1112 Manatee Avenue West
Bradenton, FL 34205
purchasing@mymanatee.org

Solicitation Addendum

Addendum No.:	**1**
Solicitation No.:	**IFBC 21-TA003724AJ**
Project No.:	6007506
Solicitation Title:	G.T Bray Drainage Pipe CIPP Lining Project
Addendum Date:	June 23, 2021
Procurement Contact:	Abby Jenkins

IFBC 21-TA003724AJ is amended as set forth herein. Responses to questions posed by prospective bidders are provided below. This Addendum is hereby incorporated in and made a part of IFBC 21-TA003724AJ.

The deadline to submit all inquiries concerning interpretation, clarification or additional information pertaining to this IFBC was June 14, 2021.

REPLACE:
SECTION C, BID ATTACHMENT 2, TECHNICAL SPECIFICATIONS

Replace Attachment 2, Technical Specifications with the attached Attachment 2, Revised Technical Specifications included with this Addendum 1.

REPLACE:
SECTION C, BID ATTACHMENT 3, PLANS/DRAWINGS

Replace Attachment 3, Plans/Drawings with the attached Attachment 3, Plans/Drawings for clarity as a separate attachment to this Addendum 1.

QUESTIONS AND RESPONSES:

Q1. I am trying to obtain the specs for this bid advertisement, but they are not available online. If possible, can you please email them.

R1. The bid documents are available on the County Website www.mymanatee.org and Periscope S2G https://www.bidsync.com/bidsync-cas/

Q2. Would a spray applied lining system utilizing GeoKrete geopolymer be accepted as an alternative pipelining technology to CIPP?

R2. No. It's been determined that CIPP will be the best application for this project.

Q3. Please advise if an alternative lining solution other than CIPP would be acceptable for this bid? We recently completed a slip lining job for St Johns River Water Management District where we lined an existing double barrel 72" CMP pipe with 60" HDPE pipe that was fused together. One advantage with this method is that we did not have to dewater the pipe.

R3. Refer to R2.

Q4. Can the county provide clearer plans, the ones provided are very blurry and hard to determine the location of the pipe in need of repair. We would like to do a site visit of the area.

R4. Yes, a digital (non-scanned) copy of the plans will be uploaded to the County Website www.mymanatee.org and Periscope S2G https://www.bidsync.com/bidsync-cas/ .

Q5. In the technical specifications under section C Bid attachments section 3.1.2 it is stated, "For a Contractor to be considered Commercially Proven, the Contractor must satisfy all insurance, financial, and bonding requirements of the owner, and must have had at least 5 years active experience in the commercial installation of the product bid. " Ric-Man Construction Florida meets each of these requirements quite easily. The specifications goes on to state, "In addition, the Contractor must have successfully installed at least 1,000,000 feet of the same product bid in wastewater collection systems and a minimum of 50,000 of 48" or greater in Diameter." Having been a Florida Utility Contractor for over 17 years and self-performing CIPP installation for 10 years we do not come close to the one million feet minimal requirement. Relatively few companies reach that footage. The large diameter (48" or greater) requirement, the Field supervision experience and foreman experience we more than qualify with your requirements. Our Field Superintendent, Foreman and Project Manager collectively have over 50 years and approximately 2,000,000 feet installed to their credit.

We respectfully request that the County re-consider the one-million-foot requirement of minimal company experience. We eagerly await your reply and will respond with any additional information that you may require.

R5. This project does include an uncommon size of 72" diameter. We will update the technical specifications to say:

In addition, the Contractor must have successfully installed at least 1,000,000 feet of the same product bid in wastewater collection systems OR a minimum of 50,000 of 48" or greater in Diameter.

Q6. The bid documents request Builder's Risk Insurance. Is there construction of roadways and/or the addition of a permanent structure or building, including the installation of machinery and/or equipment in this bid as stated in the Builders Risk description in the bid documents?

