

**1712 – PRE-FABRICATED VERTICAL DRAIN**

**SECTION 1712**

**PRE-FABRICATED VERTICAL DRAIN**

**1712.1 DESCRIPTION**

This specification covers the requirements for prefabricated vertical drains.

**1712.2 REQUIREMENTS**

Provide a prefabricated polypropylene channeled core wrapped in a non-woven polypropylene continuous filament geotextile complying with the minimum, minimum average roll values in **TABLES 1712-1 and 1712-2**.

| <b>TABLE 1712-1: PREFABRICATED VERTICAL DRAIN FABRIC, MINIMUM AVERAGE ROLL VALUES</b> |                       |                    |
|---------------------------------------------------------------------------------------|-----------------------|--------------------|
| <b>Property</b>                                                                       | <b>Requirement</b>    | <b>Test Method</b> |
| Grab Tensile Strength                                                                 | 130 lbs               | ASTM D4632         |
| Grab Elongation at Failure                                                            | > 50%                 | ASTM D4632         |
| Trapezoidal Tear                                                                      | 60 lbs                | ASTM D4533         |
| Permittivity                                                                          | 0.5 sec <sup>-1</sup> | ASTM D4491         |
| Apparent Opening Size (AOS)                                                           | ≤ 0.3 mm              | ASTM D4751         |

| <b>TABLE 1712-2: PREFABRICATED VERTICAL DRAIN COMPOSITE, MINIMUM AVERAGE ROLL VALUES</b> |                             |                    |
|------------------------------------------------------------------------------------------|-----------------------------|--------------------|
| <b>Discharge</b>                                                                         | <b>Capacity Requirement</b> | <b>Test Method</b> |
| 1.5 gpm                                                                                  | 1.5 psi                     | ASTM D4716         |
| 1.5 gpm                                                                                  | 43.5 psi                    | ASTM D4716         |

**1712.3 TEST METHODS**

Test in accordance with the requirements stated in **subsection 1712.2**.

**1712.4 PREQUALIFICATION**

None required.

**1712.5 BASIS OF ACCEPTANCE**

The Engineer will accept the geosynthetic material upon the basis of satisfactory test results for each lot. A lot is defined as 10,000 feet. If the material fails to comply with the requirements, the entire lot will be rejected.

Any geosynthetic material proposed for use must be evaluated by the Bureau of Structures and Geotechnical Services, Geotechnical Unit, Soils Section. The entire lot of geosynthetic material must be on site before samples are taken and laboratory testing performed.

Allow a minimum of 15 working days for the approval process. After sufficient data has been collected, the testing frequency may be modified upon approval by the Chief Geotechnical Engineer.