

# ***Attachment No. III***

## **LEE COUNTY UTILITIES FORT MYERS SHORES 1D WATER MAIN IMPROVEMENTS TECHNICAL SPECIFICATIONS**

### REFERENCE DOCUMENTS

Contractor shall complete all work in conformance with the Lee County Utilities Design Manual, latest revision, and as provided herein these technical specifications. The latest version of the Design Manual is available at the Lee County website:

<http://www.leegov.com/utilities/design-manual>

Contractor shall complete all applicable work in conformance with the latest version of the FDOT indices.

<http://www.fdot.gov/design/standardplans/current/default.shtm>

All utility related materials shall comply with Lee County Utility's Approved Materials List available at the Lee County website: <http://www.leegov.com/utilities/Pages/Approved-Materials.aspx>

## **LEE COUNTY UTILITIES WATER AND WASTEWATER TECHNICAL SPECIFICATIONS**

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SECTION 01010  
**SUMMARY OF WORK**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Description of Work
- B. Constraints
- C. Work by Others
- D. CONTRACTOR's Use of Site
- E. Work Sequence
- F. Owner Occupancy

1.2 DESCRIPTION OF WORK

- A. The contract involves the installation of a new water main for Fort Myers Shores Phase 1D, covering approximately 5,470 linear feet of pipeline. The work includes installing approximately 2,200 linear feet of 12-inch High-Density Polyethylene (HDPE) DR11 water main along Upcohall Avenue and approximately 3,270 linear feet of 8-inch HDPE DR11 water main along First Street, Second Street, Third Street, Fourth Street, and Fifth Street, utilizing directional drilling and/or direct burial methods as specified in the project drawings. The scope also encompasses all necessary ancillary items and connections, as outlined in the Drawings. The Work Includes:
  - 1. Furnishing of all labor, material, superintendence, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, services and other means of construction necessary or proper for performing and completing the Work.
  - 2. Sole responsibility for all materials, equipment & labor for the project.
  - 3. Maintaining the work area and site in a clean and acceptable manner.
  - 4. Locate, support, and maintain existing facilities and utilities in service at all times except where specifically provided for otherwise herein.
  - 5. Protection of finished and unfinished Work.
  - 6. Repair and restoration of Work damaged during construction.
  - 7. Furnishing as necessary proper equipment and machinery, of a sufficient capacity, to facilitate the Work and to handle all emergencies normally encountered in Work of this character.
  - 8. Coordination with LCU on pressure tests, bacteriological tests, clear the new water main for use (LDOH Bacteriological clearance), and place it into service prior to removing or grouting the existing main.

- C. Implied and Normally Required Work: It is the intent of these Specifications to provide the OWNER with complete operable systems, subsystems and other items of Work. Any part or item of Work which is reasonably implied or normally required to make each installation satisfactorily and completely operable is deemed to be included in the Work and the Contract Amount. All miscellaneous appurtenances and other items of Work incidental to meeting the intent of these Specifications are included in the Work and the Contract Amount even though these appurtenances may not be specifically called for in these Specifications.
- D. Quality of Work: Regard the apparent silence of the Contract Documents 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 as meaning that only the best general practice is to prevail and that only materials and workmanship of the best quality are to be used. Interpretation of these specifications will be made upon this basis.

### 1.3 CONSTRAINTS

- A. The Contract Documents are intended to allow the CONTRACTOR flexibility in construction of the Work; however, the following constraints apply:
  - 1. All work to be done under this Contract shall be done with minimum inconvenience to the OWNER, and Lee County Utilities' customers being served by the existing water main. The CONTRACTOR shall coordinate his work with the OWNER such that facilities operation is maintained to the maximum extent possible.
  - 2. The CONTRACTOR shall notify the OWNER at least 72 hours prior to any shutdown of existing facilities.
  - 3. All Work shall be done in accordance with permits issued by the following agencies: Lee County Health Department and Lee County Government.
  - 4. Prior Notice of at least 72 hours will be given to residents before open cutting driveways, lawn or private property. Access will be restored to all properties by end of the work day.
  - 5. Water service disruption to LCU customers must be minimized, and shall not occur over weekends. CONTRACTOR must schedule Bacteriological sampling for a Monday and Tuesday, unless otherwise approved in advance by LCU. CONTRACTOR may be fined at the Liquidated Damages daily rate when Boil Water Notice periods extend beyond 72 hours.
  - 6. Site will be cleared and restores as work progresses; at no time will United States Postal Service be interrupted to the individual properties

