

## 213 – PREFABRICATED VERTICAL DRAIN

### SECTION 213

#### PREFABRICATED VERTICAL DRAIN

##### 213.1 DESCRIPTION

Excavate for and place geosynthetics to provide a drainage pathway for consolidating embankments and foundation soils as shown in the Contract Documents.

##### BID ITEM

Prefabricated Vertical Drain

##### UNITS

Linear Foot

##### 213.2 MATERIALS

Provide prefabricated vertical drain that complies with **DIVISION 1700**.

##### 213.3 CONSTRUCTION REQUIREMENTS

**a. Qualification of the Prefabricated Vertical Drain Contractor.** At least 1 month before the construction of the prefabricated vertical drains, provide KDOT's Bureau of Structures and Geotechnical Services, Geotechnical Unit with evidence of successful installation of prefabricated vertical drains on 3 or more projects under similar conditions using the same installation technique. For the completed projects, include the location, description, size, the owner's name, address and telephone number, and the project engineer's name.

KDOT's Bureau of Structures and Geotechnical Services, Geotechnical Unit will approve (or deny) the Contractor's qualifications. No adjustment in contract price will be allowed if the submittal is rejected.

Before installing drains, satisfactorily install 3 test prefabricated vertical drains to the maximum anticipated depth shown in the Contract Documents at locations designated by the Engineer.

**b. Construction of Prefabricated Vertical Drain.** Survey, number and stake the drains within 6 inches of the locations indicated in the Contract Documents, or as directed by the Engineer.

Install drains from the working surface to the depth shown in the Contract Documents, or as specified by the Engineer.

Do not vary the installed drains from the vertical by more than 1 inch per 4 feet.

Provide a suitable means of determining the quantity of prefabricated vertical drain material used, and the depth of the drain.

Splice or connect the drain material in a workmanlike manner for continuity of drain material. Leave a 4 to 8-inch length of drain material protruding above the natural ground surface at each drain location. Cut the drain material neatly at its upper end.

If obstructions are encountered below the working surface that cannot be penetrated using normal and accepted procedures, complete the drain from the elevation of the obstruction to the working surface and notify the Engineer. At the direction of the Engineer, install a new drain within 2 feet from the obstructed drain. The injection of limited amounts of water will be allowed to facilitate the anchoring of drains. Make a maximum of 2 attempts to install the replacement prefabricated vertical drain as directed by the Engineer. If the drain still cannot be installed to the design tip elevation, abandon the drain location.

##### 213.4 MEASUREMENT AND PAYMENT

The Engineer will measure prefabricated vertical drains by the linear foot.

The Engineer will pay for "Prefabricated Vertical Drain" at the contract unit price which is full compensation for the specified work.

Satisfactory test drain installations will be paid for at the contract unit price per foot for "Prefabricated Vertical Drain". The Contractor will be paid for all obstructed drains properly completed at the contract unit price.