

**\*\*\* DRAFT – NOT FOR FILING \*\*\***

3745-512-621

Cap system granular drainage layer.

(A) The cap system granular drainage layer shall meet the following criteria:

- (1) Be free of foreign material and deleterious material.
- (2) Have not more than five per cent of the particles by weight passing through the number two hundred standard sieve.
- (3) Have a hydraulic conductivity not less than 0.5 centimeters per second.

(B) If the cap system granular drainage layer is placed on a flexible membrane liner, and the granular drainage layer is not comprised of a material with a sand classification as described in ASTM D2487 (USCS) as described in rule 3745-500-03 of the Administrative Code, a cushion layer shall be placed by the owner or operator between the flexible membrane liner and the granular drainage layer. The cushion layer shall conform to the following:

- (1) Consist of a geotextile with either of the following minimum average roll values unless an alternative material is approved in accordance with rule 3745-512-17 of the Administrative Code:
  - (a) Sixteen ounces per square yard and puncture resistance of at least three hundred ten pounds as determined by ASTM D4833 (index puncture resistance) as described in rule 3745-500-03 of the Administrative Code.
  - (b) For rounded or sub-rounded gravel with no dimension greater than one inch in length, eight ounces per square yard.
- (2) Be sewn by the owner or operator to prevent exposure of the flexible membrane liner.

(C) Testing of the material used for the cap system granular drainage layer shall be performed by the owner or operator in conformance with the following:

- (1) Pre-construction testing on representative samples to determine shear strength in accordance with rule 3745-512-10 of the Administrative Code.
- (2) Pre-construction testing on representative samples in accordance with rule 3745-512-15 of the Administrative Code.

(D) Certification of the cap system granular drainage layer by the owner or operator shall include the following:

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- (1) Record drawings showing the location, including the run-out if applicable, and plan views with topographic representation of the basal and final elevations of the granular drainage layer, as constructed.
- (2) The table of survey information described in rule 3745-512-50 of the Administrative Code and a comparison of the survey data to the elevations in the authorizing document.
- (3) Results of all testing and verification that the granular drainage layer, including the cushion layer if applicable, meets the standards in paragraphs (A) and (B) of this rule and the specifications in the authorizing document. If an alternative material is used, the evaluation conducted pursuant to rule 3745-512-17 of the Administrative Code was submitted prior to use of the alternative material and therefore verification is not required to be submitted with the construction certification report under this rule. However, results of all testing to verify that the alternative material meets material specifications are required in the construction certification report.