

SECTION 059
SPECIFICATIONS - SEEDING AND SODDING

All costs associated with the initial seeding and sodding and any subsequent maintenance, reseeding, or resodding required, shall be the exclusive responsibility of the Contractor. If the Contractor fails to properly provide for seeding or sodding in the areas disturbed by construction activities, to the satisfaction of the Engineer, the District shall have the right to have the seeding or sodding performed in accordance with these specifications by a third party, and all associated costs shall be the exclusive responsibility of the Contractor.

1.0 Preparing for Sodding and Seeding

Preparation for sodding and seeding shall be performed in accordance with the following specifications.

1.1 Soil Preparation

Sodding and seeding shall be performed using a quality layer of worked topsoil of no less than six (6) inches in depth. Seedbed preparation shall not start until all stones, debris, roots, etc. larger than one (1) inch in diameter, or length, have been removed. As approved by the Engineer, the area shall be sufficiently worked to a minimum depth of three (3) inches such that the topsoil material is sufficiently aerated and loose. Equipment used to work the soil shall include a disk or other equipment approved by the Engineer. No seed or sod shall be used on the area when the soil is crusted or caked, and has not been approved by the Engineer.

1.2 Fertilizing

Seeding or sodding cannot be started until a commercial grade synthetic, slow-release fertilizer has been applied at the rate of one (1) pound of Nitrogen per 1,000 square feet of area to be seeded. The fertilizer shall be delivered to the site in suitable containers that are fully labeled. The nutrient mixture of the fertilizer shall be 11 % total nitrogen, 15 % total phosphorus and 11 % water-soluble potash.

Dry fertilizers shall not be applied during hot, dry weather. Generally, the fertilizer shall be applied during either the early morning hours or later in the afternoon, avoiding the daytime hours corresponding to peak sun intensity and temperature. Dry fertilizers shall not be applied until the area to be fertilized is completely watered. After fertilizer application, the area shall again be completely watered to the point of runoff.

2.0 Seeding

Seeding shall be performed in accordance with the following specifications.

2.1 Seed Mix

In improved areas that have a grassy lawn preexisting before the commencement of construction, the mixture of seed to be sown shall be chosen to approximately match the existing. Generally, in lawn areas, the grass seed mixture shall be composed of sixty (60) percent Kentucky blue grass, twenty (20) percent creeping red fescue, and twenty (20) percent perennial rye grass. The Contractor shall not introduce any foreign grass types that might overtake existing lawns. Otherwise, in areas not occupied by lawns, such as in right-of-ways or in waterways, the grass seed mixture shall be composed of forty (40) percent Kentucky blue grass, twenty (20) percent creeping red fescue, and forty (40) percent perennial rye grass.

Seed mixtures shall be mixed to the satisfaction of the Engineer and delivered to the site of the work in unopened bags with the seed analysis label clearly visible. Germination percentages for each seed type shall not be less than seventy (70) percent. Seed mixes shall not contain any noxious weeds. Additionally, seed mixes shall not contain any "other crop seeds". Weed seed amounts in each bag of seed mix shall be less than one (1) percent. Finally, bags of seed mix shall not have a test date listed on the label older than one (1) year prior to the date of seed application.

2.2 Application

No seed shall be sown in windy conditions or, in the opinion of the Engineer, when soil is either too wet or in improper condition for seeding. Seeding shall be performed within twenty-four (24) hours after soil preparation, unless, in the judgment of the Engineer, weather conditions prohibit seeding.

Grass seed shall be sown by using a broadcast spreader, a drop spreader or, if the area is small enough, a handheld spreader, and at the rate of eight (8) pounds per 1,000 square feet. Seed application shall be evenly distributed throughout the area sown to provide for a uniformly textured lawn. The seeding equipment shall be so operated so as to insure a complete coverage of the entire area to be seeded. The seed shall be worked into the soil to a depth to ensure good contact between the seed and soil, but not too deep to prohibit growth. The seed shall then be rolled with a water-filled roller no more than twelve (12) hours after seeding to insure the seed is well compacted into the soil and to level the area of seed application.

