

SECTION 312120 – TURF AND GRASSES

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The work consists of the re-establishment of a healthy and vigorous turf over all areas of the site disturbed by the Contractor that were occupied by permanent lawns prior to construction.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Grass Seed

Name	Prop by Wt.	Minimum Percent Purity	Minimum Percent Germ.	Maximum Percent Weed Seed
Type I				
Kentucky 31 Fescue	100%	98	90	1
Type II				
Kentucky 31 Fescue	75%	98	90	1
Annual ryegrain	25%	98	90	1

- B. All seed shall be fresh, clean, from new crop seed, and delivered in unopened original packages, which carry a guaranteed analysis by a recognized authority.
- C. Lime: Ground limestone (dolomite) containing not less than 85% of total carbonates.
- D. Commercial Fertilizer: 10-10-10 formula conforming to the applicable State of North Carolina Board of Agriculture Fertilizer Laws. It shall be uniform in composition, dry and free flowing and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer’s guaranteed analysis.
- E. Superphosphate: Phosphate rock, finely ground, containing not less than 18% available phosphoric acid.
- F. Water: Contractor shall make, at his expense, arrangements to ensure an adequate supply of water to meet the needs of this Contract. Furnish all necessary hose, equipment and attachments, for the adequate irrigation of lawns as may be required to complete the work.
- G. Jute Matting: A uniform open plain weave of single jute yarn, 18” wide. Weight shall average 1.22 pounds per linear yard of matting.
- H. Mulch: Small grain straw or tame hay, air dry threshed and free of undesirable weed seed.

PART 3 - EXECUTION

3.1 SEEDBED PREPARATION

- A. Preparation of Subgrade: Subsoil shall be graded and uniformly compacted so that it will be parallel to proposed finished grade. Subgrade material shall be loosened and mixed to a depth of 3" and all stones over 2" in size, sticks, and rubbish shall be removed. No heavy objects except lawn rollers shall be moved over prepared subgrade unless the subgrade soil is again graded and loosened as specified above before topsoil is spread.
- B. Finished Grading: After the subgrade soil has been prepared, topsoil shall be spread evenly thereon and lightly compacted. No topsoil shall be spread in a frozen or muddy condition. Finished grades shall be the same as final grades shown on drawings. Where final grades are not indicated, finished grades shall be level or sloping between points for which elevations are given or between such points and existing grades in conformity with the molding of the surface indicated by the finish grade contours. Spot elevations take precedence over the grades which might be interpolated between contours. Surfaces shall be rounded where there is an appreciable or noticeable change in slope. Good surface drainage must be provided and minor modifications in the specified grades as may be necessary for that purpose are authorized subject to approval of the A-E. Areas which must drain onto walks or pavement shall be filled so that after settlement they will be 1/2" higher than the adjacent walks or pavement. Areas toward which walks are sloped to drain shall be filled so that after settlement they will be 1/2" to 1" lower than the adjacent walk.
 - 1. Areas to be seeded shall be brought to finished grade.
 - 2. Allowance for settlement shall be made.
 - 3. Areas where the topsoil has not been removed shall be scarified and smoothed. Remove sticks, stones and rubbish.

3.2 SOIL IMPROVEMENTS

- A. Application rates for soil additives and mulch:
 - 1. Fertilizer 10-10-10 @ 20 lb. per 1000 sq. ft.
 - 2. Lime @ 100 lb. per 1000 sq. ft.
(Apply October-March)
 - 3. Superphosphate @ 15 lb. per 1000 sq. ft.
 - 4. Asphalt emulsion 7 gallons per 1,000 sq. ft.
 - 5. Mulch all areas 1-1/2 to 2 bales per 1,000 sq. ft.

3.3 SEEDING

- A. Seed may be sown immediately after application of soil additives, provided the bed has remained in a good, friable condition and has not become muddy or hard. If it has become hard, it shall be tilled to a friable condition again.

- B. Seed must be sown within thirty (30) calendar days after grading is completed, and whenever the weather and soil conditions are favorable or as otherwise authorized by the Owner or his representative and with the consent of the Contractor.
- C. Seeding shall be accomplished by any accepted method such as, but not limited to, hand broadcast, cultipacker, drill type, or the hydraulic method. The hydraulic method may be required on embankments with slopes greater than 3 to 1.
- D. Sowing of Seed: Immediately before any seed is to be sown, the ground shall be scarified as necessary and shall be raked until the surface is smooth, friable and of uniform medium-fine texture. The method of sowing the seed may be varied at the discretion of the Contractor on his responsibility to establish a smooth, uniform turf composed of the grasses specified. If area is to be seeded between October 15 and February 15, sow with Type II seed. After February sow Type I seed over the areas seeded with Type II. Sowing of seed shall be at the rates as shown below:

<u>Name</u>	<u>Dates for Seeding</u>	<u>Rate - lbs. per Acre</u>
Type I	Feb. 15 - Oct. 15	200
Type II (Temporary)	Oct. 15 - Feb. 15	200

- E. Installation of Jute Matting: Unroll jute matting downgrade and run each strip parallel to the previous strip with a 2" overlay. Bury the top end of the jute strip in a trench 4" deep. Staple the matting 10" on center at intervals 4' apart. Staples should be No. 8 gauge wire 8" - 10" in length. Jute matting shall be used on all slopes with a gradient steeper than a 2-1/2 to 1 slope. Ditches which are subject to erosion shall receive jute matting.
- F. Mulch: Spread straw mulch and tack with asphalt emulsion using the application rates specified above.
- G. Clean-Up: Any soil, manure, or similar material which has been brought onto paved areas by hauling operations, shall be removed. Upon completion of the planting, all excess soil, stones and debris shall be removed from the site or disposed of as directed by the A-E. All lawns and planting areas shall be prepared for final inspection.
- H. Erosion Control: Areas of erosion damage shall be repaired and maintained until acceptance of the project.

3.4 MAINTENANCE AND PROTECTION

- A. Acceptance Before Maintenance Begins: There shall be an acceptance of grading and lawn installation before maintenance begins.
- B. Contractor shall make, at his expense, arrangements to ensure an adequate supply of water to meet the needs of this contract. Contractor shall maintain grass areas by watering, weeding, mowing and reseeding as necessary to control erosion. It shall continue until the turf is established even though the remainder of the project may have been accepted by the Owner.
- C. Maintenance shall also include all temporary protection fences, barriers and signs, where deemed necessary, and all other work incidental to proper maintenance.

3.5 RESPONSIBILITY FOR LAWNS

- A. Until the project is finally accepted, the Contractor shall repair or replace any seeding or mulching that is defective or becomes damaged. When, in the judgment of the A-E, such defects or damages are the result of poor workmanship or failure to meet the requirements of the specifications, the cost of the necessary repairs or replacements shall be borne by the Contractor.

3.6 INSPECTION AND ACCEPTANCE

- A. At the conclusion of the project the A-E shall inspect the seeded areas upon written request by the Contractor. The request shall be received at least 10 days before the anticipated date of inspection.
- B. Inspection and acceptance of seeded areas may be requested and granted in part, provided the area for which acceptance is requested is relatively substantial in size with clearly definable boundaries.

END OF SECTION 312120