

14. ITEMS OF WORK AND CONSTRUCTION DETAILS

Items of work to be performed in conformance with this specification and the construction details therefor are:

The following items are common to Bid Items 14, 15 and 16;

- (1) In Section 12, Pressure Testing, Method 1 will apply.
- (2) In Section 13, Measurement and Payment, Method 1 will apply

A. **Bid Item 14; Plastic Pipe, 6" Sch. 40**

- (1) This item consists of furnishing and installing the 6-inch diameter plastic pipe and fittings within treatment bed #1 as shown on the drawings. Also included in this item is the furnishing and installing of the water valve and valve box required on this pipe.
- (2) The pipe shall be 6-inch diameter, Schedule 40, PVC, meeting the requirements of ASTM D-1785. Fittings shall conform the requirements of ASTM D-2466.
- (3) All pipe and fittings shall be joined using solvent cement.

B. **Subsidiary Item; Water Valve and Valve Box**

- (1) This item consists of furnishing and installing a 6-inch gate valve and valve box for the 6-inch diameter Schedule 40 pipe in treatment bed #1.
- (2) The valve shall be heavy duty, brass, gate, pressure rated type, compatible with 4" diameter Schedule 40 pipe, meeting AWWA C-509, such as those manufactured by Mueller Co., Resilient Wedge Gate Valve, or an equivalent type approved by the Engineer. One (1), removable, shut-off tee handle shall be furnished for the water valve.
- (3) The valve box shall be fabricated from Schedule 40 PVC pipe and include a lockable cap as approved by the NRCS Representative.
- (4) No separate payment will be made for this item. Compensation for these items shall be included in the payment for **Plastic Pipe, 6" Sch. 40.**

C. **Bid Item 15; Plastic Pipe, 6" SDR-35**

- (1) This item consists of furnishing and installing the 6-inch diameter, gravity sewer pipe as shown on the drawings required for:

- (a) Delivery pipe from the mine opening to the wetland.
- (b) Wetland outlet spillway system.
- (c) Flushing system delivery pipe from treatment bed #1 to the settling basin.
- (d) Settling basin outlet spillway system.

Also included in this item is the furnishing and installing the water level control structures for the wetland and settling basin and the extra non-limestone gravel and rock required for the deep mine discharge water collection system.

- (2) The pipe and fittings shall be 6-inch diameter, SDR-35, Type PSM PVC Sewer Pipe, meeting the requirements of ASTM F-3034.

D. **Subsidiary Item, Water Level Control Structures**

- (1) This item consists of furnishing and installing the water level control structures in the wetland and settling basin as shown on the drawings.
- (2) The structures shall be for "inline" use for 6-inch pipe, three and six-foot high, respectively, constructed of PVC plastic, include stainless steel hardware and flash boards, such as manufactured by Agri Drain Corporation, RR 2, Box 458, Adair, Iowa, 50002, or an approved equivalent..
- (3) No separate payment will be made for these items. Compensation will be included in the payment for **Plastic Pipe, 6" SDR-35**.

E. **Subsidiary Item; Rock and Gravel**

- (1) This item consists of furnishing and installing the non-limestone rock and gravel for the mine water collection system as shown on the drawings.
- (2) The rock and gravel shall be obtained from a source listed in the current edition of PennDOT's Bulletin # 14.
- (3) No separate payment will be made for these items. Compensation will be included in the payment for **Plastic Pipe, 6" SDR-35**.

F. **Bid Item 16; Plastic Pipe, 4" Sch. 40**

- (1) This item consists of furnishing and installing the 4-inch diameter, solid and perforated pipe in: (a) treatment bed #1 for the flush piping system and (b) the inoculation ports in both treatment beds as shown on the drawings.
- (2) The pipe shall be 4-inch diameter, Schedule 40, PVC, meeting the requirements of ASTM D-1785. Fittings shall conform to the requirements of ASTM D-2466.
- (3) In exception to Section 3, PERFORATIONS, of Material Specification 547. Perforations, as required and as shown on the drawings, shall be one (1) row of one-half inch (1/2") diameter holes at twelve-inch (12") spacing along the pipe.
- (4) All pipe and fittings shall be joined using solvent cement.