**ITEM 751.765 COMPOST AND SEED OVER MODIFIED ROCK CUBIC YARD**

*REV. 2024.01.01 (REV. DATE TO BE REMOVED BY CONTRACTS).*

**DESIGNER: This item is generally not recommended for large expanses of rock slope where conditions may be too hot and dry for seed germination. Areas with partial shade or where there is moisture from waterways have been observed to be the most successful.**

**GENERAL**

The work under this Item shall conform to the relevant provisions of Subsection 751, 767, and 765 of the Standard Specifications and the following.

Work shall consist of furnishing and pneumatically applying compost in conjunction with the specified native seed on designated areas of modified rock and achieving satisfactory establishment of seeded species as specified herein.

## QUALIFICATIONS

Compost application and seeding shall be done by a company having a minimum of five years of experience with native seed establishment. Prior to beginning work, the seeding Contractor shall furnish proof of qualifications to the Engineer for approval. Proof of qualifications shall include providing documentation (photos and contacts) to demonstrate knowledge and expertise with native seeding and establishment and proof of having completed successful native seeding projects.

## MATERIAL AND SUBMITTALS

**Compost**

Compost shall meet the relevant provisions for Type 2 Compost, found in Section M1.06 of the Supplemental Standard Specifications.

The Engineer shall approve the Contractor's equipment for application.

**Seed Mix**

Seed Mixes and Submittals shall be per the item(s) for the permanent seed mix. Mix shall be:

**DESIGNER: INSERT NATIVE SEED MIX ITEM NUMBER AND DESCRIPTION HERE.**

**Ensure that the item and special provision for seed by pound are included in the contract.**

## SEEDING SEASON

The season for seeding native mixes is April 1 - May 15 and October 1 - December 1 for dormant seeding. Written approval must be obtained for seeding outside the seeding season and, if approved, the permanent seed rate shall be increased by 50%

**CONSTRUCTION METHODS**

Method of application and equipment to be used shall be reviewed and approved by the Engineer prior to placement of material.

**Placement of Compost**

Compost shall be placed as shown on the Plans and in the Detail and as required by the Engineer. Material shall be placed so that settled material is at or slightly below the surface plane of the stone. The Contractor shall ensure that there will be adequate quantity, including adjustment for settlement.

For purposes of estimation, required compost quantities should be 300 cubic yards per acre to achieve the target depth.

**Seeding**

For areas smaller than half an acre, unless otherwise approved by the Engineer, seeding shall be done by broadcast method. Seeding shall be done in conjunction with or immediately following Compost application. Alternative seeding methods must be submitted and approved by the Engineer 14 days in advance of compost and seed application.

Hydroseeding

Hydroseeding may be used for sites over half an acre in size or when the rock slope does not permit safe application via a broadcasting method. Hydroseed shall be per the manufacturer’s directions and as follows.

Tank and hoses shall be cleaned from all previous hydroseeding and hydromulching projects. Seed shall be mixed into the slurry immediately before application and slurry applied within 30 minutes after seeds have been placed in the tank. Once seed has been placed in the tank, tank shall be agitated only enough to mix the seeds and keep slurry from separating.

When Seeding Occurs after Application of Compost or after December 1

When seeding is done more than 3 days after Compost application or when Compost is applied after December 1, seeding rate shall be increased by 50%.

Over-Seeding

Large extents of bare area (greater than 5-6 feet and depending on modified rock slope conditions) shall be over-seeded with the specified mix during the appropriate season for seeding. Rates, methods, and submittals shall be as specified under the relevant Seed Mix Item and Materials above.

Over-seeding, mulch, watering, and all work for over-seeding shall be incidental.

Determining Satisfactory Establishment

A reasonably well-established stand of the specified seeded species as determined by the Engineer and the MassDOT Landscape Architect or designated Specialist will be required for Final Acceptance. The expectation is that an acceptable number and variety of the desired permanent seeded species will be visible. For seeding with compost over modified rock this shall generally be:

* A minimum of 50% coverage by the specified permanent seeded species after one growing season (considered June-September 15). Of that percentage, generally, depending on the mix species:
	+ At least 2 types of permanent seeded grass species shall be visible.
	+ At least 2 species of wildflowers shall be visible.
* There will be no more than 25% coverage by weed species.
* There will be no invasive or aggressive species within the stand at the time of acceptance.
* There shall be no evidence of seed from non-native mixes (ex., clover) due to using an incorrect or modified mix or due to failure to clean the hydroseeding tank if a hydroseeder is used.

Invasive and aggressive weeds (such as mugwort, vetch, knapweed, and chicory) must be cut, pulled with roots removed, or treated with herbicide by a licensed and approved applicator prior to going to seed for Interim Acceptance. Weed removal shall be coordinated with MassDOT Landscape Architect. No herbicides shall be used without approval and coordination with MassDOT Landscape Design Section.

Acceptance of Seeding and Establishment Work

**Conditional Acceptance** shall be based on approval of seed mix submittals and proper application of seed as specified herein.

**Final Acceptance of Seed Establishment** shall be given upon satisfactory Establishment as described above. If the seeded area fails to meet the requirements of Establishment by the end of the growing season, contractor shall propose and implement remediations and site shall be inspected during the following growing season after July 1st. Otherwise, Contractor shall forego the payment for Final Acceptance. All remediation shall be at the contractor’s expense.

**METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

Compost and Seed for Modified Rock will be measured and paid for at the Contract unit price per Cubic Yard which price shall include all labor, materials, equipment, site preparation, and all incidental costs required to complete the work.

Native Seed Mix shall be compensated at the bid price per the specified seed mix item by pound.

Schedule of payment shall be as follows:

60% upon approval of Compost application and Conditional Acceptance of seeding as specified above

40% upon Final Acceptance of Seed Establishment