

SECTION 01150 MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE

- A. The scope of this section of the Contract Documents is to further define the items included in each Bid Item in the Bid Form section of the Contract Documents. Payment will be made based on the specified items included in the description in this section for each bid item.

- B. All contract prices included in the Bid Form section will be full compensation for all shop drawings, working drawings, labor, materials, tools, equipment, and incidentals necessary to complete the construction as shown on the Drawings and/or as specified in the Contract Documents to be performed under this Contract. Actual quantities of each item bid on a unit price basis will be determined upon completion of the construction in the manner set up for each item in this section of the Specifications. Payment for all items listed in the Bid Form will constitute full compensation for all work shown and/or specified to be performed under this Contract.

1.02 ESTIMATED QUANTITIES

The quantities shown are approximate and are given only as a basis of calculation upon which the award of the Contract is to be made. The County does not assume any responsibility for the final quantities, nor shall the Contractor claim misunderstanding because of such estimate of quantities. Final payment will be made only for satisfactorily completed quantity of each item.

1.03 WORK OUTSIDE AUTHORIZED LIMITS

No payment will be made for work constructed outside the authorized limits of work.

1.04 MEASUREMENT STANDARDS

Unless otherwise specified for the items involved, all measurements of distance shall be taken horizontally or vertically.

1.05 AREA MEASUREMENTS

In the measurement of items to be paid for on the basis of area of finished work, the lengths and/or widths to be used in the calculations shall be the final dimensions measured along the surface of the completed work within the neat lines shown or designated.

1.06 LUMP SUM ITEMS

Where payment for items is shown to be paid for on a lump sum basis, no separate payment will be made for any item of work required to complete the lump sum items. Lump sum contracts shall be complete, tested and fully operable prior to request for final payment. Contractor may be required to provide a break-down of the lump sum

totals.

1.07

UNIT PRICE ITEM

Separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed but required for satisfactory completion of the work shall be considered to be included in the scope of the appropriate listed work items.

No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work. Final payments shall not be requested by the Contractor or made by the County until as-built (record) drawings have been submitted and approved by the County.

1. Project signs and photographs.
2. Removal, repair, replacement or relocation of all signs, walls, private irrigation systems and related items.
3. Rubbish and spoil removal.
4. Shop Drawings, Working Drawings.
5. Clearing, grubbing, and grading except as hereinafter specified.
6. Trench excavation, including necessary pavement removal and rock removal, except as otherwise specified.
7. Dewatering and disposal of surplus water.
8. Structural fill, backfill, and grading.
9. Replacement of unpaved roadways, and shrubbery plots.
10. Cleanup & miscellaneous work.
11. Foundation and borrow materials, except as hereinafter specified.
12. Testing and placing system in operation.
13. Any material and equipment required to be installed and utilized for the tests.
14. Pipe, structures, pavement replacement, asphalt, and shell driveways and/or appurtenances included within the limits of lump sum work, unless otherwise shown.
15. Maintaining the existing quality of service during construction.
16. Appurtenant work as required for a complete and operable system.
17. Seeding and hydro mulching.

(THE BID ITEM SECTION IS TO BE COMPLETED FOR EACH ITEM TO BE BID. EXAMPLES AS FOLLOWS)

BID ITEM NO. 1 - MOBILIZATION AND DEBMOBILIZATOIN

Measurement and payment for this Bid Item shall include full compensation for the required 100 percent (100%) Performance Bond, 100 Percent (100%) Payment Bond, all required insurance for the project and the Contractor's mobilization and demobilization costs as shown in the Bid Form. Mobilization includes, but it not limited to preparation and movement of personnel, equipment, supplies and incidentals such as safety and sanitary supplies/ facilities

Payment for mobilization shall not exceed 10 percent (10%) of the total Contract cost unless the Contractor can prove to the County that his actual mobilization cost exceeds 10 percent (10%).

Partial payments for this Bid Item will be made in accordance with the following schedule:

Percent of Original Contract Amount:	Percent Allowable Payment of Mobilization/Demobilization Bid Item Price:
5	25
10	35
25	45
50	50
75	75
100	100

These payments will be subject to the standard retainage provided in the Contract. Payment of the retainage will be made after completion of the work and demobilization.

BID ITEM NO. 2 - SITE WORK

Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all labor, materials, and equipment necessary to excavation, grading and fill soils to return site to existing grade elevations or modify for new elevations. Refer to drawings and specification.

Payment for this item shall be lump sum.

BID ITEM 3 - DEMOLITION

Payment for all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all labor, materials, and equipment necessary as specified herein or as otherwise necessary for the completion of the Work associated with this Contract. Refer to drawings and specifications.

