that will be installed under this project and that will come into contact with drinking water will conform to NSF International Standard 61 as adopted in Rule 62-555.335, F.A.C., or other applicable standards, regulations, or requirements referenced in paragraph 62-555.320(3)(b), F.A.C. [FAC 62-555.320(3)(b); exceptions allowed under FAC 62-555.320(3)(d)]
- d. All pipe and pipe fittings installed under this project will contain no more than 8.0% lead, and any solder or flux used in this project will contain no more than 0.2% lead. [FAC 62-555.322]
- e. All pipe and pipe fittings installed under this project will be color coded or marked in accordance with subparagraph 62-555.320(21)(b)3, F.A.C., using blue as a predominant color. (Underground plastic pipe will be solid-wall blue pipe, will have a co-extruded blue external skin, or will be white or black pipe with blue stripes incorporated into, or applied to, the pipe wall; and underground metal or concrete pipe will have blue stripes applied to the pipe wall. Pipe striped during manufacturing of the pipe will have continuous stripes that run parallel to the axis of the pipe, that are located at no greater than 90-degree intervals around the pipe, and that will remain intact during and after installation of the pipe. If tape or paint is used to stripe pipe during installation of the pipe, the tape or paint will be applied in a continuous line that runs parallel to the axis of the pipe and that is located along the top of the pipe; for pipe with an internal diameter of 24 inches or greater, tape or paint will be applied in continuous lines along each side of the pipe as well as along the top of the pipe. Aboveground pipe will be painted blue or will be color coded or marked like underground pipe.) [FAC 62-555.320(21)(b)3]
-  f. All new or altered water mains included in this project are sized after a hydraulic analysis based on flow demands and pressure requirements. ATTACH A HYDRAULIC ANALYSIS JUSTIFYING THE SIZE OF ANY NEW OR ALTERED WATER MAINS WITH AN INSIDE DIAMETER OF LESS THAN THREE INCHES. [FAC 62-555.320(21)(b) and RSWW 8.1]

NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSIONS FOR PWSs

Project Name: 44th Ave Water Line Improvements, Project	Permittee: Manatee County Utility Operations Dept.

- g. The inside diameter of new or altered water mains that are included in this project and that are being designed to provide fire protection and serve fire hydrants will be at least six inches. [FAC 62-555.320(21)(b) and RSWW 8.1.2]
- h. New or altered water mains that are included in this project and that are not being designed to carry fire flows do not have fire hydrants connected to them. [FAC 62-555.320(21)(b) and RSWW 8.1.5]
- i. This project is being designed to minimize dead-end water mains by making appropriate tie-ins where practical. [FAC 62-555.320(21)(b) and RSWW 8.1.6.a]
- j. New or altered dead-end water mains included in this project will be provided with a fire or flushing hydrant or blow-off for flushing purposes. [FAC 62-555.320(21)(b) and RSWW 8.1.6.b]
- k. Sufficient valves will be provided on new or altered water mains included in this project so that inconvenience and sanitary hazards will be minimized during repairs. [FAC 62-555.320(21)(b) and RSWW 8.2]
- l. New or altered fire hydrant leads included in this project will have an inside diameter of at least six inches and will include an auxiliary valve. [FAC 62-555.320(21)(b) and RSWW 8.3.3]
- m. All fire hydrants that will be installed under this project and that will have unplugged, underground drains will be located at least three feet from any existing or proposed storm sewer, stormwater force main, pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., or vacuum-type sanitary sewer; at least six feet from any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-10, F.A.C.; and at least ten feet from any existing or proposed "on-site sewage treatment and disposal system." [FAC 62-555.314(4)]
- n. At high points where air can accumulate in new or altered water mains included in this project, provisions will be made to remove the air by means of air relief valves, and automatic air relief valves will not be used in situations where flooding of the valve manhole or chamber may occur. [FAC 62-555.320(21)(b) and RSWW 8.4.1]
- o. The open end of the air relief pipe from all automatic air relief valves installed under this project will be extended to at least one foot above grade and will be provided with a screened, downward-facing elbow. [FAC 62-555.320(21)(b) and RSWW 8.4.2]
- p. New or altered chambers, pits, or manholes that contain valves, blow-offs, meters, or other such water distribution system appurtenances and that are included in this project will not be connected directly to any sanitary or storm sewer, and blow-offs or air relief valves installed under this project will not be connected directly to any sanitary or storm sewer. [FAC 62-555.320(21)(b) and RSWW 8.4.3]
- q. New or altered water mains included in this project will be installed in accordance with applicable AWWA standards or in accordance with manufacturers' recommended procedures. [FAC 62-555.320(21)(b), RSWW 8.5.1, and AWWA standards as incorporated into FAC 62-555.330]
- r. A continuous and uniform bedding will be provided in trenches for underground pipe installed under this project; backfill material will be tamped in layers around underground pipe installed under this project and to a sufficient height above the pipe to adequately support and protect the pipe; and unsuitably sized stones (as described in applicable AWWA standards or manufacturers' recommended installation procedures) found in trenches will be removed for a depth of at least six inches below the bottom of underground pipe installed under this project. [FAC 62-555.320(21)(b), RSWW 8.5.2]
- s. All water main tees, bends, plugs, and hydrants installed under this project will be provided with thrust blocks or restrained joints to prevent movement. [FAC 62-555.320(21)(b) and RSWW 8.5.4]
- t. New or altered water mains that are included in this project and that will be constructed of asbestos-cement or polyvinyl chloride pipe will be pressure and leakage tested in accordance with AWWA Standard C603 or C605, respectively, as incorporated into Rule 62-555.330, F.A.C., and all other new or altered water mains included in this project will be pressure and leakage tested in accordance with AWWA Standard C600 as incorporated into Rule 62-555.330. [FAC 62-555.320(21)(b)1 and AWWA standards as incorporated into FAC 62-555.330]
- u. New or altered water mains, including fire hydrant leads and including service lines that will be under the control of a public water system and that have an inside diameter of three inches or greater, will be disinfected and bacteriologically evaluated in accordance with Rule 62-555.340, F.A.C. [FAC 62-555.320(21)(b)2 and FAC 62-555.340]
- v. New or altered water mains that are included in this project and that will be installed in areas where there are known aggressive soil conditions will be protected through use of corrosion-resistant water main materials, through encasement of the water mains in polyethylene, or through provision of cathodic protection. [FAC 62-555.320(21)(b) and RSWW 8.5.7.d]

NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSIONS FOR PWSs

Project Name: 44th Ave Water Line Improvements, Project Permittee: Manatee County Utility Operations Dept.

- JS
- w. New or relocated, underground water mains included in this project will be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed vacuum-type sanitary sewer, storm sewer, stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.; a horizontal distance of at least six feet between the outside of the water main and the outside of any existing or proposed gravity-type sanitary sewer (or a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed gravity-type sanitary sewer if the bottom of the water main will be laid at least six inches above the top of the sewer); a horizontal distance of at least six feet between the outside of the water main and the outside of any existing or proposed pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.; and a horizontal distance of at least ten feet between the outside of the water main and all parts of any existing or proposed "on-site sewage treatment and disposal system." [FAC 62-555.314(1); exceptions allowed under FAC 62-555.314(5)]
- JS
- x. New or relocated, underground water mains that are included in this project and that will cross any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer will be laid so the outside of the water main is at least six inches above the other pipeline or at least 12 inches below the other pipeline; and new or relocated, underground water mains that are included in this project and that will cross any existing or proposed pressure-type sanitary sewer, wastewater or stormwater force main, or pipeline conveying reclaimed water will be laid so the outside of the water main is at least 12 inches above or below the other pipeline. [FAC 62-555.314(2); exceptions allowed under FAC 62-555.314(5)]
- JS
- y. At the utility crossings described in Part II.C.1.w above, one full length of water main pipe will be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline or the pipes will be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, stormwater force mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. [FAC 62-555.314(2); exceptions allowed under FAC 62-555.314(5)]
- NA
- z. New or altered water mains that are included in this project and that will cross above surface water will be adequately supported and anchored, protected from damage and freezing, and accessible for repair or replacement. [FAC 62-555.320(21)(b) and RSWW 8.7.1]
- NA
- aa. New or altered water mains that are included in this project and that will cross under surface water will have a minimum cover of two feet. [FAC 62-555.320(21)(b) and RSWW 8.7.2]
- NA
- bb. New or altered water mains that are included in this project and that will cross under surface water courses greater than 15 feet in width will have flexible or restrained, watertight pipe joints and will include valves at both ends of the water crossing so the underwater main can be isolated for testing and repair; the aforementioned isolation valves will be easily accessible and will not be subject to flooding; the isolation valve closest to the water supply source will be in a manhole; and permanent taps will be provided on each side of the isolation valve within the manhole to allow for insertion of a small meter to determine leakage from the underwater main and to allow for sampling of water from the underwater main. [FAC 62-555.320(21)(b) and RSWW 8.7.2]
- JS
- cc. This project is being designed to include proper backflow protection at those new or altered service connections where backflow protection is required or recommended under Rule 62-555.360, F.A.C., or in *Recommended Practice for Backflow Prevention and Cross-Connection Control*, AWWA Manual M14, as incorporated into Rule 62-555.330, F.A.C.; or the public water system that will own this project after it is placed into operation has a cross-connection control program requiring water customers to install proper backflow protection at those service connections where backflow protection is required or recommended under Rule 62-555.360, F.A.C., or in AWWA Manual M14. [FAC 62-555.360 and AWWA Manual M14 as incorporated into FAC 62-555.330]
- JS
- dd. Neither steam condensate, cooling water from engine jackets, nor water used in conjunction with heat exchangers will be returned to the new or altered water mains included in this project. [FAC 62-555.320(21)(b) and RSWW 8.8.2]

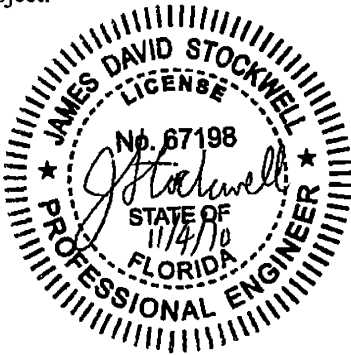
NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSIONS FOR PWSs

Project Name: 44th Ave Water Line Improvements, Project Permittee: Manatee County Utility Operations Dept.

2. Explanation for Requirements Marked "NA" in Part II.C.1 Above, Including Justification, Documentation, Assurances, and/or Alternatives as Required by Rule for Exceptions to Requirements in Part II.C.1: Requirements z, aa, & bb do not apply to this project.

I completed Part II of this notice, and the information provided in Part II and on the attachment(s) to Part II is true and accurate to the best of my knowledge and belief.

Signature, Seal, and Date of Professional Engineer (PE) or
Signature and Date of Other Person in Responsible Charge of
Designing Project:*



Printed/Typed Name: James D. Stockwell, P.E.

License Number of PE or License Number or Title of Other
Person in Responsible Charge of Designing Project:* 67198

Portion of Preliminary Design Report for Which Responsible:
ALL

Signature, Seal, and Date of Professional Engineer (PE) or
Signature and Date of Other Person in Responsible Charge of
Designing Project:*

Printed/Typed Name:

License Number of PE or License Number or Title of Other
Person in Responsible Charge of Designing Project:*

Portion of Preliminary Design Report for Which Responsible:

* Except as noted in paragraphs 62-555.520(3)(a) and (b), F.A.C., projects shall be designed under the responsible charge of one or more PEs licensed in Florida. If this project is being designed under the responsible charge of one or more PEs licensed in Florida, Part II of this notice shall be completed, signed, sealed, and dated by the PE(s) in responsible charge. If this project is not being designed under the responsible charge of one or more PEs licensed in Florida, Part II shall be completed, signed, and dated by the person(s) in responsible charge of designing this project.

NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSIONS FOR PWSs

Project Name: 44th Ave Water Line Improvements, Project Permittee: Manatee County Utility Operations Dept.

III. Certifications

A. Certification by Permittee

I am duly authorized to sign this notice on behalf of the permittee identified in Part I.F of this notice. I certify that, to the best of my knowledge and belief, this project complies with Chapter 62-555, F.A.C. I also certify that construction of this project has not begun yet and that, to the best of my knowledge and belief, this project does not include any of the following construction work:

- construction of water mains conveying raw or partially treated drinking water;
- construction of drinking water treatment, pumping, or storage facilities or conflict manholes;
- construction of water mains in areas contaminated by low-molecular-weight petroleum products or organic solvents;
- construction of an interconnection between previously separate public water systems or construction of water mains that create a "new system" as described under subsection 62-555.525(1), F.A.C.; or
- construction of water mains that will remain dry following completion of construction.

(A specific construction permit is required for each project involving any of the above listed construction work.)

I understand that, if this project is designed under the responsible charge of one or more professional engineers (PEs) licensed in Florida, the permittee must retain a Florida-licensed PE to take responsible charge of inspecting construction of this project for the purpose of determining in general if the construction proceeds in compliance with the Department of Environmental Protection construction permit, including the approved preliminary design report, for this project. I understand that the permittee must have complete record drawings prepared for this project. I also understand that the permittee must submit a certification of construction completion to the Department and obtain written approval, or clearance, from the Department before the permittee places this project into operation for any purpose other than disinfection or testing for leaks.

Signature and Date

11-4-10

Sia Mollanazar, P.E.

Printed or Typed Name

Deputy Director, Engineering

Title

B. Certification by PWS Supplying Water to Project

I am duly authorized to sign this notice on behalf of the PWS identified in Part I.G of this notice. I certify that said PWS will supply the water necessary to meet the design water demands for this project. As indicated below, the water treatment plant(s) to which this project will be connected has(have) the capacity necessary to meet the design water demands for this project, and I certify that all other PWS components affected by this project also have the capacity necessary to meet the design water demands for this project. I certify that said PWS is in compliance with applicable planning requirements in Rule 62-555.348, F.A.C.; applicable cross-connection control requirements in Rule 62-555.360, F.A.C.; and to the best of my knowledge and belief, all other applicable rules in Chapters 62-550, 62-555, and 62-699, F.A.C.; furthermore, I certify that, to the best of my knowledge and belief, said PWS's connection to this project will not cause said PWS to be in noncompliance with Chapter 62-550 or 62-555, F.A.C. I also certify that said PWS has reviewed the preliminary design report for this project and that said PWS considers the connection(s) between this project and said PWS acceptable as designed.

- Name(s) of Water Treatment Plant(s) to Which this Project Will Be Connected: Lake Manatee Water Treatment Plant

- Total Permitted Maximum Day Operating Capacity of Plant(s), gpd: 84,000,000

- Total Maximum Day Flow at Plant(s) as Recorded on Monthly Operating Reports During Past 12 Months, gpd: 46,000,000

Signature and Date

11-4-10

Sia Mollanazar, P.E.

Printed or Typed Name

Deputy Director, Engineering

Title

C. Certification by PWS that Will Own Project After It Is Placed into Permanent Operation

I am duly authorized to sign this notice on behalf of the PWS identified in Part I.H of this notice. I certify that said PWS will own this project after it is placed into permanent operation. I also certify that said PWS has reviewed the preliminary design report for this project and that said PWS considers this project acceptable as designed.

Signature and Date

11-4-10

Sia Mollanazar, P.E.

Printed or Typed Name

Deputy Director, Engineering

Title

NOTICE OF INTENT TO USE THE GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSIONS FOR PWSs

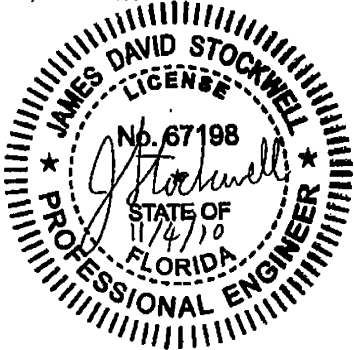
Project Name: 44th Ave Water Line Improvements, Project	Permittee: Manatee County Utility Operations Dept.

D. Certification by Professional Engineer(s) in Responsible Charge of Designing Project*

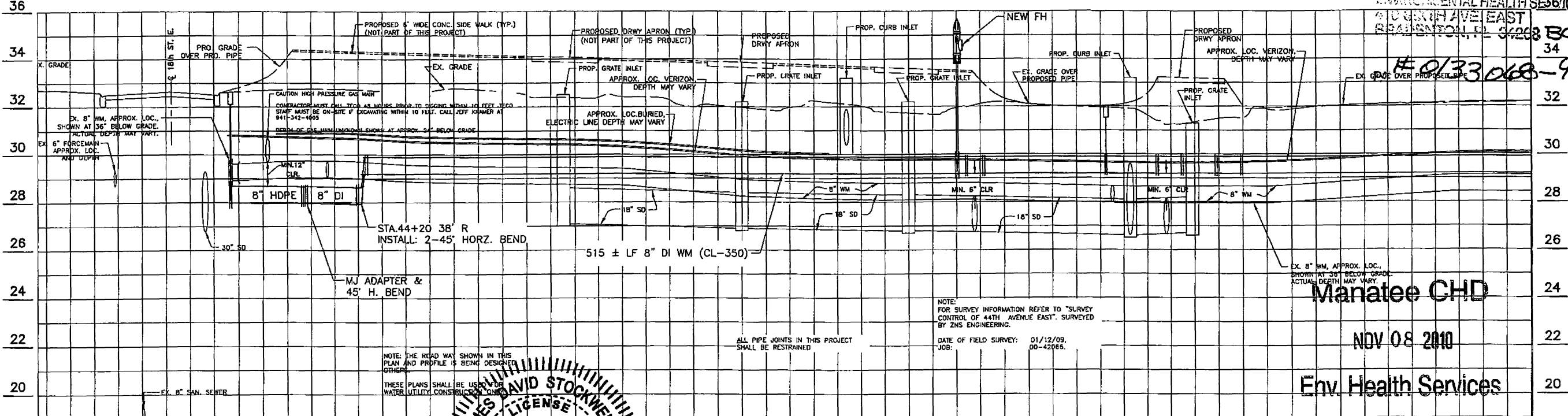
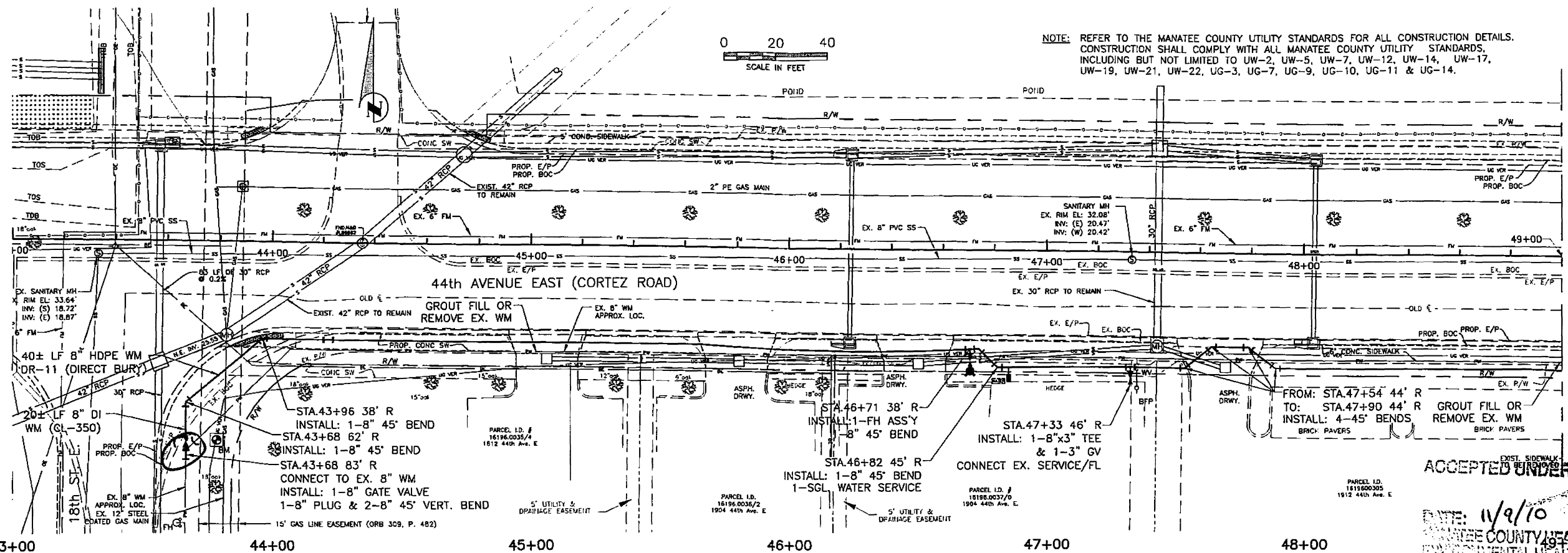
I, the undersigned professional engineer licensed in Florida, am in responsible charge of designing this project. I certify that, to the best of my knowledge and belief, the design of this project complies with Chapter 62-555, F.A.C. I also certify that, to the best of my knowledge and belief, this project is not being designed to include any of the following construction work:

- construction of water mains conveying raw or partially treated drinking water;
- construction of drinking water treatment, pumping, or storage facilities or conflict manholes;
- construction of water mains in areas contaminated by low-molecular-weight petroleum products or organic solvents;
- construction of an interconnection between previously separate public water systems or construction of water mains that create a "new system" as described under subsection 62-555.525(1), F.A.C.; or
- construction of water mains that will remain dry following completion of construction.

(A specific construction permit is required for each project involving any of the above listed construction work.)

Signature, Seal, and Date: 	Signature, Seal, and Date:
Printed/Typed Name: James D. Stockwell, P.E. License Number: 67198 Portion of Preliminary Design Report for Which Responsible: ALL	Printed/Typed Name: License Number: Portion of Preliminary Design Report for Which Responsible:

* Except as noted in paragraphs 62-555.520(3)(a) and (b), F.A.C., projects shall be designed under the responsible charge of one or more professional engineers (PEs) licensed in Florida. If this project is being designed under the responsible charge of one or more PEs licensed in Florida, Part III.D of this notice shall be completed by the PE(s) in responsible charge. If this project is not being designed under the responsible charge of one or more PEs licensed in Florida, Part III.D does not have to be completed.



SEC. TWP. RGE		01/35S/17E	
SURVEY BOOK NO.		00-42066	
PROJECT NUMBER		323-6045661	
By	Checked	Date	
Surveyed	ZNS	01/12/09	
Drawn	BLR	07/04/10	
Designed	JS	07/10	

NOTE:

THESE PLANS DO NOT REFLECT A TRUE BOUNDARY OR RIGHTS-OF-WAY SURVEY. THE LOCATION OF THE RIGHTS-OF-WAY LINES SHOWN IS APPROXIMATE AND BASED ON INFORMATION CONTAINED IN THE SUBDIVISION PLATS, RIGHTS-OF-WAY MAPS ON RECORD IN MANATEE COUNTY AND ON TOPOGRAPHIC DATA COLLECTED ON THE ROUTE SURVEY OF THE RIGHTS-OF-WAY. CONSEQUENTLY THE RIGHTS-OF-WAY LINES SHOWN ARE NOT INTENDED TO INDICATE THE EXACT PROPERTY CORNERS.