### 1.4 WORK BY OTHERS

- A. Work on the Project, which may take place concurrently with this CONTRACT and which is excluded from this CONTRACT, is as follows:

Not Applicable.

#### 1.5 CONTRACTOR'S USE OF SITE

- A. In addition to the requirements of the General Conditions, limit use of site and premises for work and storage to allow for the following:
  - 1. OWNER occupancy and access to operate existing facilities.
  - 2. Coordination of site use with ENGINEER.
  - 3. Responsibility for protection and safekeeping of products under this CONTRACT.
  - 4. Providing additional off-site storage at no additional cost to OWNER as needed.

#### 1.6 WORK SEQUENCE

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

#### 1.7 OWNER OCCUPANCY

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

#### 1.8 ASBESTOS CEMENT (AC) PIPE ABATEMENT REQUIREMENTS

- A. The Contractor shall either be, or employ the services of a Subcontractor who is, licensed in the State of Florida to perform asbestos abatement if required. All work associated with the handling of asbestos cement pipe shall be conducted only by the licensed party.
- B. Comply with all the laws, ordinances, codes, rules and regulations of the local, state and federal authorities including the requirements of the 29 CFR, Part 1910 & 1926; 40 CFR, Part 61 and 763.
- C. Execute all notifications and manifests and obtain and pay for all permits and licenses for removing, handling and disposing of the AC pipe.
- D. Existing AC pipe shall not be saw cut. The collar at each joint shall be removed and then the section of pipe shall be removed from the trench without disturbing the AC pipe to remain in service.

- E. Contractor shall avoid crushing, crumbling or pulverizing AC pipe. If the AC pipe should become damaged as a result of the Contractor's operations, the Contractor shall remove the pipe, transport and dispose of it in a landfill that is permitted to accept asbestos.
- C. Submit to the Engineer the following items prior to the performance of work associated with asbestos cement pipe.
  - 1. Copy of licenses to perform asbestos abatement work.
  - 2. Copy of training certificates and Florida Department of Labor and Workforce Development Certification for each worker.
  - 3. OSHA medical surveillance documents conducted within the last 12 months for each worker.
  - 4. Plan to describe the method for performing air monitoring and sampling to be following OSHA Asbestos Standards.
  - 5. Name, address and applicable licenses of the transporter and landfill that will handle and dispose of the asbestos cement pipe.

## PART 2 PRODUCTS

NOT USED

## PART 3 EXECUTION

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

**END OF SECTION**

SECTION 01026  
**MEASUREMENT AND PAYMENT**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Explanation and Definitions
- B. Measurement
- C. Payment
- D. Schedule of Values
- E. Application for Payment

**1.2 EXPLANATION OF DEFINITIONS**

- A. The following explanation of the Measurement and Payment for the Bid Schedule items is made for information and guidance. The omission of reference to any item in this description shall not, however, alter the intent of the Bid Schedule or relieve the CONTRACTOR of the necessity of furnishing such as a part of the Contract.

**1.3 MEASUREMENT**

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

**1.4 PAYMENT**

- A. Payment shall be made for the items listed on the Bid Schedule on the basis of the work actually performed and completed, such work including but not limited to, the furnishing of all necessary labor, materials, equipment, transportation, clean up, restoration of disturbed areas, and all other appurtenances to complete the construction and installation of the work as shown on the Drawings and described in the specifications.
- B. Unit prices are used as a means of computing the final figures for bid and Contract purposes, for periodic payments for work performed, for determining value of additions or deletions and wherever else reasonable.

