



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0016

JOHN ELIAS BALDACCI
GOVERNOR

DAVID A. COLE
COMMISSIONER

April 23, 2007
Subject: **Addison**
Project No. BR-1264(000)X
Pin No. 12640.00
Amendment No. 3

Dear Sir/Ms:

Please make the following change to the Bid Documents:

In the Bid Book, REMOVE the existing: "Special Provision, Section 620, Drainage Geocomposite" four pages total, dated February 20, 2007 and REPLACE with the attached updated: "Special Provision, Section 620, Drainage Geocomposite" three pages total, dated April 23, 2007.

Consider this change prior to submitting your bid on April 25, 2007.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Bickford".

Scott Bickford
Contracts & Specifications Engineer



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SPECIAL PROVISION
SECTION 620
 Drainage Geocomposite

Description This work shall consist of placing Drainage Geocomposite as specified in this Section and as shown on the plans or as directed by the Resident. Geocomposite Drainage shall consist of a formed polystyrene core covered on one side with a non-woven, needle-punched polypropylene filter fabric.

Material Drainage Geocomposite must be a composite system consisting of permeable geotextile and three-dimensional polymeric core providing equal flow in two perpendicular directions.

Quality Assurance Testing Drainage Geocomposite must be backed by Letter of Certification from Manufacturer that the flow rate in the plane of the core meets or exceeds the specified flow given herein and determined by ASTM D4716.

Product Specification The Drainage Geocomposite shall consist of Miradrain 6000, Amerdrain 500, or equal that meets or exceeds the following properties:

TYPICAL PROPERTIES		Test Method
Fabric Properties		
Material	Polypropylene	
Grab tensile strength	100 lb (450 N)	ASTM D4632
Puncture strength	65 lb (285 N)	ASTM D4833
Trapezoidal tear	50 lb (220 N)	ASTM D4533
Mullen burst strength	215 psi (1430 kPa)	ASTM D3786
AOS	70 US Std Sieve (0.21 mm)	ASTM D4751
Permeability	0.3 cm/sec	ASTM D 4491
Water Flow Rate	120 gpm/ft ² (4903 l/min/m ²)	ASTM D 4491
Core properties		
Material	Polystyrene	
Compressive strength	15,000 psf (720 kN/m ²)	ASTM D1621(Mod.)
Thickness	0.4 inch (10.16 mm)	ASTM D 1777
Product properties		
Flow capacity per unit width ¹	15 gpm/ft (190 liter/min/m ²)	ASTM D4716

¹In Plane Flow Rate at Gradient of 1.0 or 3600 psf.

All numeric values in the above table, except AOS, represent minimum average roll values in the weakest principal direction (i.e., average test results of any roll in a lot sampled for conformance or quality assurance testing shall meet or exceed the minimum values). Values for AOS represent maximum average roll values.

Placement Requirements The Drainage Geocomposite shall be installed by methods approved by the Manufacturer. The Drainage Geocomposite installer shall coordinate installation with the Manufacturer's representative.

The installer shall place the Drainage Geocomposite at the elevations and alignment shown on the Plans and as directed by the Resident. The Drainage Geocomposite shall be installed with the fabric side toward the soil.

When installing the Drainage Geocomposite:

- (1) Start at the low point of the wall and attach the panel to the wall.
- (2) Adjacent panels may be:
 - a. Joined together with the lateral edge of the next/upper panel placed over the flanged edge of the lower panel;
 - b. Overlap the dimples of the preceding panel onto the dimples of the previous panel by 2 inches.

The Drainage Geocomposite from the adjacent panels shall overlap the preceding panel. The overlap fabric can be adhered with the Manufacturers approved tape or duct tape. The Drainage Geocomposite shall be attached to non-waterproofed walls with contact adhesive or tape. The Drainage Geocomposite will be permanently secured upon completion of backfilling. Backfilling shall be placed within seven days of Drainage Geocomposite installation. Backfill to at least 6 inches above the top edge of the Drainage Geocomposite.

The top or terminal edge of the Drainage Geocomposite shall be covered by applying a piece of filter geotextile, meeting the requirements of MDOT 722.03, over the edge sufficient in width to prevent soil or other foreign construction materials from intruding into or behind the Drainage Geocomposite panels. The filter geotextile shall be placed to match finished grade.

If necessary, the Drainage Geocomposite and filter geotextile shall be positioned by hand to minimize wrinkles.

Unanticipated subsurface drainage features exposed in the excavation shall be drained independently of the Drainage Geocomposite.

Backfill Requirements Structural backfill meeting the requirements of MDOT 703.06(a) Type C, shall be placed immediately against the Drainage Geocomposite. Care shall be taken during the backfill operation not to damage the geotextile surface of the drain. The backfill shall be placed and compacted in accordance with the project plans and specifications. Care shall also be taken to avoid excessive settlement of the backfill material. The Drainage Geocomposite, once installed, shall not be exposed for more than seven days prior to backfilling.

Storage Requirements The Contractor shall check the Drainage Geocomposite upon delivery to ensure that the proper material has been delivered. The Contractor shall be responsible for the storage of the Drainage Geocomposite material at the site.

Drainage Geocomposite shall be provided in rolls wrapped with a protective covering and stored in a manner, which protects the material from temperatures greater than 60° C, mud, dirt, dust, and debris. Protective wrapping shall not be removed until immediately before the Drainage Geocomposite is installed.

Drainage Geocomposite material shall be delivered and stored in original packages bearing the Manufacturer's name. The fabric shall not be exposed to direct sunlight for more than seven days during its storage and installation. The Drainage Geocomposite material shall be stored in a clean, dry environment out of the pathway of construction equipment. Each roll of Drainage Geocomposite material shall be labeled to identify the production run.

Repair Requirements Prior to the placement of the Drainage Geocomposite each roll shall be inspected for damage resulting from construction.

Any ripped, torn, or damaged areas of the Drainage Geocomposite material shall be removed and patched by placing a patch large enough to cover the damaged area and provide a sufficient overlap on all sides to fasten. The patch shall be secured to the original Drainage Geocomposite material using the Manufacturers approved methods. If the hole width or tear width across the panel is more than 50% of the width of the material, the damaged area shall be cut out and the two portions of the Drainage Geocomposite material shall be joined in accordance with the placement requirement.

If the damage occurs to the Drainage Geocomposite material during shipping, handling, or installation, the damaged areas shall be cut out and a repair section of Drainage Geocomposite shall be installed at the Contractor's expense.

Method of Measurement Drainage Geocomposite installation shall be measured by the square foot in place and accepted. Measurements will not be made for overlaps, patches, and repairs.

Basis of Payment The accepted quantity of Drainage Geocomposite installed shall be paid for at the contract unit price per square foot, which shall be full compensation for off-loading, inspection, storage, materials, equipment, and any incidentals necessary to complete the installation.

The cost and placement of the drainage collection pipe will be incidental to the installation of the Drainage Geocomposite.

<u>Pay Item</u>	<u>Measurement Unit</u>
620.661 Drainage Geocomposite	square foot