MANATEE COUNTY

FLORIDA

PROFESSIONAL ENGINEER

JAMES DAVID STOCKWELL

No. 67198

11/5/10

DATE OF FIELD SURVEY: 01/12/09

JOB: 00-42066

NO.	REVISION DESCRIPTION	BY	DATE

WATER LINE IMPROVEMENTS

44TH AVENUE EAST

PLAN & PROFILE 44th Ave. E.

STA. 43+00 TO STA. 49+00

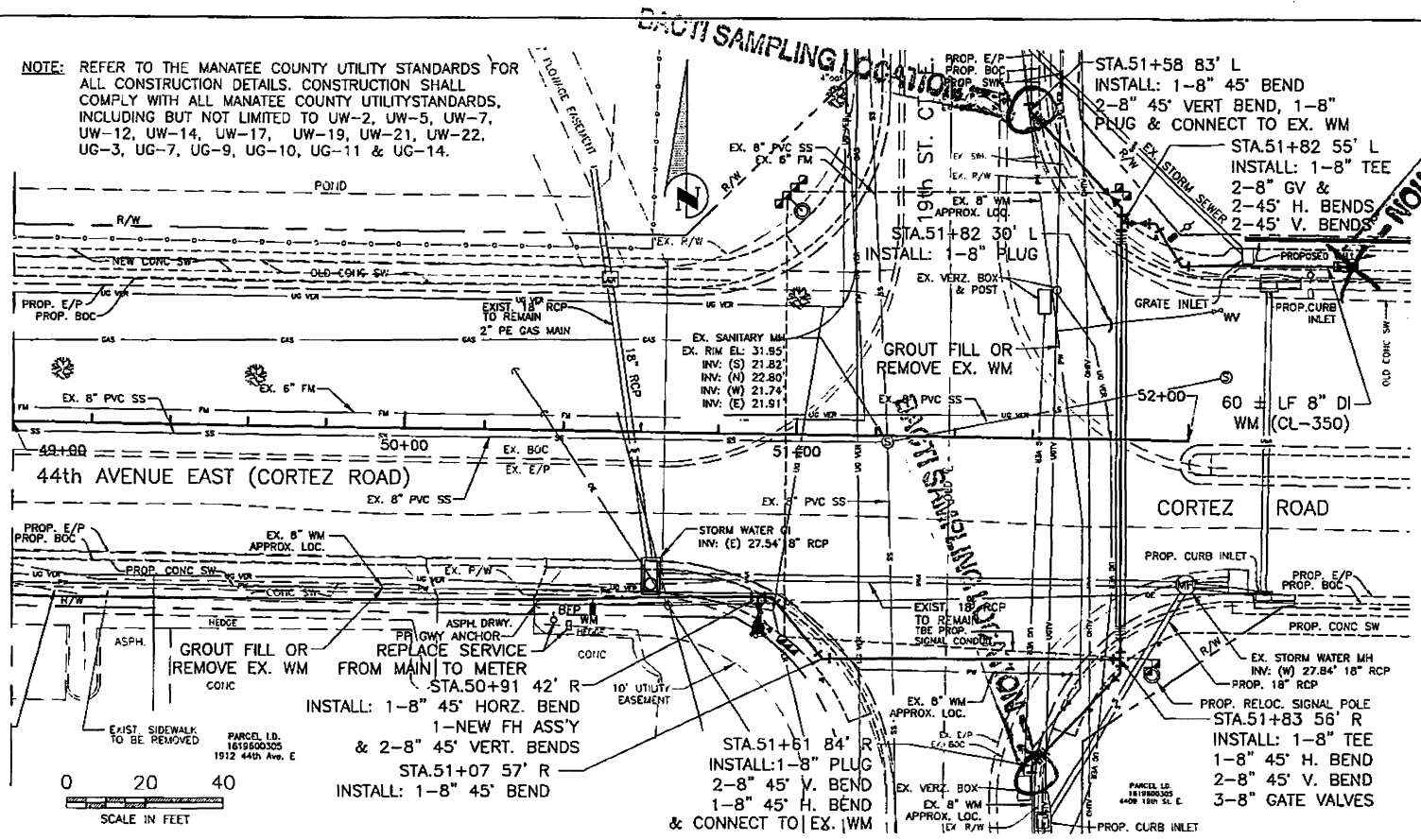
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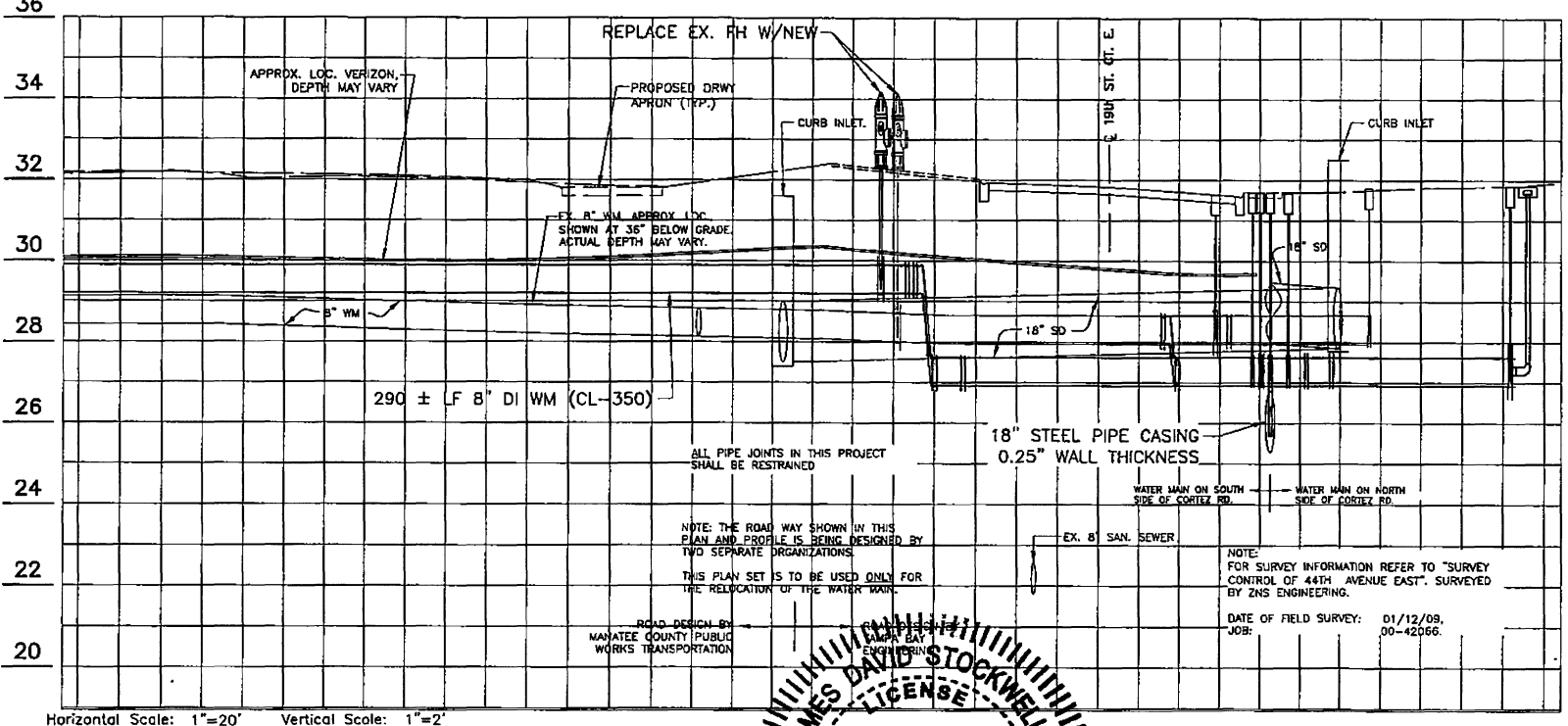
6.1

NOTE: REFER TO THE MANATEE COUNTY UTILITY STANDARDS FOR ALL CONSTRUCTION DETAILS. CONSTRUCTION SHALL COMPLY WITH ALL MANATEE COUNTY UTILITY STANDARDS, INCLUDING BUT NOT LIMITED TO UW-2, UW-5, UW-7, UW-12, UW-14, UW-17, UW-19, UW-21, UW-22, UG-3, UG-7, UG-9, UG-10, UG-11 & UG-14.

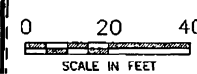
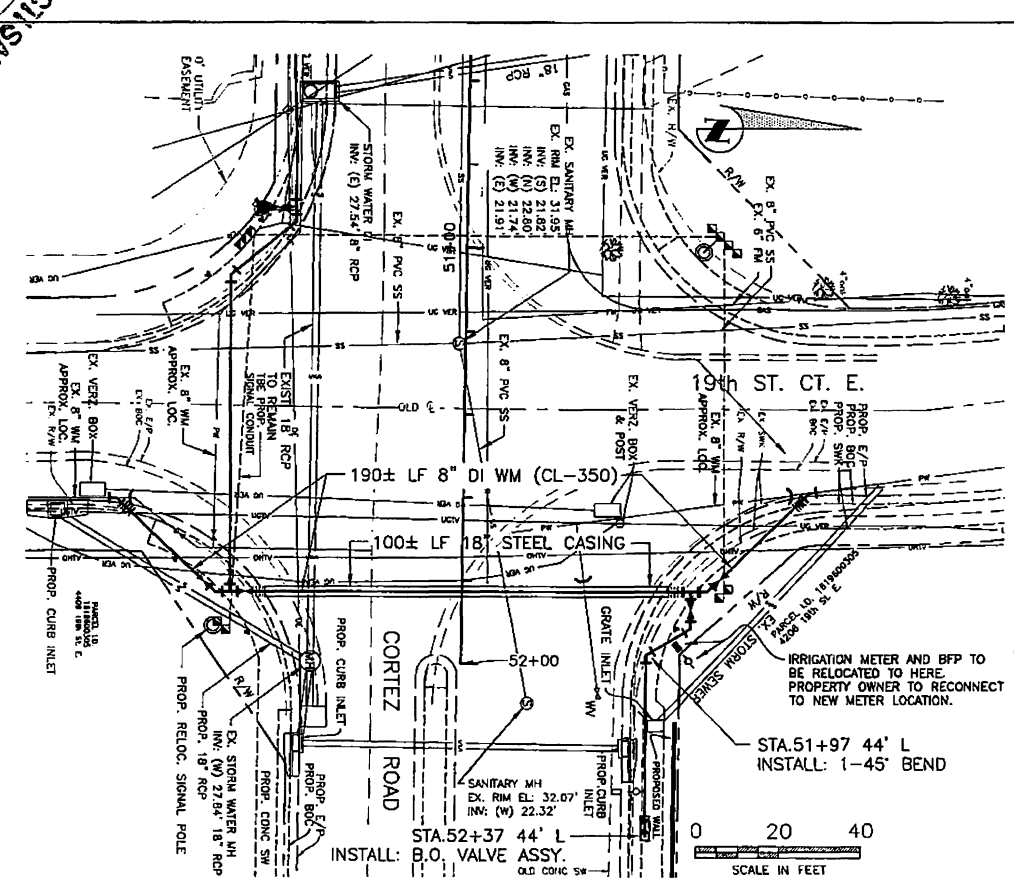
MATCH LINE STA. 49+00



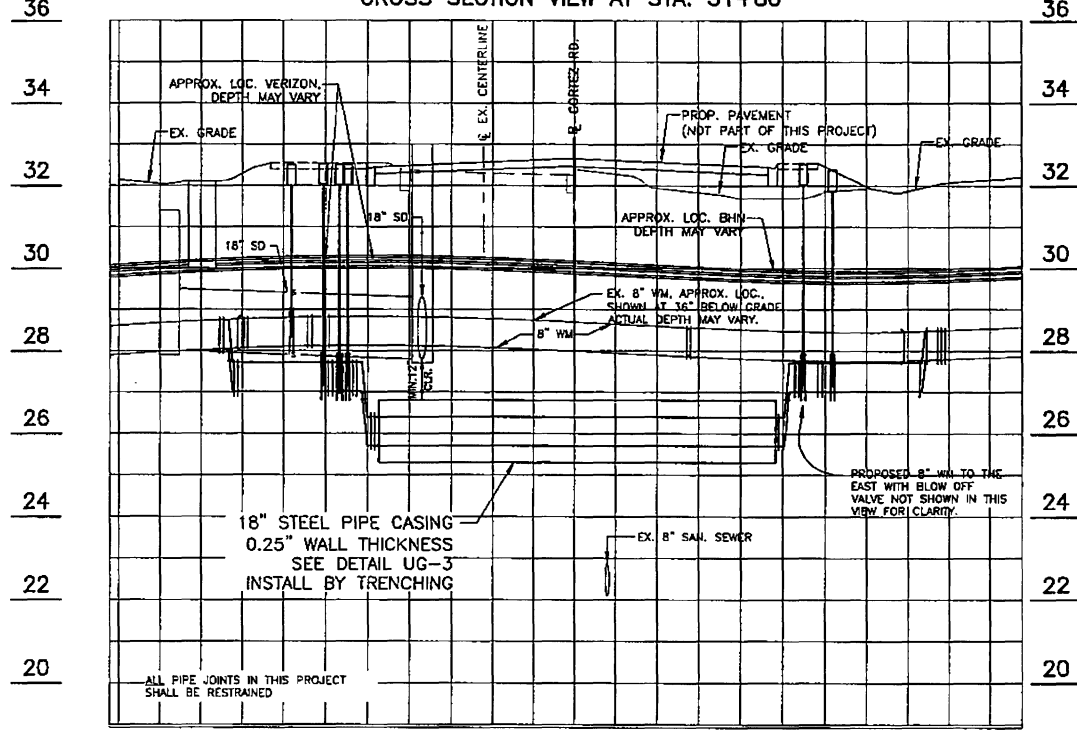
49+00 50+00 51+00 52+00



Horizontal Scale: 1"=20' Vertical Scale: 1"=2'

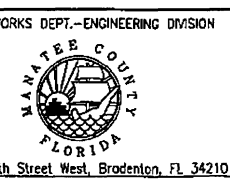
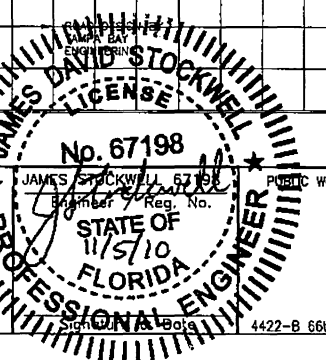


CROSS SECTION VIEW AT STA. 51+80



SEC, TWP, RGE		01/35S/17E	
SURVEY BOOK NO.		00-42066	
PROJECT NUMBER		323-6045661	
	By	Checked	Date
Surveyed	ZNS		01/12/09
Drawn	BLR		07/04/10
Designed	JS		07/10

NOTE: THESE PLANS DO NOT REFLECT A TRUE BOUNDARY OR RIGHTS-OF-WAY SURVEY. THE LOCATION OF THE RIGHTS-OF-WAY LINES SHOWN IS APPROXIMATE AND IS BASED ON INFORMATION CONTAINED IN THE SUBDIVISION PLATS, RIGHTS-OF-WAY MAPS ON RECORD IN MANATEE COUNTY AND ON TOPOGRAPHIC DATA COLLECTED ON THE ROUTE SURVEY OF THE RIGHTS-OF-WAY. CONSEQUENTLY, THE RIGHTS-OF-WAY LINES SHOWN ARE NOT INTENDED TO INDICATE THE EXACT PROPERTY CORNERS.



NO.	REVISION DESCRIPTION	BY	DATE

WATER LINE IMPROVEMENTS
44TH AVENUE EAST
PLAN & PROFILE 44th Ave. E.
STA. 49+00 TO STA. 52+00

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ROADWAY SOIL SURVEY REPORT

For the

ROADWAY IMPROVEMENTS
44TH AVENUE EAST FROM 15TH STREET EAST
TO 19TH STREET
MANATEE COUNTY, FLORIDA

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September 9, 2002

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1.0 PROJECT DESCRIPTION

This geotechnical study is to support the design of the proposed improvements to 44th Avenue East in Manatee County, Florida. The project includes improvements to 44th Avenue East from 15th Street East to 19th Street, in Manatee County, Florida. The length of the project is approximately 2,200 feet on 44th Avenue East, and 500 feet on 18th Street East. The eastern 1/3 of this project consists of improvements to an existing roadway section. The western 2/3 of this project is currently unpaved.

The scope of the project includes the design of a four lane divided urban roadway with bike lanes, sidewalks, drainage facilities, traffic signals and roadway lighting. Four (4) signal poles are expected to be designed and constructed with this project. Two (2) stormwater ponds are also planned to be included with this project. A box culvert at 15th Street is also planned.

The following report presents the results of the subsurface exploration for the proposed roadway improvements and comments on roadway subgrade preparation procedures and pavement design considerations based on the encountered subgrade soils and measured groundwater conditions. In addition, the following report presents the results of the subsurface exploration for the proposed pond located near the intersection of 44th Avenue East and 15th Street East along with pond design considerations based on the encountered soil and groundwater conditions.

2.0 SCOPE OF SERVICES

The purpose of this study was to obtain information on the general subsurface conditions at the locations of the roadway and pond improvements. Subsurface materials encountered were then evaluated with respect to available project characteristics. In this regard, engineering assessments for the following items have been formulated:

1. Suitability of the existing shallow soils and groundwater conditions for roadway support. Anticipated site preparation recommendations for support of the new pavement.
2. Suitability of materials along the alignment for use as engineered fill, pavement subgrade fill and general backfill. Engineering criteria for placement and compaction of approved fill materials.
3. General location and description of potentially deleterious materials encountered in the borings that may interfere with construction progress or roadway performance, including existing fills or surficial organics.



4. Assessment of the existing soil subgrade and groundwater conditions at the subject site for suitability in pond design.

The scope of work for this project included the following:

1. Performed a general visual reconnaissance of the site and coordinated utility locate services.
2. Executed a program of subsurface exploration consisting of subsurface sampling and field testing. A total of twenty-six (26) auger borings were completed within the planned roadway improvement areas. Twenty-one (21) of the auger borings were advanced by hand to a depth of about 5 feet below the existing grade. Five (5) power auger borings were advanced by a drill rig to depths of about 10 to 15 feet below the existing grade. In addition, two (2) Standard Penetration Test (SPT) borings were performed within the limits of the proposed pond near the northeastern corner of the intersection at 44th Avenue East and 15th Street East. The SPT borings extended to depths of 25 feet below existing grades. Samples were obtained and SPT "N" values measured virtually continuously for the upper 10 feet and then on 5 feet intervals thereafter.
3. Visually classified the samples in the laboratory using the American Association of State Highway and Transportation Officials (AASHTO) Soil Classification System in general accordance with the American Society of Testing and Materials (ASTM) test designation D-3282, titled "Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes".
4. Performed limited laboratory testing including sieve analysis, moisture content, organic content and Limerock Bearing Ratio (LBR) tests.
5. Measured groundwater levels in the borings and estimated the seasonal high groundwater levels.
6. Prepared this engineering report summarizing the field studies and the subsurface soil and groundwater conditions encountered.



3.0 SUBSURFACE EXPLORATION AND CONDITIONS

To identify shallow subsurface conditions within the roadway improvement/expansion areas, a series of twenty-six (26) auger borings was performed to depths of 5 to 15 feet below the existing grade. In each boring, samples were collected virtually continuously from the ground surface to the depths of termination. These soil samples were classified in the field and placed in airtight jars for transportation to our laboratory in Tampa. For safety, after performing the borings, the boreholes were backfilled with available existing materials.

3.1 BORING LOCATIONS

Boring locations were determined by PSI engineers based on the plans provided by Wade-Trim, Inc. The borings were staked and performed in the field by PSI technicians. Ground surface elevations were obtained from cross section and profiles provided by Wade – Trim.

The boring locations are presented on Sheets 2 and 3 in the Appendix.

3.2 SOIL BORINGS

The results of the roadway and pond borings are presented on Sheet 4 in the Appendix in the form of soil profiles, along with the profile legend and other pertinent information such as measured groundwater levels and laboratory test results. Soil stratification is based on an examination of the recovered soil samples, the laboratory testing and interpretation of field boring logs by a geotechnical engineer. The stratification lines represent the approximate boundaries between soil types of significantly different engineering properties. The actual transition may be gradual. In some cases, small variations in properties, not considered pertinent to our engineering evaluation, may have been abbreviated for clarity. The profiles represent the conditions at the boring locations only and variations may occur between the borings and beyond the depths explored. In general, the borings performed along the roadway alignment and within the proposed pond encountered the following strata.

SOIL STRATUM DESCRIPTIONS AND AASHTO CLASSIFICATIONS		
Stratum	Soil Description	AASHTO Soil Classification
1	Fine Sand	A-3
2	Silty Organic Fine Sand	A-8
3	Clayey Sand to Sandy Clay	A-2-6/A-6
4	Slightly Clayey Sand	A-2-4



3.3 GROUNDWATER TABLE

The groundwater table was measured at each of the boring locations. The depths to the groundwater table, when encountered ranged from 4 to 8 feet below the existing ground surface. The groundwater table depths measured at each boring location during our field survey are presented graphically on the Soil Boring Profiles on Sheet 3 in the Appendix.

Groundwater conditions will change with environmental variations and seasonal conditions, such as the frequency and magnitude of rainfall patterns, as well as man-made influences, such as existing swales, drainage ponds and underdrains. The estimated seasonal high groundwater tables (SHGWT) for the proposed roadway alignment ranges from approximately 2 to 5 feet below existing grades as shown on Table 2 and on the soil profiles in the Appendix.

4.0 LABORATORY TESTING

4.1 SOIL CLASSIFICATION

Representative samples collected from the borings were visually examined in the laboratory by a geotechnical engineer to verify the field classifications. The samples were classified in general accordance with the AASHTO Classification System as based on visual examinations. Laboratory testing included natural moisture content, organic content, grain-size distribution and LBR testing on selected samples. This testing was utilized to confirm the visual classifications. The laboratory test results are summarized on the attached Table 3 and the Cross Section Soil Survey on Sheet 5 in the Appendix. LBR test results are presented on Table 4.

