

- ITEM 605.2410 17- PREFABRICATED COMPOSITE EDGE DRAIN  
(UNDERDRAIN FILTER MATERIAL BACKFILL)**
- ITEM 605.2411 17- PREFABRICATED COMPOSITE EDGE DRAIN  
(EXISTING MATERIAL BACKFILL)**

### **DESCRIPTION**

The work consists of furnishing and installing an approved Prefabricated Composite Edge Drain (PCED) as specified at the locations shown on the plans or specified by the Engineer. This work includes excavating and backfilling the trench.

Prior to installation, furnish the Engineer with copies of the manufacturer's literature with details and installation requirements for the PCED. In addition, provide information on the type of trenching equipment to be used and the proposed procedure for installation of the PCED and outlets.

Provide a manufacturer's representative experienced in the installation of PCED on the project during the start-up of installation of the PCED and until such time as trouble free installation is achieved to the satisfaction of the Engineer.

### **MATERIALS**

Materials shall meet the requirements specified in §737-06 Prefabricated Composite Edge Drains.

#### **A. General**

Provide PCED that is a flexible product consisting of a geotextile bonded to or tightly wrapped around an internal supporting core.

Provide PCED that is resistant to deterioration from salts, road oils, fuels and other deleterious substances encountered in the type of application.

#### **B. Backfill Material**

Provide backfill material meeting the following requirements:

For existing material backfill, provide suitable material.

For underdrain filter material backfill, provide material that meets the requirements of Item 605.1001 M, Underdrain Filter, Type II.

#### **C. Fittings**

Provide fittings and materials necessary to make splices and connections of the PCED to outlet piping that conform to the manufacturers requirements. Design all fittings and materials to prevent soil intrusion into the PCED or outlet piping.

Provide fittings that allow for outletting the continuous PCED in a sag area; i.e., a tee; and for outletting the individual run length segments as shown in the contract documents or as ordered by the Engineer.

In cases where the PCED is terminated without an outlet, provide a fitting to prevent soil intrusion into the end of the PCED.

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### **CONSTRUCTION DETAILS**

Excavate a trench in the location and to the limits shown in the contract documents or as directed by the Engineer.

Where existing material backfill is used, place the PCED abutting the side of the trench closest to the centerline of pavement (the inside of the trench). Where underdrain filter material backfill is used, place the PCED abutting the side of the trench farthest away from the centerline of pavement (the outside of the trench). Place the PCED in an upright vertical position so that it has no bends, crimps or sags in its final position. Be aware that many PCED's provide drainage on only one side. Place the PCED so the side that provides drainage faces the pavement.

Backfill and compact the trench. Where underdrain filter material backfill is used, place the backfill in one lift. Where existing material backfill is used, place backfill in three approximately equal lifts. For existing material backfill, perform the trenching, PCED placement, and first lift backfill and compaction operations in one continuous operation.

Compact each lift with at least two passes of an approved vibrating pad, plate, or drum-type compactor. Other vibratory compaction systems may be used as approved by the Engineer. Remove the surplus excavated material from the work area and dispose of it as required in §203-3.08, Disposal of Surplus Excavated Materials.

For any given PCED run, install outlets no later than 48 hours after PCED placement. Do not backfill the outlet trench until the installation of the fitting and connection to the outlet pipe is inspected and approved by the Engineer. Backfill all trenches before the end of the workday.

Install splices required in the PCED prior to placement of the PCED. Install splices and connections in the PCED in accordance with the manufacturer's recommendations to ensure continuity of the PCED.

During all periods of shipment and storage, keep the PCED wrapped and protected from direct exposure to sunlight, mud, dirt and debris. Repair or replace any damaged portion of the PCED to the satisfaction of the Engineer. Payment will not be made for repairing or replacing the damaged portions caused by the Contractor's operations.

Backfill and compact all portions of the trench which are overcut in length to facilitate the operation of the trench cutting equipment in accordance with the same requirements as for the trench containing the installed PCED.

### **METHOD OF MEASUREMENT**

The quantity of the PCED to be paid will be the number of linear meters satisfactorily installed and approved by the Engineer.

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**BASIS OF PAYMENT**

Include in the unit price bid per linear meter the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work, including excavation, installation, underdrain filter material, backfilling and compacting, repair of overcuts, and removal of surplus excavated material. Payment will not be made for repairs of damage caused by the Contractor's operations.

Payment for outlets are not included, and will be made under the appropriate, separate pay items.