

**904 - SEEDING**

**SECTION 904**

**SEEDING**

**904.1 DESCRIPTION**

Prepare the seedbed, provide the seed and plant at the rate and in the locations designated in the Contract Documents.

**BID ITEMS**

- Seed (\*)
- Seed (Hydro) (\*)
- Seeding
- \* Type of Seed

**UNITS**

- Pound
- Pound
- Lump Sum

**904.2 MATERIALS**

Provide seeds and nitrogen-fixing bacteria that comply with **DIVISION 2100**. Do not change seed or seed mixture without approval of the Environmental Scientist (Bureau of Right of Way, Environmental Services Section).

**904.3 CONSTRUCTION REQUIREMENTS**

**a. Seeding Seasons.** Determine the seeding season using **TABLE 904-1**.

<b>TABLE 904-1: GRASS &amp; WILDFLOWER SEEDING SEASONS</b>	
<b>Type</b>	<b>Season</b>
Cool Season Grasses	February 15 thru April 20 August 15 thru September 30
Warm Season Grasses and Wildflowers	November 15 thru June 1

If cool season grasses are mixed with warm season grasses, seed the area during the seeding season for warm season grasses.

When the area to be seeded is less than 1 acre (bid item "Seeding" per lump sum), seed the area during the seeding seasons specified for either cool season grasses or warm season grasses. Plant temporary seeding any time of the year.

Seed the project during the proper seeding season to protect the finished grading. This may require seeding different parts of the project at different times or seasons. Complete permanent seeding during the first season after the grading work is finished. Complete the area once the seeding operations begin in an area.

The Environmental Scientist or Stormwater Compliance Engineer may extend the seeding season a few days in special situations depending on area and weather conditions.

**b. Preparation of the Seedbed.** Unless shown otherwise in the Contract Documents, prepare the seedbed and seed all disturbed or cultivated areas within the right-of-way and construction easements. Seed and mulch the area within 24 hours of seedbed preparation.

Repair eroded areas before the seedbed is prepared.

In urban areas, use a landscape box to level the seedbed. Grade seedbeds to the elevations of abutting sidewalks. Remove rocks and other debris detrimental to lawn maintenance equipment.

Before seeding, use tillage equipment that penetrates 2 to 3 inches to prepare a firm, friable and weed-free seedbed. If the use of disks and harrows is impracticable, prepare the seedbed using hand methods.

Prepare seedbeds in developed urban and residential areas using rotary tillers or similar equipment. Tractor mounted equipment is permitted if the area is large enough to facilitate the use of such equipment.

Do not injure trees while preparing the seedbed. If the Engineer designates areas of desirable perennial native grasses to remain, do not till such areas. If areas of annual grasses such as cheat, crabgrass or triple-awn are encountered, destroy such grasses by thorough disking.

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Do not till areas if temporary or existing grasses provide stable slopes with no erosion. Seed the permanent grasses into the existing cover using a no-till drill.

**c. Seeding.** In rural areas, use seed drills that comply with **subsection 156.1**. If it is impracticable to operate a seed drill, broadcast the seed with a standard manufacture grass seeder. A hydro-seeder may be used in place of the broadcast seeder, when approved by the Engineer.

On lawn areas and small areas in developed urban areas, apply the seed with equipment suitable for the size of the area. Use manually operated drop-seeders, cyclone spreaders or other similar equipment when appropriate. After the seeding, but before mulching, hand rake the seeded lawn areas.

Similar size seeds may be mixed before drilling. The seed company may mix the seeds before delivery, or the Contractor may mix the seeds at the project site. If the seed company mixes the seeds, each bag of mixed seeds shall have a tag indicating the quantity (pounds) of each type seed and the total weight (pounds) of the bag. If the Contractor mixes the seeds, the Engineer must witness the mixing.

If required, inoculate the seeds according **DIVISION 2100**.

The drill used for seeding shall accommodate the seed sizes and weight of seed by the use of as many compartments as required. Seeds of compatible size and weight may be mixed and placed in the same compartment. Drill seed at the rate and in the locations shown in the Contract Documents. Drills shall comply with **subsection 156.1**.

Drill the seeds into the prepared seedbed. The maximum depth for drilling grass seeds is ½ inch. Unless shown otherwise in the Contract Documents, the maximum depth for drilling wildflower seeds is ⅛ inch. If grasses and wildflowers are seeded on the same area, drill the grasses first, then the wildflowers.

After an area is fertilized and seeded, use a seed drill with press wheels or separate cultipacker to firm the soil.

**d. Hydro-seeding.** On steep slopes or other areas inaccessible with a seed drill or broadcast seeder, a hydro seeder may be used when approved by the Engineer. Apply the seed-fertilizer-water slurry within 1 hour after the seed is added to the hydro-seeder tank. Apply seed evenly over the entire site. Use a fan-type nozzle with approximately 500 gallons of water per acre. Add 50 pounds of hydro-mulch per 500 gallons of water for a visual tracer. After the seeding, but before mulching, hand rake the seeded areas inaccessible by a cultipacker.

Immediately apply bonded fiber matrix mulching according to **subsection 905.3c**. Do not apply hydro-seed and bonded fiber matrix in one application.

**e. Seeding/Lump Sum.** This item is only used on projects with less than 1 acre of seeding.

Prepare the seedbed, fertilize, seed and mulch all disturbed or cultivated areas within the right-of-way and construction easements according to **DIVISION 900**.

### 904.4 MEASUREMENT AND PAYMENT

The Engineer will measure the total quantity for each type of pure live seed used by the pound.

The Engineer will not measure hydromulch used as a visual tracer for separate payment. This work is subsidiary to the hydro-seeding item.

Bonded fiber matrix mulching will be measured and paid for according to **SECTION 905**.

The Engineer will measure "Seeding" by the lump sum. No measurement will be made of the area seeded.

Payment for the various types of "Seed", "Seed (Hydro)" and "Seeding" at the contract unit prices is full compensation for the specified work.