R6. The description of work is provided in the Bid Attachment 2, Technical Specification and Bid Attachment 3, Plans/Drawings.

Q7. What is the warranty term for this contract?

R7. Refer to Section D, Sample Construction Agreement.

Q8. Is there a bid bond form or can standard AIA forms be used?

R8. No, the County does not have a bid bond form, Bidder's may submit the standard AIA Forms.

Q9. Could you please provide a current planholder's list, if available?

R9. The system Procurement uses to advertise solicitations currently does not have the planholder's list functionality activated. Procurement is working with the vendor to engage this feature. A planholder's list will not be available for this IFBC.

Q10. Do you have any additional drawings, plans, as-builts, etc. of the pipe segments to be rehabbed?

R10. All available existing condition information is included in the IFBC Bid documents.

Q11. Could you please provide the depths and/or elevations of the structures and pipe segments to be rehabbed?

R11. The County did not want to disturb the soccer field for investigation. The Contractor shall verify elevations as part of project. Invert elevations have been provided to use for the beginning and end of project to estimate depths.

Q12. Plan sheet CG-101 states a CIPP thickness of 25 mm. Is this a minimum thickness or the required thickness to be installed?

R12. Yes, as per CIPP Bid Attachment 2 Technical Specification, Section 4.1.1, the thickness will meet or exceed the design thickness.

Q13. If this is the required thickness to be installed, what depth and other design parameters were used?

R13. This information in not available.

Q14. To confirm, a partially deteriorated design condition is allowed per CIPP spec, correct?

R14. Yes, see Bid Attachment 2, Technical Specification Section 5.3 for Partially Deteriorated design requirements.

Q15. Will the contractor be allowed to dispose of CIPP cure water into the adjacent sanitary system?

R15. Yes, its allowed, but uncommon. Cure water is allowed to flow down stream of stormwater system. Per Bid Attachment 2, Technical Specification Section 9.1.4, only hot water shall be used to cure.

Q16. Where is the nearest manhole(s) to the site where cure water can be disposed of? Is a map available of the surrounding sanitary system?

R16. Nearest manhole is shown in the Bid Attachment 3 Plans/Drawings with all existing conditions.

Q17. Do you know the approximate burial depth of the junction box structures?

R17. Please use invert elevations to estimate. Contractor to verify on field as part of project.

Q18. CIPP spec section 3.1.6 mentions only proposals using pre-approved products and Contractors will be opened. Is SAK pre-approved or could you please provide a list of pre-approved products and Contractors?

R18. There is no pre-approved product list. The product must be a fiber material and able to meet load requirements per installation. Please see Bid Attachment 2, Technical Specification Section 4 Materials in CIPP specifications for more information.

NOTE:

Items that are ~~struck through~~ are deleted. Items that are <u>underlined</u> have been added or changed. All other terms and conditions remain as stated in IFBC.

INSTRUCTIONS:

Receipt of this Addendum must be acknowledged as instructed in the solicitation document. Failure to acknowledge receipt of this Addendum may result in the response being deemed non-responsive.

END OF ADDENDUM

AUTHORIZED FOR RELEASE

Jacob Erickson, MBA, CPPO, NIGP-CPP

Digitally signed by Jacob Erickson, MBA, CPPO, NIGP-CPP
Date: 2021.06.23 13:02:51 -04'00'

SPECIAL PROVISIONS

FOR

GT Bray Drainage Pipe CIPP Lining

PROJECT # 6007506

April 2021

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
Manatee County Public Works Department
1022 26th Avenue East
Bradenton, Florida 34208
(941) 708-7450

SPECIAL PROVISIONS

SECTION **PAGE**

SPECIAL PROVISIONS

GENERAL

This Section amends, enhances or otherwise revises the Technical Specifications.

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*, most current 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 June 2015).

The Contractor's work shall follow the Manatee County Public Works Utility Standards (dated February 25, 2020) for all utility 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 or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used. Interpretation of these specifications shall be made upon that basis.