2.3 Mulching

Within twenty-four (24) hours from the time seeding has been performed, the area shall be mulched using an approved mulch material. Unless otherwise approved by the Engineer, mulch material shall be straw, hay or burlap. Mulching material shall be spread evenly over the entire sown area and separated sufficiently to prevent packing. Straw and hay shall be spread to a depth of not less than three (3) inches. The Contractor shall keep the seeded and mulched areas moist for a period of four (4) weeks from the date of sowing. The applied layer of mulching material shall also be maintained for four (4) weeks after seeding is applied. Watering shall be performed using a fine water spray.

2.4 Straw Erosion Control Blanket

When required by the Engineer, use a straw erosion control blanket in lieu of mulch as specified above. The straw erosion control blanket shall be DS150 as manufactured by North American Green, or equivalent. The straw erosion control blanket shall be a machine-produced mat with a one-hundred (100) percent agricultural straw matrix.

The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the blanket. The blanket shall be covered on the top and bottom with polypropylene netting having an approximate ½ inch by ½ inch mesh with photodegradable accelerators to provide breakdown of the netting within approximately forty-five (45) to sixty (60) days, depending on geographic location and elevation. The blanket shall be sewn together on 1½-inch centers (fifty (50) stitches per roll width) with degradable thread.

Installation staple patterns shall be clearly marked on the erosion control blanket with environmentally safe paint. The blanket shall be manufactured with a colored line or thread stitched along both outer edges (approximately two to five inches from the edge) to ensure proper material overlapping.

The erosion control blanket shall have the following properties: the matrix is to be one-hundred (100) percent straw fiber with a density of 0.50 lb/yd²; the netting, both topside and bottom side, is to be lightweight and photodegradable with photo accelerators and have an approximate density of 1.64 lbs/1,000 ft²; the thread shall also be degradable. Each roll shall also have the following properties: the width shall be 6.67 feet, the length shall be 108 feet, the weight shall be forty (40) pounds, ± ten (10) percent, the area shall be eighty (80) yd² and the stitch spacing shall be 1½ inches.

2.5 Reseeding

Washouts or areas that fail to yield a good grass covering by the passing of a growing season shall be regraded, pulverized, reseeded and mulched, in accordance with these specifications, until good grass coverage is obtained to the satisfaction of the Engineer.

3.0 Sodding

The placing of sod shall be performed in accordance with the following specifications.

3.1 Sod

Sod types shall be chosen to best match the existing lawn conditions and withstand the predominant climate conditions. Sod shall be nursery or field grown, certified, well rooted, and approved by the Engineer before application. Sod shall be cool to the touch, free of unwanted insects, disease, weeds or objectionable plants. The age of the sod shall be such that no tall grasses are matted into the rolled sod. The soil adherent to the sod shall be such that it will not break, crumble or tear during sod application. Sod shall not be matted such that penetration into the soil by water or fertilizers is inhibited. Roots shall be at least ½ inch long and the total thickness of the sod shall be between one (1) and three (3) inches. The color of the sod shall be vibrant green.

Delivered sod shall be moist, but not saturated, and kept moist until applied. Sod shall not have dried out or been cut more than forty-eight (48) hours before application. If application is delayed after delivery, the sod shall be stored in a shady place, unrolled and kept moist until application.

3.2 Application

Sod shall be placed within twenty-four (24) hours of soil preparation and fertilizing. Sod shall be placed on the prepared surface with the edges in close contact and the alternate courses staggered. The edges of the sod rolls shall be staggered upon application such that a continuous seam is not developed between two adjoining rolls. On slopes, the sod shall be placed with the longer dimension parallel to the ground contour. Sod shall be staked on all slopes of two (2) to one (1) or greater with four (4) stakes per square yard.

Within eight (8) hours after application, the applied sod shall be watered with a fine spray such that the soil is kept moist. The soil shall be kept moist for a period of four (4) weeks after sod application with watering performed in the early morning or late afternoon. After application, any cracks or gaps between sod mats shall be filled in with quality topsoil. Within twelve (12) hours of application, the entire area of applied sod shall be leveled using a water-filled roller.

END OF SECTION