3A **Concrete Vault** - Payment for all work included in this Bid Item will be made at the applicable Contract each for furnishing all labor, materials, and equipment necessary as specified herein or as otherwise necessary for the demolition of the concrete vault and the completion of the Work associated with this Contract. Refer to drawings and specifications.

Payment for this item shall be each.

3B **Valving and Piping** - Payment for all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all labor, materials, and equipment necessary as specified herein or as otherwise necessary for the demolition of the valving and piping and the completion of the Work associated with this Contract. Refer to drawings and specifications.

Payment for this item shall be lump sum.

All costs for disposal of all items shall be included in the Contractor's Base Bid.

BID ITEM NO. 4- MECHANICAL IMPROVEMENTS

Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all labor, materials, and equipment necessary for pump and header piping replacement. Provide all demolition, new pumps and piping, valves and supports specified herein or as otherwise necessary for the completion of the Work associated with this Contract. Refer to drawings and specifications.

4A **Pumps and Motor Replacement** shall include all labor, materials and equipment necessary for the removal of the existing pump to be replaced and the installation of the new axial split case centrifugal pumps, pipe spools, adjustments for alignment and fit, pump base as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4A.1 **Spare Pump and Motor** shall include one (1) new axial split case centrifugal pump and motor, tools and spare parts as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4B **24-inch Butterfly Valve** shall include all labor, materials and equipment necessary for the installation of the 24-inch butterfly valve as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4C **12-inch Gate Valve** shall include all labor, materials and equipment necessary for the installation of the 12-inch gate valve as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4D **24-inch Pressure Sustaining Valve** shall include all labor, materials and equipment necessary for the installation of a 24-inch pressure sustaining valve as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4E **24-inch Ductile Iron Pipe** shall include all labor, materials and equipment necessary for the installation of the 24-inch ductile iron pipe as called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be linear feet.

4F **24" inch Blind Flange** shall include all labor, materials, and equipment necessary for the installation of a 24" Blind Flange as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4G **24" inch Plug** shall include all labor, materials, and equipment necessary for the installation of a 24" Plug as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4H **24" 90 Degree Bend** shall include all labor, materials, and equipment necessary for the installation of a 24" 90 Degree Bend as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4I **24" 11.25 Degree Bend** shall include all labor, materials, and equipment necessary for the installation of a 24" 11.25 Degree Bend as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4J **24" Tee** shall include all labor, materials, and equipment necessary for the installation of a 24" Tee as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

4K **2-inch Air Release Valve** shall include all labor, materials, and equipment necessary for the installation of a 2-inch Air Release Valve as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

- 4L **Pipe Supports** shall include all labor, materials, and equipment necessary for the installation of pipe supports as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

- 4M **Bollards** - shall include all labor, materials and equipment necessary for the installation of bollards as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

- 4N **Equipment Pad** shall include all labor, materials, and equipment necessary for the installation of an Equipment Pad as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be cubic yard.

- 4O **Thrust Blocks** shall include all labor, materials and equipment necessary for the installation of thrust blocks as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be in cubic yard.

- 4P **Temporary Bypass Operation with Backup** shall include all labor, materials, and equipment (ancillary piping and controls) necessary for the full bypass of the station during construction.

Payment for this item shall be lump sum.

MECHANICAL IMPROVEMENTS - CROM TANK

- 4Q **Mixer** shall include all labor, materials and equipment necessary for the installation of mixer in the Crom Tank as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

- 4R **Inlet Pipe at Crom Tank** shall include all labor, materials and equipment necessary for the design and installation of the new inlet pipe into the Crom Tank including but not limited to the concrete encasement under the Crom tanks, tank penetration, tank inspection, miscellaneous fittings and waterstops, reinforcing steel, 36-inch underfloor pipe into the Crom Tank, coating repairs, as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be lump sum.

All costs for disposal of all items shall be included in the Contractor's Base Bid.

BID ITEM NO. 5 - INSTRUMENTATION AND CONTROLS

Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all plant, labor, materials, and equipment necessary for the refurbishment of the pump station. Provide instrumentation as shown on drawings. Provide mounting hardware and ancillary items. Location of panel to be moved under separate contract.

- 5A **Field Equipment** - Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all plant, labor, materials, and equipment necessary for furnishing the field equipment, including but not limited to start up, testing, training spare parts and other ancillary items necessary for the complete door installation as called out on the drawings and per the Contract Documents.

