

CONSTRUCTION SPECIFICATION

MI-166. SEEDING

1. SCOPE

The work shall consist of furnishing all labor, equipment and materials for seeding a permanent grass mixture on the areas shown on the drawings and/or all disturbed areas unless otherwise specified or approved.

2. GENERAL

Liming, fertilizing, seeding and mulching shall be performed within 20 days from disturbance any time during the year except during the period October 1 to November 1 South of US 10, September 20 to October 25 North of US 10 and any other time of the year that the seedbed cannot be properly prepared due to wetness, snow or frozen soil.

3. FERTILIZER AND LIME

Lime shall be standard agricultural ground limestone. Fertilizer shall meet the requirements of the applicable Michigan state laws, and shall be in such physical condition to insure uniform application over the area to be fertilized. Rates of application shall be as specified on the drawings or as shown in Section 8 of this specification.

4. SEED

The seed shall conform to the latest seed laws of the United States and of Michigan. Species, the source of production if native grasses are used, and rate of seeding shall be as specified on the drawings or as shown in Section 8 of this specification.

Inoculate all legume seed in accordance with the manufacturer's recommendations. The inoculate for treating legume seeds shall be a pure culture of nitrogen-fixing bacteria specific for the species and shall not be used later than the date indicated on the container or as otherwise specified. A mixing medium, as recommended by the manufacturer, shall be used to bond inoculate to the seed. All legumes not inoculated will be inoculated within 12 hours of seeding with inoculate specific to the species being seeded. If seed was inoculated more than 60 days prior to seeding, add new inoculation. When the area is seeded with a hydro-seeder or a site where a new legume is seeded for the first time ever, use 5 times the recommended rate of inoculate.

5. PREPARATION OF SEEDBED

The entire area to be seeded shall be reasonably smooth and all washes and gullies shall be filled to conform to the desired cross-section before actual seedbed preparation is begun. Scarify subsoil areas perpendicular to water flow before they are filled. After final grading, the required fertilizer (except that applied with a hydraulic seeding) and/or lime shall be applied uniformly and incorporated into the top 3 inches of the soil. The seedbed preparation operation shall be suspended when the soil is too wet or too dry.

On side slopes steeper than 3:1, the 3 inch minimum depth of seedbed preparation is not required, but the soil shall be worked enough to insure sufficient loose soil to provide adequate seed cover.

6. SOWING THE SEED

Seed immediately after preparation of the seedbed. Uniform seed distribution shall be accomplished by drilling, broadcasting or hydraulically seeding. If a hydraulic seeder is used, the seed, fertilizer and mulch may be applied together with water.

Immediately after seeding, except in the case of hydraulic seeding, the soil shall be firmed with a cultipacker or other equipment approved by the NRCS Inspector to give the seed a cover of not more than 1/2 inch. Where broadcast seeding, the seed will be covered by use of hand rake or by dragging harrows, chains, or other suitable equipment over the surface or mulch to cover the seed.

On slopes steeper than 3:1, the seed may be covered by hand without cultipacking.

7. MULCHING

The required mulching shall be performed with hydraulic seeding or immediately after seeding. The mulch shall be applied uniformly over the area. The type and rate shall be as specified on the drawings or as shown on an attachment to this specification.

The mulch, except for hydraulically placed mulch, shall be anchored.. Anchoring of the mulch shall be performed by application of a commercially available tackifier at the rate recommended by the manufacturer, a mulch anchoring tool, tandem disk weighted and set nearly straight, track type tractor, or by installation of mulch netting. Mechanical anchoring shall be performed in a manner that creates ridges perpendicular to flow of water. Where mulch netting is used, follow Construction Specification 167, Mulch Netting.

8. QUANTITIES

The estimated area to be seeded = _____(acres) (1000 square feet)

a. Lime

The following minimum amount of lime shall be applied:

_____ pounds per (acre) (1000 square feet)

_____ pounds total

b. Fertilizer

Without soil tests, apply a minimum of 500 pounds per acre or 12 pounds per 1000 square feet of a commercial fertilizer having an analysis of 12-12-12 or equivalent. (Equivalent 19-19-19 is 315 pounds per acre or 7.5 pounds per 1000 square feet.)

With a soil test, apply the Michigan State University recommended rate of fertilizer for establishment of the seeding specified.

_____ pounds of (12-12-12) fertilizer total

_____ pounds of (19-19-19) fertilizer total

c. **Seed**

The following kinds and rates of seed shall be sown:

<u>Kind of Seed</u>	<u>(lbs./acre) (lbs./1000 ft.²)</u>	<u>Total Seed (lbs.)(kg)</u>
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d. **Mulch**

Straw mulch shall be spread at the rate of 1.5 to 2 tons per acre or 2 to 3 bales per 1000 square feet.

Hay mulch shall be dry and spread at the rate of 2 to 2.5 tons per acre or 3 to 4 bales per 1000 square feet.

_____ (Tons) (Bales) total mulch (Hay) (Straw)

_____ square yards total of netting