4.2 SIEVE ANALYSIS TEST

The sieve analysis test measures the percentage by weight of a dry soil sample passing a series of U.S. standard sieves, including the percent passing the No. 200 sieve. In this manner, the grain size distribution of the soil is measured. The percentage by weight passing the No. 200 sieve is the silt and clay content. The soil gradation, including the percentage by weight of silt and clay in a soil affects its engineering properties, including permeability, suitability as roadway subgrade and suitability as general fill material. Sieve analysis tests were conducted in accordance with the FDOT FM 1-T207, (American Standard for Testing Materials (ASTM) D-1587).

4.3 MOISTURE AND ORGANIC CONTENT TESTS

Laboratory moisture and organic content tests consist of the percentage of moisture and organic contents in selected samples in general accordance with FM 1-T265 and 1-T267 (ASTM D-2216) and D-2974). Briefly, the natural moisture content was determined by weighing a sample of the selected material and then drying it in an oven.



Care was taken to use a gentle heat so as not to destroy the organics. The sample was removed from the oven and reweighed. The difference between the two (2) weights was the amount of moisture removed from the sample. The weights of the moisture divided by the weight of the dry soil sample is the percentage by weight of the moisture in the sample.

The dried soil samples were then heated in a small muffle furnace to 550 to 660 degrees Centigrade for six (6) hours, thereby driving off all organic-type material, leaving only the soil minerals. The difference in weight prior to and after the burning is the weight of the organics. The weight of the organics divided by the weight of the dried soil is the percentage of organics within a sample. Soils which have organic contents in excess of five percent (5)% are classified as "muck", A-8 materials.

5.0 GENERAL SITE GEOLOGY AND SUBSURFACE CONDITIONS

5.1 REGIONAL GEOLOGY

Surface and near surface sediments in Manatee County consist of quartz sand, consolidated and unconsolidated shell beds, clays, limestone and dolomite. The sediments range in age from Oligocene to Holocene which are described below in ascending order.

The Oligocene Series consists of Suwannee Limestone. This is generally broken down into two (2) units. The upper unit of the Suwannee Limestone is a creamy white to light yellowish gray limestone containing darker dolomitized zones. The undolomitized portions are variable packstone to wackestone, poorly to well indurated and variably recrystallized. The upper unit is highly fossiliferous, containing abundant poorly preserved foraminiferous, mollusks, echinoids and corals.

The lower unit of the Suwannee Limestone is generally a pale gray to light yellow calcitic limestone. The lower unit is typically softer, more calcitic and less porous and fossiliferous than the upper unit and may contain finely divided pyrite. The top of the Suwannee Limestone is encountered at approximately 360 feet below mean sea level in the southeastern-most part of the county; the top of the Suwannee Limestone is encountered at depths of approximately 150 feet to over 360 feet.

The Arcadia Formation is present throughout Manatee County in the subsurface. The top of the Arcadia Formation is encountered at approximately mean sea level in southeastern Manatee County to just over 100 feet below mean sea level in the southern part of the county. The Arcadia Formation dips gently to the south-southeast. The thickness of this formation ranges from approximately 300 to over 490 feet. The Arcadia Formation in Manatee County consists of, in ascending order, the Tampa Member and an unnamed upper member. The Tampa Member is a white to tan-colored, quartz sandy limestone with a carbonate mud matrix. Varying amounts of clay are usually disseminated throughout the rock. Some beds within the Tampa Member



contain more than 50% quartz sand. Dolomite is relatively uncommon within the Tampa Member. The Tampa Member is recognizable through most of southern Manatee County. The upper unnamed member consists of white to yellowish-gray quartz sand, phosphatic, sometimes clayey dolomites and limestones. Occasional beds of carbonate rich quartz sand and thin clay beds are present.

The Peace River Formation consists of sediments of yellowish-gray to light olive green interbedded phosphatic sands, clayey sand, clays and dolomite stringers. The top of this formation is found at or near mean sea level. However, in southeastern Manatee County, this formation is encountered at approximately 50 feet above mean sea level. The thickness of the formation ranges from 0 to 110 feet thick.

5.2 MANATEE COUNTY SOIL SURVEY

The "Soil Survey of Manatee County, Florida" published by the USDA Soil Conservation Service (SCS) indicated the primary mapping units in the vicinity of the proposed roadway improvements for 44th Avenue East as Eauggallie Fine Sand (20), Floridana Fine Sand (25), Gator Muck (27) and Parkwood variant complex (39). A summary of the USDA Soil Survey information is presented in Table 1 and the USDA-SCS site vicinity map is presented on Sheet 1 in the Appendix.

5.3 USGS QUADRANGLE MAP

A review of the "Bradenton, Florida" Quadrangle map published by the United States Geological Service indicates that existing site grade elevations are at approximately 25 to 35 feet based on the 1929 National Geodetic Vertical Datum and the vicinity map on Sheet 1 in the Appendix.

6.0 GENERAL ROADWAY CONSTRUCTION RECOMMENDATIONS

6.1 SUBGRADE PREPARATION

Site preparation and roadway construction should be in accordance with Manatee County Specifications or the latest FDOT Standard Specifications for Road and Bridge Construction and Roadway and Traffic Design Standards.

Groundwater levels along the roadway improvement areas ranged from 4 to 8 feet below the existing grade. Seasonal high groundwater levels are expected to be within 2 to 5 feet of the existing ground surface. Depending upon groundwater levels at the time of construction, some form of dewatering may be required.



6.2 TEMPORARY SIDE SLOPES

All excavations should be performed in accordance with Manatee County Specifications or FDOT Standard Index 500 and the latest Standard Specifications for Road and Bridge Construction and in accordance with OSHA Standards.

6.3 GROUNDWATER CONTROL

Depending upon groundwater levels at the time of construction, some form of dewatering may be required for utility construction. Groundwater can normally be controlled in shallow excavations with pumps and sumps. During subgrade soil preparation any plastic soils below design grade could become disturbed by construction activities. If this becomes the case, the contractor may be directed to remove the disturbed or pumping soils to a depth of at least 12 to 18 inches below design grade and backfill the area with structural fill. In such situations, FDOT Indexes 500 and 505 should be followed closely.

6.4 ON-SITE SOIL SUITABILITY

In general, the sands (Stratum 1) can be moved and used for grading purposes, site leveling, general engineering fill, structural fill and backfill in other areas, provided the fill is free of highly organic materials, clay, debris or any other material deemed unsuitable for construction. Stratum 2 consists of silty organic sand (A-8). Based on laboratory test results, Stratum 2 has organic contents as high as 18 percent by weight. These soils should be removed from the bottom of the existing embankment out to the proposed right-of-way in accordance with Index 500. Soils from Stratum 3 consist of plastic to highly plastic materials (A-2-6/A-6) and should be removed from beneath the proposed roadway to a depth of 24 inches below the bottom of the planned base course per Index 500. These soils should not be placed in an embankment section within 4 feet (measured vertically) from the bottom of the planned base course, per Index 505. Highly plastic materials should not be placed anywhere beneath the proposed roadway within the 1:2 control line and may only be placed above the water table to within 4 feet of the bottom of the proposed base course elevation outside of the 1:2 control line, per the Index 505. Stratum 4 consists of slightly clayey sands (A-2-4) and appears to be satisfactory for use in the embankment, when utilized in accordance with Index 505. However, this material is likely to retain excess moisture and may be more difficult to dry and compact. This material should be used in the embankment above the water level existing at the time of construction.

6.5 PAVEMENT DESIGN CONSIDERATIONS

Two (2) LBR tests were performed at the locations indicated on Table 4 in the Appendix. Testing on the samples yielded LBR values of 27 and 50 percent. Unless additional LBR tests are performed on the existing subgrade, a design LBR value of 27 percent is recommended for the existing project soils for use in pavement design. The results of the LBR tests are presented in Table 4 in the Appendix.



When encountered, groundwater levels varied from 4 feet to 8 feet below the existing grades along the alignment and are presented on the soil profiles on Sheet 3 and Table 2 in the Appendix along with seasonal high water levels. The minimum separation between the bottom of the base and the estimated seasonal high groundwater table (SHGWT) levels shall be designed in accordance with the FDOT Drainage Manual and other related FDOT and FHWA guidelines. Based on preliminary information provided by Wade - Trim, Inc., the proposed roadway improvements will generally be at or near the existing grades of the existing roadway. However, if significant cuts are proposed, the choice of base material would depend upon the relationship of final roadway improvement grades and the bottom of the base to the estimated SHGWT levels. Coquina shell base materials are more resistant to wet conditions than limerock and the separation can be somewhat reduced. Crushed concrete is also less sensitive to moisture than limerock, but should be treated in the same fashion. An asphaltic concrete base may also be used in areas of high groundwater.

7.0 POND DESIGN CONSIDERATIONS

7.1 GENERAL

The soils encountered in the two (2) borings performed within the proposed pond to be located near the northeast corner of the Intersection at 44th Avenue East and 15th Street East generally consisted of organic silty sand (A-8), fine sand (A-3) and slightly clayey sand (A-2-6) from the ground surface to a depth of approximately 6 feet. Underlying these soils is clayey sand to sandy clay (A-2-6/A-6) to the depth of termination at 20 feet below existing grades. Groundwater was encountered in the borings at depths of approximately 5 to 7 feet below existing grades. The estimated seasonal high groundwater table for the referenced pond is estimated at an approximate depth of 4 to 6 feet below existing grades.

7.2 GENERAL CONSTRUCTION RECOMMENDATIONS

Site preparation and construction should be done in accordance with the latest FDOT Standard Specifications for Road and Bridge Construction and Roadway and Traffic Design Standards. Temporary excavation side slopes should be shored in accordance with OSHA requirements.

7.3 GROUNDWATER CONTROL

Depending upon groundwater levels at the time of construction, some form of dewatering may be required to achieve the required excavations. Groundwater can normally be controlled in shallow excavations with pumps and sumps.



7.4 ON-SITE SOIL SUITABILITY

In general, the majority of the fine sands (A-3, Stratum 1) can be moved and used for embankment fill, site leveling, general engineering fill, structural fill and backfill in other areas, provided the fill is free of organic materials, clay, debris or any other material deemed unsuitable for construction. All fill should be placed in accordance with the recommendations provided in this report.

The material from Stratum 2 is considered organic (muck, A-8) material. Based on laboratory test results, this material has organic contents as high as 18 percent by weight. Stratum 2 soils should not be placed anywhere beneath the proposed roadway within the 1:2 control line per Index 505.

The materials from Stratum 3 are plastic materials (A-2-6 and A-6) and shall be removed in accordance with Index 500. These soils may be placed above the existing water level (at the time of construction) to within 4 feet of the proposed base. They should be placed uniformly in the lower portion of the embankment for some distance along the project rather than full depth for shorter distances. Highly plastic materials should not be placed anywhere beneath the proposed roadway within the 1:2 control line and may only be placed above the water table to within 4 feet of the bottom of the proposed base course elevation outside of the 1:2 control line, per the Index 505.

The material from Stratum 4 consists of slightly clayey sand (A-2-4) and appears to be satisfactory for use in the embankment, when utilized in accordance with Index 505. However, this material is likely to retain excess moisture and may be difficult to dry and compact. It should be used in the embankment above the water level existing at the time of construction.

8.0 REPORT LIMITATIONS

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This company is not responsible for the conclusions, opinions or recommendations made by others based on this data.

The analyses and recommendations submitted in this report are based upon the anticipated location and type of construction and the data obtained from the soil borings performed at the locations indicated and does not reflect any variations which may occur among these borings. If any variations become evident during the course of construction, a re-evaluation of the recommendations contained in this report will be necessary after we have had an opportunity to observe the characteristics of the conditions encountered. When final design plans and specifications are available, a general review by our office should be completed to check that the assumptions made in preparation of this report are correct and that earthwork and foundation recommendations are properly interpreted and implemented.



TABLE I
SUMMARY OF USDA SOIL SURVEY
44TH AVENUE EAST FROM 15TH STREET EAST TO 19TH STREET
MANATEE COUNTY, FLORIDA
PSI PROJECT NO. 775-25188

USDA MAP SYMBOL AND SOIL NAME	SOIL CLASSIFICATION			SEASONAL HIGH WATER TABLE			RISK OF CORROSION	
	DEPTH (in)	AASHTO GROUP	PERMEABILITY (in/hr)	DEPTH (feet)	KIND	MONTH	UNCOATED STEEL	CONCRETE
Eau Gallie Fine Sand (20)	0 - 28	A-3	6.0 - 20	0 - 1.0	Apparent	Jun - Dec	High	Moderate
	28 - 42	A-3, A-2-4	0.6 - 6.0					
	42 - 50	A-2-4	0.6 - 6.0					
	50 - 65	A-2-4, A-2-6	2.0 - 6.0					
Floridana Fine Sand (25)	0 - 15	A-3, A-2-4	6.0 - 20	0 - 1.0	Apparent	Jun - Feb	Moderate	Low
	15 - 32	A-3	6.0 - 20					
	32 - 65	A-2-4, A-2-6	<0.2					
Gator Muck (27)	0 - 18	A-8	6.0 - 20	+1 - 0	Apparent	Jun - Mar	High	High
	18 - 55	A-2, A-4, A-6	0.6 - 2.0					
	55 - 80	A-3, A-2-4	6.0 - 20					
Parkwood Variant Complex (39)	0 - 9	A-3, A-2-4	>20	0 - 1.0	Apparent	Jun - Oct	High	Low
	9 - 37	A-2-4	2.0 - 6.0					
	37 - 80	Unweathered Bedrock	--					

TABLE 2
AUGER BORING LOCATIONS AND GROUNDWATER TABLE
44TH AVENUE EAST FROM 15TH STREET EAST TO 19TH STREET
MANATEE COUNTY, FLORIDA
PSI PROJECT NO. 775-25188

BORING NUMBER	BORING LOCATION		BORING ELEVATION ¹ (feet, NGVD)	MEASURED GROUNDWATER TABLE ²		ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (feet, NGVD)	BORING DEPTH (feet)	BORING TYPE
	STATION (feet)	OFFSET (feet)		DEPTH (feet)	ELEVATION (feet, NGVD)			
B 1	129 + 43	52 LT	31.7	5.0	26.7		25.0	SPT
B 2	129 + 57	64 RT	31.5	NOT PERFORMED DUE TO LIMITED ACCESS				
B 3	130 + 52	66 LT	27.8	5.0	22.8		25.0	SPT
B 4	130 + 50	58 RT	28.5	5.0	23.5		25.0	SPT
PB 1	130 + 82	350 LT	---	7.0	---		20.0	SPT
PB 2	131 + 20	130 LT	---	5.0	---		20.0	SPT
AB 1	131 + 00	20 LT	25.6	4.0	21.6	22.6	5.0	AUGER
AB 2	132 + 00	20 RT	29.3	GNE'	---		5.0	AUGER
AB 3	133 + 40	15 LT	26.1	GNE'	---		5.0	AUGER
AB 4	134 + 00	18 RT	30.8	GNE'	---		5.0	AUGER
AB 5	135 + 00	20 LT	28.1	8.0	20.1	21.6	10.0	AUGER
AB 6	136 + 00	20 RT	32.9	GNE'	---		5.0	AUGER
AB 7	137 + 00	20 LT	27.9	GNE'	---		5.0	AUGER
AB 8	138 + 00	20 RT	31.8	GNE'	---		5.0	AUGER
AB 9	139 + 00	20 LT	29.0	GNE'	---		5.0	AUGER
AB 10	140 + 00	18 RT	32.4	7.0	25.4	26.4	10.0	AUGER
AB 11	141 + 00	23 LT	31.6	GNE'	---		5.0	AUGER
AB 12	142 + 00	17 RT	33.7	GNE'	---		5.0	AUGER
AB 13	143 + 00	19 LT	32.5	GNE'	---		5.0	AUGER
AB 14	144 + 00	18 LT	33.2	GNE'	---		5.0	AUGER
AB 15	145 + 00	16 LT	33.5	4.5	29.0	30.1	10.0	AUGER
AB 16	146 + 00	9 LT	32.6	4.5	28.1	30.6	5.0	AUGER
AB 17	147 + 00	30 LT	32.1	GNE'	---		3.0	AUGER
AB 18	148 + 00	8 LT	32.0	4.0	28.0	30.0	5.0	AUGER
AB 19	149 + 00	18 LT	32.2	GNE'	---		5.0	AUGER
AB 20	150 + 00	18 LT	31.8	5.5	26.3	26.8	15.0	AUGER
AB 21	151 + 00	21 LT	32.0	4.0	28.0	29.0	5.0	AUGER
18TH STREET								
AB 22	14 + 00	35 LT	32.3	GNE'	---		5.0	AUGER
AB 23	13 + 00	20 LT	32.3	6.0	26.3		15.0	AUGER
AB 24	12 + 00	15 LT	32.3	GNE'	---		5.0	AUGER
AB 25	11 + 00	15 LT	31.9	GNE'	---		5.0	AUGER
AB 26	10 + 00	13 LT	32.2	GNE'	---		5.0	AUGER

¹ Boring elevations were obtained from cross sections and profiles provided by Wade-Trim, Inc.

² Measured at the time of drilling.

³ Groundwater table not encountered within the depth of the boring at the time of field activities.

TABLE 3
SUMMARY OF LABORATORY TEST RESULTS
44th AVENUE EAST FROM 15TH STREET EAST TO 19TH STREET
MANATEE COUNTY, FLORIDA
PSI PROJECT NO. 775-25188

BORING NUMBER	BORING LOCATION		SAMPLE DEPTH (ft)	ORGANIC CONTENT (%)	MOISTURE CONTENT (%)	SIEVE ANALYSES (%)					ATTERBERG LIMITS (%)		AASHTO GROUP	STRATUM NUMBER
	STATION (ft)	OFFSET (ft)				#10	#40	#60	#100	#200	LL	PI		
AB - 1	131 + 00	20 LT	3.5-4.5	18	43	-	-	-	-	28	-	-	A-8	2
PB - 2	131 + 20	130 LT	2.0-4.0	11	30	-	-	-	-	39	-	-	A-8	2
AB - 8	138 - 00	20 RT	4.0-5.0	-	10	100	98	90	63	19	-	-	A-2-4	3
AB - 13	143 + 00	19 LT	0.0-2.5	-	4	91	82	71	43	8	-	-	A-3	1
AB - 15	145 + 00	16 LT	0.0-1.0	-	9	100	97	88	58	12	-	-	A-2-4	4
AB - 24	12 + 00	15 LT	0.0-3.0	-	6	95	89	79	32	10	-	-	A-3	1

TABLE 4
SUMMARY OF LIMEROCK BEARING RATIO TEST RESULTS
44TH AVENUE EAST FROM 15TH STREET EAST TO 19TH STREET EAST
MANATEE COUNTY, FLORIDA
PSI PROJECT NO. 775-25188

SAMPLE NUMBER	SAMPLE LOCATION ¹		DEPTH (ft)	AASHTO GROUP	STRATUM NUMBER	MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE CONTENT (%)	LBR VALUE (%)
	STATION (ft)	OFFSET (ft)						
LBR - 1	149 + 00	20 LT	0 - 1	A-3	1	107.0	12.5	27
LBR - 2	136 + 00	20 RT	0 - 1	A-2-4	1	114.0	11.0	50

ATTACHMENT 'S'

**SUBSURFACE SOIL EXPLORATION,
ANALYSIS AND RECOMMENDATIONS
FOR PROPOSED DOT MAST ARM POLES,
44TH AVENUE EAST,
FROM U.S. 41 TO 15TH STREET EAST,
BRADENTON,
MANATEE COUNTY, FLORIDA**



Ardaman & Associates, Inc.

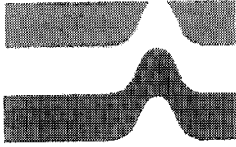
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Bartow, 1525 Centennial Drive, Bartow, Florida 33830, Phone (863) 533-0858
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Sarasota, 78 Sarasota Center Boulevard, Sarasota, Florida 34240, Phone (941) 922-3526
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American Society for Testing and Materials
Florida Institute of Consulting Engineers**



Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

June 16, 2010
File No. 10-7134

TO: Manatee County Public Works Department
Project Management Division
1022 26th Avenue East
Bradenton, Florida 34208

Attention: Mr. Steve Serbaty

SUBJECT: Subsurface Soil Exploration, Analysis and Recommendations for Proposed DOT
Mast Arm Poles, 44th Avenue East, from US 41 to 15th Street East, Bradenton,
Manatee County, Florida

Gentlemen:

As requested, our firm has completed an exploration of foundation soil conditions at the above-referenced site. This report will present the results of our exploration and foundation recommendations.

This report was prepared for the exclusive use of Manatee County Public Works Department and their consultants for use in the design of foundation systems for the proposed mast-arm poles, in accordance with generally-accepted geotechnical engineering practices. No other warranty, expressed or implied, is made.

SCOPE

The scope of our services has included the following items:

1. Conducting nine (9) Standard Penetration Test borings to determine the nature and condition of the subsurface soils.

2. Reviewing each soil sample obtained in our field testing program by a geotechnical engineer in the laboratory for further investigation, classification and assignment of laboratory tests.
3. Performing laboratory tests on selected samples.
4. Analyzing the existing soil conditions with respect to the proposed construction.
5. Preparing this report to document the results of our field testing program, laboratory analysis and engineering analysis.

FIELD EXPLORATION

The borings were performed at three (3) separate intersections with 44th Avenue East, 301 Boulevard, 9th Street East and 15th Street East. Our field exploration program consisted of conducting nine (9) Standard Penetration Test borings at the locations shown on the attached Sheets M-1, M-2 and M-3 for each intersection respectively. Test boring depth, location and number were determined by others. Test borings were located in the field by Ardaman & Associates, Inc. The borings were performed to determine the nature and condition of the subsurface soils to a maximum depth of 30 feet below the existing ground surface. The equipment and procedures utilized in the Standard Penetration Test are described in greater detail in the appendix of this report.

It should be noted that access was limited at the intersections due to conflicts with overhead power lines and large trees with the drill rig mast as well as drainage ditches that limited truck access. In some cases, a boring was not performed at one or more corners of the intersection. In other cases, the boring was moved some distance from the proposed mast arm pole. In other cases, auger borings were performed with dynamic cone penetrometer tests in lieu of SPT borings. It is not necessary to raise the drill rig mast to perform auger borings.