**1.5 SCHEDULE OF VALUES**

- A. Approval of Schedule: Submit for approval a preliminary schedule of values, in duplicate, for all the Work. Prepare a preliminary schedule in accordance with the General Conditions. Submit a preliminary schedule of values within 10 calendar days after the Effective Date of the Agreement. Submit a final schedule of values in accordance with the General Conditions.
- B. Format: Utilize a format similar to the Table of Contents of the Project Specifications. Identify each line item with number and title of the major specification. Identify site mobilization, bonds and insurance. Include within each line item, a direct proportional amount of CONTRACTOR's overhead profit.

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

## 1.6 APPLICATION FOR PAYMENT

- A. Required Copies: Submit three copies of each application on the "Estimate and Requisition for Payment" form CMO: 013. Present required information in typewritten form or on electronic media printout.
- B. Execute certification by signature of authorized officer.
- C. Use data from approved Schedule of Values.
- D. Stored Materials: When payment for materials stored is permitted, submit a separate schedule for Materials Stored showing line item, description, previous value received, value incorporated into the Work and present value.
- E. Change Orders: List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of work.
- F. Final Payment: Prepare Application for Final Payment as required in the General Conditions.
- G. Submit an updated construction schedule for each Application for Payment.
- H. Submit application for payment to ENGINEER on, or before, the 25th of each month.

## PART 2 PRODUCTS

NOT USED

## PART 3 EXECUTION

### 1.1 MEASUREMENT AND PAYMENT

- A. Payment shall be made on the basis of work actually performed completing each item in the Bid, such work including, but not limited to, the furnishing of all necessary labor, materials, equipment, transportation, dewatering, protection of existing utilities, restorations, bacteriological clearing and testing, cleanup, and all other appurtenances to complete the construction and installation of the work to the configuration and extent as shown on the Drawings and described in the specifications.
- B. Underground Piping, Valves and Piping Specials: Each Bid Item that consists of any connection to existing facilities, abandonment or removal of existing facilities, and installation of underground piping or valves or pipe specials shall include the following work and activities as part of the description of that bid item:
  - 1. Locator discs;
  - 2. Identification tape;
  - 3. Coordination with other utilities to relocate and protect above ground and underground pipes and cables and conduits;
  - 4. Relocation and protection of existing overhead and underground pipes and cables and conduits;



5. Survey and layout;
6. Clearing and grubbing including removal and disposal of landscape structures, landscaping;
7. Protection and repair of private irrigation systems including such systems installed within County rights-of-way;
8. Protection and replacement of private and public facilities and improvements not specifically designated in the Bid Schedule;
9. Protection and maintenance of all public signage, including relocation and replacement if required;
10. Protection and maintenance of all guardrails, light fixtures and light poles, including, support, relocation and replacement if required;
11. Trenching;
12. Excavation;
13. Dewatering, including all necessary permits for Dewatering in accordance with the South Florida Water Management District;
14. Maintenance of public services and utilities;
15. Temporary facilities and services;
16. Rock excavation and disposal;
17. Bedding;
18. Laying of pipe;
19. Restraints and harnessing;
20. Pipe fittings and appurtenances such as tees, elbows, reducers, plugs, caps, sleeves, corporation stops, couplings, small gate and ball valves, concrete encasement, and temporary blow-offs and sampling stations;
21. Flushing, pigging and cleaning piping and connections;
22. Pressure testing including test connections, air vents, test piping and gauges;
23. Bacterial testing including temporary sample connections and piping;
24. Furnishing of proper backfill materials;
25. Backfill;
26. Compaction;
27. Grading;
28. Sodding;
29. Maintenance of sod including watering and fertilizer;
30. Replacement and relocation of landscape including maintenance of landscaping;

