

SECTION 071700 - BENTONITE WATERPROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Bentonite waterproofing.
 2. Molded-sheet drainage panels.
 3. Insulation.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show installation details for interface with other work.

1.3 INFORMATIONAL SUBMITTALS

- A. Material certificates.
- B. Product test reports.
- C. Sample warranty.

1.4 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer and Installer agree(s) to repair or replace components of bentonite waterproofing system that fail in materials or workmanship within specified warranty period.
1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 COMPOSITE HDPE/BENTONITE MEMBRANE

- A. Composite HDPE/Bentonite-Polymer Membrane: Minimum 200-mil- thick membrane consisting of HDPE geomembrane liner bonded to a layer of bentonite-polymer clay granules.
1. **Products:** Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- a. [CETCO](#); Volclay Ultraseal SP.
2. Puncture Resistance: 75 lbf according to ASTM D 4833.
3. Vapor Permeance: 0.005 perms according to ASTM E 96.

2.2 COMPOSITE GEOTEXTILE-HDPE/BENTONITE MEMBRANE

- A. Geotextile/Bentonite-Polymer Waterproofing: Minimum 250-mil- thick membrane of bentonite-polymer clay granules between two layers of geotextile polypropylene fabric, one woven and one nonwoven, needle punched and heat fused together.
 1. [Products](#): Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. [CETCO](#); Volclay Ultraseal BT.
 2. Puncture Resistance: 75 lbf according to ASTM D 4833.
 3. Vapor Permeance: 0.005 perms according to ASTM E 96.

2.3 INSTALLATION ACCESSORIES

- A. General: Manufacturer's standard accessories recommended for intended use and compatible with bentonite waterproofing.
- B. Geotextile Protection Course: As recommended by waterproofing manufacturer.
- C. Nonwoven-Geotextile-Faced, Molded-Sheet Drainage Panel: If indicated in the Architectural drawings provide a manufactured composite subsurface drainage panels consisting of a nonwoven, needle-punched geotextile facing with an apparent opening size not exceeding No. 70 sieve laminated to one side with or without a polymeric film bonded to the other side of a studded, nonbiodegradable, molded-plastic-sheet drainage core, with a vertical flow rate of 9 to 15 gpm per foot.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Prepare substrates to be waterproofed, install waterproofing and accessories, and protect waterproofing from damage and wetting according to manufacturer's written instructions.
- B. Install protection course before backfilling or placing overburden when recommended by waterproofing manufacturer.

3.2 COMPOSITE GEOTEXTILE-HDPE/BENTONITE MEMBRANE INSTALLATION

- A. Install a continuous layer of waterproofing membrane with ends and edges lapped a minimum of 3 inches. Stagger end joints between membranes. Seal joints with permanent seam tape.

3.3 MOLDED-SHEET DRAINAGE PANEL INSTALLATION

- A. Place and secure molded-sheet drainage panels, with geotextile facing away from wall or deck substrate. Use adhesives or mechanical fasteners that do not penetrate waterproofing. Lap edges and ends of geotextile to maintain continuity. Protect installed molded-sheet drainage panels during subsequent construction.

END OF SECTION 071700