The dynamic cone penetrometer (DCP), manufactured by Durham Geo-Enterprises, Inc., uses a



slide hammer to strike an anvil to penetrate a 1.5-inch diameter cone that has been seated into the bottom of an augered hole. This allows a measurement of soil resistance using hand equipment. Based on calibration with local soils, the cone resistance blow counts per 1.75-inch increment correlate at very close to a 1:1 ratio with standard penetration test "N" values in the lower blow count range. At higher counts, a conversion factor provided by the manufacturer is used. The drawback with the DCP testing is that it can only be used to a depth of around 10 feet below grade.

SOIL CONDITIONS

Soil boring logs representing the soil profiles encountered in our test boring program have been included as Sheets M-1A, M-2A and M-3A in the appendix of this report. Soil descriptions listed are based upon visual examination by the drill crew in the field and by a geotechnical engineer in the laboratory.

LABORATORY INVESTIGATION

Samples obtained during our field sampling program were thoroughly examined in our laboratory to obtain an accurate definition of the soil profile. Additional testing was deemed necessary in order to further define soil properties. Basic laboratory tests, including sieve analyses, natural water content and organic content were conducted on selected soil samples collected. Sieve analysis curves are included in the appendix of this report.

From this basic laboratory data and N values from the Standard Penetration Test borings the friction angle (ϕ'), cohesion (c) in kips per square foot and the total saturated unit weight (γ_t) in pounds per



cubic foot were estimated from tables of standard properties of soils. The friction angle is not an appropriate value for clays and was left blank for those soils. Similarly, the cohesion is not an appropriate value for sands. Silt is generally cohesionless. However, in strata that are very hard cemented silt such as limerock, the material has been given a high cohesion for modeling purposes.

Although no corrosion parameters were determined for these soil samples, the corrosion potential of the soil encountered in this area has generally been found to be moderately aggressive, as indicated by analytical reports of the corrosivity parameters from other sites. Generally the following criteria indicate the aggressiveness of a soil:

Classification	Environmental	Units	Steel		Concrete	
	Condition		Water	Soil	Water	Soil
Extremely Aggressive	pH		< 6.0		< 5.0	
(If any of these	Cl	ppm	> 2000		> 2000	
conditions exist)	SO ₄	ppm	N.A.		> 1500	> 2000
	Resistivity	Ohm-cm	< 1000		< 500	
Slightly Aggressive	pH		> 7.0		> 6.0	
(If all of these	Cl	ppm	N.A.		< 500	
conditions exist)	SO ₄	ppm	N.A.		< 150	< 1000
	Resistivity	Ohm-cm	> 5000		> 3000	
Moderately Aggressive	This classification must be used at all sites not meeting requirements for either slightly aggressive or extremely aggressive environments.					
pH = acidity (-log ₁₀ H ⁺ ; potential of Hydrogen), Cl = chloride content, SO ₄ = Sulfate content.						



RESULTS

The FDOT has developed standard foundation designs for various mast arm configurations. The standard designs are based on the foundation soils meeting certain criteria:

- The soils must be classified as cohesionless
- They must have a friction angle of a minimum of 30 degrees
- They must have a saturated submerged unit weight of at least 50 pounds per cubic foot

The estimated saturated unit weight, friction angle and cohesion have been indicated on the boring logs. In general, an SPT "N" value of at least 7 is necessary to meet the FDOT friction angle requirement of 30 degrees. To convert saturated unit weight to buoyant (also known as submerged or effective) unit weight, subtract 62.4 from the value given on the logs. Soils with the USCS classifications SP, SP-SM, SM, SM-SC, SC and, in most cases, ML are cohesionless. USCS classification SC is clayey sand and can exhibit some cohesion at higher clay content ranges.

The three (3) intersections are discussed individually below.

44th Avenue East and 301 Boulevard

The borings needed to be moved a significant distance away from the proposed mast arm locations due to multiple power lines. The upper 10 feet of sands are soft and do not meet the FDOT criteria of a friction angle of 30 degrees. Hard cemented silt was encountered at a depth of around 18 feet at the boring locations. Rock drilling would likely be necessary to penetrate this layer.



44th Avenue East and 9th Street East

Although the strength of the sands varied somewhat between borings and at various depths, the upper 10 feet of sands are soft and frequently do not meet the FDOT criteria of a friction angle of 30 degrees. Hard cemented silt was encountered at a depth of around 18 feet at one of the boring locations and was deeper than 25 feet at another of the boring locations. Rock drilling would likely be necessary to penetrate this layer.

44th Avenue East and 15th Street East

The soils are the poorest at this intersection. There is a layer of peat (mucky sand) 2 to 3 feet thick just below the surface. These organic soils are very weak and their strength should likely be disregarded in the foundation analysis. Below the peat is a clay layer in a number of the borings. Hard cemented silt was encountered at a depth of around 8 to 10 feet in all of the borings. This hard layer continued for the full depth of the borings. Rock drilling would likely be necessary to penetrate this layer.

None of the soil borings met all of the FDOT criteria for the standard mast arm foundation design. It appears that a custom foundation design will be necessary. For design purposes, it should be assumed that the water table will be at or near the ground surface at various times.

GENERAL COMMENTS

The analysis and recommendations submitted in this report are based upon the data obtained from nine (9) Standard Penetration Test borings performed at the locations indicated on the attached Sheets. While the borings are representative of the subsurface conditions at their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and may be encountered. The boring logs and related information are based upon the



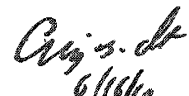
driller's logs and visual examination of selected samples in the laboratory. The delineation between soil types shown on the logs is approximate, and the description represents our interpretation of the subsurface conditions at the designated boring location on the particular date drilled.

The water table levels shown on the boring logs represent the water table surfaces encountered on the dates shown. Fluctuations in the water table levels should be anticipated throughout the year.

It has been a pleasure to be of assistance to you with this project. Please contact us when we may be of further service to you, or should you have any questions concerning this report.

Very truly yours,

ARDAMAN & ASSOCIATES, INC.
Certificate of Authorization No. 5950


6/16/10
Craig G. Obrecht, P.E.
Project Engineer
Fl. Lic. No. 55451


Gary H. Schmidt, P.E.
Vice President
Fl. Lic. No. 12305

CGO/GHS:nh



APPENDIX

SOIL BORING, SAMPLING AND TESTING METHODS

Standard Penetration Test

The Standard Penetration Test (SPT) is a widely accepted method of in situ testing of foundation soils (ASTM D-1586). A 2-foot long, 2-inch O.D. split-barrel sampler attached to the end of a string of drilling rods is driven 18 inches into the ground by successive blows of a 140-pound hammer freely dropping 30 inches. The number of blows needed for each 6 inches of penetration is recorded. The sum of the blows required for penetration of the second and third 6-inch increments of penetration constitutes the test result or N-value. After the test, the sampler is extracted from the ground and opened to allow visual examination and classification of the retained soil sample. The N-value has been empirically correlated with various soil properties allowing a conservative estimate of the behavior of soils under load. The following tables relate N-values to a qualitative description of soil density and, for cohesive soils, an approximate unconfined compressive strength (Q_u):

Cohesionless Soils:	<u>N-Value</u>	<u>Description</u>
	0 to 4	Very loose
	4 to 10	Loose
	10 to 30	Medium dense
	30 to 50	Dense
	Above 50	Very dense

Cohesive Soils:	<u>N-Value</u>	<u>Description</u>	<u>Q_u (ton/ft²)</u>
	0 to 2	Very soft	Below 0.25
	2 to 4	Soft	0.25 to 0.50
	4 to 8	Medium stiff	0.50 to 1.0
	8 to 15	Stiff	1.0 to 2.0
	15 to 30	Very stiff	2.0 to 4.0
	Above 30	Hard	Above 4.0

The tests are usually performed at 5-foot intervals. However, more frequent or continuous testing is done by our firm through depths where a more accurate definition of the soils is required. The test holes are advanced to the test elevations by rotary drilling with a cutting bit, using circulating fluid to remove the cuttings and hold the fine grains in suspension. The circulating fluid, which is a bentonitic drilling mud, is also used to keep the hole open below the water table by maintaining an excess hydrostatic pressure inside the hole. In some soil deposits, particularly highly pervious ones, NX-size flush-coupled casing must be driven to just above the testing depth to keep the hole open and/or prevent the loss of circulating fluid.

Representative split-spoon samples from each sampling interval and from every different stratum are brought to our laboratory in air-tight jars for further evaluation and testing, if necessary. After thorough examination and testing of the obtained samples in the laboratory, the samples are discarded unless prior arrangements have been made. After completion of a test boring, the hole is kept open until a steady state groundwater level is recorded. The hole is then sealed, if necessary, and backfilled.

Auger Borings

Auger borings are used when a relatively large, continuous sampling of soil strata close to ground surface is desired. A 4-inch diameter, continuous flight, helical auger with a cutting head at its end is screwed into the ground in 5-foot sections. It is powered by the rotating action of the Kelly bar of a rotary drill rig. The sample is recovered by withdrawing the auger out of the ground without rotating it. The soil sample so obtained is classified and representative samples put in bags or jars and brought back to the laboratory for further classification and testing.

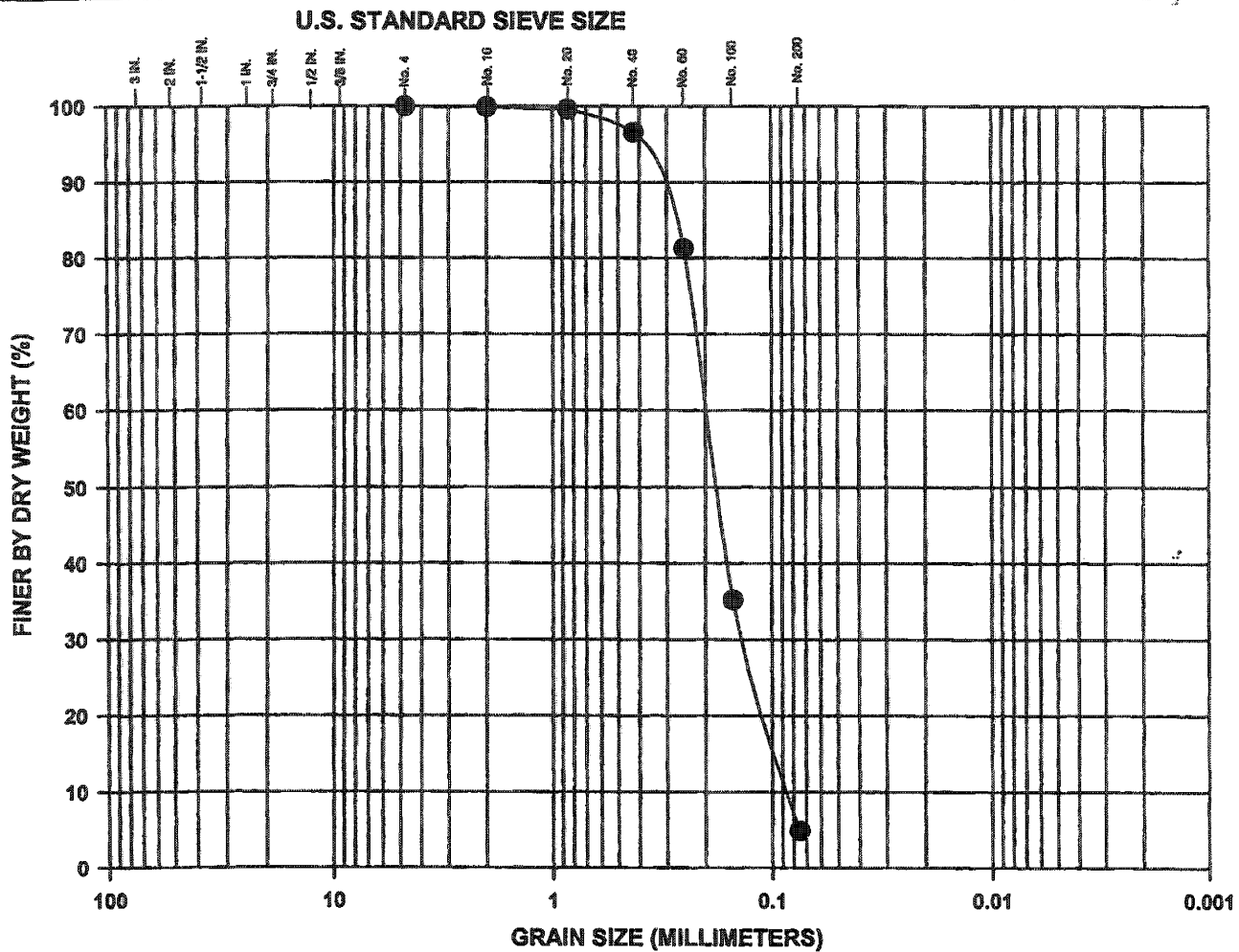
Dynamic Cone Penetrometer

The dynamic cone penetrometer, manufactured by Durham Geo-Enterprises, Inc., uses a slide hammer to strike an anvil to penetrate a 1.5-inch diameter cone that has been seated into the bottom of a hand augered hole. This allows a measurement of soil resistance using hand equipment. Based on calibration with local soils, the cone resistance blow counts per 1.75-inch increment correlate at very close to a 1:1 ratio with standard penetration test "N" values in the lower blow count range. At higher counts, a conversion factor provided by the manufacturer is used.

Laboratory Test Methods

Soil samples returned to our laboratory are examined by a geotechnical engineer or geotechnician to obtain more accurate descriptions of the soil strata. Laboratory testing is performed on selected samples as deemed necessary to aid in soil classification and to further define engineering properties of the soils. The test results are presented on the soil boring logs at the depths at which the respective sample was recovered, except that grain size distributions or selected other test results may be presented on separate tables, figures or plates as described in this report. The soil descriptions shown on the logs are based upon a visual-manual classification procedure in general accordance with the Unified Soil Classification System (ASTM D-2488-84) and standard practice. Following is a list of abbreviations which may be used on the boring logs or elsewhere in this report.

- 200 - Fines Content (percent passing the No. 200 sieve); ASTM D-1140
- DD - Dry Density of Undisturbed Sample; ASTM D-2937
- Gs - Specific Gravity of Soil; ASTM D-854
- k - Hydraulic Conductivity (Coefficient of Permeability)
- LL - Liquid Limit; ASTM D-423
- OC - Organic Content; ASTM D-2974
- pH - pH of Soil; ASTM D-2976
- PI - Plasticity Index (LL-PL); ASTM D-424
- PL - Plastic Limit; ASTM D-424
- Qp - Unconfined Compressive Strength by Pocket Penetrometer;
- Qu - Unconfined Compressive Strength; ASTM D-2166 (soil), D-2938 (rock)
- SL - Shrinkage Limit; ASTM D-427
- USCS - Unified Soil Classification System; ASTM D-2487, D-2488
- w - Water (Moisture) Content; ASTM D-2216

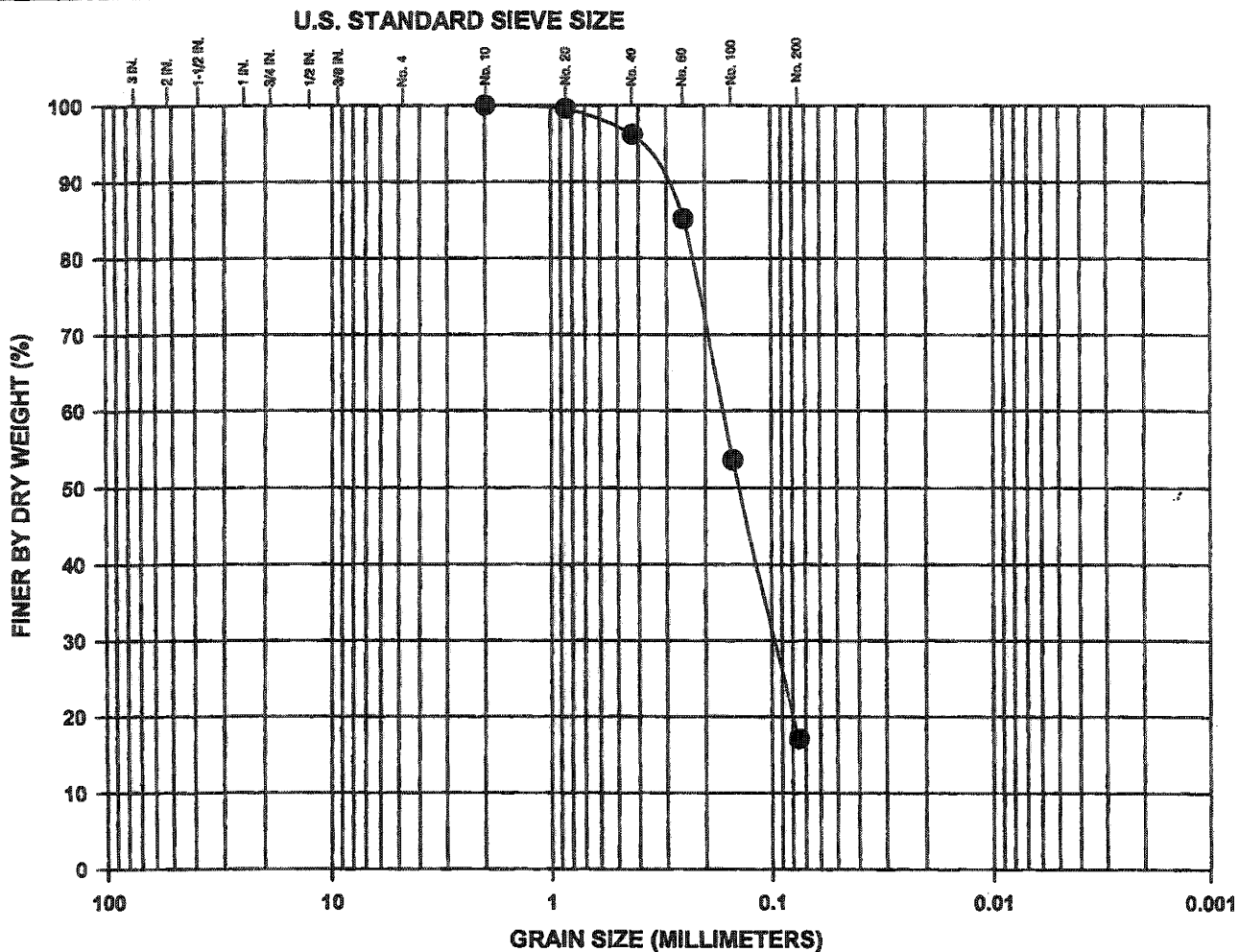


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sieve Size	Percent Passing
3/4-in	
3/8-in	
#4	100.0
#10	99.9
#20	99.8
#40	96.6
#60	81.3
#100	35.2
#200	4.9

Boring No. 5
Sample No. 6
Depth (ft): 19.5
Description: dark brown fine sand
USCS: SP

 Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants			
44th Avenue East US 41 to 15th Street East Manatee Co., FL			
DRAWN BY:	CJO	CHECKED BY:	DATE: 06/14/10
FILE NO:	10-7134	APPROVED BY:	FIGURE:

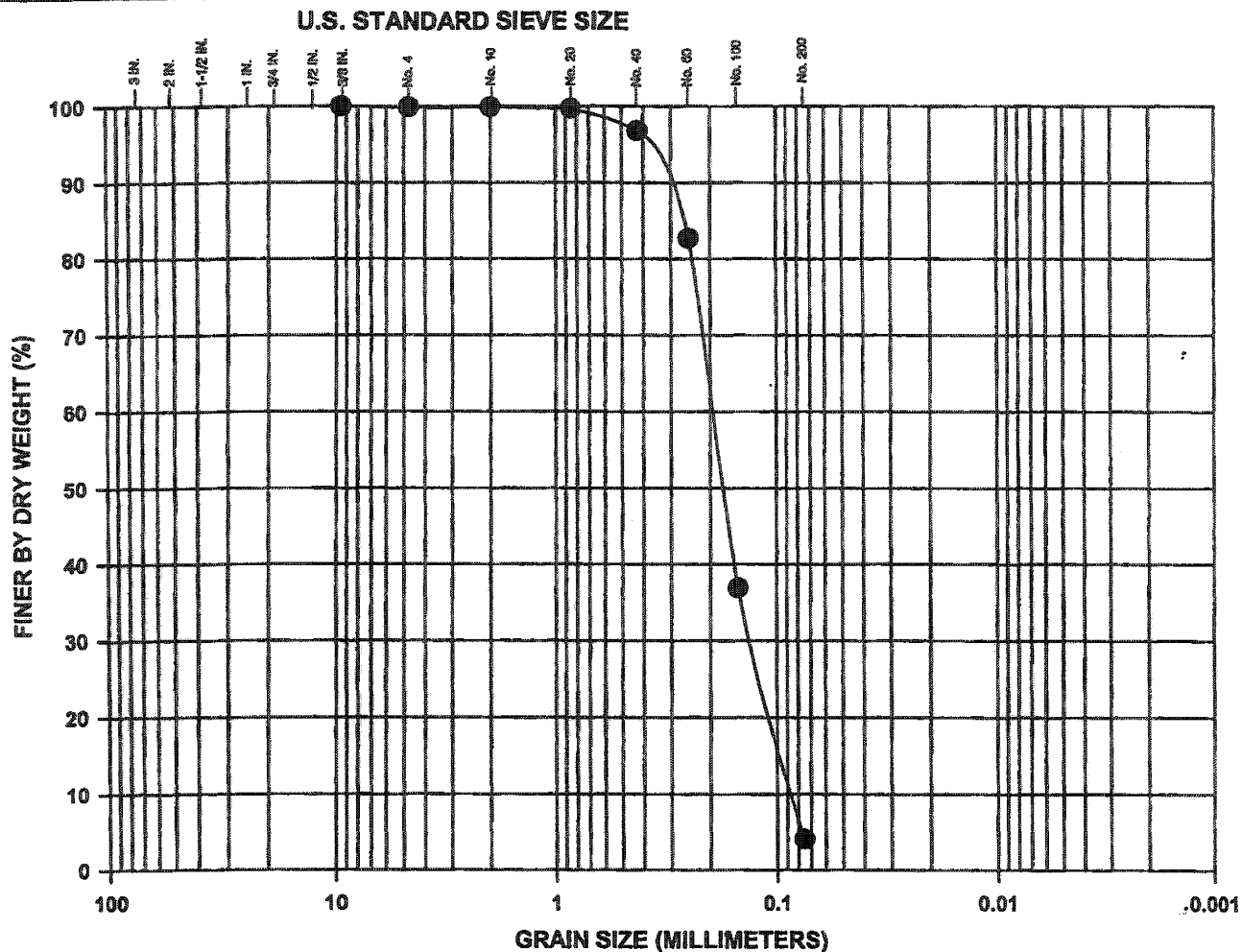


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sieve Size	Percent Passing
3/4-in	
3/8-in	
#4	
#10	100.0
#20	99.6
#40	96.2
#60	85.2
#100	53.6
#200	17.1