- 31. Disposal of unusable excavated material;
  - 32. Cleanup; and
  - 33. Appurtenances and incidentals necessary on the Contract Documents and specified herein.
  - 34. Installation and maintenance in acceptable condition throughout the contract time all Storm water Pollution Prevention Plan BMP's, including all silt fencing, hay bales, turbidity control devices, and filter barriers as shown on and in accordance with the Contract Plans and Specifications.
  - 35. Compliance with all permits
  - 36. Furnishing of Record/As-Built drawings based on survey located installed facilities.
- C. Retainage will be withheld from the final payment until written acceptance by the Owner's Representative for all final clean up, restoration and Record Drawings/As-Built.

## **1.2 LEE COUNTY UTILITIES BID SCHEDULE ITEMS**

### **1. Mobilization & Demobilization:**

Payment for mobilization / demobilization will be made at the Contract lump sum price. Mobilization shall include all costs to move the CONTRACTOR'S equipment to the site, establish temporary facilities necessary to perform the Work, bonds, insurance, submittals, site preparation and supervision. Demobilization shall include all costs for removing the CONTRACTOR'S equipment and temporary facilities from the site. Construction laydown area to be secured by contractor if required for material & equipment storage. Payment for mobilization will be twenty-five (25%) of the lump sum amount to be included with the final payment request.

### **2. Maintenance of Traffic:**

Payment for maintenance of traffic will be made for at the Contract lump sum price and includes the furnishing and installation of labor, equipment and materials to provide temporary traffic control, temporary surfaces and pavements, preparation of maintenance of traffic plans, and other such cost that may be necessary to properly maintain traffic throughout the entire construction site including provisions for emergency vehicles. This item includes the traffic control devices, flag men to direct traffic and the preparation and submittal of the Maintenance of Traffic plan to LCDOT for approval. All maintenance of traffic shall be in accordance with the approved Lee County Right of Way permit and in accordance with applicable FDOT/LCDOT standard Indexes. It also includes road/lane closures of local streets with minimal delay to traffic. All emergency services shall be notified well in advance of road closures.

### **3. Survey & Layout As-Built Drawings:**

The cost for preparation of the record drawings, survey, and construction layout shall be made at the Contract lump sum price. This item includes material, labor and certification to prepare the "As-Built Drawing", field verification of existing underground facilities, construction stakeout of the proposed pipe and to survey the new pipe after it has been installed. Prior to acceptance of the project by the Board of County Commissioners, the CONTRACTOR shall submit two red-lined prints, which include the original design and all deviations that occurred during construction in accordance with Lee County regulations. The as-built drawings shall include vertical and horizontal alignment of all water mains, valves, tees, bends, reducers, air release valves and other pertinent structures. Drawings are to meet the LCU Design Manual section 1B. Minimum Drawing Requirements Revised 3/12/2015. Pipe runs more than 500 feet without fittings shall include vertical alignment and grade information. Record drawings shall be certified by a Professional Land surveyor licensed in the State of Florida. All elevation to be based on NAVD 88 vertical datum and all horizontal coordinates in Florida West State Plane coordinates.

4. Preconstruction Video:

Payment for the Pre-Construction video done by the Contractor will be done at the Contract lump sum price, which includes the original and one (1) copy of a continuous color and audio- video DVD recording of the project site.

Prior to any construction, equipment, or material mobilization, CONTRACTOR shall perform this audio-video survey along the length of the project in any areas that have the potential to be disturbed by the CONTRACTOR'S operations such as any areas to be entered by vehicles or equipment, any paved or unpaved areas that will be used by vehicles or equipment, and any other areas that will be affected by work such as work staging areas, field offices, or any areas deemed necessary by the OWNER. The surface features recorded shall include, but are not limited to, roadways, driveways, sidewalks, curbs, culverts, headwalls, retaining walls, buildings, mailboxes, aboveground utilities, parks, lawns, landscaping, tree canopies, shrubbery and fences. The area recorded should extend to a minimum of 15 feet outside the actual right-of-way and extend 50 feet from the proposed work site as well as covering all working areas as described above.