PRIORITY

In any instance where there is an apparent conflict between these technical specifications, special provisions and the corresponding terms of the "Standard Specifications", these special provisions followed by these technical specifications shall be controlling.

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.

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.

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.

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 also be in accordance with the applicable portions of the *FDOT Standard Specifications* and these specifications.

MEASUREMENT AND PAYMENT

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 Engineer.

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 Owner.

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. 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 Owner 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.

   No payment shall be made for contingency quantities or additional work unless otherwise directed and approved in writing by the Engineer.

g. Bid Schedule Completion - the blank spaces in the bid schedule shall be filled in correctly where indicated for each and every item for which a description is given, as the bidder must state the unit prices for which he proposes to do each part of the work contemplated, and the total price for all the parts included in any or all of the combinations of the work. In case of a discrepancy, the written words for "unit price", where stated, shall be considered as being the unit price. If the bid schedule

does not use the written words for the unit price, then the numerically correct "total price", shall be considered as being the total price.

RESTORATION

Payment for restoration shall be covered under the applicable restoration Pay Items as specified in the proposal. If a specific restoration Pay Item is not listed in the proposal, 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 owners 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 Owner shall not be responsible for costs associated with delays, disruptions and remobilizations attributed to utility agency scheduling. The Contractor shall also cooperate with GT Bray Park to minimize impacts.

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 Owner assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Owner. The Owner 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 Engineer or are expressly stated in the Contract and (2) the Contract expressly provides that the responsibility therefore is assumed by the Owner.

PROJECT SCHEDULE

The Contractor shall submit a preliminary construction schedule after the bid. The preliminary schedule shall show major work items and any phases the Contractor proposes. The schedule will show duration of work items and phases.

The Contractor shall submit a detailed Critical Path Method (CPM) construction schedule within 15 days of the notification of award or its intent for the County to review. The submittal shall meet the following requirements:

- Schedule will be submitted electronically
- 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.

A copy of the CPM 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.

The Contractor shall provide a revised CPM 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 CPM 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 CPM schedule. The cost to prepare and revise the schedule is considered incidental to the Work.

SPECIAL TERMS AND CONDITIONS

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 usage of temporary erosion control features. The plan shall include:

- **Sediment barriers** designed, furnished and installed by the Contractor in accordance with the plans, and FDOT Specifications Section 104.

- **Inlet Protection System** furnished and installed by the Contractor as shown on the plans and/or required by conditions of the permits and as outlined in FDOT Specifications Section 104.

SHOP DRAWINGS

The Contractor shall submit to the Engineer for 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 working and shop drawings shall be certified by a Florida licensed Professional Engineer and state that the design is sufficient for the successful completion of the Work. The working drawings and shop drawings shall include, but not be limited to:

- Traffic Control Plan
- Erosion Control Plan
- Shop Drawings as required by FDOT Standard Specifications
- Liner Specifications

The Contractor is responsible for maintaining a Submittal Activity Record (Logbook) on this project using e-Builder, Inc. The Contractor shall submit all shop drawings to the 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 time when any Shop Drawing submittal activity occurs.

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, such as plastic/organic soil, rock, hard plane, debris and trash, within project limit, following FDOT Design Standard Index 500, latest version. Payment for subsoil excavation shall be included in the subsoil excavation pay items.

DEWATERING, SHEETING AND BRACING

The contractor shall determine the need of dewatering, sheeting and bracing to facilitate the construction, conforming to current SWFWMD/FDEP rule and OSHA safety criteria. Payment for dewatering, sheeting and bracing shall be included in the applicable item for earthwork, 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 obtain the approval from SWFMWD, or FDEP (if water needs to be discharged offsite into the state surface water), and submit the permit with a detailed description of the proposed dewatering system to the Project Manager. The dewatering 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 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 alternate forms of

stormwater removal adequate 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 for new storm systems.

