

SECTION 02710

UNDERDRAINS

1.0 DESCRIPTION:

The work under this item shall consist of furnishing all plant, labor, equipment, appliances and materials and performing all operations to:

Furnish and install site underdrains as detailed;

Connect outfall pipe to new storm structure; and

Coordinate work of this Section with installation of the required drainage system..

2.0 MATERIALS:

- a. Pipe shall be perforated polyvinyl chloride pipe conforming to ASTM 2729 of the size indicated on the Contract Drawings complete with required couplings and fittings.
- b. Open outlets pipe for underdrains shall be of the same size and type as that of the underdrain to which it is connected, except that it shall not be perforated.
- c. Aggregates shall be 3/4 inch crushed stone.
- d. Filter material shall be Mirafi 140 drainage fabric as manufactured by Celanese Fiber Co. Or approved equal.

3.0 CONSTRUCTION METHODS:

- a. Excavate for the underdrain trench at the location and to the required depth. Hand trim excavations to required elevations. Do not over excavate. Remove large stones or other matter which could damage underdrain pipe.
- b. Compact bottom of trench and install filter fabric.
- c. Place a minimum of 3 inches of crushed stone and compact thoroughly. Slope at a minimum of 0.5%.
- d. Place underdrain pipe firmly bedded on the crushed stone with perforations facing downward. Place remainder of the crushed stone over pipe and tamp. Do not displace or damage pipe when compacting.
- e. Fold filter fabric over crushed stone with a minimum of one foot overlap.

- f. Backfill and compact trench.
- g. Connect outfall pipe to the storm structure.

4.0 **METHOD OF MEASUREMENT:**

- a. This work shall be measured for payment by the actual number of linear feet of underdrains completed, accepted and measured in place.
- b. Trench excavation shall not be measured for payment.
- c. Rock in trench excavation shall be measured for payment in accordance with Section 02221, “Trench Excavation and Backfill”.

5.0 **BASIS OF PAYMENT:**

- a. This work shall be paid for at the contract unit price per linear foot for “Underdrain”, complete in place which price shall include pipe of the size specified, elbows, tees, wyes, couplings, fittings, trench excavation, geotextile, aggregate, sand, tools, material and labor incidental thereto.
- b. There will be no separate payment made for capping, plugging or connecting underdrains to existing or proposed drainage systems or structure. Compensation for such work shall be considered to be included in the price bid for other items of work.
- c. Rock in trench excavation shall be paid for in accordance with Section 02221, “Trench Excavation and Backfill”.

<u>Pay Item</u>	<u>Per Unit</u>
6" Underdrain	L.F.