The video portion of the recording shall produce bright, sharp, and clear pictures with accurate colors and shall be free from any form of picture imperfection. The audio portion of the recording shall reproduce precise and concise explanatory notes by the camera operator with proper volume, clarity, and freedom from distortions of any kind. To preclude any possibility of tampering or editing, the DVD shall display continuous digital information including the date and time of recording, date information containing the month, day and year; time information containing hours, minutes and seconds separated by colons. It should also have the engineering stationing corresponding to the stationing on the contract documents, or as directed by the OWNER.

All video recording shall take place during regular business hours unless otherwise approved by the OWNER and no video recording shall take place if the weather is

unacceptable, such as rain or in the case of elongated shadows that distort perception and prevent clear resolution.

5. Erosion Control and Maintenance:

Payment for erosion control will be made at the contract lump sum price. Erosion Control & BMP's to be maintained throughout the duration of the project. This item shall include all necessary labor, equipment and materials for the installation and removal of erosion control devices including but not limited to temporary turf, sandbags, rock bags, slope drains, sediment basins, berms, synthetic bales, temporary silt fence and staked turbidity barriers, Erosion control shall conform to the latest FDOT standard specifications. Contractor to provide a submittal erosion control plan with BMP & other control measures shown on the plan for approval prior to construction beginning.

6. Clearing and Grubbing:

Payment for clearing and grubbing will be made at the contract lump sum price. This item includes all necessary labor, equipment and materials to clear and grub existing right of way conditions. This pay item also includes trimming of tree branches and roots within the right of way necessary for installation of the new water main.

7. Pipe and Fittings (Items 7a-b):

Payment for installing water main pipelines (various sizes and materials) will be made at the contract unit price per linear foot for the pipe in place. This item includes all necessary fittings, labor, equipment and materials for the furnishing and laying of the pipe, signs, dewatering, compaction, pipe bedding, backfilling, sheeting, restrained joint piping, tracer wire (2" HDPE conduit and #10-gauge wire), polyethylene sleeve, clamps, harnessing, plugs, caps, and adapters. Excavation of all material encountered including rock, backfill, replacement of grass, sod, pavement, driveways, sidewalks, mailboxes, culverts, storm sewers, and other surface materials not specifically designated in the Bid, clean-up, sterilization, and tests. Measurement of the pipe shall be to the nearest foot along the centerline including the lengths of manholes, valves and fittings. Linear footage measurement shall be horizontal. Cuts shall be measured from existing grade to the invert elevation of the water main.

8. Services (Items 8a-e):

This item includes all labor, equipment, and materials for furnishing, installing, excavation, pipe bedding, de-watering, compaction, removal and replacement of grass, sod, shrubs, pavement, driveways, culverts and storm sewers, mailboxes, sidewalks and other surface materials not specifically designated in the Bid, cleanup, testing and all other work for a complete installation in accordance with the detail shown on the plans.

Payment for furnishing and installing new water services will be made at the appropriate contract unit price per each service installed.

- (1) Water Service Re-Connection Directional Bore (1" -2" Carrier and 4" Casing):  
No additional payment for water service re- connection directional bore will be made. This work is included in Services bid price. This item includes all necessary labor, equipment and materials for furnishing and installing the carrier and casing pipe, maintenance of traffic, excavation pits, sheeting, de-watering, comp action, Directional Boring, necessary fittings and pipe restraints, Excavation of all material encountered including rock, back filling, restoration or any other items not specifically mentioned, but are required for a complete installation. No additional payments shall be made due to CONTRACTOR means and methods, equipment capabilities or presence of rock. During the bid, the CONTRACTOR shall analyze the directional bore lengths to determine feasibility based upon site conditions, means and methods, equipment to be used, and the presence of rock. No additional payments shall be made for extensions beyond plan lengths. Water meter boxes that are damaged and in need of repair and shall be replaced with LCU standard water meter box, quazite or approved equal. Payment will be made for each damaged water meter box replaced with new.