Boring No. 1
 Sample No. 5
 Depth (ft): 6.5
 Description: gray silty fine sand
 USCS: SM

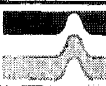
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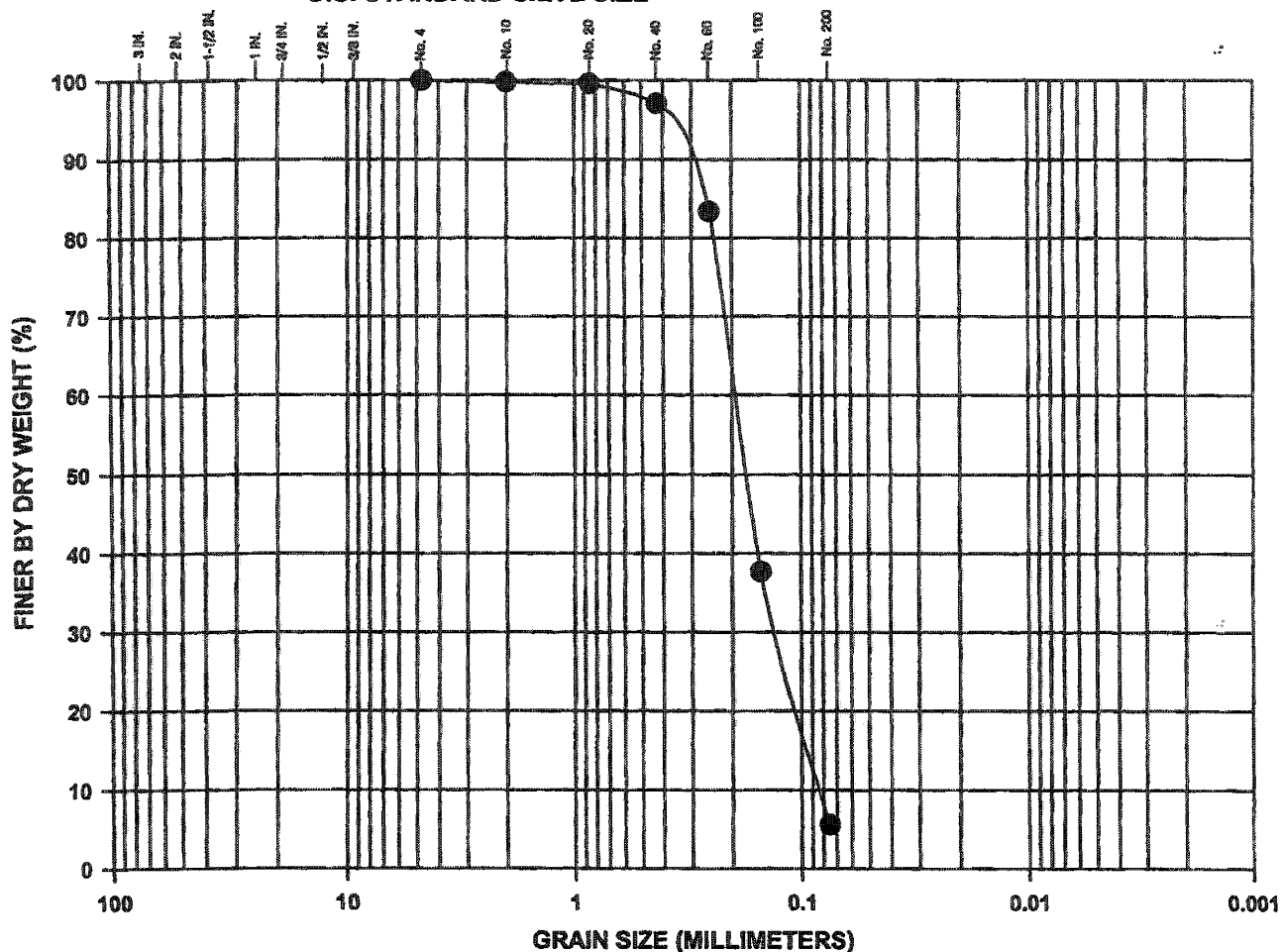
GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sieve Size	Percent Passing
3/4-in	100.0
#4	99.9
#10	99.9
#20	99.7
#40	96.8
#60	82.7
#100	36.9
#200	4.1

Boring No. 4
 Sample No. 4
 Depth (ft): 3.0
 Description: brown fine sand
 USCS: SP

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U.S. STANDARD SIEVE SIZE

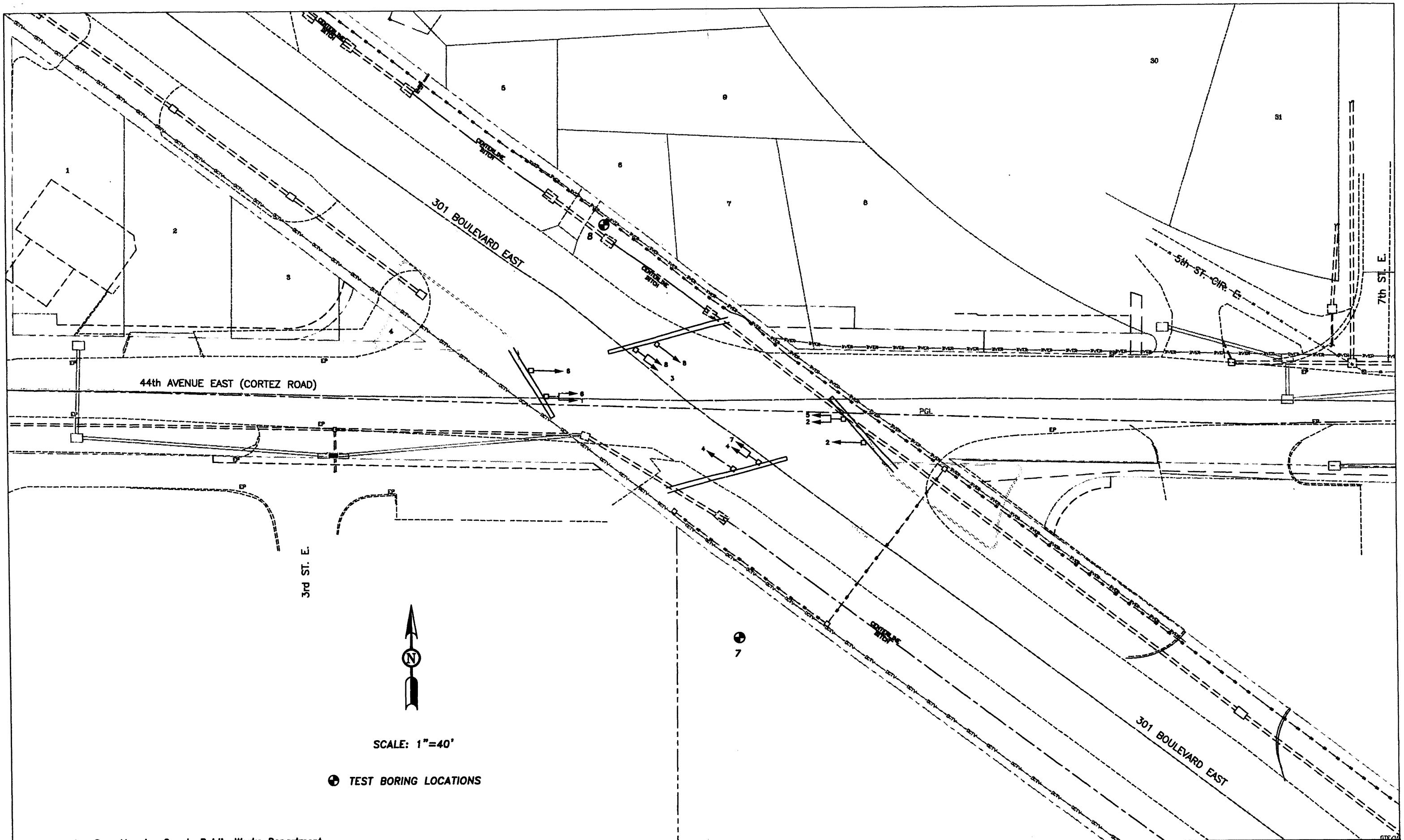


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sieve Size	Percent Passing
3/4-in	
3/8-in	
#4	100.0
#10	99.8
#20	99.6
#40	97.1
#60	83.4
#100	37.7
#200	5.6

Boring No. 5
Sample No. 2
Depth (ft): 2.0
Description: brown fine sand with silt
USCS: SP-SM

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FILE NO.: 10-7134	APPROVED BY:	FIGURE



Base Drawing By: Manatee County Public Works Department

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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 Materials Consultants
 70 Sarasota Center Blvd. Sarasota, FL 34240
 Tel. (941) 922-8585
 CERTIFICATE OF AUTHORIZATION NO. 9880

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DESIGNED BY					
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CHECKED BY	CGO				

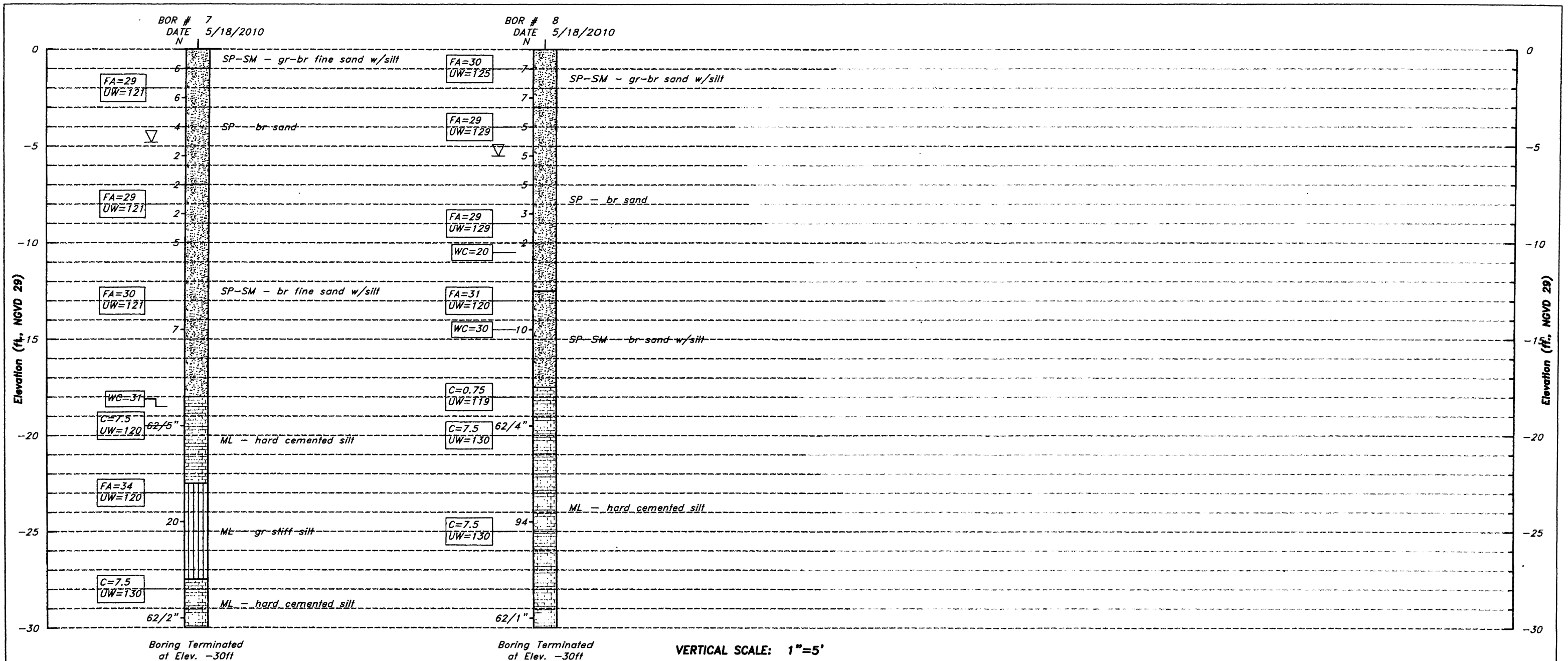
44th AVENUE E. & 301 BLVD.

MAST ARM SOIL
BORING LOCATIONS

APPROVED BY:
Craig G. Obrecht, P.E.
PROFESSIONAL ENGINEER NO.
STATE OF FLORIDA 98481

CADD FILE NAME:
10-7134

SHEET NO.
M-1



LEGEND

	Sand (SP, SP-SM)		Silty-Clayey Sand (SM-SC)
	Clayey Sand (SC)		Clay (CH)
	Mucky Sand (PT)		Cemented Silt (ML)
	Silty Sand (SM)		
	Silt (ML)		
	Silty Clay (CH)		
	Hard Cemented Silt (ML)		

SP UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) SYMBOL
▽ GROUNDWATER LEVEL MEASURED ON DATE DRILLED
N SPT N-VALUE IN BLOWS PER FOOT IN BLOWS PER FOOT (UNLESS OTHERWISE NOTED)
WC NATURAL MOISTURE CONTENT (%)
-200 FINES PASSING THE NO. 200 SIEVE (%)
LL LIQUID LIMIT (%)
OC ORGANIC CONTENT (%)
PI PLASTICITY INDEX (%)
FA = FRICTION ANGLE (Degrees)
UW = SATURATED UNIT WEIGHT (pcf)
C = COHESION (ksf)

GRANULAR MATERIALS- RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 4
LOOSE	4-10
MEDIUM OR COMPACT	10-30
DENSE	30-50
VERY DENSE	GREATER THAN 50
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 4
SOFT	2-4
FIRM	4-8
STIFF	8-15
VERY STIFF	15-30
HARD	GREATER THAN 30

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

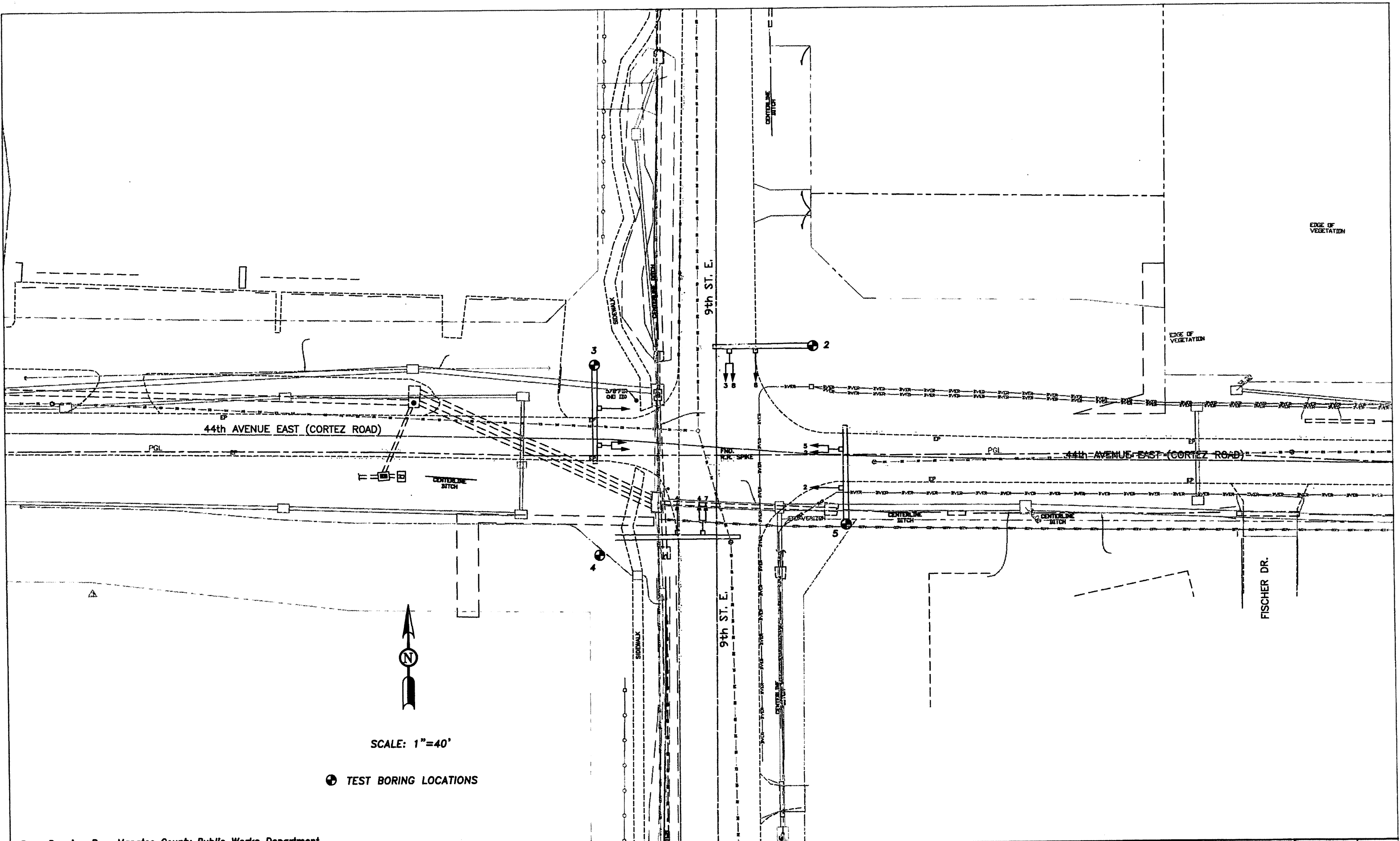
Ardaman & Associates, Inc.
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Materials Consultants
70 Sarasota Center Blvd. Sarasota, FL 34240
Tel. (941) 922-3525
CERTIFICATE OF AUTHORIZATION NO.5850

REVISION BY	NAME	DATE	MANATEE COUNTY GOVERNMENT PUBLIC WORKS DIVISION	

44th AVENUE E. & 301 BLVD.

REPORT OF SOIL BORINGS

APPROVED BY: Craig G. Obrecht, P.E.	SHEET NO. M-1A
PROFESSIONAL ENGINEER NO. STATE OF FLORIDA 55451	CADD FILE NAME: 10-7134



Base Drawing By: Manatee County Public Works Department

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Materials Consultants
79 Sarasota Center Blvd. Sarasota, FL 34248
Tel. (941) 922-3225
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CHECKED BY					

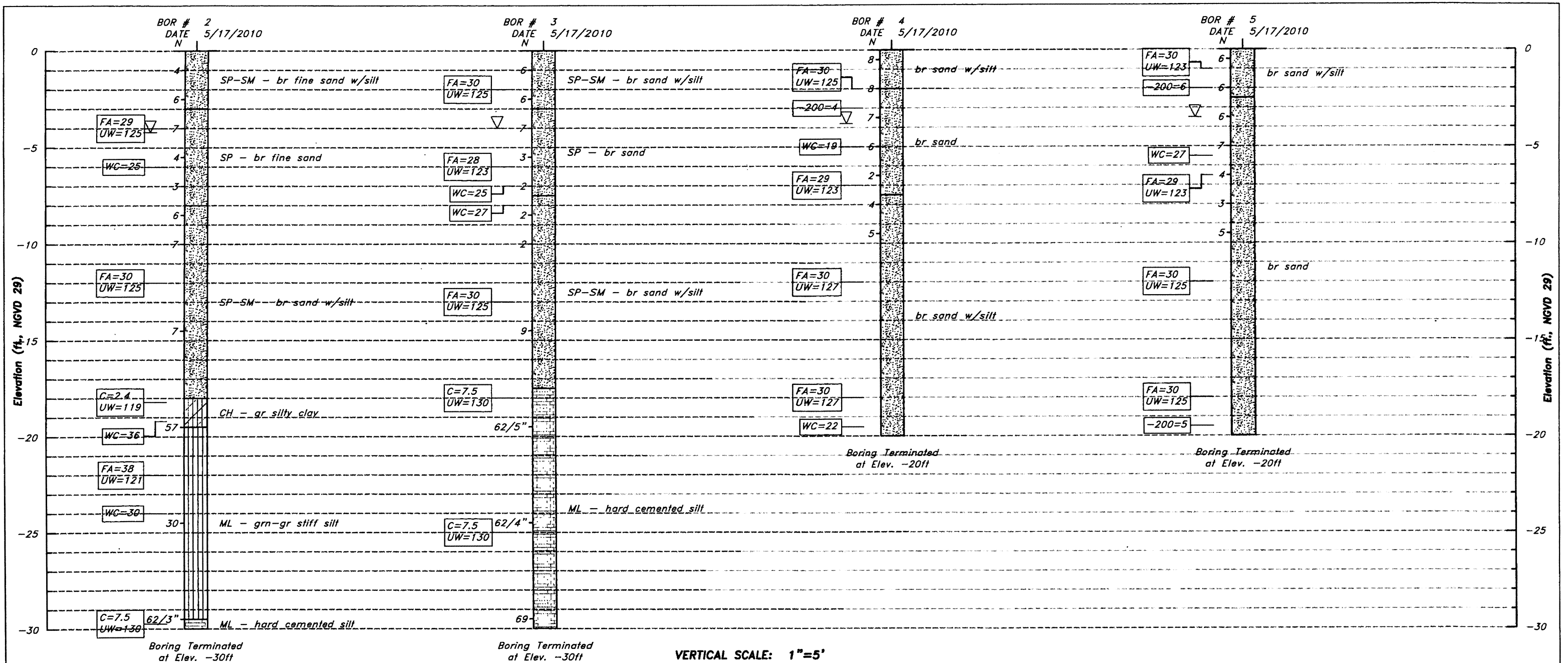
44th AVENUE E. & 9th STREET E.

