

NOTICE TO BIDDERS
CONSTRUCTION OF NEWARK SPRAY IRRIGATION FACILITIES
WORCESTER COUNTY, MARYLAND

The Worcester County Commissioners are currently accepting sealed bids for construction of Spray Irrigation Facilities in the Newark Service Area for the Worcester County Department of Public Works - Water and Wastewater Division. The Project generally consists of construction of approximately 6,700 linear feet of discharge piping, spray irrigation piping and discharge via center pivot spray irrigation, a new pump station, modification of the treatment plant pond to increase holding, testing, start-up, site restoration and close-out, and includes furnishing all equipment, material, and labor for the work described in the bid document drawings and specifications. This project is funded by the Clean Water State Revolving Fund (CWSRF) administered by the Environmental Protection Agency and the Maryland Department of the Environment. Contractor requirements under the CWSRF are included in the bid documents and include, but are not limited to, use of American iron and steel, adhering to applicable Davis Bacon Act prevailing wage rates, and participation of disadvantaged business enterprises. Bid documents are available from DiCarlo Precision Instruments, Inc., 2006 Northwood Drive, Salisbury, Maryland 21801 (410-749-0112). Interested bidders are encouraged to attend a non-mandatory **Pre-Bid Conference at 10:00 AM (EDT) on Wednesday, November 20, 2019** at the Worcester County Department of Public Works - Water and Wastewater Division Office at 1000 Shore Lane, Ocean Pines, Maryland 21811. **Sealed proposals will be accepted until 1:00 PM (EDT) on Monday, December 9, 2019** in the Office of the County Commissioners at Room 1103 - Worcester County Government Center, One West Market Street, Snow Hill, Maryland 21863, at which time they will be opened and publicly read aloud. Envelopes shall be marked "**Bid Enclosed - Newark Spray Irrigation Facilities**" in the lower left-hand corner. After opening, bids will be forwarded to the Public Works Department for tabulation, review and recommendation to the County Commissioners for their consideration at a future meeting. In awarding the bid, the Commissioners reserve the right to reject any and all bids, waive formalities, informalities and technicalities therein, and to take whatever bid they determine to be in the best interest of the County considering lowest or best bid, quality of goods and work, time of delivery or completion, responsibility of bidders being considered, previous experience of bidders with County contracts, or any other factors they deem appropriate. All inquiries shall be directed to Darl Kolar, P.E., Project Manager, EA Engineering, Science, and Technology, Inc., PBC at 410-641-5341.

December 2, 2019
EA Project No. 1548101

TO: Bidders of Record

FROM: EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit 101A
Ocean Pines, MD 21811

RE: Addendum No. 01
Worcester County Department of Public Works
Newark Spray Irrigation

TO ALL BIDDERS: This Addendum No. 1 contains modifications to the Contract Documents. This Addendum No. 1 shall supplement, amend, and become part of the Contract Documents and Construction Specifications for the title project and contract.

Except as may be otherwise described, bidding requirements, materials, and workmanship for the work described herein shall conform to all requirements of the original Contract Documents, except as modified using succeeding addenda. The following Addendum to the specifications and drawings is made a part of the project and takes precedence over the section of the specifications, in part, and/or drawings, as originally written, or as modified in succeeding addenda. All bids shall be based on this addendum in accordance with the Bidding Documents.

- Modifications to Contract Documents
- Questions and Responses
- Pre-bid meeting minutes
- Pre-bid sign-in sheet

MODIFICATIONS TO CONTRACT DOCUMENTS

Contract Documents and Specifications

- DELETE "Bid Form" in its entirety and REPLACE with the attached "Bid Form"
- DELETE "Section 01 20 00 Measurement and Payment" in its entirety and REPLACE with the attached "Section 01 20 00 Measurement and Payment"

Questions and Responses

- Question 1: How should I bid the item # 28? The item 27 is one service which has a Rack item 21. Item 28 has a rack as well. But item 21 shows ONLY one. Do we bid it as one and ask for a change order to make it two?
- Response 1: See the attached revised Bid Form delineating the electrical work at the Lagoon and Spray Sites.
- Question 2: Note 5 on drawing E-101 ask for upgrade to existing County software. Need to know exactly the intent for this upgrade. Need part numbers of any upgrades they desire.

Response 2: The intent is to incorporate the Newark Spray Irrigation System into the existing Worcester County SCADA system, and to allow access by cellular telephone by County personnel to control the Newark Spray pump. The integration into the County SCADA system is segregated into Bid Alternate Item No. 01.

Question 3: I downloaded the VTScada price sheet. Ask them to define exactly what they want included in the bid. Note talks about thin clients. The thin client option is based on tag count. What is the tag count of their existing system?

Response 3: Contractor can assume a tag count of 10,000.

Question 4: I had a representative for the Floating Zone Baffle ask about the spec for this. I couldn't find one in the spec book. Could you help me out with that?

Response 4: The floating zone baffle shall be inclusive of completely enclosed cell polyfoam logs (minimum buoyance of 60 pcf), bottom ballast, concrete anchors, cable and end/baffle connections (cable and connections shall be stainless steel) and baffle curtain material provided by Engineered Textile Products, Inc. or approved equal. The floating baffle curtain material shall be Style 6730 XR-5 by Seaman Corporation or approved equal.

Question 5: Will the County draw down the lagoon level prior to construction?

Response 5: The County will draw down the lagoon level to extent practicable with given flows and precipitation. The Contractor can assume that a window of 45 calendar days of storage following the County's draw down attempts.

**PRE-BID MEETING MINUTES
NEWARK SPRAY IRRIGATION
WORCESTER COUNTY, MD**

DATE: November 20, 2019
TIME: 10:00 A.M.
LOCATION: Worcester County Department of Public Works Water and Wastewater
Administration Building:
1000 Shore Lane
Ocean Pines, Maryland 21811

Introductions

Owner: County Commissioners of Worcester County (DPW)
Engineer: EA Engineering, Science and Technology, Inc., PBC (EA)

Attendees

Darl Kolar	EA Engineering	dkolar@eaest.com
Steven Lemasters	EA Engineering	Slemasters@eaest.com
Barry Brooks	EA Engineering	Bbrooks@eaest.com
John Ross	Worcester County	Jross@worcester.md.us
Mike McCabe	Worcester County	Mmccabe@worcester.md.us
Gary Serman	Worcester County	gserman@co.worcester.md.us
Keith Cordren	Bunting & Murray	keith@buntingandmurray.com
Lee Martinson	SMI Services	lmartinson@smicompanies.net
Josh Abbott	Lywood Electric	abbott68@yahoo.com
Patrick Kintz	A-Del Construction	pkintz@a-del.com
Fred Klaveweiden	T.K. Construction	FredK@tk-construction.com
Shaun Fink	Breakwater Construction	shaun@breakwaterce.com
Jeff Phillips	AIM Services	jphillips@aimservicesinc.com
Scott Whitt	AIM Services	swhitt@aimservicesinc.com
Rich Mazol	Chesapeake Turf	Rich@chesapeaketurf.com

Project Description

- Installation and construction of approximately 6,700 linear feet of discharge piping, center pivot irrigation system, and pump station.
- Lagoon Earthwork
- Chlorine Contact Chamber internal feature demolition.
- Demolition, abandonment and removal of existing piping.
- Gravel access driveways
- Construction modification of existing Chlorine Contact Chamber walls for retrofit to pumping station wet well.
- Install vault, magnetic flow meter, pressure sensor, and appurtenances

- Install Equipment Mounting Rack, including Pump Control Panel, VFD's, and power distribution equipment.
- Install transformer and panelboard LP1.
- Program Pump Control Panel's PLC and Operator Interface Terminal, and integrate Pump Station into the existing Worcester County SCADA system.
- Prepare and supply Operation and Maintenance Manuals for all equipment.
- Conduct Start-up test and provide testing results to Owner and Engineer.
- Other work as shown on the plans and specifications

Project Funding and Requirements

- The project is funded by the Clean Water State Revolving Fund (CWSRF) administered by the Environmental Protection Agency and the Maryland Department of the Environment.
- CWSRF requirements are included in the bid documents and include, but not limited to
 - Use of American iron and steel
 - Adherence to applicable Davis Bacon Act prevailing wage rates
 - Participation of Disadvantaged Business Enterprises

Bid Due Date

- Bids are due on Monday, 9 December 2019 at 1:00 PM in the Offices of the County Commissioner's Room 1103 – Worcester County Government Center, One West Market Street, Snow Hill, Maryland 21863

Bonds and Bid Form

- Performance and Payment Bonds are required for this project.
- Proposal/Bid Bond shall be included in the Bid Package.

Completion Time

- Contract Time will be 240 Days
- Liquidated damages will be \$1,000 per day for the first 30 days and increase to \$5,000 per day for each day after, until work is completed.
- Retainage in the amount of 10 (percent) of each progress payment will be withheld by the Owner. The retainage will be paid at the time of completion.
- Contractor to submit proposed schedule and update as required.
- Certificate of Substantial Completion can be issued following the successful testing of the completed center pivot spray irrigation system with clean water and identified punch list items.
- Contract time will cease to run when Certificate of Substantial Completion is issued.
- Contractor must notify Construction Manager within 2 days of any event that will delay project.
- Claims for weather days must be requested by the 15th of the following month. Detailed back-up must be submitted with the request.

Submittals

- Submittals can be provided electronically to initiate review, but sufficient hard copies are

required to allow the County to keep two hard copies.

Requests for Information

- All RFIs to be in writing or by email and numbered sequentially.
- Contractor to maintain an RFI log.

Record Drawings

- Maintain red line mark-ups at site at all times.

Permitting and Requirements

- General Permit for Stormwater associated with Construction Activity (Notice of Intent) in place.
 - Maryland Department of the Environment (Green Card). Contractor shall maintain onsite a person who holds a current issued sediment control Green Card.
- Erosion and Sediment Control – Worcester Soil Conservation District
- Stormwater Management Approval – Worcester County Environmental Programs
- The County is currently acquiring two private utility easements for the project to utilize, specifically along the Worcester County Developmental Center and subsequently the Jones properties.

QUESTIONS AND ANSWERS

- Question No. 01* *Where can the contract documents be obtained and in what format?*
Response No. 01 Per the Contract Documents, Section A “Instructions to Bidders”, Item 2.1 states that bid documents are available from DiCarlo Precision Instruments, Inc. 2006 Northwood Drive, Salisbury, Maryland 21801 (410-749-0112). Documents can be purchased either as paper or digital files.
- Question No. 02* *Can the sign-in sheet be distributed?*
Response No. 02 Copies of the sign-in sheet were distributed at the meeting and is attached to these pre-bid meeting minutes.
- Question No. 03* *What are the requirements for American Steel? Are the pumps required to be made with American steel and fabricated in the United States?*
Response No. 03 The American Steel requirement applies to structural steel associated with the pump station and modifications to the existing chlorine contact chamber, the pipeline and miscellaneous. The pumps and center pivot irrigation systems are considered mechanical materials and not anticipated to be required to meet the American steel requirement. Contractor is reminded that General Guidance for the Requirement for the use of American Iron and Steel Products is included Section B of the Contract Documents

Question No. 04 *Is there a cost estimate for the project and can it be distributed?*
Response No. 04 An Engineer's Estimate of Probable Cost was prepared to comply with Maryland Department of the Environment's funding requirements. This cost estimate was prepared primarily utilizing the unit costs associated with the previous design. The Engineer's Estimate of Probable Cost of the project is between \$1.6 and \$1.7 Million. This dollar figure **shall not** be considered the contractor's target bid price. In addition, Mr. John Ross stated that the previous project design bids were received at a price of \$2.3 million and the costs were the primary cause of the project being redesigned.

Question No. 05 *Can electrical wiring be installed within the forcemain trench?*
Response No. 05 No. With the exception of a small amount of electrical work between the wet well and valve vault, there is no electrical work within the forcemain trench. Between the wet well and the valve vault, it is not acceptable to place both within the same trench.

Question No. 06 *Is the existing electrical service adequate for the pump station?*
Response No. 06 The existing electrical service is adequate for the existing pump station; the existing electrical service will not be adequate for the new pump station and thus the requirement of coordinating with Choptank to change the utility transformer.

Question No. 07 *Is the contractor or Choptank Electric responsible for the installation of the transformer at the wastewater treatment plant?*
Response No. 07 Choptank Electric is responsible for the installation of electric service from the three-phase distribution cabinet to and including the utility Transformer. Choptank Electric is the service provider at the wastewater treatment plant site and Delmarva Power at the spray irrigation site.

Attachments

1. Pre-Bid Sign in Sheet



WORCESTER COUNTY
NEWARK SPRAY IRRIGATION
PRE-BID MEETING
SIGN IN SHEET

<u>NAME</u>	<u>COMPANY</u>	<u>PHONE</u>	<u>EMAIL</u>
1. STEVEN LEMASTERS	EA	410-641-5371	sllemasters@eaest.com
2. DARL KOLAR	EA	410-641-5371	dkolar@eaest.com
3. Keith A. Cordrey	BUNTING & MURRAY	302-436- ⁵¹⁴⁴ 994	Keith@buntingandmurray.com lmarthuse@
4. Lee S. Martuson	S.M.T. SERVICES	443-239-0935	SMDCOMPANIES.net
5. Josh Abbott	Lywood Electric	443-669-6882	abbott68@yahoo.com
6. Scott Whit	AIM	443-890-3165	SWHIT@AIMSERVICESINC.com
7. Patrick Kintz	A-Del Construction	302-354-3720	pkintz@q-del.com
8. FRED KLAVERWEIDEN	T.K. CONSTRUCTION	443-783-4989	FRED@TK-CONSTRUCTION.COM JPHILLIPS@AIMSERVICES
9. JEFF PHILLIPS	AIM	410-603-0085	INC.COM
10. SHAUN C. FINK	BREAKWATER CONST	302-542-7174	shaun@breakwaterce.com
11. Barry Brooks	EA	443 235 4832	
12. Gary Seaman	WorCity DPW	410-641-5251 + 2415	gseaman@co.worcester.md.us
13. Michael McCabe	WorCity DPW	410-641-5251	mmccabec@co.worcester.md.us
14. John Ross	DPW	410-641-5251	jross@co.worcester.md.us
15. RICK MAZOH	CHESAPEAKE TURF, LLC	302-922-1317	RIK@CHESAPEAKE TURF.COM
16.			
17.			
18.			
19.			

BID FORM

PROJECT IDENTIFICATION: Newark Spray Irrigation

CONTRACT IDENTIFICATION: _____

THIS BID IS SUBMITTED TO: County Commissioners of Worcester County—OWNER

SUBMIT BID AT: Worcester County Government Center
1 West Market Street
Room 1103
Snow Hill, Maryland 21863
Attn: Mr. John Ross, P.E., Deputy Director of Public Works

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicted in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Advertisement and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for one hundred and twenty (120) days after the day of Bid opening. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen (15) days after the date of OWNER’S Notice of Award.
3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:
 - a. Bidder has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date(s)	Number(s)
_____	_____
 - b. Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance, or furnishing of the Work.
 - c. Bidder has obtained and carefully studies (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, and studies which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress,

- performance, or furnishing of the Work as Bidder considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 4 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, or similar information or data are or will be required by Bidder for such purposes.
- d. Bidder has reviewed and checked all information and data shown on or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, or similar information or data in respect of said Underground Facilities are or will be required by Bidder in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 4 of the General Conditions.
 - e. Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Contract Documents.
 - f. Bidder has given ENGINEER written notice of all conflicts, errors, or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to Bidder.
 - g. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation: Bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
4. Bidder will complete the Work within two hundred and forty (240) calendar days from receipt of Notice to Proceed for the following price as indicated on the Bid Form.

BID FORM
NEWARK SPRAY IRRIGATION
WORCESTER COUNTY, MARYLAND

ITEM NO.	BASE BID ITEM DESCRIPTION	ESTIMATED QTY	UNIT	COST PER UNIT (\$)	TOTAL ITEM COST (\$)
GENERAL					
1	Mobilization and Demobilization	1	LS		
2	Survey and Stake Out	1	LS		
3	Equipment Startup and Forcemain Pressure Testing	1	LS		
4a	Lagoon Earthwork – Structural Fill	800	CY		
4b	Lagoon Earthwork - Clay	400	CY		
5	Raising of Existing Concrete Comminutor, Manhole, and Valve Vault	3	EA		
6	Selective Demolition and Abandonment	1	LS		
EROSION AND SEDIMENT CONTROL					
7	Furnish and Install Stabilized Construction Entrance	2	EA		
8	Furnish/Install/Maintain Silt Fence	7000	LF		
9	Furnish/Install/Maintain Super Silt Fence	1400	LF		
10	Vegetative Stabilization	10	AC		
11	Gravel Access Driveways	400	CY		
12	Turbidity Barrier - Type 1	440	LF		
CHLORINE CONTACT CHAMBER DEMOLITION					
13	Wet Well structure retrofit (Demo, Associated Excavation for vertical expansion)	1	LS		
14	Demolish and Remove all Mechanical Equipment, Hangers, Fiberglass Lid, and Baskets	1	LS		
15	Remove Associated Electrical Items and Controls	1	LS		
WET WELL AND VALVE VAULT RENOVATIONS					
16	Furnish and Install all items and material associated with construction of the wet well	1	LS		
17	SS Hardware and cables, link seals and associated piping for suction lift station	1	LS		
18	Floats and Ultrasonic Level Sensor	1	LS		
19	Magnetic Flow Meter, Vault and Appurtenances	1	LS		
20	Suction Lift Station	1	LS		
ELECTRICAL					
21	Electrical Service at the Lagoon	1	LS		
22	Equipment Mounting Rack at the Lagoon	1	LS		
23	Pump Control Panel (at the Lagoon)	1	LS		
24	Power Distribution Equipment (panelboards, electrical utility meter, disconnect switch, combination motor starters, transformer) at the Lagoon	1	LS		
25	Site work at the Lagoon (including installation of the underground conduits and conductors)	1	LS		
26	Miscellaneous Equipment at Lagoon (including the site light and exhaust fan)	1	LS		
27	Electrical Service at Spray Field	1	LS		
28	Equipment Mounting Rack at the Spray Field	1	LS		
29	Pump Control Panel for the Center Pivot (at the Spray Field)	1	LS		
30	Power Distribution Equipment (panelboard, electrical utility meter, disconnect switch, combination motor starters) at the Spray Field	1	LS		

31	Site work at the Spray Field (including installation of the underground conduits and conductors)	1	LS		
32	Miscellaneous equipment at the Spray Field	1	LS		
MECHANICAL					
33	Furnish and Install Air Release Valve	2	EA		
34	Furnish and Install Blow Off Valves	3	EA		
35	Furnish and Install Sampling Station	1	EA		
36	Furnish and Install Fittings	1	LS		
37	Furnish and Install RCP Pipe	40	LF		
38	Furnish and Install Duplex Basket Strainer	1	EA		
39	Furnish and Install 6" C-900 Forcemain – Open Cut	3,100	LF		
40	Furnish and Install 6" Directional Drilled Forcemain	3,600	LF		
41	Furnish and Install Precast Concrete Air Release and Blow off Valve Structures	13	EA		
42	Center Pivot Spray Irrigation System	1	LS		
43	AASHTO No. 57 Stone for Pipe Bedding	100	Tons		
		TOTAL BID:			
ITEM NO.	ALTERNATE BID ITEM DESCRIPTION	ESTIMATED QTY	UNIT	COST PER UNIT (\$)	TOTAL ITEM COST (\$)
01	Allowance for Integration of Equipment into County Scada System, Programming Changes to Existing Central Computer	1	LS		

TOTAL BASE BID (Bid Items 1- 43) PRICE IN WORDS: _____

TOTAL BASE WITH ADD ALTERNATES (Bid Items 1- 43 and Alternate Bid Item No. 01) BID PRICE IN WORDS: _____

5. The following documents are attached to and made a condition of this Bid:
 - a. Required bid Security in the form of bond or cashier's check.
 - b. A tabulation of Subcontractors, Suppliers, and other persons and organizations required to be identified in this Bid.
 - c. Bidder's Qualification Statement with supporting data.
6. Communications concerning this Bid shall be addressed:

Darl Kolar, P.E.
EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit 101A
Ocean Pines, MD 21811

7. The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

SUBMITTED ON _____, 201__.

If Bidder is:

An Individual

By _____ (SEAL)
(Individual's Name)

(Signature)

doing business at

Business Address: _____

Phone Number: _____

A Partnership

By _____ (SEAL)
(Firm Name)

(General Partner)

(Signature)

Business Address: _____

Phone Number: _____

A Corporation

By _____ (SEAL)
(Corporation Name)

(State of Incorporation)

By _____
(Name of Person Authorized to Sign)

(Title)

(Signature)

(Corporate Seal)

Attest _____ (SEAL)
(Secretary)

Business Address: _____

Phone Number: _____

A Joint Venture

By _____
(Name)

(Signature)

(Address)

By _____
(Name)

(Signature)

(Address)

(Each joint venture must sign. The manner of signing for each individual, partnership, and corporation that is a party of the joint venture should be in the manner indicated above.)

**SECTION 01 10 00
MEASUREMENT AND PAYMENT**

PART I – GENERAL

1.1 DESCRIPTION

1.1.1 Scope of Work

The items listed in this section refer to and are the same pay items listed on the Bid Form. They constitute all of the pay items for the completion of the Work. Compensation for all such services and materials shall be included in the prices stipulated for the lump sum and unit price pay items listed herein. Items of Work not specifically included in this Section for measurement and payment as described herein will not be measured for payment, but will be considered incidental to the Contract with the associated costs borne solely by the CONTRACTOR.

Schedule of Values

- The Schedule of Values is a list of line items, corresponding to each aspect of the Work, establishing in detail the value or cost of each major part of the Work, and is submitted to ENGINEER for acceptance.
- Upon request of ENGINEER, support values with data that substantiate their correctness.
- The preliminary Schedule of Values is submitted to the ENGINEER for initial review. The CONTRACTOR shall incorporate the ENGINEER's comments into the Schedule of Values and provide a re-submittal to the ENGINEER. The ENGINEER may require corrections and re-submittal of the Schedule of Values until it is acceptable.
- The Schedule of Values and the Progress Schedule updates specified in Section 01300, Submittals shall be used as the basis for preparing each Application for Payment. The Schedule of Values may be used as a basis for negotiating the price of changes in the Work.
- Unit price payment items with their associated quantity shall be included in the Schedule of Values. Provide in the Schedule of Values a detailed breakdown of the unit prices when required by the ENGINEER.

1.2 SUBMITTALS

Schedule of Values

- The CONTRACTOR shall submit to the ENGINEER for acceptance a Schedule of Values that allocates cost to each item of the Work.

- The Schedule of Values shall include an itemized list of Work for each major part of the Contract, for each payment item as listed in the Bid Form.
- This schedule, when approved by the ENGINEER, shall be used as the basis for the CONTRACTOR's Applications for Progress Payments.
- Submit the required number of copies of the Schedule of Values to ENGINEER at or before the Pre-construction meeting. The first Application for Payment will not be processed without a Schedule of Values approved by the ENGINEER.
- When required by the ENGINEER, promptly submit an updated Schedule of Values to include cost breakdowns for changes in the Work, including Change Orders.

1.3 MEASUREMENT

Measurement shall be made in accordance with the Bid Form items and as described in the following sections.

1.3.1 Estimate of Quantities

The estimated quantities for unit price pay items, as listed in the Bid Form, are approximate only and are included solely for the purpose of comparison of Bids. The ENGINEER does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond therewith, and reserves the right to increase or decrease any quantity or to eliminate any quantity as the ENGINEER may deem necessary in accordance with the Contract Documents. CONTRACTOR shall not be entitled to any adjustment in a unit bid price as a result of any change in an estimated quantity and agrees to accept the aforesaid unit bid prices as complete and total compensation for any additions or deductions caused by changes or alterations in the Work directed by the COUNTY. Increased or decreased Work involving change orders will be paid for as stipulated in the Contract Documents.

Payment for unit price earthwork quantities shall be computed by field survey grid method and analysis using AutoCAD Civil 3D 2012 or similar software. Points shall include all slope breaks and features. A maximum 10-foot by 10-foot (10' x10) grid or cross sections every 5-ft (as determined by the ENGINEER shall be used in the field and the vertical tolerance shall be 0.01 foot (0.01'). Alternative methods may be used as approved by the ENGINEER. Surveys shall be field run by CONTRACTOR'S independent licensed surveyor.

1.4 PAYMENT

Payments to the CONTRACTOR shall be in accordance with Paragraph GC.14 of the General Conditions and the Agreement.

Lump sum price items shall be paid for the actual percentage of Work completed as identified in the approved Schedule of Values as required in Paragraph 1.5.

Unit price items shall be paid in accordance of Paragraph GC.14.c of the General Conditions and the Agreement.

Payment for the Work shall be made in accordance with the Bid Form items as described in the following sections.

1.4.1 Payment Items

The items listed in the Contract Documents refer to the pay items listed on the Bid Form. They constitute all of the pay items for the completion of the Work. Compensation for all such services and materials shall be included in the prices stipulated for the unit price and lump sum pay items listed on the Bid Form.

- Each lump sum and unit bid price will be deemed to include an amount considered by the CONTRACTOR to be adequate to cover the CONTRACTOR's overhead and profit for each separately identified item.
- No progress payments will be made by the ENGINEER until the Construction Schedule and the Schedule of Values have been submitted to and approved by the ENGINEER.
- The CONTRACTOR shall accept in compensation, as herein provided, full payment for furnishing all materials, labor, tools, equipment, and incidentals necessary to the completed Work and for performing all Work contemplated and embraced by the Contract, also for all loss or damage arising from weather or other unforeseen conditions which may be encountered during the execution of the Work and until its final acceptance by the ENGINEER, and for all risks of every description connected with the prosecution of the Work, except as provided herein, also for all expenses incurred as a result of the suspension of the Work as herein authorized.
- The payment of any partial estimate or of any retained percentage, except by and under the approved final invoice, in no way shall affect the obligation of the CONTRACTOR to repair or renew any defective parts of the construction or to be responsible for all damage due to such defects.

1.4.2 Eliminated Items

Should any items contained in the Schedule of Values be found unnecessary for the proper completion of the Work contracted, the ENGINEER may eliminate such items from the Contract, and such action shall in no way invalidate the Contract. No allowance will be made for payment of items so eliminated.

1.4.3 Progress Payments

Percentage of Work Complete – At the end of each pay period, the CONTRACTOR's Superintendent or other authorized representative of the CONTRACTOR shall meet with the

ENGINEER and determine and agree upon the percentage of the project completed during the pay period.

Application for Payment – The CONTRACTOR will then prepare and submit an Application for Payment to the ENGINEER. The ENGINEER will evaluate the Application for Payment, determine the amounts owed, and issue a Recommendation of Payment in such amounts as provided in the Contract Documents. Progress payments shall be made monthly as the Work progresses. All progress invoices and payments shall be subject to correction in the final invoice and payment. The progress payment will be based on invoices prepared by the CONTRACTOR and approved by the ENGINEER for the value of the Work performed, and materials complete in place in accordance with the Contract. Retainage shall be as specified in the Contract Documents. The payment schedule shall be in accordance with the Contract Documents.

1.4.4 Final Payment

The CONTRACTOR shall make and the ENGINEER shall approve, as soon as practicable after the completion of the project, a final invoice for the amount of Work performed under the Contract and establish the value of such Work. Final payment shall be made in accordance with the Contract Documents.

1.5 MEASUREMENT AND PAYMENT OF BASE BID ITEMS

1.5.1 Mobilization/Demobilization – Bid Item No. 1

This item shall include all items necessary to prepare Contractor onsite for project commencement as well as all items necessary for disassembly at project completion and required bonds. Measurement and Payment for Bid Item No. 1 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 1 in accordance with the Contract Documents.

1.5.2 Survey and Stake Out – Bid Item No. 2

This item shall include all Survey and Stake Out work necessary for project construction. Measurement and Payment for Bid Item No. 2 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 2 in accordance with the Contract Documents.

1.5.3 Equipment Startup and Forcemain Pressure Testing – Bid Item No. 3

This item includes remaining items required for project completion, including but not limited to: Adjustment of Spray Heads, pressure adjustments, testing of the electrical controls, and start-up of the pumping system. This item also includes preparation and submittal of as-built drawings for all work associated with this contract as well as final document submittals for project completion and close-out. Measurement and Payment for Bid Item No. 3 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 3 in accordance with the Contract Documents.

1.5.4 Lagoon Earthwork – Structural Fill – Bid Item No. 4a

This item consists of all materials, labor, and equipment to complete work activities for providing and installing clean select fill. The Work shall include, but not be limited to, furnishing and placing clean select fill to include delivery, placement, excavation, backfill, compaction, and testing as shown in project Drawings. Clean select fill will be measured on the cubic yard basis and payment made at the Contract unit price in accordance with the Contract Documents.

1.5.5 Lagoon Earthwork – Clay – Bid Item No. 4b

This item consists of all materials, labor, and equipment to complete Work activities for providing and installing low permeability clay (topsoil and clay core Material). The Work shall include, but not be limited to, furnishing, placing, compaction grading, rolling, testing, re-handling, wetting, drying, discing, survey, and any other incidentals for the clay and topsoil as shown in the project Drawings. Clay material shall meet sufficient permeability for use in berm build-up. Clean select fill will be measured on the cubic yard basis and payment made at the Contract unit price in accordance with the Contract Documents.

1.5.6 Raising of Existing Concrete Communitor, Manhole, and Valve Vault – Bid Item No. 5

This item shall include all materials, labor, and equipment necessary to complete the Work associated with the vertical expansion of the existing concrete valve vault, communitor, and sanitary manhole as a result of raising the lagoon berm height. The Work shall include, but not be limited to, excavation, Forming, Steel Reinforcement, Finishing, backfill, placement of concrete, material sampling/testing and compaction. Measurement and Payment for this item will be on a per each basis.

1.5.7 Selective Demolition and Abandonment – Bid Item No. 6

This item shall include all items as shown on project Drawings and as described in Section 02 41 16 DEMOLITION. Measurement and Payment for Bid Item No. 5 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 6 in accordance with the Contract Documents.

1.5.8 Furnish and Install Stabilized Construction Entrance – Bid Item No. 7

This item shall include all materials, labor and equipment to complete the installation and maintenance of stabilized construction entrances as shown on project Drawings and as described in Section 02 93 10 Erosion and Sediment Control for Stabilized Construction Entrance. Measurement and Payment for this item will be on a per each basis.

1.5.9 Furnish Install/Maintain Silt Fence – Bid Item No. 8

This item shall include all materials, labor, and equipment to complete the installation and maintenance of silt fence as shown on project Drawings and as described in Section 02 93 10 Erosion and Sediment Control for Silt Fence. Bid Item No. 8 will be measured in the field using survey or rolling tape wheel as agreed to by the COUNTY and COUNTY's inspector. COUNTY's inspector shall concur with quantities submitted for payment. Measurement and Payment for this item will be on a per linear foot basis.

1.5.10 Furnish Install/Maintain Super Silt Fence – Bid Item No. 9

This item shall include all materials, labor, and equipment to complete the installation and maintenance of super silt fence as shown on project Drawings and as described in Section 02 93 10 Erosion and Sediment Control for Super Silt Fence. Bid Item No. 9 shall be measured in the field using survey or rolling tape wheel as agreed to by the COUNTY and COUNTY's inspector. COUNTY's inspector shall concur with quantities submitted for payment. Measurement and Payment for this item will be on a per linear foot basis.

1.5.11 Vegetative Stabilization – Bid Item No. 10

This item shall include all items as shown on project Drawings and as described in Section 02 93 10 Erosion and Sediment Control for Vegetative Stabilization and shall include required maintenance. Bid Item No. 10 shall be measured in the field using survey or rolling tape wheel as agreed to by the COUNTY and COUNTY's inspector. COUNTY's inspector shall concur with quantities submitted for payment. Measurement and Payment for this item will be on a per acre basis.

1.5.12 Gravel Access Driveways – Bid Item No. 11

This item consists of all materials, labor, and equipment to complete Work activities for the installation of the Gravel Access Driveways. The Work shall include, but not be limited to, furnishing and placing CR6 stone to include delivery, placement, excavation, geotextile, backfill and compaction. Measurement and Payment of the gravel driveway will be measured on Cubic Yard installed.

1.5.13 Turbidity Barrier - Type I – Bid Item No. 12

This item shall include all items as shown on project Drawings. Measurement and Payment for Bid Item No. 12 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 12 in accordance with the Contract Documents

1.5.14 Wet Well Structure Retrofit (Demolition) – Bid Item No. 13

This item shall include all items necessary to Retrofit the existing Chlorine Contact Chamber to include excavation, capping, exterior restoration, plumbing, sewage disposal, and associated piping. This item includes concrete preparation for vertical construction of new work.

Measurement and Payment for Bid Item No. 13 will not be measured and shall be paid by lump sum.

1.5.15 Demolish and Remove all Mechanical Equipment, Hangers, Grate, and Baskets – Bid Item No. 14

This item shall include all items necessary to Demolish the select features of the Chlorine Contact Chamber, Equipment Removal, and Appurtenances. This item includes disposal or delivery of equipment to the County. Measurement and Payment for Bid Item No. 14 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item.

1.5.16 Remove Associated Electrical Items and Controls – Bid Item No. 15

This item shall include all items necessary to demolition the existing Electrical Equipment and Appurtenances associated with the chlorine contact chamber. This item includes disposal or delivery of equipment to the County. Measurement and Payment for Bid Item No. 15 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item

1.5.17 Furnish and Install all items and materials associated with construction of the new Wet Well. To include Concrete, Concrete Reinforcements, Forming, Finishing, Venting, Safety Hatches W/Grates, and Final Backfill Grading – Bid Item No. 16

This item consists of all materials, labor, and equipment to complete Work activities associated with construction of the new Wet Well and pump station concrete pad including, but not limited to, the Concrete, Concrete Reinforcements, Forming, Finishing, Venting, Safety Hatches with Grates, and Final Backfill Grading around the Wet Well renovations. Measurement and Payment for Bid Item No. 16 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 16.

1.5.18 Furnish and Install Stainless Steel Hardware, Stainless Steel Cables, Link Seals and Associated Piping – Bid Item No. 17

This item shall include all labor, materials, equipment, pump protection devices, and incidentals necessary to Furnish and Install Rails, Hoist, SS Hardware, and SS Cables, Link Seals and Associated Piping, and appurtenances. Measurement and Payment this this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 17 in accordance with the Contract Documents.

1.5.19 Furnish/Install/Setup Floats and Ultrasonic Transducer – Bid Item No. 18

This item shall include all labor, materials, equipment, pump protection devices, and incidentals necessary to Furnish, Install and Setup Floats and Ultrasonic Transducer. This item shall also include all required documentation to include, but not limited to, operation and maintenance manuals, tests and factory witnessed performance tests. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 18 in accordance with the Contract Documents.

1.5.20 Mag Meter, Vault, and Appurtenances – Bid Item No. 19

This item consists of all materials, labor, and equipment to complete Work activities for the installation of a Magnetic Flow Meter, Vault, and appurtenances. The Work shall include, but not be limited to, furnishing and installation of a Magnetic flow meter, concrete valve vault and appurtenances to include frame and cover, link seals, excavation, exterior coating, backfill and compaction, jointing materials and buttresses, strapping, restoration; testing of the complete installation; and incidental items to complete the vault and wet well installation. Contractor shall verify size to accommodate the proposed equipment and appurtenances. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 19 in accordance with the Contract Documents.

1.5.21 Furnish and Install Suction Lift Station – Bid Item No. 20

This item shall include all labor, materials, and equipment to complete the installation of the suction lift station including pumping, enclosure, valving, piping, and other appurtenances. This item shall also include all required pump documentation to include, but not limited to, operation and maintenance manuals, certified factory pump tests and factory witnessed performance tests.

1.5.22 Electrical Service at Lagoon– Bid Item No. 21

This item includes coordinating with Choptank Electric to obtain a new 480VAC three-phase service to replace the existing single-phase electrical service. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 21 in accordance with the Contract Documents.

1.5.23 Equipment Mounting Rack at the Lagoon – Bid Item No. 22

This item includes the equipment mounting rack at the lagoon. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 22 in accordance with the Contract Documents.

1.5.24 Pump Control Panel at the Lagoon – Bid Item No. 23

This item includes the Pump Control Panel (shown on drawing E-601) at the lagoon. It shall also include all items related to the installation of the Pump Control Panel, programming of the PLC and operator interface in the pump control panel at the Lagoon. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 23 in accordance with the Contract Documents.

1.5.25 Power Distribution Equipment at the Lagoon– Bid Item No. 24

This item includes the Power Distribution Equipment at the Lagoon, inclusive of the panelboard, electrical utility meter, disconnect switch, combination motor starters, and transformer, and all conduit, conductors, and ancillary equipment and testing to provide a complete installation

Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 24 in accordance with the Contract Documents.

1.5.26 Site Work at the Lagoon– Bid Item No. 25

This item shall include any items related to the site work, including the installation of the underground conduits and conductors, grounding conductors and any ancillary equipment to install and test for proper installation and function. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 25 in accordance with the Contract Documents.

1.5.27 Miscellaneous Equipment at the Lagoon – Bid Item No. 26

This item shall include the site light, the exhaust fan, and any miscellaneous equipment at the Lagoon which is not categorized in the other bid items. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 26 in accordance with the Contract Documents.

1.5.28 Electrical Service at Spray Field – Bid Item No. 27

This item includes coordinating with Delmarva Power to obtain a new 480VAC three-phase service at the Spray Field. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 27 in accordance with the Contract Documents.

1.5.29 Equipment Mounting Rack at the Spray Site – Bid Item No. 28

This item includes the Equipment Mounting Rack at the Spray Site. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 28 in accordance with the Contract Documents.

1.5.30 Pump Control Panel at the Spray Site – Bid Item No. 29

This item includes the Center Pivot Pump Control Panel at the Spray Site. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 29 in accordance with the Contract Documents.

1.5.31 Power Distribution Equipment at the Spray Site– Bid Item No. 30

This item includes the Power Distribution Equipment at the Spray Site, inclusive of the panelboard, electrical utility meter, disconnect switch, combination motor starters, and all conduit, conductors, and ancillary equipment and testing to provide a complete installation. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 30 in accordance with the Contract Documents.

1.5.32 Site Work at the Spray Site– Bid Item No. 31

This item shall include any items related to the site work, including installation of the underground conduits and conductors, grounding conductors, and any ancillary equipment to install and test for proper installation and function. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 25 in accordance with the Contract Documents.

1.5.33 Miscellaneous Equipment at the Lagoon – Bid Item No. 32

This item shall include any miscellaneous equipment at the Spray Site which is not categorized in the other bid items. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 32 in accordance with the Contract Documents.

1.5.34 Furnish and Install Air Release Valves – Bid Item No. 33

This item consists of all materials, labor, and equipment to complete Work activities for the air release valves. The Work shall include, but not be limited to, furnishing and air release valve for sewage application and appurtenances to include excavation, backfill and compaction, calculations and Certifications, furnishing and installing an air release valve, jointing materials and buttresses, strapping, restoration; testing of the complete installation; and incidental items to complete the valve installation. Measurement and Payment will be measured on the basis of each and payment made at the Contract unit price as shown on Bid Item No. 33 in accordance with the Contract Documents.

1.5.35 Furnish and Install Blow off Valves – Bid Item No. 34

This item consists of all materials, labor, and equipment to complete Work activities for the Blow Off Valves. The Work shall include, but not be limited to, furnishing Blow Off valves for sewage application and appurtenances to include excavation, backfill and compaction, furnishing and installing an Blow Off valve, jointing materials and buttresses, strapping, restoration; testing of the complete installation; and incidental items to complete the valve installation. Measurement and Payment will be measured on the basis of each and payment made at the Contract unit price as shown on Bid Item No. 34 in accordance with the Contract Documents.

1.5.36 Furnish and Install Sampling Station – Bid Item No. 35

This item consists of all materials, labor, and equipment to complete Work activities for the installation of Kupferle Eclipse #88 sampling stations, signage, and appurtenances. The Work shall include, but not be limited to, furnishing and installation of a sampling stations, signage and appurtenances to include, excavation, backfill and compaction, aggregate, plumbing, restoration; testing of the completed installations; and incidental items to complete sampling stations and signage installation. Measurement and Payment for this item will be measured on the basis of each and payment made at the Contract unit price as shown on Bid Item No. 35 in accordance with the Contract Documents.

1.5.37 Furnish and Install Fittings – Bid Item No. 36

This item consists of all materials, labor, and equipment to complete Work activities. The Work shall include, but not be limited to, furnishing fittings for sewage applications and appurtenances to include excavation, backfill and compaction, furnishing and installing fittings, jointing materials and buttresses, strapping, restoration; testing of the complete installation; and incidental items to complete the Fittings installation. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 36 in accordance with the Contract Documents.

1.5.38 Furnish and Install Duplex Basket Strainer – Bid Item No. 37

This item consists of all materials, labor, and equipment to complete Work activities for the installation of the Easton Model 50 Duplex Strainer Basket. The work shall include, but not be limited to furnishing, installation, and supporting of the Strainer Basket above grade at the center pivot concrete pad. Measurement and Payment for this item will not be measures and shall be paid by lump sum at the Contract price as shown on Bid Item No. 37 in accordance with the Contract Documents.

1.5.39 Furnish and Install RCP Pipe – Bid Item No. 38

This item consists of all materials, labor, and equipment to complete Work activities for RCP pipe. Work under this bid item includes furnishing and installing RCP piping and appurtenances, materials to provide clearance from existing utilities, traffic control, laying pipe, installation, excavation, backfill and compaction, restoration; and incidental items to complete the RCP piping installation. Measurement and Payment for this item will be on a per linear foot basis payment made at the Contract unit price as shown on Bid Item No. 38 in accordance with the Contract Documents. Length of pipe will be measured in the field using survey or rolling tape wheel as agreed to by the COUNTY and COUNTY's inspector. COUNTY's inspector shall concur with quantities submitted for payment.

1.5.40 Furnish and Install 6-inch C-900 Force Main – Open Cut – Bid Item No. 39

This item consists of all materials, labor, and equipment to complete Work activities for the installation of the 6-inch forcemain via open cut methods. Work under this bid item includes furnishing and installing 6-inch C900 PVC force main piping and appurtenances, fittings to provide clearance from existing utilities, traffic control, fusing of pipe and fittings, installation, excavation, backfill and compaction, roadway restoration, roadway valve boxes, jointing materials and buttresses, strapping, restoration; testing of the complete installation; and incidental items to complete the force main piping installation via open cut methods. Measurement and payment for this item will be on the basis of linear foot and payment made at the Contract unit price as shown on Bid Item No. 39 in accordance with the Contract Documents. Length of pipe will be measured in the field using survey or rolling tape wheel as agreed to by the COUNTY and COUNTY's inspector. COUNTY's inspector shall concur with quantities submitted for payment.

1.5.41 Furnish and Install 6-inch Directional Drilled Force Main – Bid Item No. 40

This item consists of all materials, labor, and equipment to complete Work activities for Force Main, 6-inch Directional Drilled. Work under this bid item includes furnishing and installing 6-inch Directional Drilled force main piping and appurtenances, fittings to provide clearance from existing utilities, traffic control, fusing of pipe and fittings, installation, excavation, backfill and compaction, roadway valve boxes, roadway restoration, jointing materials and buttresses, strapping, restoration; testing of the complete installation; and incidental items to complete the force main piping installation. Measurement and Payment for this item will be on the basis of linear feet and payment made at the Contract unit price as shown on Bid Item No. 40 in accordance with the Contract Documents. Length of pipe will be measured in the field using survey or rolling tape wheel as agreed to by the COUNTY and COUNTY's inspector. COUNTY's inspector shall concur with quantities submitted for payment.

1.5.42 Furnish and Install Precast Concrete Air Release and Blow Off Valve Structures – Bid Item No. 41

This item consists of all materials, labor, and equipment to complete Work activities for the installation of Precast Concrete Air Release and Blow Off Structures and appurtenances. The Work shall include, but not be limited to, furnishing and installation of a precast concrete structure and appurtenances to include frame and cover, Link Seals, excavation, exterior coating, backfill and compaction, jointing materials and buttresses, strapping, restoration; testing of the complete installation; and incidental items to complete the precast concrete structure installation. Contractor shall verify size to accommodate the proposed house equipment and appurtenances. Measurement and Payment for this item will be made on a per each basis in accordance with the Contract Documents.

1.5.43 Center Pivot Spray Irrigation Package – Bid Item No. 42

This item consists of all materials, labor, and equipment required to complete Work activities for the Center Pivot Spray Irrigation Package. Work shall include furnishing and installing all components of the Center Pivot Spray irrigation systems including, but not limited to, concrete support pad, support system, electrical controls, piping, arm spans, sprinkler heads and associated regulators, weights, semi-rigid drop hoses, and fittings, booster pump, end gun, and wheels. This item shall also include all required center pivot documentation to include, but not limited to, operation and maintenance manuals, certified factory pump tests and factory witnessed performance tests. Measurement and Payment for this item will be made on a lump sum basis in accordance with the Contract Documents.

1.5.44 AASHTO NO. 57 Stone for Pipe Bedding – Bid Item No. 43

This item consists of all materials, labor, and equipment to complete Work activities for providing AASHTO No. 57 Stone for pipe bedding. The work shall include, but not be limited to, furnishing and placing AASHTO NO. 57 stone as pipe bedding where the County or County's inspector deem it necessary and shall include delivery, placement, excavation, backfill, testing, compaction, and all other items required for a complete safe, and satisfactory installation.

Measurement and Payment for this item will be made on a per ton basis in accordance with the Contract Documents.

1.5.46 Integration of Equipment into County SCADA System, Programming Changes to Existing Central Computer – Alternate Bid Item No. 01

This item shall include the integration of the Newark Spray Irrigation system into the existing Worcester County SCADA System. Work for this item may include verifying the functioning of the SCADA Remote Control Unit (RTU) which provides local control at Newark Spray Irrigation system, and programming changes to the central computer located at the Ocean Pines Water Treatment Plant. The programming changes shall be field tested and verified to confirm the correct functioning of the SCADA RTU Control Panel located at Newark wastewater treatment plant within the Worcester County SCADA system. Measurement and Payment for this item will not be measured and shall be paid by lump sum at the Contract price as shown on Alternate Bid Item No. 01 in accordance with the Contract Documents.

1.6 Measurement and Payment, General

All incidental, minor and miscellaneous items, work and materials for which no specific lump sum or unit price bid item is shown and which are necessary to complete the Work and to maintain and/or repair the Work, shall be done and furnished by the CONTRACTOR without extra charge.

PART II – PRODUCTS

Not used.

PART III – EXECUTION

Not used.

+ + END OF SECTION + +