9. Gate Valve (Item 9a-b):

Payment for furnishing and installing gate valves (various sizes) will be made at the appropriate Contract unit price per each valve acceptably installed. This item includes the gate valve, valve stem, ID Tags, valve box, and all necessary labor, all necessary restoration to equal or better conditions, materials and equipment for installation, including valve stem and valve box extensions, joints and concrete pads. This item also includes the installation of base material below the valve in accordance with the detail shown in the Plans. Valves are considered to be dead-ends and shall be restrained per the Restraint Table.

10. Furnish and Install Fire Hydrant Assemblies:

- a. Measurement for payment for fire hydrant assembly shall be the actual number of units furnished, installed and accepted.
- b. Payment shall be made at the Bid Form unit price for each fire hydrant assembly installed and accepted. This item shall also include all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding, backfill, compaction, pipe, valve, valve box, concrete, hydrant, tee and all other incidentals necessary to complete the installation as specified.

11. 6" AC pipe to be grouted:

Payment for furnishing and installing concrete grout will be made per linear foot of existing pipe grouted. All concrete grout shall conform to the technical specifications, FDOT Specifications and a Grouting Plan approved by the ENGINEER. This item includes all necessary labor, equipment and materials to perform the grouting, grout-fill access points, plugs, caps, blow-offs, ports, pavement repairs and all other items necessary for a complete installation. The CONTRACTOR shall provide grout volume quantities to LCU.

12. 8" PVC pipe to be grouted:

Payment for furnishing and installing concrete grout will be made per linear foot of existing pipe grouted. All concrete grout shall conform to the technical specifications, FDOT Specifications and a Grouting Plan approved by the ENGINEER. This item includes all necessary labor, equipment and materials to perform the grouting, grout-fill access points, plugs, caps, blow-offs, ports, pavement repairs and all other items necessary for a complete installation. The CONTRACTOR shall provide grout volume quantities to LCU.

13. 8" HDPE Offset Horizontal (4 – 45 Deg HDPE Fittings With 40 LF of 8" HDPE Pipe):

Payment for offsets horizontal will be made at the contract unit each price for 8" and 10" pipe sizes. This item includes identifying conflicts which would require an offset horizontally around these conflicts within the right of way. Locates of existing utilities and site observation of drainage structures and other obstacles as required and confirmed by LCU representative prior to authorization of this work pay item. Provide 20' of HDPE pipe & 4 45-degree fittings of each of the pay item sizes, oriented to provide specified clearances around conflicts. Provide all labor, materials, equipment, and other incidentals necessary to complete the item.

14. 8" HDPE Offset Vertical (4 – 45 Deg HDPE Fittings With 40 LF of 8" HDPE Pipe):

Payment for offsets vertical will be made at the contract unit each price for 8" and 10" pipe sizes. This item includes identifying conflicts which would require an offset vertically below these conflicts within the right of way. Locates of existing utilities and site observation of drainage structures and other obstacles as required and confirmed by LCU representative prior to authorization of this work pay item. Provide 20' of HDPE pipe & 4 45-degree fittings of each of the pay item sizes, oriented to provide specified clearances around conflicts. Provide all labor, materials, equipment, and other incidentals necessary to complete the item.