MAST ARM SOIL
BORING LOCATIONS

APPROVED BY:
Craig G. Obrecht, P.E.
PROFESSIONAL ENGINEER NO.
STATE OF FLORIDA 58451

CADD FILE NAME:
10-7134

SHEET NO.
M-2



LEGEND

	Sand (SP, SP-SM)		Silty-Clayey Sand (SM-SC)
	Clayey Sand (SC)		Clay (CH)
	Mucky Sand (PT)		Cemented Silt (ML)
	Silty Sand (SM)		
	Silt (ML)		
	Silty Clay (CH)		
	Hard Cemented Silt (ML)		

SP	UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) SYMBOL
▽	GROUNDWATER LEVEL MEASURED ON DATE DRILLED
N	SPT N-VALUE IN BLOWS PER FOOT IN BLOWS PER FOOT (UNLESS OTHERWISE NOTED)
WC	NATURAL MOISTURE CONTENT (%)
-200	FINES PASSING THE NO. 200 SIEVE (%)
LL	LIQUID LIMIT (%)
OC	ORGANIC CONTENT (%)
PI	PLASTICITY INDEX (%)
FA	FRICITION ANGLE (Degrees)
UW	SATURATED UNIT WEIGHT (pcf)
C	COHESION (ksf)

GRANULAR MATERIALS- RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 4
LOOSE	4-10
MEDIUM OR COMPACT	10-30
DENSE	30-50
VERY DENSE	GREATER THAN 50
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 4
SOFT	2-4
FIRM	4-8
STIFF	8-15
VERY STIFF	15-30
HARD	GREATER THAN 30

REVISIONS			
DATE	BY	DESCRIPTION	

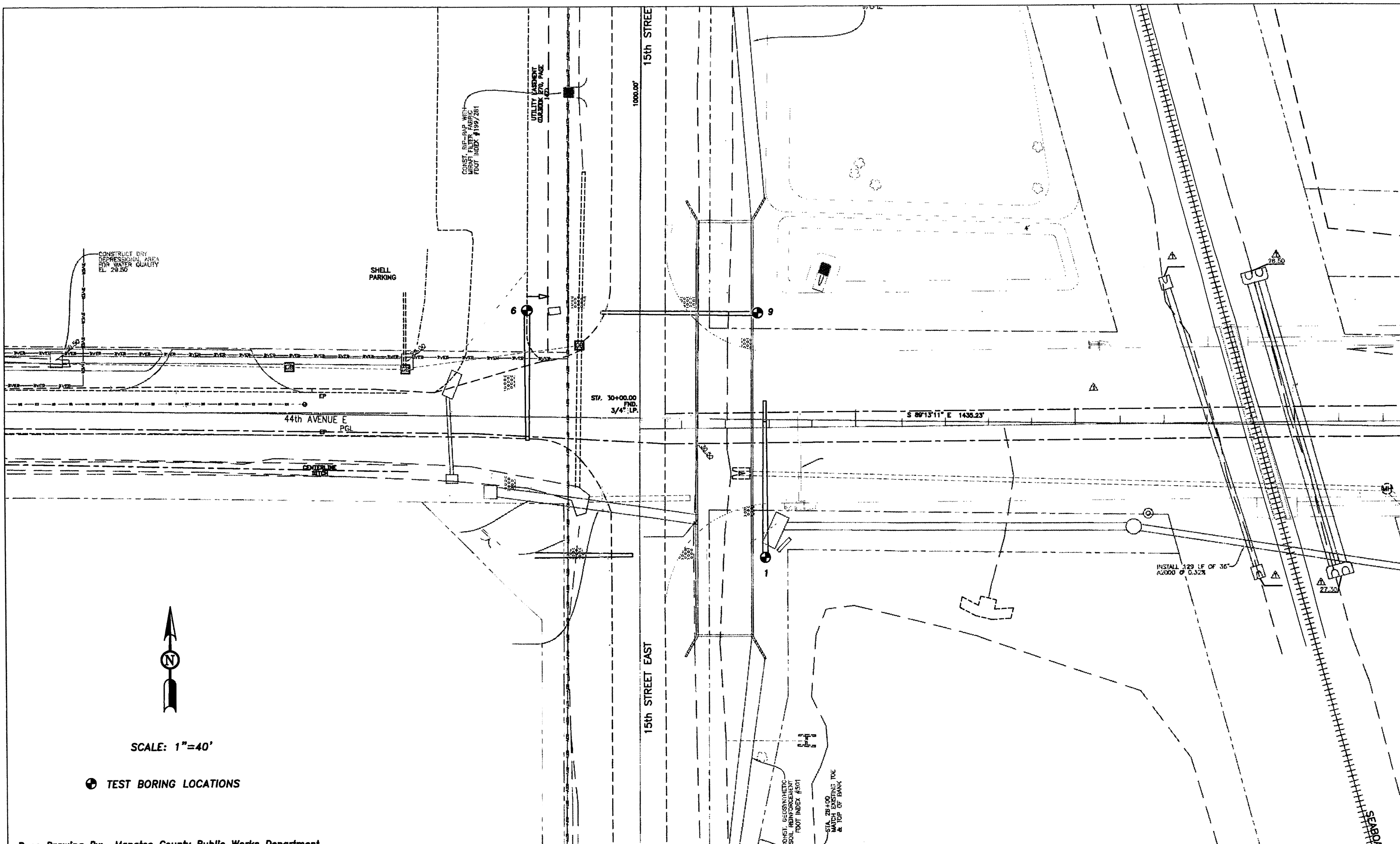
Ardaman & Associates, Inc.
Geotechnical, Environmental and
Materials Consultants
78 Sarasota Center Blvd. Sarasota, FL 34240
Tel. (941) 922-3526
CERTIFICATE OF AUTHORIZATION NO. 9880

DESIGNED BY	NAME	DATE
CHECKED BY	NAME	DATE

44th AVENUE E. & 9th STREET E.

REPORT OF SOIL BORINGS

APPROVED BY: Craig G. Obrecht, P.E.	SHEET NO. M-2A
PROFESSIONAL ENGINEER NO. STATE OF FLORIDA 98451	CADD FILE NAME: 10-7134



Base Drawing By: Manatee County Public Works Department

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Ardaman & Associates, Inc.
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Materials Consultants
78 Sarasota Center Blvd. Sarasota, FL 34240
Tel. (941) 922-3528
CERTIFICATE OF AUTHORIZATION NO. 58950

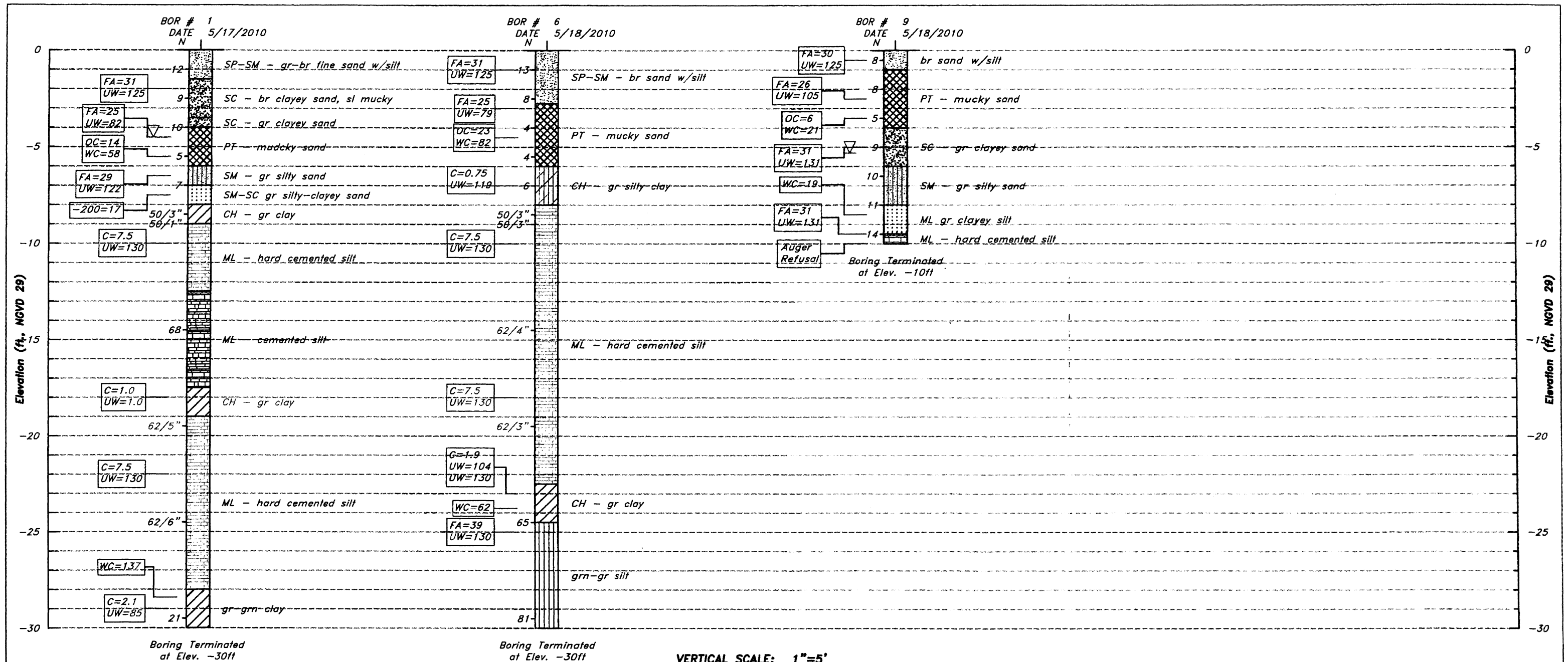
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DRAWN BY	KGS	5/28/10
CHECKED BY	CGO	

MANATEE COUNTY GOVERNMENT PUBLIC WORKS DIVISION		
SCALES	HORIZ.	VERT.
	N/A	N/A

44th AVENUE E. & 15th STREET E.

MAST ARM SOIL
BORING LOCATIONS

APPROVED BY: Craig G. Obrecht, P.E.	CADD FILE NAME: 10-7134	SHEET NO. M-3
PROFESSIONAL ENGINEER NO. STATE OF FLORIDA 95481		



LEGEND

	Sand (SP, SP-SM)		Silty-Clayey Sand (SM-SC)
	Clayey Sand (SC)		Clay (CH)
	Mucky Sand (PT)		Cemented Silt (ML)
	Silty Sand (SM)		
	Silt (ML)		
	Silty Clay (CH)		
	Hard Cemented Silt (ML)		

SP UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) SYMBOL
▽ GROUNDWATER LEVEL MEASURED ON DATE DRILLED
N SPT N-VALUE IN BLOWS PER FOOT IN BLOWS PER FOOT (UNLESS OTHERWISE NOTED)
WC NATURAL MOISTURE CONTENT (%)
-200 FINES PASSING THE NO. 200 SIEVE (%)
LL LIQUID LIMIT (%)
OC ORGANIC CONTENT (%)
PI PLASTICITY INDEX (%)
FA = FRICTION ANGLE (Degrees)
UW = SATURATED UNIT WEIGHT (pcf)
C = COHESION (ksf)

GRANULAR MATERIALS- RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 4
LOOSE	4-10
MEDIUM OR COMPACT	10-30
DENSE	30-50
VERY DENSE	GREATER THAN 50
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 4
SOFT	2-4
FIRM	4-8
STIFF	8-15
VERY STIFF	15-30
HARD	GREATER THAN 30

REVISIONS			
DATE	BY	DESCRIPTION	

Ardaman & Associates, Inc.
Geotechnical, Environmental and
Materials Consultants
78 Sarasota Center Blvd. Sarasota, FL 34240
Tel. (941) 922-3525
CERTIFICATE OF AUTHORIZATION NO. 9850

NAME	DATE	MANATEE COUNTY GOVERNMENT PUBLIC WORKS DIVISION

44th AVENUE E. & 15th STREET E.

REPORT OF SOIL BORINGS

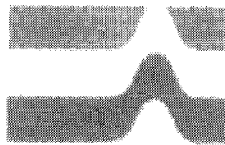
APPROVED BY:
Craig G. Obrecht, P.E.
PROFESSIONAL ENGINEER NO.
STATE OF FLORIDA 98481

CADD FILE NAME:
10-7134

SHEET NO.
M-3A

ATTACHMENT 'T'

**SUBSURFACE SOIL EXPLORATION,
ANALYSIS AND RECOMMENDATIONS
FOR PROPOSED
"SIGNALIZATION MAST ARMS" AT
44TH AVENUE EAST & 18TH STREET EAST,
BRADENTON,
MANATEE COUNTY, FLORIDA**



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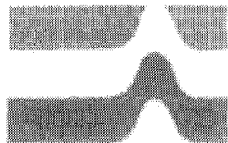
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A.S.F.E.

American Concrete Institute
American Society for Testing and Materials
Florida Institute of Consulting Engineers



Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

February 23, 2012

File No. 10-7413

TO: Cardno TBE
8110 Blaikie Ct., Suite E
Sarasota, FL 34240

Attention: Larry Mau

SUBJECT: Subsurface Soil Exploration, Analysis and Recommendations for Proposed
"Signalization Mast Arms" at 44th Avenue East and 18th Street East,
Bradenton, Manatee County, Florida

Dear Mr. Mau:

As authorized by Mr. E. Peter Nikolov, P.E., our firm has completed an exploration of foundation soil conditions at the above-referenced site. This report will present the results of our exploration and foundation design recommendations.

This report was prepared for the exclusive use of Cardno TBE, Manatee County Government and their consultants for use in the design of foundation systems for the proposed mast-arm signalization poles, in accordance with generally-accepted geotechnical engineering practices. No other warranty, expressed or implied, is made.

SCOPE

The scope of our services has included the following items:

1. Conducting two (2) Standard Penetration Test borings to determine the nature and condition of the subsurface soils.
2. Reviewing each soil sample obtained in our field testing program by a geotechnical engineer in the laboratory for further investigation, classification and assignment of laboratory tests.
3. Performing laboratory tests on selected samples.
4. Analyzing the existing soil conditions with respect to the proposed construction.
5. Preparing this report to document the results of our field testing program, laboratory analysis and engineering analysis.

FIELD EXPLORATION

Our field exploration program consisted of conducting two (2) Standard Penetration Test borings at the locations shown on the attached Figure 1. The borings were performed to determine the nature and condition of the subsurface soils to a maximum depth of 30 feet below the existing ground surface. The equipment and procedures utilized in the Standard Penetration Test are described in Appendix I of this report.

Test boring depths, location and number were determined by others. Test borings were located in the field by Ardaman & Associates, Inc., by visual reckoning to available site landmarks using an aerial photograph of the site area. Test boring locations should be considered accurate only to the degree implied by the method used. Should more accurate locations be required, a registered land surveyor should be retained.

SOIL CONDITIONS

The general subsurface conditions encountered during the field exploration program are shown on the soil boring logs, included in Appendix II of this report. Soil stratification is based on examination of recovered soil samples and interpretation of field boring logs. The stratification lines represent the approximate boundaries between the soil types, while the actual transitions may be gradual.

On the date of our field exploration program, the groundwater table was encountered at depths ranging from 5.5 to 7.4 feet below the existing ground surface. The groundwater table is anticipated to fluctuate due to seasonal rainfall variations and other factors.

LABORATORY INVESTIGATION

Representative soil samples obtained during our field sampling operation were packaged and transferred to our office and, thereafter, examined by a geotechnical engineer to obtain more accurate descriptions of the existing soil strata. Laboratory testing was performed on selected samples as deemed necessary to aid in soil classification and to further define their engineering properties. The laboratory tests included determining the fines (silt and clay) content and the water content. The test results are presented on the soil boring logs (in Appendix II) at the depths from which the samples were recovered. The soil descriptions shown on the soil boring logs are based on the laboratory test results and a visual classification procedure in general accordance with the Unified Soil Classification System (ASTM D-2487 or D-2488).



ANALYSIS AND RECOMMENDATIONS

This section included a discussion of soil corrosivity and recommended soil parameters for use in mast arm foundation design. The applicability of the Florida Department of Transportation (FDOT) standard mast arm foundation designs will also be discussed.

Recommended Soil Parameters

Based upon the laboratory test data, soil classifications and SPT "N" values, the internal friction angle, cohesion and unit weights (saturated and buoyant) can be estimated for the soils encountered at the site. These are summarized in the following table for each of the two borings performed.

Depth (feet)	Unified Soil Classification	Average SPT N-value	Saturated Unit Weight (pcf)	Buoyant Unit Weight (pcf)	Internal Friction Angle (degrees)	Cohesion (psf)
Boring 1						
0 - 7.5	SP/SP-SM	10	112	50	31	0
7.5 - 8.5	CL	20	117	55	---	2500
8.5 - 9.5	ML	20	117	55	34	0
9.5 - 11	Rock	>50	135	73	---	---
11 - 18	ML	>50	135	73	39	0
18 - 27	Rock	>50	135	73	---	---
27 - 30	MH	27	121	59	---	3000
Boring 2						
0 - 4.5	SP/SP-SM	14	114	52	32	0
4.5 - 7.5	SM	16	115	53	33	0
7.5 - 8.5	CL	45	132	70	---	5500
8.5 - 9.5	ML	45	132	70	38	0
9.5 - 11	Rock	>50	135	73	---	---
11 - 18	MH	>50	135	73	---	6000
18 - 27	Rock	>50	135	73	---	---
27 - 30	ML	32	124	62	36	0

The friction angle is not relevant to cohesive soils (clays) and was left blank for those soils. Similarly, friction angle and cohesion are not relevant to rock.

FDOT Standard Designs

The FDOT has developed standard foundation designs for various mast arm configurations. The standard designs are based on the foundation soils meeting certain criteria:



- The soils must be classified as cohesionless
- They must have a friction angle of a minimum of 30 degrees
- They must have a saturated submerged unit weight of at least 50 pounds per cubic foot

The estimated submerged (buoyant) unit weight, friction angle and cohesion have been indicated in the above table. Soils with the USCS classifications SP, SP-SM, SM, SM-SC, SC and, in most cases, ML are generally considered cohesionless. USCS classification SC is clayey sand and can exhibit some cohesion at higher clay content ranges, however. No SC soils were encountered in our boring.

As can be seen by the boring logs and the table, the soils meet the FDOT standard design criteria from the ground surface to a depth of approximately 7.5 feet. At that depth is a clay layer that is cohesive soil rather than cohesionless soil. This clay layer is relatively thin and is underlain by rock. The deeper soils generally consist of alternating layers of rock, weathered rock and silt. Some of these silts are elastic silts (MH), which are cohesive. If the FDOT analysis results in a foundation that is less than 7.5 feet deep, the design may not be affected by the clay, silt and rock strata. If the proposed foundation does extend below this depth, the Structural Engineer may need to perform a more detailed foundation design utilizing the soil parameters given in this report.



Soil Corrosivity

Although no site-specific measurements of soil corrosivity parameters were made, the corrosion potential of the soil in this area has generally been found to be moderately aggressive, as indicated by analytical reports of the corrosivity parameters from other sites. Generally the following criteria indicate the aggressiveness of a soil:

Classification	Environmental Condition	Units	Steel		Concrete	
			Water	Soil	Water	Soil
Extremely Aggressive (If any of these conditions exist)	pH		< 6.0		< 5.0	
	Cl	ppm	> 2000		> 2000	
	SO ₄	ppm	N.A.		> 1500	> 2000
	Resistivity	ohm-cm	< 1000		< 500	
Slightly Aggressive (If all of these conditions exist)	pH		> 7.0		> 6.0	
	Cl	ppm	N.A.		< 500	
	SO ₄	ppm	N.A.		< 150	< 1000
	Resistivity	ohm-cm	> 5000		> 3000	
Moderately Aggressive	This classification must be used at all sites not meeting requirements for either slightly aggressive or extremely aggressive environments.					
pH = acidity (-log ₁₀ H ⁺ ; potential of Hydrogen), Cl = chloride content, SO ₄ = Sulfate content.						

GENERAL COMMENTS

The analysis and recommendations submitted in this report are based upon the data obtained from two (2) Standard Penetration Test borings performed at the locations indicated on the attached Figure 1. While the boring is representative of the subsurface conditions at the vertical reach, local variations characteristic of the subsurface materials of the region are anticipated and may be encountered. The boring log and related information are based upon the driller's log and visual examination of selected samples in the laboratory. The delineation between soil types shown on the log is approximate, and the description represents our interpretation of the subsurface conditions at the designated boring location on the particular date drilled.

The water table level shown on the boring log represents the water table surface encountered on the date shown. Fluctuations in the water table levels should be anticipated throughout the year. The absence of a water table listing on a boring log does not imply that the water table does not occur within the boring depth, unless expressly so stated.



Cardno TBE
File No. 10-7413
February 23, 2012

6

It has been a pleasure to be of assistance to you with this project. Please contact us when we may be of further service to you, or should you have any questions concerning this report.

Very truly yours,

ARDAMAN & ASSOCIATES, INC.
Certificate of Authorization No. 5950


2/23/12
Jerry H. Kuehn, P.E.
Senior Project Engineer
Fl. License No. 35557


Gary H. Schmidt, P.E.
Vice President
Fl. License No. 12305

JHK/GHS:ly



Ardaman & Associates, Inc.

APPENDIX I

SOIL BORING, SAMPLING & TEST METHODS

SOIL BORING, SAMPLING AND TESTING METHODS

Standard Penetration Test

The Standard Penetration Test (SPT) is a widely accepted method of in situ testing of foundation soils (ASTM D-1586). A 2-foot long, 2-inch O.D. split-barrel sampler attached to the end of a string of drilling rods is driven 18 inches into the ground by successive blows of a 140-pound hammer freely dropping 30 inches. The number of blows needed for each 6 inches of penetration is recorded. The sum of the blows required for penetration of the second and third 6-inch increments of penetration constitutes the test result or N-value. After the test, the sampler is extracted from the ground and opened to allow visual examination and classification of the retained soil sample. The N-value has been empirically correlated with various soil properties allowing a conservative estimate of the behavior of soils under load. The following tables relate N-values to a qualitative description of soil density and, for cohesive soils, an approximate unconfined compressive strength (Q_u):

Cohesionless Soils:	<u>N-Value</u>	<u>Description</u>	
	0 to 4	Very loose	
	4 to 10	Loose	
	10 to 30	Medium dense	
	30 to 50	Dense	
	Above 50	Very dense	
Cohesive Soils:	<u>N-Value</u>	<u>Description</u>	<u>Q_u (ton/ft²)</u>
	0 to 2	Very soft	Below 0.25
	2 to 4	Soft	0.25 to 0.50
	4 to 8	Medium stiff	0.50 to 1.0
	8 to 15	Stiff	1.0 to 2.0
	15 to 30	Very stiff	2.0 to 4.0
	Above 30	Hard	Above 4.0

The tests are usually performed at 5-foot intervals. However, more frequent or continuous testing is done by our firm through depths where a more accurate definition of the soils is required. The test holes are advanced to the test elevations by rotary drilling with a cutting bit, using circulating fluid to remove the cuttings and hold the fine grains in suspension. The circulating fluid, which is a bentonitic drilling mud, is also used to keep the hole open below the water table by maintaining an excess hydrostatic pressure inside the hole. In some soil deposits, particularly highly pervious ones, NX-size flush-coupled casing must be driven to just above the testing depth to keep the hole open and/or prevent the loss of circulating fluid.

Representative split-spoon samples from each sampling interval and from every different stratum are brought to our laboratory in air-tight jars for further evaluation and testing, if necessary. After thorough examination and testing of the samples, the samples are discarded unless prior arrangements have been made. After completion of a test boring, the hole is kept open until a steady state groundwater level is recorded. The hole is then sealed, if necessary, and backfilled.

