

Seaside Rehabilitation and Healthcare Center  
Portland, Maine

SECTION 02270 - EROSION CONTROL & SLOPE PROTECTION

**PART 1 - GENERAL**

1.01 GENERAL PROVISIONS:

- A. Documents affecting Work of this Section include, but are not necessarily limited to, The CONDITIONS OF THE CONTRACT General Conditions, Supplementary Conditions, Addenda and all Sections of Division 1, which are hereby made a part of this Section
- B. Coordinate Work with that of other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of the Work.
- C. The "*Standard Specifications*" referred to herein is the book entitled "*Standard Specifications, Highways and Bridges*" published by the State of Maine Department of Transportation (latest date), and Supplemental Specifications in Force, excluding the following portions thereof:

Division 100, Sections 102 through 109; numerical index of payment items included in each section.

Those Sections of the aforementioned Standard Specifications which are cited herein are applicable to the Work of this Contract as they may be modified, amplified or added to by this Section.

- D. All Work shall be in conformance with the requirements of the City of Portland, the Maine Department of Environmental Protection, the U.S. Army Corps of Engineers, and the U. S. Environmental Protection Agency (NPDES).
- E. Reference is made to the latest Erosion Control Report and Drawings for this project. Strict adherence to this report and Drawings must be followed in order to prevent adverse downstream impacts from erosion and sedimentation, originating from on-site construction activity. The Erosion and Sedimentation Control Report and drawings for the project shall apply to the Work of this Section as though fully repeated herein.

1.02 DESCRIPTION:

- A. It is not the intent herein to describe all the items and Work that may be required under this Section. All site erosion and sedimentation control measures, not otherwise specified herein or shown on the Drawings, but required by regulatory authorities or the Architect/Engineer for the proper protection of exposed slopes, drainage ways, etc., shall be included under this Section.
- B. Schedule of Work: Work includes but is not limited to the following:
  - 1. Provide and install erosion and sedimentation controls as shown on Drawings and as specified herein, and/or as required to minimize erosion throughout the site.
  - 2. Provide and install rip-rap, geotextile fabric, and/or other measures to stabilize slopes and control erosion, as shown on Drawings and/or as required.

Seaside Rehabilitation and Healthcare Center  
Portland, Maine

3. Provide temporary seeding and mulching as required to stabilize earth and loam stockpiles, excavated areas, and ditches and slopes, until final landscaping can be completed and all affected areas stabilized.

1.03 QUALITY CONTROL/SUBMITTALS:

- A. General: Comply with requirements of Division 1 sections for Submittals and Quality Control.
- B. Requirements of regulatory agencies:
  1. Maine Department of Environmental Protection; and local ordinances for the City of Portland.
  2. Federal codes and regulations, specifically including Army Corps of Engineers and EPA NPDES requirements.
- C. Submit product specification sheets and/or product samples for the following:
  1. Silt fence.
  2. Geotextile fabric (for rip-rap).
  3. Perforated HDPE pipe with filter sock material (for temporary perforated filters at detention basin outlets).

**PART 2 - PRODUCTS**

2.01 EROSION AND SEDIMENTATION CONTROLS:

- A. Baled hay or straw: 14" x 18" x 30" (standard size), tightly bound (MDOT 656.02).
- B. Stakes: Shall be 1 1/4" x 1 1/4" x 4-4.5' long hardwood stakes, or steel posts 5' long with projections for fastening.
- C. Silt Fence: 12 month ultra-violet, degradation-resistant geotextile extra strength fabric, affixed/stapled to square posts; "Envirofence" by Mirafi (extra strength); MDOT 656.03(c).
- D. Temporary Seeding: Conservation Mix, as specified by Cumberland County Natural Resources Conservation Service or as indicated in the Erosion and Sedimentation Controls Report and Drawings.
- E. Hay Mulch: Clean, dry hay not older than previous season's cutting, relatively free from noxious weeds and undesirable material.
- F. Mulch Binder: May be emulsified asphalt, or as approved by Architect/Engineer.
- G. Rip Rap: Shall be of D50 size as noted on the Plans; a graded mixture with 50 percent of the stone being greater than D50 size.
- H. Geotextile: Woven polypropylene erosion control fabric; Mirafi, 700X.

Seaside Rehabilitation and Healthcare Center  
Portland, Maine

**PART 3 - EXECUTION**

3.01 EROSION AND SEDIMENTATION CONTROLS:

- A. All erosion and sedimentation controls shall be installed in conformance with the approved Erosion and Sedimentation Control Report, the Drawings and these Specifications.
- B. Install all sedimentation and erosion controls immediately after clearing and prior to start of grubbing and stripping operations.
- C. Install staked hay bales or stone check dams in both existing and new drainage ways and around existing and newly installed catch basins. Location and installation shall be as shown on Plans and Details, or as directed by the Architect/Engineer.
- D. Install silt fence along base of all new or disturbed slopes, alongside drainage ways, and in other areas as shown on Plans.
  - 1. Fence posts shall be a maximum of 8 feet on center and driven a minimum of 18 inches into the ground.
  - 2. The Geotextile fabric used for silt fencing shall be secured to the posts in a suitable manner to prevent tearing and sagging of the fabric. The bottom of the Geotextile fabric shall be entrenched into the ground a minimum of 4 inches.
- E. Provide stone or hay bale check dams at all culvert inlets and outlets, and at detention basin outlets, as shown on the Plans.
- F. Inspect check dams and silt fencing on a weekly basis and after every major storm event to remove any build-up of silt and debris. Sediment build-up shall be removed when it reaches a depth of 6 inches, and distributed to an area undergoing final grading.
- G. Temporary Seeding: Apply temporary seed mix, fertilizer, lime and mulch to all newly constructed slopes over 5%, and other exposed areas as required, including earth and loam stockpiles, until final landscaping can be carried out. Application rates are as follows (unless otherwise specified for winter seeding in Section 02000, Attachment C – Erosion and Sedimentation Controls Report): seed mixture of conservation mix of perennial rye grass @1 lb/1000 sq. ft., fertilizer @25 lbs/1000 sq. ft., lime @ 100 lbs/1000 sq. ft., mulch @100 lbs/1000 sq. ft. Do re-seeding and appurtenant Work as specified above or as required by conditions, to properly protect the site until such time as it is practical to do permanent loaming and seeding (see Section 02900). All seeded areas shall be mulched with hay at a rate of 90 lbs./1000 sq. ft. All mulch is to be anchored with emulsified asphalt or by other approved method, to prevent wind blowing.
- H. Construct rip-rap aprons, swales, and slopes where indicated on Plans, upon a properly graded and compacted 6" gravel base or geotextile (See details on Drawings). If geotextile is used, anchor edges in shallow trench and backfill, in accordance with manufacturer's instructions. Stones shall be placed full depth in one operation, with special handwork if necessary to insure interlocking of all face stones. Do not drop stones on geotextile in such a manner as to damage geotextile. Larger stones shall be laid at the base of side slopes and at culvert inlets and outfalls. Openings between stones shall be filled with sand or gravel and rocks securely rammed into

Seaside Rehabilitation and Healthcare Center  
Portland, Maine

place. Loose stones or exceedingly large stones tending to rise above the average general surface shall be imbedded, reoriented or discarded.

- I. Ditches, swales and ponds shall be lined with sod or loamed and seeded, as indicated on the Plans and as specified in Section 02900 - Landscaping. Ditches, swales, ponds and berms shall be constructed and maintained as described in the Erosion Control Report and Drawings.

**END OF SECTION**