15. 12" HDPE Offset Horizontal (4 – 45 Deg HDPE Fittings With 40 LF of 12" HDPE Pipe):

Payment for offsets horizontal will be made at the contract unit each price for 10" pipe sizes. This item includes identifying conflicts which would require an offset vertically below these conflicts within the right of way. Locates of existing utilities and site observation of drainage structures and other obstacles as required and confirmed by LCU representative prior to authorization of this work pay item. Provide 20' of HDPE pipe & 4 45-degree fittings of each of the pay item sizes, oriented to provide specified clearances around conflicts. Provide all labor, materials, equipment, and other incidentals necessary to complete the item

16. 12" HDPE Offset Vertical (4 – 45 Deg HDPE Fittings With 40 LF of 12" HDPE Pipe):

Payment for offsets vertical will be made at the contract unit each price for 10" pipe sizes. This item includes identifying conflicts which would require an offset vertically below these conflicts within the right of way. Locates of existing utilities and site

observation of drainage structures and other obstacles as required and confirmed by LCU representative prior to authorization of this work pay item. Provide 20' of HDPE pipe & 4 45-degree fittings of each of the pay item sizes, oriented to provide specified clearances around conflicts. Provide all labor, materials, equipment, and other incidentals necessary to complete the item

17. Connect to Existing Watermain (Items 16a-d):

Payment for installing the water main interconnections (various sizes & material) will be made at the Contract price per each interconnection acceptably installed. This item includes all labor, equipment and materials to install all necessary pipe, fittings, connections, tapping sleeve and valve with valve box, field measurements, protection of existing facilities, excavation, pipe bedding, dewatering, compaction, surface restoration, testing, cleanup and all other work for a complete installation.

18. Removal of Gate Valve Box, Concrete Pad, Bury & Restore (Items 17a-d)

These items include all labor, equipment, and materials for gate valve removal of various size, valve box & concrete pad, excavation, backfilling, compaction, removal and replacement of grass, sod, shrubs, pavement, driveways, culverts and storm sewers, mailboxes, sidewalks cleanup, and all other work necessary, but not specifically designated in the Bid.

Payment for removing and disposing of existing gate valve will be made at the Contract unit price per each gate valve acceptably removed and restore. Please note quantity of existing gate valve to be removed and gate valve to be installed may differ.

19. Removal of Fire Hydrant, Valve Box, Concrete Pad, Restore & Delivery to LCU

These items include all labor, equipment, and materials for hydrant removal, valve box & concrete pad, excavation, backfilling, compaction, removal and replacement of grass, sod, shrubs, pavement, driveways, delivery to LCU, culverts and storm sewers, mailboxes, sidewalks cleanup, and all other work necessary, but not specifically designated in the Bid.

Payment for removing and disposing of existing fire hydrant assemblies will be made at the Contract unit price per each fire hydrant acceptably removed and disposed of. Please note quantity of existing fire hydrants to be removed and fire hydrants to be installed may differ. The limits of this line item are from the main to the fire hydrant, including the hydrant valve.

20. Place 2" Out of Service:

Measurement for payment for Place 2" Out of Service will be based on a linear foot basis. Payment for Place 2" Out of Service will be based on a linear foot basis. The work of this item is to include all labor, materials, and equipment to excavate, drain, plug and cap in place existing water mains and/or casing pipe designated to be placed out-of-service in place. This item also includes all necessary labor, equipment and material to restore the work area to the Engineer's satisfaction.

21. Signing and Pavement Markings:

Payment for Signing and Pavement Markings will be made at the contract lump sum price. This item includes all necessary labor, equipment and materials to restore to existing conditions or better. The CONTRACTOR shall follow the latest LCDOT and FDOT standards and specifications.

22. Restoration:

Payment for restoration will be made at the contract lump sum price. This item includes the restoration of land that is disturbed as a direct result of construction. This includes but is not limited to furnishing and replacing of grass, sod, shrubs, pavement, driveways, culverts and storm sewers and MES per FDOT Indices, mailboxes, and sidewalks. Sod shall be provided and installed in all disturbed areas caused by construction of this project in accordance with FDOT Specifications. Sod shall be replaced with like species at no additional compensation.

23. Payment and performance bond:

Payment for Performance and Payment Bond Premium & Insurance. Provide the Bonds & Insurance as called for in the project documents. Payment will be made at the contract price Lump Sum.

**END OF SECTION**