Laboratory Test Methods

Soil samples returned to our laboratory are examined by a geotechnical engineer or geotechnician to obtain more accurate descriptions of the soil strata. Laboratory testing is performed on selected samples as deemed necessary to aid in soil classification and to further define engineering properties of the soils. The test results are presented on the soil boring logs at the depths at which the respective sample was recovered, except that grain size distributions or selected other test results may be presented on separate tables, figures or plates as described in this report. The soil descriptions shown on the logs are based upon a visual-manual classification procedure in general accordance with the Unified Soil Classification System (ASTM D-2488-84) and standard practice. Following is a list of abbreviations which may be used on the boring logs or elsewhere in this report.

-200	- Fines Content (percent passing the No. 200 sieve); ASTM D1140
DD	- Dry Density of Undisturbed Sample; ASTM D2937
Gs	- Specific Gravity of Soil; ASTM D854
k	- Hydraulic Conductivity (Coefficient of Permeability)
LL	- Liquid Limit; ASTM D423
OC	- Organic Content; ASTM D2974
pH	- pH of Soil; ASTM D2976
PI	- Plasticity Index (LL-PL); ASTM D424
PL	- Plastic Limit; ASTM D424
Qp	- Unconfined Compressive Strength by Pocket Penetrometer;
Qu	- Unconfined Compressive Strength; ASTM D2166 (soil), D7012 (rock)
SL	- Shrinkage Limit; ASTM D427
ST	- Splitting Tensile Strength; ASTM D3967 (rock)
USCS	- Unified Soil Classification System; ASTM D2487, D2488
w	- Water (Moisture) Content; ASTM D2216

Soil Classifications

The soil descriptions presented on the soil boring logs are based upon the Unified Soil Classification System (USCS), which is the generally accepted method (ASTM D-2487 and D-2488) for classifying soils for engineering purposes. The following modifiers are the most commonly used in the descriptions.

For Sands:	<u>Modifier</u>	<u>Fines, Sand or Gravel Content*</u>
	with silt or with clay	5% to 12% fines
	silty or clayey	12% to 50% fines
	with gravel or with shell	15% to 50% gravel or shell
For Silts or Clays	<u>Modifier</u>	<u>Fines, Sand or Gravel Content*</u>
	with sand	15% to 30% sand and gravel; and % sand > % gravel
	sandy	30% to 50% sand and gravel; and % sand > % gravel
	with gravel	15% to 30% sand and gravel; and % sand < % gravel
	gravelly	30% to 50% sand and gravel; and % sand < % gravel

* may be determined by laboratory testing or estimated by visual/manual procedures. Fines content is the combined silt and clay content, or the percent passing the No. 200 sieve.

Other soil classification standards may be used, depending on the project requirements. The AASHTO classification system is commonly used for highway design purposes and the USDA soil textural classifications are commonly used for septic (on-site sewage disposal) system design purposes.

APPENDIX II
SOIL BORING LOGS

CLIENT: Cardano TBE

PROJECT: Signalization Mast Arms

DATE DRILLED: 2/6/12 START:

FINISH

LOCATION: 44th Avenue East & 18th Street East,
Bradenton, Manatee County, Florida

GROUND SURFACE ELEVATION:

WATER TABLE DEPTH: 7.4 TIME: DATE: 2/6/12

DRILL CREW: DP/MC

LOGGED BY: MO

DRILL MAKE & MODEL: CME-45 BIT: 2-3/8" tricone

DRILLING RODS: AW

DRILLING METHOD: rotary with SPT (auto-hammer)

WEATHER CONDITIONS:

[illegible]

PAGE 1 OF 1



Ardaman & Associates, Inc.

အိမ်ထောင်ရေးနှင့် အသက်မွေးဝမ်းကျောင်းများကို အကဲဖြတ် ဆုံးဖြတ်ပေးရန် အသုံးပြုနိုင်သည့် အချက်အလက်များကို အောက်ဖော်ပြပါအတိုင်း ဖော်ပြထားပါသည်။

REVIEWED BY: Jerry H. Kuehn, P.E.

FILE NO: 10-7413

BORING NO.: 1

BORING LOCATION: see Figure 1

CLIENT: Cardno TBE

PROJECT: Signalization Mast Arms

LOCATION: 44th Avenue East & 18th Street East,
Bradenton, Manatee County, Florida

DRILL CREW: DP/MO

LOGGED BY: MO

DATE DRILLED: 2/6/12 START: FINISH:

GROUND SURFACE ELEVATION:

WATER TABLE DEPTH: 5.5 TIME: DATE: 2/6/12

DRILL MAKE & MODEL: CME-45 BIT: 2-3/8" tricone

DRILLING RODS: AW

DRILLING METHOD: rotary with SPT (auto-hammer)

WEATHER CONDITIONS:

DEPTH, FT.	SPT N-VALUE	SAMPLE NO.	GRAPHIC LOG	USCS	SOIL DESCRIPTION	PERCENT FINES	ORGANIC CONTENT (%)	WATER CONTENT (%)	FRICTION ANGLE (degrees)	COHESION (ksf)	TOTAL UNIT WEIGHT (pcf)
0	17	1		SP-SM	dark brown fine sand with silt (trace shell)						
	12	2		SP	gray fine sand (trace shell)						
	12	3		SP	brown fine sand						
5	10	4		SM	brownish gray silty fine sand	15					
	21	5		CL	blueish gray sandy clay	50					
	45	6		ML	light gray sandy silt						
10	99/10"	7		ROCK	pale brown weathered limeroak						
				MH	gray elastic silt			32			
15	94	8									
				ROCK	gray limestone (little sample recovery)						
20	62/1"	9		ROCK	gray calcareous sandy clay (very weathered clayey limeroak)						
25	62/3"	10									
				ML	gray silt						
30	32	11			end of boring						
35											

PAGE 1 OF 1

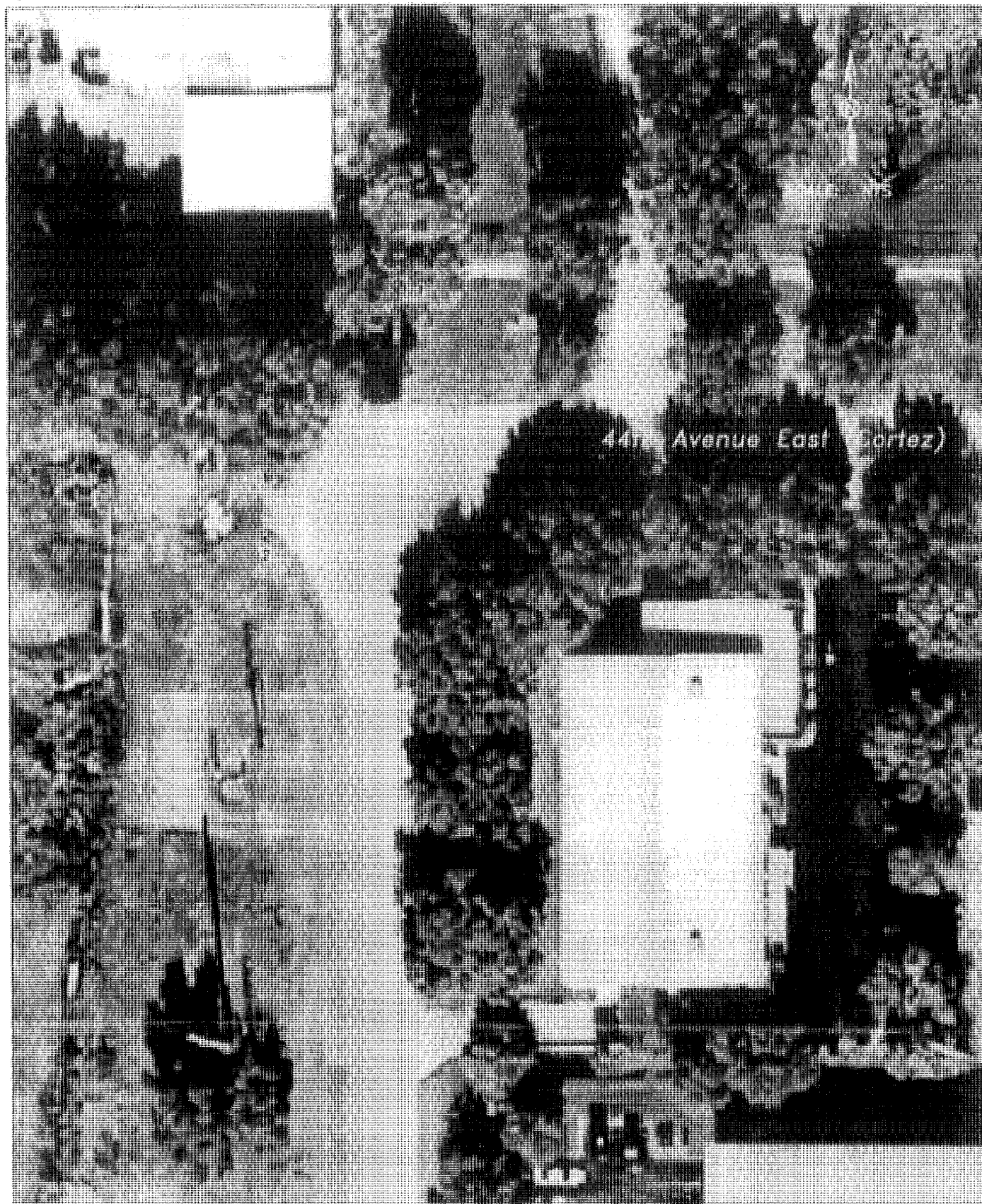
Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Construction

REVIEWED BY: Jerry H. Kuehn, P.E.

FILE NO: 10-7413

BORING NO.: 2



44th Avenue East (Cortez)

© TEST BORING LOCATIONS

 Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants		
Test Locations Most Arm Borings 44th Ave. East & 18th St. East Manatee County, Florida		
ORDER BY: KGS	CHECKED BY:	DATE: 2/5/12
FILE NO: 10-7413	APPROVED BY: <i>[Signature]</i>	PAGES: 1

ATTACHMENT 'U'

SUBSURFACE SOIL, GROUNDWATER AND PAVEMENT EXPLORATION FOR "RECONSTRUCTION OF 44TH AVENUE EAST FROM U.S. 41 TO 15TH STREET EAST, MANATEE COUNTY, FLORIDA"



Ardaman & Associates, Inc.

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Association of Soil and Foundation Engineers
Florida Institute of Consulting Engineers
Professional Engineers in Private Practice



Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

April 15, 1991
File No. 90-7853

TO: Larson Engineering, Inc.
6404 Manatee Avenue West, Suite N
Bradenton, FL 34209

Attention: Mr. Kurt Jensen, P.E.

SUBJECT: Subsurface Soil, Groundwater and Pavement Exploration for
"Reconstruction of 44th Avenue East from U.S. 41 to 15th
Street East, Manatee County, Florida"

Gentlemen:

As per our proposal of August 13, 1990, our firm has completed an exploration of the subgrade soil conditions within the right-of-way of the proposed 44th Avenue East reconstruction. The purpose of our exploration was to determine the general characteristics of the subgrade soils and existing pavement and estimate the seasonal high water table. The following report summarizes the results of our field exploration and recommendations.

This report was prepared for the exclusive use of Larson Engineering, Inc. for use in the design of roadway reconstruction in accordance with generally-accepted geotechnical engineering practices. No other warranty, expressed or implied, is made.

SCOPE

The scope of our services has included the following items:

1. Conducting eighty-two (82) hand-auger borings at 100-foot intervals in the right-of-way of 44th Avenue East and along 15th Street East and U.S. 41 near their intersections with 44th Avenue East to determine the nature and condition of subsurface soils.
2. Estimate the seasonal high groundwater table levels along the existing roadway.
3. Conducting twenty (20) pavement cores to determine the nature and condition of existing roadway pavement, base and subbase materials.
4. Performing laboratory tests on selected samples.
5. Analyzing the existing soil and pavement conditions with respect to the proposed roadway reconstruction.
6. Preparing this report to document the results of our field exploration, engineering analysis, and recommendations.

FIELD EXPLORATION

Our field exploration program consisted of conducting eighty-two (82) hand-auger borings to depths of 3 to 6 feet below existing grade. The approximate location of each test boring is shown on Figure 1. The graphical interpretation of the soil profiles and the depth at which the water table was encountered at each boring, are included on Figure 2 of this report.

Twenty (20) cores of the existing pavement were obtained in order to assist in the determination of the salvage value of the existing pavement materials. Four (4) bag samples were collected from the surface subgrade strata and returned to our laboratory for Limerock Bearing Ratio testing.

LABORATORY INVESTIGATION

Samples obtained during our field sampling program were thoroughly examined in our laboratory to obtain an accurate definition of the soil profile. In addition, grain size analysis, Atterberg limit analyses, organic and moisture content analyses, and Limerock Bearing Ratio tests were conducted on representative samples to assist in their classification. The grain size distributions, organic and moisture content analyses, and Atterberg limit analyses have been summarized with AASHTO classifications on Figure 1. Four (4) Limerock Bearing Ratio tests were conducted on materials along the roadway right-of-way at the locations shown on Figure 1. Results are also presented on Figure 1. As indicated, tests results indicate Limerock Bearing Ratio values varying from 17 to 52. We recommend a soil support value of 4.75 to be used in pavement design.

ROADWAY SOIL CONDITIONS

Profiles of the subgrade soils encountered in our field exploration program along 44th Avenue East are shown graphically on the attached Figure 2. Our exploration allows us to conclude that the majority of the subgrade soils encountered consisted of clean fine sands and slightly clayey fine sands from existing ground surface to a depth 5 to 6 feet below grade with the exception of several specific areas of muck and organic sands and clays.

The most significant amount of mucky soils was encountered at the U.S. 41/44th Avenue East intersection. The U.S.D.A. Soil Conservation Service "Soil Survey of Manatee County, Florida" (1981), indicates Tomoka soils at this location which are typically mucky surface soils overlying sands and sandy clays. Test borings conducted in this area in which muck and matted organics were encountered include HA-6, HA-8, HA-10 through HA-13, and borings conducted at Stations 10+00, 11+00 and 15+00 through 17+00. The mucky and organic soils typically extended for 6 to 24 inches beginning at 3 or 4 feet below grade, and were often underlain by rock.

Mucky and clayey soils were also encountered along 15th Street East in Test Borings HA-21 through HA-29, from approximately 2 to 5 feet below grade and in the test borings at Stations 56+00 through 58+00 from 4 to 5 feet below grade.

The removal of any muck or plastic material occurring within the roadway expansion shall be accomplished in accordance with Index No. 500. Minor amounts may also be anticipated in drainage ditches which would not appear in the soil profiles. Material utilized in embankment construction shall be in accordance with Index No. 505.

Rock was encountered at the termination of borings HA-1 at 2.0 feet, HA-2 and HA-3 at 4.0 feet, HA-4 at 1.5 feet, HA-5 at 5.5 feet and HA-6 through HA-7 at approximately 4 feet below grade. Rock excavation techniques should be anticipated should utilities be planned through this area below these levels.

HYDROLOGIC CONDITIONS

For a typical year in Manatee County, over 60% of the annual rainfall occurs during the months of June through September. During this period, water table levels gradually rise to their

annually highest levels, which typically occur in August to September. During the relatively dry portion of the year (from October to May), the water table recedes to lower levels, typically reaching the lowest level in May.

The U.S.D.A. Soil Conservation Service "Soil Survey of Manatee County, Florida" (1981) indicates the predominant surficial soil types along the roadway to be Bradenton fine sands on U.S. 41 approaching 44th Avenue East, Tomoka soil (muck) at the intersection of U.S. 41 and 44th Avenue East extending to Station 17+00, a small area of EauGallie fine sand from Stations 18+00 to 19+00, Orlando fine sands from Station 19+00, up the hill to Station 44+00, Ona fine sands from Station 44+00 to 55+00, and Floridana fine sand from Station 55+00 through the intersection of 44th Avenue East and 15th Street East. Selected properties of these six (6) soil types are included on Table 1 of this report. The seasonal high water table levels listed on Table 1 assume essentially natural drainage conditions, without engineered drainage or other improvements.

SEASONAL HIGH WATER TABLE LEVELS

The seasonal high water table was estimated at each of our test locations, based upon our review of the SCS Soil Survey, our field explorations, and records of water table fluctuations maintained by our firm. The existing water table level and mean seasonal high water table level for each location is summarized in Table 2 of this report.

PAVEMENT CORING

Thirteen (13) pavement cores were conducted to determine the nature and condition of the existing roadway pavement, base and subbase materials. The approximate location of the cores is indicated on Figure 1. Profiles of the materials encountered are described on Table 3. As indicated, asphalt surfacing ranged in thickness from 1.1 inch to 14.8 inches. Base materials generally consisted of shell with some areas consisting of shell and limerock or limerock. The base was found to range in thickness from 2.0 inches to 10.0 inches. The subbase materials generally consisted of unstabilized fine sands.

GENERAL COMMENTS

The analysis and recommendations submitted in this report are based upon the data obtained from eighty-two (82) soil borings performed at the locations indicated on the attached Figure 1. This report does not reflect any variations which may occur between the borings. While the borings are representative of the subsurface conditions at their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and may be encountered. The boring logs and related information are based upon the driller's logs and visual examination of selected samples in the laboratory. The delineation between soil types shown on the logs is approximate, and the description represents our interpretation of the subsurface conditions at the designated boring location on the particular date drilled.

The groundwater elevations shown on the boring logs represent groundwater surfaces encountered on the dates shown. Fluctuations in water table levels should be anticipated throughout the year. When the final design and specifications are completed, we must be given the opportunity to review them in order to determine whether changes in the original concept may have affected the validity of these recommendations and whether these recommendations have been implemented in the design specifications.



Larson Engineering, Inc.
File No. 90-7853
April 15, 1991

9

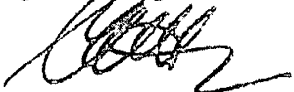
It has been a pleasure to be of assistance to you with this project. Please contact our office if you should require further assistance, or if you have any questions concerning this report.

Very truly yours,

ARDAMAN & ASSOCIATES, INC.



Scott B. Perkins
Project Engineer



Gary H. Schmidt, P.E.
Executive Vice President
Eng. Reg. No. 12305

SBP/GHS:emn



Ardaman & Associates, Inc.

TABLE 1

SELECTED PROPERTIES OF SURFICIAL SOILS FROM
SCS SOIL SURVEY OF MANATEE COUNTY

MAP SYMBOL	SOIL NAME	HIGH WATER TABLE	HYDROLOGIC GROUP
5	Bradenton	0.0-1.0	B/D
20	EauGallie	0.0-1.0	B/D
25	Floridana	0.0-1.0	B/D
35	Ona	0.0-1.0	B/D
36	Orlando	3.5-6.0	A
47	Tomoka	+1.0-0.0	A/D

18+00 TO 19+00

55+00 TO 63+

44+00 TO 55+00

19+00 TO 44+00

VS 41

44+00 TO 44+00

TABLE 2

**EXISTING GROUNDWATER AND ESTIMATED
SEASONAL HIGH GROUNDWATER LEVELS**

LOCATION	EXISTING GROUNDWATER LEVEL (feet below existing grade)	ESTIMATED MEAN SEASONAL HIGH GROUNDWATER TABLE LEVEL (feet below existing grade)
HA-1	>2.0	1.0
HA-2	>4.5	1.0
HA-3	>4.0	1.0
HA-4	>1.6	1.0
HA-5	>5.3	1.5
HA-6	>4.2	1.0
HA-7	>3.8	1.0
HA-8	>3.2	1.0
HA-9	5.0	2.2
HA-10	7.5	2.5
HA-11	>6.0	1.5
HA-12	>6.0	1.0
HA-13	>6.0	2.0
HA-14	4.5	1.7
HA-15	3.8	1.0
HA-16	2.8	0.0
HA-17	4.0	0.5
HA-18	6.0	2.0
HA-19	>6.0	2.0
HA-20	>5.5	2.0
STA 10+00	>6.0	2.5
STA 11+00	6.3	2.5
STA 12+00	6.0	2.0
STA 13+00	2.8	0.0
STA 14+00	2.6	0.0

TABLE 2 (Continued)

LOCATION	EXISTING GROUNDWATER LEVEL (feet below existing grade)	ESTIMATED MEAN SEASONAL HIGH GROUNDWATER TABLE LEVEL (feet below existing grade)
STA 15+00	2.3	0.0 ~~4.8~~
STA 16+00	3.1	0.3 4.8 ±
STA 17+00	3.5	0.7 4.31 ±
STA 18+00	2.5	0.0 4.54 ±
STA 19+00	4.4	1.6
STA 20+00	5.2	2.4
STA 21+00	6.0	3.0
STA 22+00	>6.0	4.0
STA 23+00	>6.0	4.0
STA 24+00	>6.0	4.0
STA 25+00	>6.0	4.0
STA 26+00	>6.0	4.0
STA 27+00	6.0	4.0
STA 28+00	5.9	3.0
STA 29+00	5.5	2.7
STA 30+00	5.4	2.6
STA 31+00	5.4	2.6
STA 32+00	5.0	2.2
STA 33+00	4.9	2.1
STA 34+00	5.0	2.2
STA 35+00	5.0	2.0
STA 36+00	4.8	2.0
STA 37+00	5.0	2.0
STA 38+00	>6.0	2.0
STA 39+00	4.3	1.5
STA 40+00	4.3	1.5

info from
PSI

TABLE 2 (Continued)

LOCATION	EXISTING GROUNDWATER LEVEL (feet below existing grade)	ESTIMATED MEAN SEASONAL HIGH GROUNDWATER TABLE LEVEL (feet below existing grade)
STA 41+00	4.3	1.5
STA 42+00	4.3	1.5
STA 43+00	4.3	1.5
STA 44+00	4.0	1.5
STA 45+00	4.8	2.0
STA 46+00	4.8	2.0
STA 47+00	4.8	2.0
STA 48+00	4.8	2.0
STA 49+00	4.3	1.0
STA 50+00	5.3	2.0
STA 51+00	>6.0	2.0
STA 52+00	3.8	1.0
STA 53+00	4.5	1.0
STA 54+00	4.3	1.5
STA 55+00	4.3	1.0
STA 56+00	4.5	1.0
STA 57+00	4.5	1.7
STA 58+00	4.8	2.0
STA 59+00	4.5	1.5
STA 60+00	4.5	1.7
STA 61+00	5.0	1.0
STA 62+00	4.5	1.0
HA-21	5.5	1.0
HA-22	3.8	0.5
HA-23	5.8	2.0
HA-24	>6.0	2.0

TABLE 3

PAVEMENT CORE DATA

CORE NO.	STATION NO.	LANE	ASPHALT THICKNESS	BASE TYPE	BASE THICKNESS	SUBBASE TYPE
1	11+00	EBL	3.1"	Limerock	8.0"	Brown fine sand w/limerock
2	17+00	EBL	14.8"	Shell	2.0"*	----
3	23+00	EBL	5.5"	Shell	4.5"	Tan fine sand
4	28+00	EBL	6.8"	Shell	5.0"	Gray fine sand
5	34+00	EBL	5.0"	Shell	3.8"	Gray fine sand
6	40+00	EBL	1.1"	Limerock and Shell	5.5"	Gray fine sand
7	46+00	EBL	3.5"	Shell	4.0"	Brown fine sand
8	61+00	WBL	5.0"	Shell	4.0"	Brown fine sand
9	58+00	WBL	2.0"	Shell	8.0"	Brown fine sand
10	55+00	WBL	1.5"	Shell	8.0"	Tan fine sand
11	52+00	WBL	1.0"	Shell and Limerock	10.0"	Brown fine sand
12	49+00	WBL	1.5"	Shell and Limerock	10.0"	Brown fine sand
13	43+00	WBL	1.5"	Shell and Limerock	10.0"	Brown fine sand

*Could not penetrate any further, unable to reach subbase materials.

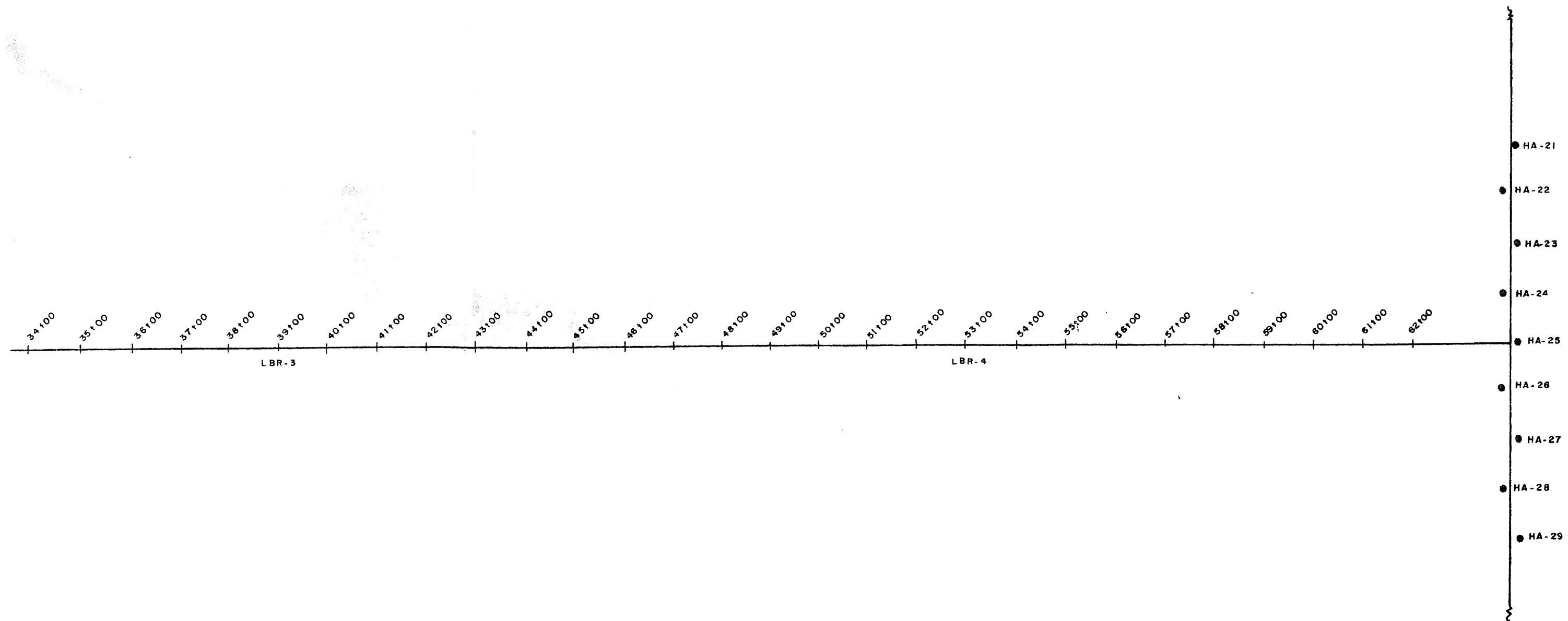
TABLE 2 (Continued)

LOCATION	EXISTING GROUNDWATER LEVEL (feet below existing grade)	ESTIMATED MEAN SEASONAL HIGH GROUNDWATER TABLE LEVEL (feet below existing grade)
HA-25	6.0	2.0
HA-26	>6.0	2.0
HA-27	>6.0	2.0
HA-28	5.8	2.0
HA-29	6.0	2.0

STRATUM NO.	STRATUM NAME	P-1/2 (%)	P-3/8 (%)	P-4 (%)	P-10 (%)	P-40 (%)	P-60 (%)	P-100 (%)	P-200 (%)	Organic Content (%)	Water Content (%)	LL	PI	AASHTO CLASSIFICATION
1	Tan fine sand	100.0	100.0	99.9	99.7	95.5	81.0	37.0	2.1	---	---	--	--	A-3
2	Brown fine sand	99.7	99.1	98.8	97.2	90.6	76.5	38.4	8.1	---	---	--	--	A-3
3	Dark brown fine sand	100.0	100.0	100.0	99.8	97.7	87.1	44.2	3.8	---	---	--	--	A-3
4	Light gray fine sand	100.0	100.0	100.0	99.8	94.0	75.1	27.3	1.3	---	---	--	--	A-3
5	Gray fine sand	100.0	100.0	99.7	99.0	91.6	77.2	42.2	7.1	---	---	--	--	A-3
6	Dark gray fine sand	96.7	95.9	94.5	93.4	88.6	75.6	37.4	6.7	---	---	--	--	A-3
7	Brown/gray silty fine sand	100.0	100.0	100.0	99.7	92.4	81.2	44.4	11.0	---	---	--	NP	A-2-4
8	Brown/gray clayey fine sand	100.0	100.0	100.0	99.9	94.9	83.3	47.7	14.4	---	20.0	--	NP	A-2-4
9	Black sandy clayey muck	100.0	100.0	95.2	87.0	77.1	68.3	45.2	23.0	27.2	127.2	--	NP	A-8
10	Matted organics	100.0	98.2	87.7	76.7	61.5	52.6	26.2	4.6	35.5	---	--	--	A-8
11	Rock	-----	-----	-----	-----	-----	-----	-----	---	---	---	--	--	---
12	Shell	99.0	97.4	91.8	81.4	62.3	54.9	31.2	5.9	---	---	--	--	A-3
13	Tan/green clay	100.0	100.0	100.0	100.0	98.0	93.9	78.6	49.5	---	47.7	71.0	51.9	A-7-6
14	Black fine sand with organics	100.0	99.7	99.0	96.5	84.5	71.2	41.4	13.4	10.2	---	--	--	A-8

LBR No.	Station No.	Subbase Soil Description	P-200 (%)	LBR Value (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
1	12 + 00	Gray fine sand with rock & shell	8.3	52.0	115.2	9.3
2	25 + 00	Gray fine sand	6.2	51.5	114.2	11.5
3	39 + 00	Brown fine sand	3.8	17.3	107.6	11.9
4	53 + 00	Brown fine sand with rock	5.8	22.8	109.2	12.6

N



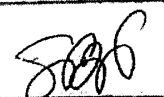
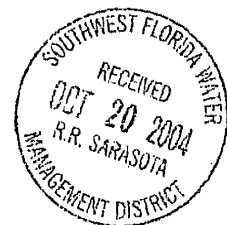
			
Ardaman & Associates, Inc.			
Consulting Engineers in Soils, Hydrogeology, Foundations, and Materials Testing			
BORING LOCATIONS FOR 44th AVENUE EAST MANATEE COUNTY, FLORIDA			
DRAWN BY: kad		CHECKED BY:	DATE: 3/25/91
FILE NO. 90-7853		APPROVED BY: 	

FIGURE 1

ATTACHMENT 'V'



44TH AVENUE EAST IMPROVEMENTS
ESTIMATION OF SEASONAL HIGH
GROUNDWATER
MANATEE COUNTY, FLORIDA
PSI PROJECT NO. 387-95007



RECEIVED

DEC 06 1999

Kimley-Horn Assoc.

April 2, 1999

Manatee County Government
Project Management Department
4422A 66th Street West
Bradenton, Florida 34210

Attention: Mr. Mike Limoge

RE: Limited Subsurface Exploration
Estimation of Seasonal High Groundwater
44th Avenue East Improvements
Manatee County, Florida
PSI Project No. 387-95007

Dear Mr. Limoge:

Professional Service Industries, Inc. (PSI) has completed a subsurface exploration program for the estimation of the seasonal high groundwater level for the proposed retention pond locations at the 44th Avenue East Improvements.

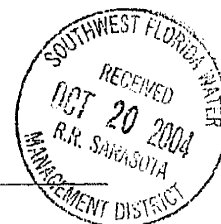
Scope of Study

The purpose of this study was to obtain information on the general subsurface conditions within the proposed retention pond area. The subsurface materials encountered were then evaluated with respect to the available project characteristics. In this regard, engineering assessments for the following items were formulated:

1. Measurement of the existing groundwater levels and estimation of seasonal high groundwater level.

The following services were provided in order to achieve the preceding objectives:

1. Reviewed readily available published soil information. This published information was obtained from the "Soil Survey of Manatee County, Florida" published by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS).
2. Executed a program of subsurface exploration consisting of subsurface sampling. We performed six (6) auger borings across the project site within potential retention pond locations, to a depth of approximately ten (10) feet below the existing grade.



3. Visually classified soil samples in the laboratory using the Unified Soil Classification System. Identified soil conditions at each boring location and formed an opinion of the site soil stratigraphy.
4. Collected groundwater level measurements and estimated seasonal high groundwater level.
5. The results of the subsurface exploration, including the recommendations and the data on which they are based, are presented in this written report supervised by a professional engineer.

Site Description

The project site is located on the south side of 44th Avenue East, east of its intersection with 1st Street. At the time of our exploration the project site was developed with a residential structure along the northeast portion of the site and the majority of the project site south of the residence was utilized as an orange grove. The northwest portion of the project site is an undeveloped, grass parcel. A lake is located south of the western portion of the project site, west of the orange grove. This lake appears to be the result of an intermittent stream leading into the lake.

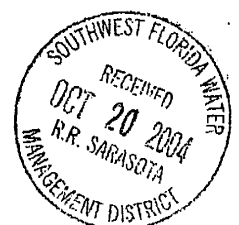
Because of the variable topography across the site, the firm of Darrell E. Gerken PSM, Inc. was obtained by Kimley-Horn & Associates to provide elevations at each boring location. According to the survey, the elevation at the boring locations ranged from approximately 25.84 to 35.54 feet. In addition, a level was utilized by PSI to provide elevation information on the lake. Based on this information, the water surface, as measured on March 23, 1999, of the lake is at an approximate elevation of 13.5 feet.

In addition, the topographic survey map published by the USGS titled "Bradenton, Florida" dated 1964 was reviewed for ground surface features at the proposed project location. Based on this review, the natural ground surface elevation in the area, prior to development, ranges from approximately 25 to 35 feet National Geodetic Vertical Datum (NGVD) of 1929.

Evaluation

The "Soil Survey of Manatee County, Florida", published in 1991 by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), was reviewed for general near-surface soil information within the general project vicinity. This information indicates that there are three (3) primary mapping units in the vicinity of the proposed project area. The map units are as follows, as provided by the USDA-NRCS.

Tomoka muck – map unit (47), with a seasonal high groundwater level of +1.0 feet above predevelopment grade



EauGallie fine sand – map unit (20), with a seasonal high groundwater level ranging from 0 to 1.0 feet below predevelopment grades

Orlando fine sand, moderately wet, 0 to 2 percent slopes – map unit (36), with a seasonal high groundwater level ranging from 3.5 to 6.0 feet below predevelopment grades

Based on the USDA NRCS mapping, the majority of the eastern portion of the project site lies within the Orlando fine sand (36) map unit and transitions toward the Tomoka muck (47) and EauGallie fine sand on the western portion of the project site.

The soil encountered within the borings at the site primarily consisted of clean to slightly silty fine sand (SP/SP-SM), with the exception of boring AB-1 where silty and clayey sands were encountered at the depths indicated on the attached boring log summary. Iron staining was encountered within borings AB-2, AB-3 and AB-4, which would indicate past seasonal high levels, experienced at that location or artificially raised groundwater levels due to irrigation of the site. ~~However, the depth to the iron staining ranged from 1.5 to 5 feet below existing grade.~~ Groundwater was encountered at approximate depths ranging from 4.5 to 6.75 feet below the existing ground. The difference in depth to groundwater can be the result of site elevation differences, draw-down effect of the groundwater in the western portion of the project site due to the presence of the lake and the different soil units present.

It is anticipated the seasonal high groundwater level will vary due to the topography and the encountered soil map units. The seasonal high groundwater level is estimated based on the review of the USDA NRCS soil survey, the measured groundwater levels in the borings and our past experience with similar soil conditions. The following table presents the estimated seasonal high groundwater level at each boring location.

Auger Boring Number	Existing Ground Surface Elevation (FT)	Approximate Depth to Groundwater (FT)	Approximate Groundwater Elevation (FT)	Approximate Elevation of Seasonal High Groundwater (FT)
AB-1	25.84	6.75	19	21 ± 0.5'
AB-2	31.31	5.50	26	27 ± 0.5'
AB-3	35.54	6.75	29	31 ± 0.5'
AB-4	30.81	5.50	25	27 ± 0.5'
AB-5	27.09	4.50	23	24 ± 0.5'
AB-6	30.82	5.75	25	27 ± 0.5'

under-grd
 - 4.84 ±
 4.31 ±
 4.54 ±
 3.81 ±
 3.9 ft
 3.2 ±



Report Limitations

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This company is not responsible for the conclusions, opinions or recommendations made by others based on these data. No other warranties are expressed or implied.

The geotechnical scope of our services does not include any environmental assessment or investigation for the presence or absence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client.

We appreciate the opportunity to be of service to you on this project. If you have any questions or comments regarding this letter, please do not hesitate to contact our office.

Sincerely,

Professional Service Industries, Inc.

Marci Forbes/cm
Marci L. Forbes
Project Engineer

Lee J. Smith
For C. Rees Nickerson, P.E.
Chief Engineer
Fl. Registration No. 35792

Michael T. Jordan/rs
Michael T. Jordan
Branch Manager

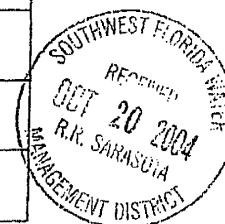
Attachments



Auger Boring Logs
44th Avenue East Improvements
 Project No. 387-95007

Auger Boring: AB-1	
Depth	Soil Description
0' – 3'	Dark Brown Clean to Slightly Silty Fine Sand (SP/SP-SM), with Trace Shell
3' – 5'	Gray Clayey Fine Sand (SC), with Trace Shell
5' – 7.5'	Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
7.5' – 10'	Dark Brown Silty Fine Sand (SM)
Top of Boring Elevation: 25.84 Feet	
Boring Termination Elevation: 15.84 Feet	
Groundwater Elevation: 19.09 Feet	
Estimated Seasonal High Groundwater Elevation: 21 ± 0.5'	

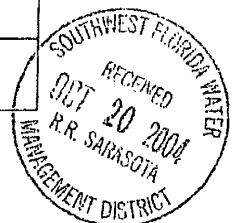
Auger Boring: AB-2	
Depth	Soil Description
0' – 5'	Light to Dark Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
5' – 8.25'	Dark Brown Clean to Slightly Silty Fine Sand (SP/SP-SM), with Iron Staining
8.25' – 10'	Light Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
Top of Boring Elevation: 31.31 Feet	
Boring Termination Elevation: 21.31 Feet	
Groundwater Elevation: 25.81 Feet	
Estimated Seasonal High Groundwater Elevation: 27 ± 0.5'	



Auger Boring Logs
44th Avenue East Improvements
Project No. 387-95007

Auger Boring AB-3	
Depth	Soil Description
0' – 5'	Light Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
5' – 7'	Brown Clean to Slightly Silty Fine Sand (SP/SP-SM) With Iron Staining
7' – 10'	Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
Top of Boring Elevation: 35.54 Feet	
Boring Termination Elevation: 25.54 Feet	
Groundwater Elevation: 28.79 Feet	
Estimated Seasonal High Groundwater Elevation: 31 ± 0.5'	

Auger Boring AB-4	
Depth	Soil Description
0' – 1'	Gray Clean to Slightly Silty Fine Sand (SP/SP-SM)
1' – 1.5'	Brown Clean to Slightly Silty Fine Sand (SP/SP-SM) With Iron Staining
1.5' – 10'	Light Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
Top of Boring Elevation: 30.81 Feet	
Boring Termination Elevation: 15.84 Feet	
Groundwater Elevation: 25.31 Feet	
Estimated Seasonal High Groundwater Elevation: 27 ± 0.5'	



Auger Boring Logs
44th Avenue East Improvements
Project No. 387-95007

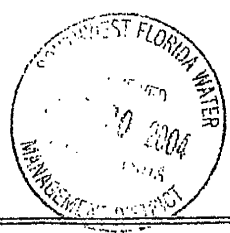
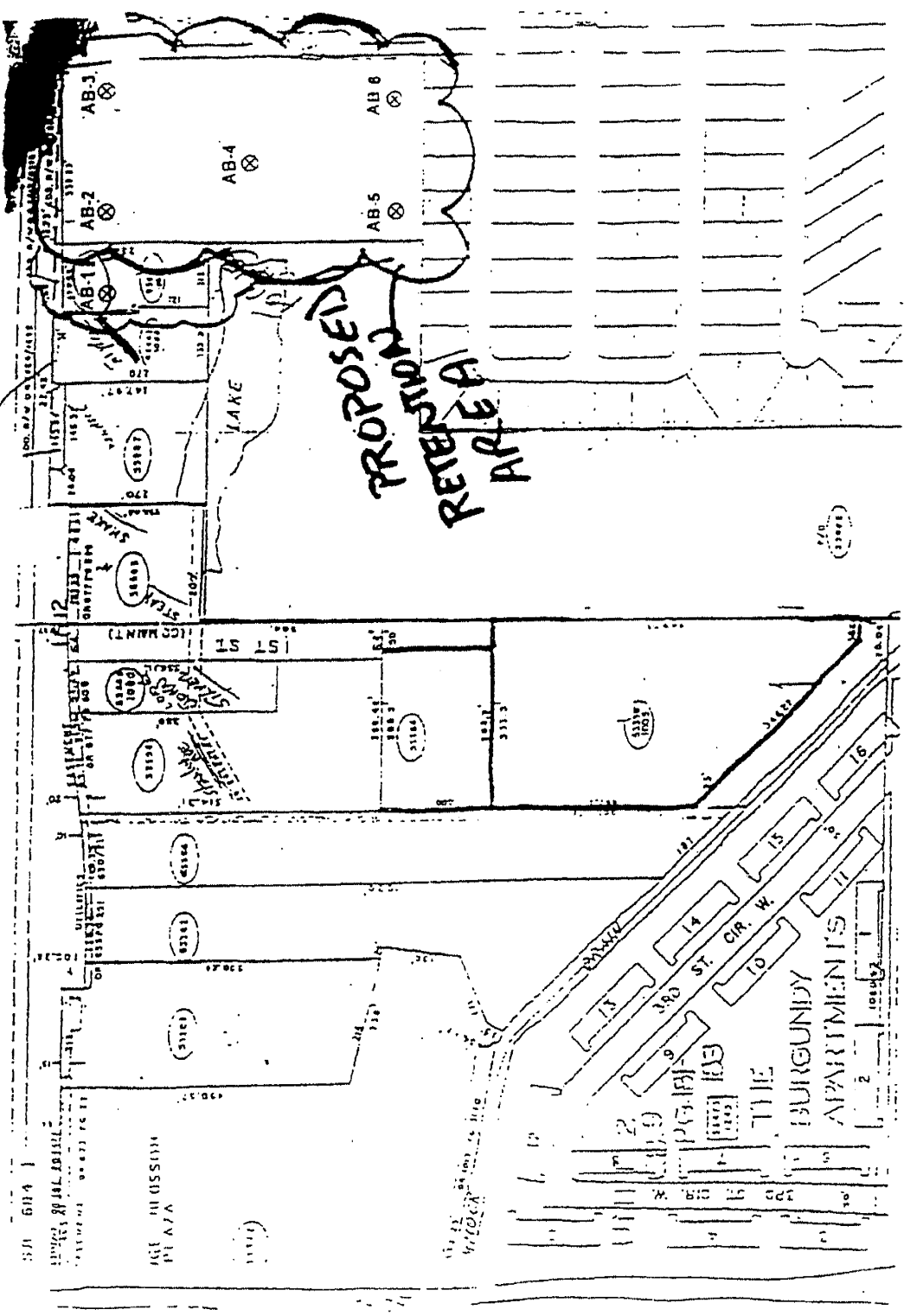
Auger Boring: AB-5	
Depth	Soil Description
0' – 10'	Light Gray to White Clean to Slightly Silty Fine Sand (SP/SP-SM)
Top of Boring Elevation: 27.09 Feet	
Boring Termination Elevation: 15.84 Feet	
Groundwater Elevation: 22.59 Feet	
Estimated Seasonal High Groundwater Elevation: 24 ± 0.5'	

Auger Boring: AB-6	
Depth	Soil Description
0' – 5'	Gray to Dark Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
5' – 8'	Gray Clean to Slightly Silty Fine Sand (SP/SP-SM), with Highly Organic Root Material
8' – 10'	Light Brown Clean to Slightly Silty Fine Sand (SP/SP-SM)
Top of Boring Elevation: 30.82 Feet	
Boring Termination Elevation: 20.82 Feet	
Groundwater Elevation: 25.07 Feet	
Estimated Seasonal High Groundwater Elevation: 27 ± 0.5'	



44TH AVENUE EAST

CORTEZ ROAD



PROJECT NAME

44th AVENUE EAST IMPROVEMENTS
MANATEE COUNTY, FLORIDA

PROJECT NO.

387-95007

DATE

MARCH, 1999

BORING LOCATION PLAN