Payment for this item shall be lump sum

- 5B **Panel Equipment** - Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all plant, labor, materials, and equipment necessary for instrumentation, including but not limited to start up, testing, training spare parts and other ancillary items necessary or as called out on the drawings and per the Contract Documents.

Payment for this item shall be lump sum

- 5C **Network Modification Cable** - Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all plant, labor, materials, and equipment necessary for the network modification cable, including but not limited to start up, testing, training spare parts and other ancillary items necessary for the complete door installation as called out on the drawings and per the Contract Documents.

Payment for this item shall be lump sum

- 5D **Spare Parts** - Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all plant, labor, materials, and equipment necessary for the furnishing of spare parts and other ancillary items necessary for the complete door installation as called out on the drawings and per the Contract Documents.

Payment for this item shall be lump sum

- 5E **System Integration, Start Up, Testing and Software Implementation** - Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all plant, labor, materials, and equipment necessary for the System Integration, Start Up, Testing and Software Implementation and other ancillary items necessary for the complete door installation as called out on the drawings and per the Contract Documents.

Payment for this item shall be lump sum

BID ITEM NO. 6 - ELECTRICAL

Payment of all work included in this Bid Item will be made at the applicable Contract lump sum price for furnishing all plant, labor, materials, and equipment necessary for the replacement of the electrical distribution and pump control equipment. Existing building lighting shall remain along with receptacle circuits; however, the receptacles and switches themselves will be replaced with corrosion resistant devices.

- 6A **Variable Frequency Drives (VFDs)** shall include all labor, materials, and equipment necessary for the installation of the new variable frequency drives (VFD) made by Yaskawa Incorporated will replace the old and be installed in the new electrical building. In addition, work will consist of but not limited to placing and connection of the electrical equipment and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

- 6B **Motor Control Center with Main** shall include all labor, materials, and equipment necessary for the installation of the 480V main distribution equipment. Work will consist of but not limited to placing and connection of equipment and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

6C **Demolition** shall include all labor, materials, and equipment necessary for site work, demolition, temporary power, and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be lump sum.

6D **Temporary Wiring** shall include all labor, materials, and equipment necessary for the installation of temporary wiring as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be lump sum.

6E **Safety disconnects, Junction and Terminal boxes** shall include all labor, materials, and equipment necessary for the installation of the junction and terminal boxes. Work will consist of but not limited to placing the junction and/or terminal boxes as called out on the drawings and ancillary items as needed, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

6F **Rigid Conduit** shall include all labor, materials, and equipment necessary for the installation of the rigid conduit as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be linear foot.

6G **Low Voltage Cables** shall include all labor, materials, and equipment necessary for the installation of the low voltage cables as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be linear foot.

6H **Instrumentation Cable** shall include all labor, materials, and equipment necessary for the installation of the instrumentation cable as otherwise called out on the drawings and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be linear foot.

6I **Grounding and Bonding** shall include all labor, materials, and equipment necessary for site work, grounding and bonding, and ancillary items as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

6I-1 **Grounding Rods** shall include all labor, materials, and equipment necessary for the installation of grounding rods as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be each.

6I-2 **Bare Copper Cable #8** shall include all labor, materials, and equipment necessary for the installation of bare copper cable #8 as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be linear foot.

6I-3 **Insulated Cable #8** shall include all labor, materials, and equipment necessary for the installation of insulated cable #8 as indicated on the drawings, specified herein or as otherwise necessary for the completion of the Work associated with this Contract.

Payment for this item shall be linear foot.

All costs for disposal of all items shall be included in the Contractor's Base Bid.

BID ITEM NO. 7- PERMIT ALLOWANCE

Fees for submitting applications for permits required to complete construction in accordance with the plans and specifications, such as Building Permit, NPDES, etc. The quantity measured for payment shall be the actual receipt-supported permit fees. Payment will be made at the actual cost to the Contractor for the permits required and acquired. Upon completion of the permitting process, the Contractor will submit receipts for permit fees to the County and Engineer.

Payment for this item shall be lump sum.

BID ITEM 8- RECORD DRAWINGS

Payment for all work included under this Bid Item shall be made at the Contract lump sum price bid listed in the Bid Form and shall represent full compensation for all labor, materials and equipment required to generate and provide record drawings approved and accepted by the County. Record drawings shall be in strict accordance with

Section 1.14 of the Manatee County Public Work Utility Standards.

Payment for this item shall be lump sum.

BID ITEM 9 - CONTRACT CONTINGENCY

Payment for all work under this Bid Item shall be made only at the County's discretion. This Bid Item shall not exceed 10% of the Bidders Total Base Bid. The Bidder shall calculate and enter a dollar amount for this Bid Item.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION