

ADDENDUM NO. 3 TO CONTRACT DOCUMENTS

Project: Oakwood Drive Bank H&S Project No. 30906-018
Stabilization Contract No. _____
City of Havelock, North Carolina

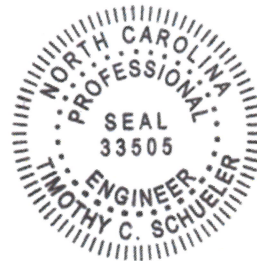
Owner: City of Havelock Date: January 4, 2019
North Carolina

To All Bidders:

Contractors submitting Proposals for the above named Project shall take note of the following changes, additions, deletions, clarifications, etc., in the Contract Documents, which shall become part of and have precedence over anything contrarily shown or described in the Contract Documents, and all such shall be taken into consideration and be included in the Contractor's Bid Proposal.

Refer to the Attached Sheets.

The return receipt acknowledgement requested below will be deemed evidence that the bidder has received this Addendum and has followed the instructions outlined herein. Please sign, date, clearly print company name, and fax this sheet back to Hazen and Sawyer at 919-833-1828 or email to JMcSwain@hazenandsawyer.com immediately upon receipt.



Company Name

Acknowledgement of Receipt

Date

A handwritten signature in black ink, appearing to read "Tim Schueler", written over a horizontal line.

Tim Schueler, P.E.
HAZEN AND SAWYER

OAKWOOD DRIVE BANK STABILIZATION

ADDENDUM NO. 3

SPECIFICATIONS:

SECTION 02241 –DEWATERING AND FLOW DIVERSION FOR STREAM WORK

This specification is provided in this addendum as attached (3 pages).

SECTION 02241

DEWATERING AND FLOW DIVERSION FOR STREAMWORK

PART 1 – GENERAL

1.01 SUMMARY

- A. This work shall consist of flow diversion, dewatering and maintaining water level for preparing work areas when construction activities take place within stream areas as specified in the Contract Documents or as directed by the Owner or Owner's Representative, and shall be in accordance with the requirements of the applicable State, District or Commonwealth:

North Carolina: *Erosion and Sediment Control Planning and Design Manual* (2013 or most current version) as developed by the North Carolina Department of Environmental Quality (NC DEQ).

This item includes placement, operation, maintenance and removal upon completion. Diversions are used to isolate work areas from flow during the construction of in-stream projects. Diversions which have an insufficient flow capacity can fail and severely erode the disturbed channel section under construction. Therefore, in-channel construction activities should occur only during conditions where the diversion is designed to convey the anticipated flow such as periods of low rainfall. The cost for maintenance of these devices is solely the Contractor's responsibility. These works are temporary and shall be removed and the area restored to its original state when they are no longer needed or permanent measures are installed.

- B. Related Sections:

1. Section 02200 – Earthwork
2. Section 02267 – Filter Bag
3. Section 02265 – Dewatering Sump

1.02 SUBMITTALS

- A. Product data for each type and/or size of dewatering coffer dam or pump around equipment as described on the Contract Documents.

1.03 QUALITY ASSURANCE

- A. Contractor shall forward one copy of a stream **Dewatering and Flow Diversion plan** to the Owner or Owner's Representative for review and approval. The plan shall include a description of means and methods plus a list of materials including pump equipment, etc that shall be employed. Specifications for any proprietary devices will be required for review and approval by the Owner or Owner's Representative.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Coffers: It is suggested that the Contractor utilize sand bags with plastic sheeting to impound water as necessary to construct stream work. However, the Contractor may submit for review by the design Owner or Owner's Representative alternative methods for coffer systems including proprietary devices.
- B. Impervious Sheeting: Sheeting shall consist of ten (10) mil or thicker polyethylene plastic, which is impervious and resistant to puncture and tearing.
- C. Pump(s): Pump(s) shall be large enough for dewatering stream section in a timely fashion without creating unsafe conditions or producing additional erosion or sediment discharge. The pump around shall include a hose, high density polyethylene (HDPE) or metal pipe suitable to convey water overland to the downstream discharge point. Pump inlets will have a screen (mesh size <1 inch) over opening. The pump(s) shall be shut off at night unless otherwise indicated on the Construction Documents. The size and number of pumps shall be determined by the Contractor based on his/her review of field conditions, interpretation of the Contract Documents and experience. All pipe work shall be secured in place.
- D. Sand bags: Sandbags shall consist of materials, which are resistant to ultraviolet radiation, tearing and puncture, and woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).
- E. Filter Bags: Per Section 02267, "Filter Bag."
- F. Dewatering Sumps: Per Section 02265, "Dewatering Sump."

PART 3 – EXECUTION

3.01 INSTALLATION, OPERATION AND REMOVAL

- A. Installation and Removal: Installation of piping, sand bags, sheeting and pump around shall be in accordance with the approved Erosion and Sediment Control Plan in the Contract Documents or as directed by the Owner or Owner's Representative. Unless otherwise specified on the Contract Documents, install diversion structures from upstream to downstream. The Contractor shall relocate the discharge pipe(s) as necessary to complete all work as shown on the Contract Documents at no additional expense to the Owner. Provide piping, sumps, sedimentation tanks, dewatering basins or non-woven dewatering bags as required by the Owner or Owner's Representative. The Contractor is responsible for ensuring water is adequately filtered or otherwise treated per State, County, and City sediment control requirements before discharging into a stream or storm drain system. Contractor shall use filter bags and dewatering sumps where directed by the Contract Documents or directed by the Owner or Owner's Representative. Cost of filter bags and dewatering sumps are considered incidental to this item and will not be paid for separately. Provide standby equipment on-site, installed and available for immediate operation, to maintain dewatering if any part of system becomes inadequate or fails. If dewatering requirements are not satisfied due to

inadequacy or failure of dewatering system, Contractor shall restore damaged structures and foundation soils at no additional expense to the Owner. Remove dewatering system from project site upon completion of construction activities related to the dewatering areas only with the approval of the Owner or the Owner's Representative.

- B. Pump-around Length and Stream Aquatics: In order to protect the existing benthic, fish and other aquatic organisms, the Contractor is not to exceed the pump-around work area limits as shown on the Contract Documents (usually less than 300 feet) without written authorization from the Owner or Owner's Representative.
- C. Disposal of Water: Dispose of water removed by dewatering in a manner that avoids sediment deposition, endangering public health, property, and portions of work under construction or completed.
- D. Daily Work Area Pump-down: The Contractor is expected to pump down any flooded work areas prior to each day's work so that operations are "in the dry". If water removed from work areas is turbid, it shall be pumped first to a filter bag or other approved filtration device prior to this water re-entering the stream; see Section 02267, "Filter Bag" for more detail.
- E. Hours of Operation: If pump operations occur between 5 PM and 7 AM, then the Contractor must have an employee on site at all times to monitor pumping operations.
- F. Noise: Pumps utilized in the stream diversion must be in compliance with Local Noise Ordinances and, if necessary, the Contractor will construct devices to muffle pump noise at no additional compensation. Noise-abatement dewatering shall be accomplished by the use of a "quiet" brand of critically silenced Dri-Prime Pump(s) manufactured by Godwin or approved equal. These quiet pumps shall be enclosed in 14-gauge sheet metal lined with 1-inch and 2-inch layers of polydamp acoustical sound deadening material to achieve a noise reduction to 69dBA at 30 feet. All exhaust pipes must be muffled.
- G. Pump Line Placement: Any piping that crosses paved trails will have a wooden ramp at a slope of 1:20 (vertical: horizontal) for pedestrian and vehicle passage.
- H. Inspection: Contractor to inspect pipes regularly for leaks and repair as necessary. Repairs are considered incidental to this item and will not be paid for separately.
- I. Elimination of Concentrated Flow Scour: All stream diversion outfalls will utilize a velocity reduction device such as a temporary riprap pad to prevent erosion.

- END OF SECTION -