POST-CONSTRUCTION STORM PIPE TESTING

The Contractor shall inspect and televise all newly constructed or rehabilitated storm pipes on the project. The purpose is to assure the pipes are properly constructed and do not leak at the joints. 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 Engineer. Temporary sidewalk shall be constructed as shown in the plans or as required to maintain pedestrian movement. Payment for these items shall be included under the lump sum pay item for Maintenance of Traffic.

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

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 Engineer. 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 existing underground utility locations by means of subsurface locating or other approved method. All existing utilities shall remain unless otherwise noted on the plans. 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 as 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 Owner.

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 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.

UTILITY CONFLICTS

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

The contractor's equipment shall maintain a minimum clearance distance to the power line (10 feet for voltage up to 50kv, 15 feet for voltage over 50kv to 200kv, 20 feet for voltage over 200kv to 350kv, 25 feet for voltage over 350kv to 500kv, 35 feet for voltage over 500kv to 750kv, 45 feet for voltage over 750kv to 1,000kv.), following new OSHA Rule (29 CFR Part 1926) and FDOT Roadway Design Bulletin 11-03 DCE Memorandum 02-11.

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.

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, business establishments and park users 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 within 7 calendar days of liner installation.

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 Owner 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.

NOTICE AND SERVICE THEREOF

All notices, which shall include demands, instructions, requests, approvals, and claims shall be in writing. Any notice to or demand upon the Contractor shall be sufficiently given if delivered to the office of the Contractor specified in the bid (or to such other office as the Contractor may, from time to time, designate to the Owner in writing), or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered, with charges prepaid, sent via fax transmission, or to any telegraph company for transmission, in each case addressed to such office.

All notices required to be hand delivered to the Owner, unless otherwise specified in writing to the Contractor, shall be delivered to the Project Manager, and any notice to or demand upon the Owner shall be sufficiently given as delivered to the office of the Project Manager, or if deposited in the United States mail in a sealed, postage prepaid envelope, sent via fax transmission, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to said Project Manager or to such other representative of the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purposes.

Any such notice or demand shall be deemed to have been given or made as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post or in the case of a fax transmission or telegram at the time of actual receipt, as the case may be.

REQUIREMENTS FOR CONTROL OF THE WORK

Prior to the start of the Work described in this contract, a pre-construction conference may 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.

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, county property, 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 Owner 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 Owner'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 Owner will coordinate with the Contractor to identify possible storage sites.

CONSTRUCTION PHOTOGRAPHY

General

The Contractor shall employ a competent photographer to take construction record photographs and perform videotaping, including providing all labor, materials, equipment and incidentals necessary to obtain photographs and/or videotapes of all areas specified in the Contract specifications.

The word "Photograph" includes standard photographic methods involving negatives, prints and slides and it also includes digital photographic methods involving computer technology items such as 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 videotape recording, the audio portion should be done by a person qualified and knowledgeable in the specifics of the Contract, who shall speak with clarify and diction so as to be easily understood.

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. 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 provided digitally.

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 ¼ of the image being the roadway fronting of property and ¾ 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.

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) if applicable. 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 FDEP. 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.

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 Project Manager 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 Project Manager or his authorized representatives. The superintendent shall have full authority to execute the orders or directions of the Project Manager 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, and wherever work is being done by the contractor.

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 Owner 48 hours in advance.

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.

RECORD DRAWINGS AND PROJECT CERTIFICATION

The County 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 Engineer and shall be delivered to the Engineer upon completion of the Work. All completed "As-builts" 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. All Record Drawings shall be in accordance with current Manatee County Standards.

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. 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.
D. Elevations on all drainage control structures, verifying all plan dimensions.
E. Stormwater ponds with cross sections [25-foot maximum interval] (sufficient to calculate volumes).
F. Flow line elevations on all ditch breaks (vertical and horizontal).
G. Field changes of dimensions and details.
H. Details not on original contract drawings.
I. Equipment and piping relocations.
J. The locations of all headwalls, pipes and any other structures shall be located by station and offset.

