MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**BIORETENTION SEEDING**

JAK:JRP 1 of 2 APPR:JLB:DMG:04-01-21

**a. Description.** This work consists of preparing the surface of the bioretention basins for the application and placement of native seed and mulch materials, the application and placement of the seeding and straw-coconut fiber erosion control blanket. Ensure bioretention seeding is in accordance with section 816 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

**b. Materials.** The materials and application rates specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer. Ensure the following materials are used on this project:

1. The seeding mixture listed in Table 1 must contain the listed proportions of seed. Procure all seed material from North Central State sources only (Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota, and Iowa). Ensure seed is less than 1 year old and stored as recommended by the supplier. Provide documentation regarding the supplier’s source with location, quantity, purity and mix proportions to the Engineer at least 30 calendar days before application of the seed mixture.

**Table 1: Seeding Mixture**

|  |  |  |  |
| --- | --- | --- | --- |
| Botanical Name | Common Name | % of each | pounds/acre |
| Cover Crop-Temporary Grasses |  |  | 12.0 |
| *Avena Sativa* | Seed Oats | 20 |  |
| *Lolium multiflorum* | Annual Rye | 25 |  |
| Native Grasses and Sedges |  |  | 13.5 |
| *Andropogon gerardii* | Big Bluestem Grass | 10 |  |
| *Carex sprengelii* | Long-beaked Sedge | 5 |  |
| *Elymus virginicus* | Canada Wild Rye | 10 |  |
| *Panicum virgatum* | Switch Grass | 7 |  |
| *Sorgastrum nutans* | Indian Grass | 5 |  |
| Native Wildflowers |  |  | 4.5 |
| *Aster novae-angliae* | New England Aster | 3 |  |
| *Monarda fistulose* | Bergamot | 3 |  |
| *Rudbeckia hirta* | Black-eyed Susan | 3 |  |
| *Ratibita pinnata* | Yellow Coneflower | 3 |  |
| *Solidago rigida* | Stiff Goldenrod | 3 |  |
| *Veronia Altissima* | Ironweed | 3 |  |
| TOTAL |  | 100 | 30.0 |

2. Ensure the soil erosion control blanket is a 70 percent straw and 30 percent coconut fiber matrix sewn between two ultraviolet stabilized nets with a cellulose fiber bottom tissue. Ensure the blanket is composed of:

A. Straw. 0.35 pounds/square yard minimum

B. Coconut fiber. 0.15 pounds/square yard minimum

C. Organic Bio-Fertilizer

**c. Construction.** Ensure construction methods are in accordance with subsection 816.03 of the Standard Specifications for Construction except as described herein. Begin this work as soon as possible after final grading of the bioretention basins but no later than the maximum time frames stated in subsection 208.03 of the Standard Specifications for Construction. Coordinate the sequence of various phases of basin construction with the overall project construction schedule.

Place the seeding at an application rate of 30 pounds/acre. If an area washes out after this work has been properly completed and approved by the Engineer, make the required corrections to prevent future washouts and replace as needed. This replacement will be paid for using the applicable pay items. If an area washes out for reasons attributable to the Contractor’s activity or failure to take proper precautions, replacement will be at no cost to the contract.

The Engineer will inspect the seeded area to ensure the vegetation is well established, 90 percent weed free, in a vigorous growing condition, and contains all the species specified in the seeding mixture. If weeds are determined by the Engineer to cover more than 10 percent of the total area, provide weed control in accordance with subsection 816.03.I of the Standard Specifications for Construction. Weed control will be at the Contractor’s expense with no additional cost to the contract.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**Pay Item Pay Unit**

Bioretention Seeding Square Yard