

ITEM 25

TOPSOIL AND SEEDING

1.0 DESCRIPTION. The Contractor shall, under Item 25, furnish all labor required to prepare the ground surface; place all topsoil over the areas shown on the drawings, where ordered by the Engineer or wherever required for the proper completion of the Contract. In those areas where exposed earth surface is to be reseeded, furnish and apply fertilizer, seed and mulch as specified for the proper completion of the work included under the Contract.

2.0 SUBMITTALS. The Contractor shall submit the following information:

A. Reference Standards. This section is not applicable.

B. Shop Drawings.

1. All shop drawings submitted electronically for review and approval shall be returned within two weeks either approved or marked up for further design.
2. After examination of such drawings by the Engineer and the return thereof, the Contractor shall make such correction to the drawings as have been indicated and shall furnish the Engineer with electronic corrections.
3. Topsoil analysis: The county may request samples.
4. Seed mixes: The Contractor shall submit the manufacturer's data on composition and application instructions.

C. Calculations. This section is not applicable.

D. Certifications. This section is not applicable.

3.0 MATERIALS. Only materials approved by the Stark County Metropolitan Sewer District may be used for this project.

A. Topsoil.

1. Topsoil material shall consist of loose, friable, sandy loam topsoil without admixture of subsoil or refuse. For topsoil to be considered loamy, that fraction passing the No. 10 sieve shall contain no more than 25 percent clay, 25-50 percent silt, and 50-70 percent sand.
2. Acceptable topsoil shall contain not less than 5 percent nor more than 10 percent organic matter as determined by loss on ignition of samples oven dried to constant weight at 212 degrees Fahrenheit.
3. Furnish topsoil that is free of manmade materials, grass, brush, roots, noxious weeds, and rocks/clay pieces bigger than three-fourths ($\frac{3}{4}$) inch in diameter.

4. Soil shall have a pH of 5.0 – 7.0 and a salinity not greater than 3 millimhos per centimeter at 25° C (per USDA Circular No. 982).

B. Seeding.

1. In residential and other areas as directed by the Engineer, ODOT “Lawn” Mixture shall be used.
2. In all other areas, ODOT “Roadside Lawn” Mixtures shall be used.

C. Mulching.

1. Clean new wheat or oats straw or other approved mulching material.
2. Mulching material must be free of weed seeds.

4.0 EXECUTION.

A. Placing Topsoil.

1. At residential areas, topsoil shall be placed at a minimum thickness of four (4) inches. Unless indicated otherwise.
2. Non-residential areas topsoil shall be placed to match existing.
3. Contractor shall accurately grade the topsoil to the required lines and regrade and roll with a light roller to secure smoothness.
4. Any sliding, settling, or washing out which may occur before the completion of the Contract shall be repaired in a satisfactory manner.
5. Placing/spreading shall not be done when ground is frozen, excessively wet, or otherwise in a detrimental condition. Surfaces designated to be covered shall be lightly scarified just prior to spreading. Compacting is not required.

B. Surface Preparation and Fertilization.

1. Contractor to finely divide planting surface hand raking or the use of a harrow.
2. Contractor shall remove all rubbish, twigs, pieces of bark and all stones three-fourths (3/4) inch in diameter or over.
3. A grass fertilizer such as 12-12-12 or an approved equal shall be applied at the rate of twenty (20) pounds per one thousand (1,000) square feet (870 pounds per acre).
4. Fertilizer shall be raked into the soil to a depth of about one (1) inch.

C. Seeding.

1. Contractor shall seed all areas deemed necessary within project limits.
2. At the completion of the work, the Contractor shall be responsible for a good crop of grass upon the areas seeded.
3. Seed shall be sown immediately after the preparation of the surface.
4. The kind of seed to be used depends upon the location.
5. All seed shall be inoculated against disease.
6. Hydro seeding or broadcasting shall be done at the rate specified by the seed manufacturer and in accordance with provisions of ODOT Item 659.

7. Under all conditions after the seed is sown, it shall be raked to a depth of one-fourth (1/4) inch and rolled with an approved roller weighing not over sixty-five (65) pounds per foot of width for sandy soils, except that when intervening precipitation causes such rolling to be unnecessary or detrimental to seeded areas, such rolling may be omitted when permission to do so has been obtained from the Engineer.

D. Mulching.

1. Immediately after seeding and rolling, approved mulching material shall be placed at the rate of one hundred (100) pounds per one thousand (1000) square feet, or such other rate as may be approved.
2. Straw shall be wetted down to prevent blowing away by wind.
3. On slopes and ditches, straw shall be restrained with pinned jute matting or a pinned single net biodegradable straw blanket.
4. Mulch shall not be removed until a good stand of grass has been well started. When removed, all straw or other mulch must be disposed of off the site of the work.
5. The Contractor may, at his option, apply an approved emulsion, such as SS-I, (applied at a rate of 120 gallons per acre), instead of wetting the mulch.

E. Watering.

1. Thoroughly water all permanent seeded areas after the seed has germinated.
2. Apply a total rate of 300 gallons per 1,000 square feet in at least two (2) applications spread over seven (7) days.
3. Apply the water using a hydro-seeder or a water tank under pressure with a nozzle that produces a spray that will not dislodge the mulch material.
4. Perform a secondary water application between seven (7) and ten (10) days after the primary applications. If ½-inch or greater of rainfall has occurred within the first 7-day period, the Contractor may delay or omit the secondary application, with the approval of the Engineer, depending on weather conditions.

5.0 ELECTRICAL. This section is not applicable.

6.0 QUALITY ASSURANCE.

A. Maintenance.

1. The Contractor shall maintain the seeded areas for one (1) month after the final payment; included shall be watering and cutting as necessary. Watering and cutting following the period of the Contractor's responsibility shall be the County's responsibility.
2. If at any time before the expiration of the Contract Bond (usually one (1) year after final payment is made) any part of the seeded area is not in good condition, the

Contractor shall fertilize such area and shall reseed it as often as may be necessary to get a good, dense stand of grass.

7.0 MEASUREMENT. If applicable, the pricing shall be a lump sum or unit price for the material and installation of all required topsoil and seeding.

8.0 PAYMENT. The area to be paid for under this item shall include all areas within or adjacent to the project site that have been cleared, filled, backfilled, or disturbed during the process of construction.

The lump sum or unit price stipulated in the proposal for topsoil and seeding under Item 25 shall include all materials, labor, tools and equipment to complete the work as called for on the drawings and as specified herein, including the furnishing of the seed and other required materials, preparation of the surfaces, fertilizing, the seeding, rolling, mulching, watering and cutting of the grass, the maintenance of the surfaces in good condition, and the fertilizing and reseedling of areas where the first seeding and subsequent seedings are not successful. If no such lump sum or unit pricing is included in the proposal, then no separate payment shall be made as specified in this item, and therefore shall be deemed to be included in the bid price for the items that require it.

<u>Item</u>	<u>Unit</u>	<u>Description</u>
25	LS/SY	Topsoil and Seeding

END OF SECTION