K. Benchmarks and elevation datum shall be indicated.
L. Additional elevations or dimensions as required by the Engineer
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 Owner 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 subject to a field review in the presence of the Engineer or his designated 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 Owner and/or Engineer and shall submit two write-only CD-ROMs, one set of 11-inch by 17-inch Mylar record drawings and four sets of 11-inch by 17-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.

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. Unless there is a separate pay item for Record Drawings, payment shall be included as part of the lump sum quantity for Mobilization.

COMPLIANCE WITH THE FDEP COASTAL PERMIT REQUIREMENTS

FDEP Stormwater Management and Discharge permits or exemptions, if any, and/or a Department of Environmental Protection Coastal permit, if any, required for this project have been obtained by the County. 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, as well as other duly authorized law enforcement officers of the State.

SPECIFCIATIONS FOR CURED-IN-PLACE PIPE (CIPP)

1. INTENT

1.1 It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube, which is formed to the original conduit by use of a hydrostatic head. The resin is cured using hot water under hydrostatic pressure or steam under air pressure within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and tight fitting.

2. REFERENCED DOCUMENTS

2.1 This specification references ASTM F1216 (Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube), ASTM Fl 743 (Rehabilitation of pipelines by pulled-in-place installation of a cured-in-place thermosetting resin pipe), and ASTM D790 (Test methods for flexural properties of non-reinforced plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern.

3. PRODUCT, MANUFACTURER, CONTRACTOR QUALIFICATION REQUIREMENTS

3.1 Since sewer products are intended to have a 50-year design life, and in order to minimize the Owner's risk, only proven products with substantial successful long-term track records will be approved. The CIPP product is defined as the combination of dry liner (felt fiber) and resin system. Data sheets for each system are required, as well as the combined testing to validate their compatibility.

Products and Contractors seeking approval must meet all of the following criteria to be deemed Commercially Acceptable:

3.1.1 For a Product to be considered Commercially Proven the liner manufacturer, resin manufacturer, and saturation company must be certified to ISO 9001 standard (or equal). The product must have a minimum of 1,000,000 linear feet or 4,000 manhole-to-manhole line sections of successful wastewater collection system installations in the U.S. and these installations must be documented to the satisfaction of the Owner to assure commercial viability, and have been in active service for over five years.

3.1.1.1 For a saturation company to be Commercially Proven, the liner impregnation must occur at a permanent wetout facility that is legally permitted with any/all local, state and federal agencies. A permanent facility is one that is:

- An existing, free-standing structure with a permanent power supply
- A legally permitted facility that is zoned and has a certificate of occupancy for its intended use
- Has written approval from a fire marshal for its intended use
- Has local or state environmental protection agency approval.
- Finally, to ensure that the finished product meets the quality control standards set forth by the Owner, all CIPP liners shall be impregnated by a facility that is approved by the product's manufacturers (both dry liner and resin). Proof of the above criteria must be submitted with the bid in order to be deemed responsive.

3.1.2 For a Contractor to be considered as Commercially Proven, the Contractor must satisfy all insurance, financial, and bonding requirements of the Owner, and must have had at least 5 (five) years active experience in the commercial installation of the product bid. In addition, the Contractor must have successfully installed at least 1,000,000 feet of the same product bid in wastewater collection systems or a minimum of 50,000 of forty-eight (48) inch or greater in diameter. Field Supervisor/Foreman: Minimum five (5) years as a foreman/superintendent for a cured-in-place lining crew (installing actual product included with this bid/project), and a minimum of 300,000 lineal feet of cured-in-place lining, diameters up to, and including, twenty-three (23) inch *(Engineer shall select appropriate*

experience requirement based upon work included with project. If work includes work in both diameter ranges please include both clauses) ***or*** Minimum of five (5) years as a foreman/superintendent for a cured-in-place lining crew, a minimum of 50,000 lineal feet of cured-in-place lining of twenty-four (24) inch or greater, installed under his/her supervision. Such experience shall include the actual product, by trade name, CONTRACTOR proposes to install. Acceptable documentation of these minimum installations must be submitted to the Owner.

3.1.3 Sewer rehabilitation products submitted for approval must provide third-party Test Results supporting the long-term performance and structural strength of the product and such data shall be satisfactory to the Owner. Test samples shall be prepared in order to simulate installation methods and trauma of the product. No product will be approved without independent third-party testing verification.

3.1.6 Proposals must be labeled clearly on the outside of the proposal envelope, listing the product name and Contractor being proposed. Only proposals using pre- approved products and Contractors will be opened and read. Proposals submitted on products and/or from Contractors that have not been pre-approved will be returned unopened.

4. MATERIALS

4.1 Tube - The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric or felt/fiber fabric and meet the requirements of ASTM F1216 or ASTM Fl 743, Section 5. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.

4.1.1 The saturated Tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the Design thickness.

4.1.2 The Tube shall be sewn to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

4.1.3 The outside layer of the Tube (before saturation) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.

4.1.4 The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

4.1.5 The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

4.1.6 Seams in the Tube shall be as strong or stronger than the non-seamed felt as per ASTM D5813. Section 6.1 of ASTM D5813 - Fabric Tube Strength- states "tube shall have a minimum tensile strength of 750psi in both the longitudinal and transverse direction". As the seam is part of the fabric tube, it must also meet this requirement.

4.1.7 All liners must undergo a vacuum dye bath test, after tube construction, to detect pinholes or other deficiencies. This must be performed at the manufacturer's facility and documented to validate compliance.

4.1.8 The outside of the Tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes must be manufactured in the USA.

4.2 Resin - The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216 and ASTM Fl 743, the physical properties herein, and those which are to be utilized in the Design of the CIPP for this project. The resin shall produce CIPP which will comply with the structural and chemical resistance requirements of this specification.

5. STRUCTURAL REQUIREMENTS

5.1 The CIPP shall be designed as per ASTM F1216, Appendix X.1 . The CIPP design shall assume no bonding to the original pipe wall.

5.2 The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the Long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D-790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third-party test data. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in Design.

5.3 The Enhancement Factor 'K' to be used in 'Partially Deteriorated' Design conditions shall be assigned a value of 7. Application of Enhancement (K) Factors in excess of 7 shall be substantiated through independent test data.

5.4 The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occurs during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

5.5 The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

MINIMUM PHYSICAL PROPERTIES

Property	Test Method	Cured Composite min. per ASTM F1216	Cured Composite (400,000 psi Resin)
Modulus of Elasticity	ASTM D-790 (short term)	250,000 psi	400,000 psi
Flexural Stress	ASTM D-790	4,500 psi	4,500 psi

5.6 The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in Section 5.5 and in accordance with the Design Equations in the appendix of ASTM F 1216, and the following design parameters:

Design Safety Factor	= 2.0
Retention Factor for Long-Term Flexural Modulus to be used in Design (*as determined by Long-Term tests described in paragraph 5.2*)	= 50% - 75%
Ovality*	= 2%
Enhancement Factor, k	= 7
Groundwater Depth (above invert)*	= ½ depth to invert ft.
Soil Depth (above crown)*	= 8 ft.(or per plans)
Soil Modulus**	= 1,000 Psi
Soil Density**	= 120 pcf
Live Load**	= H20 Highway
Design Condition (partially or fully deteriorated)***	= partially (PD) ***

* Denotes information which can be provided here or in inspection video tapes or project construction plans. Multiple line segments may require a table of values.

** Denotes information required only for fully deteriorated design conditions.

*** Based on review of video logs, conditions of pipeline can be fully or partially deteriorated. (See ASTM F1216 Appendix) The Owner will be sole judge as to pipe conditions and parameters utilized in Design.

5.7 Refer to the attached Dimensional Ratio table for specific pipe section requirements, based on the pipe condition, depth, ovality, etc. as computed for the conditions shown, using ASTM F 1216 Design Equations

5.8 Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

6 TESTING REQUIREMENTS

6.8 Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.

6.9 Hydraulic Capacity - Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

6.10 CIPP Field Samples - When requested by the Owner, the Contractor shall submit test results from field installations in the USA of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 5.5 have been achieved in previous field applications. Samples for this project shall be made and tested as described in Section 10.1.

7 INSTALLATION RESPONSIBILITIES FOR INCIDENTAL ITEMS

7.1 It shall be the responsibility of the Owner to locate and designate all manhole access points open and accessible for the work and provide rights of access to these points. If a street must be closed to traffic because of the orientation of the sewer, the Owner shall institute the actions necessary to do this for the mutually agreed time period. The owner shall also provide free access to water hydrants for cleaning, inversion and other work items requiring water.

7.2 Cleaning of Sewer Lines - The Contractor, when required, shall remove all internal debris out of the sewer line that will interfere with the installation of CIPP. The Owner shall also provide a dump site for all debris removed from the sewers during the cleaning operation. Unless stated otherwise, it is assumed this site will be at or near the sewage treatment facility to which the debris, would have arrived in absence of the cleaning operation. Any hazardous waste material encountered during this project will be considered as a changed condition.

7.3 Bypass Pumping - The Contractor, when required, shall provide for the flow of sewage or stormwater around the section or sections of pipe designated for repair. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow. The Owner may require a detail of the bypass plan to be submitted.

7.4 Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected. A video tape and suitable log shall be kept for later reference by the Owner.

7.5 Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the inversion process, that was not evident on the pre-bid video and it cannot be removed by conventional sewer cleaning equipment, then the Contractor shall make a point repair excavation to uncover and remove or repair the

obstruction. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.

7.6 Public Notification - The Contractor shall make every effort to maintain service usage throughout the duration of the project. In the event that a service will be out of service, the maximum amount of time of no service shall be 8 hours for any property served by the sewer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. The Contractor shall also provide the following:

A. Written notice to be delivered to each home or business the day prior to the beginning of work being conducted on the section, and a local telephone number of the Contractor they can call to discuss the project or any problem which could arise.

B. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

7.7 The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing and curing the CIPP.

8 LINER IMPREGNATION

8.1.1 Resin Impregnation - The quantity of resin used for tube impregnation shall be specified by the dry liner manufacturer as well as the required gap setting under which the liner is to be impregnated. During saturation, a vacuum impregnation process (or approved equal) shall be used to ensure thorough resin saturation throughout the length of the felt tube.

During resin injection, resin samples shall be collected and tested for exotherm time in a "gel test bath". These tests will serve as a quality control measure for the proper catalyst-resin ratio.
Samples shall be collected at the beginning and end of the resin pump based on the resin Manufacturer's recommendations, as well as a minimum of (2) gel tests per tube and a minimum
of (1) gel test every 2,000 pounds pumped.

Evidence of proper saturation and catalyzation shall be provided with every liner installed on the job. This will be in the form of "gel test" logs as well as wetout report documenting including the following:

- Dry liner and resin manufacturer LOT numbers
- Diameter, thickness, length information

- Actual pounds of resin per liner
- Recommended gap setting
- Liner manufacturer' s maximum/minimum/ideal heads/pressures
- Resin manufacturer' s recommended cure times at minimum interface temperatures.
- Proper DOT Compliance for shipping of wet-out tubes, and proper truck placarding.

After vacuum in the tube is established, a vacuum point shall be no further than 75 feet from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular as possible. A roller system shall be used to uniformly distribute the resin throughout the tube. If the Installer uses an alternate method of resin impregnation, the method must produce the same results. Any alternate resin impregnation method must be proven and accepted by the liner manufacturer.

Owner reserves the right to inspect any and all saturations being performed for the project. The cost of an initial inspection of the facility and witnessing of a liner impregnation must be borne by the contractor and must take place during normal business hours or a mutually agreed upon time. During the inspection of the facility, the Owner's representative reserves the right to meet with the local fire marshal onsite. Such a meeting shall be coordinated by the facility. Evidence of a legally permitted facility as specified in 3.1.3 shall be provided by the contractor during the onsite visit.

9 INSTALLATION

9.1 CIPP installation shall be in accordance with ASTM F1216, Section 7, or ASTM Fl 743, Section 6, with the following modifications:

9.1.2 Tube Insertion - The saturated tube shall be positioned in the pipeline using either inversion or a pull-in method. If pulled into place, a power winch should be utilized, and care should be exercised not to damage the tube as a result of pull-in friction. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.

9.1.3 Temperature gauges (i.e. thermocouple wires and readouts) shall be placed inside the tube at the invert level of each end and middle manholes to monitor the temperatures during the cure cycle.

9.1.4 Curing shall be accomplished by utilizing hot water under hydrostatic pressure or steam under air pressure in accordance with the liner/resin manufacturer' s recommended cure schedule.

10 REINSTATEMENT OF BRANCH CONNECTIONS

10.1 It is the intent of these specifications that branch connections to buildings be reopened without excavation, utilizing a remote-controlled cutting device, monitored by a video TV camera. The Contractor shall certify he has a minimum of 2 complete working cutters plus spare key components on the site before each inversion. Unless otherwise directed by the owner or his authorized representative, all laterals will be reinstated. No additional payment will be made for excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

11 INSPECTION

11.1 For each work order released, one CIPP sample for each diameter shall be prepared and physical properties tested in accordance with ASTM F1216 or ASTM Fl 743, Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in Table 1 of the applicable ASTM.

11.2 Wall thickness of samples shall be determined as described in paragraph 8.1.6 of ASTM Fl 743. The minimum wall thickness at any point shall not be less than 87Yi%

11.3 Visual inspection of the CIPP shall be in accordance with ASTM Fl 743, Section 8.6.

12 CLEAN-UP

12.1 Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.

13 PAYMENT

13.1 Payment for the work included in this section will be in accordance with the prices set forth in the proposal for the quantity of work performed. Progress payments will be made monthly based on the work performed during that period.

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 2013. Where such item number is not available, the description shows herein will prevail.

Maintenance of Traffic: Bid item includes as necessary work zone signs, cones, barricades as necessary.

Misc. Structure Adjustment: Bid item includes locating, uncovering, grading, accessing, securing area, temporary adjustment during construction and adjusting to height to similar preconstruction height as determined by Engineer.

CIPP Lining (72" Pipe): Price and payment for pipe liner will be full compensation for furnishing and installing the pipe liner in accordance with the requirements of the specification of the cured-in-place pipe, including all materials, labor and incidentals required to dewater and clean host pipe, dispose of all silt and debris, seal cracks and joints in the host pipe, and seal and grout the annular space between the liner and interior of the host pipe. Price and payment for pipe liner will also be full compensation for all equipment, materials and labor required for inspections, and for furnishing videos of the inspections to the Engineer.

Sod: Contractor shall replace sod to match existing turf.

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 Project Manager before the start of the work. No payment shall be made for work completed without written authorization from the Owner or Engineer.

Date:___/___/_____ Submittal No. _____

SHOP DRAWING SUBMITTAL COVER SHEET

(IFB) # [Insert IFB Number]
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]

SHOP DRAWING REVIEW

RESPONSE NOT REQUIRED	RESPONSE REQUIRED
☐ NO EXCEPTIONS TAKEN ☐ NOTE MARKINGS	☐ NOTE MARKINGS, CONFIRM ☐ 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:_____

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:___/___/_____