

SODDING

DESCRIPTION OF WORK

This supplemental specification includes all labor, materials and equipment necessary for the preparation of the sod bed, furnishing and installing sod, watering, and maintenance for completed sodded areas as specified in the contract documents.

PROTECTION OF PROPERTY

Protect existing conditions at the site against damage including the following:

- A. Take precautions to insure that equipment, vehicles, and planting operations do not disturb or damage existing grades, walls, drives, pavement, utilities, plants, lawns, irrigation systems, and other facilities.
- B. Verify locations and depths of all underground utilities prior to excavation and report conflicts with grade or sod operations.
- C. Any damage to existing trees or shrubs, including branches, and root systems to remain and protect shall be repaired and/or pruned by an approved, experienced tree surgeon or arborist at the Contractors expense.
- D. Repair, replace, and/or return to original condition any damaged item, without additional compensation.

SUBMITTALS

- A. Submit certification of products to the Engineer prior to sod placement:
 - 1. Sod: Submit sod grower's certification of grass species and location of sources.
 - 2. Fertilizer: Submit certification of the fertilizer analysis.

QUALITY ASSURANCE

All materials described and specified herein as delivered to the project site shall be subject to inspection and approval by the Engineer or his representative. The Engineer may inspect materials at source of supply. This inspection does not waive the right to reject any material after it has been delivered to the site and/or installed.

DELIVERY, STORAGE, AND HANDLING

- A. Sod shall be harvested, delivered, and transplanted within a period of twenty four (24) hours unless a suitable preservation method is approved by the Engineer prior to delivery.
- B. Do not harvest or transport sod when moisture content may adversely affect sod survival.
- C. Protect sod from sun, wind, dehydration, and rain prior to installation that cannot be placed immediately on delivery.
- D. Sod showing visible signs of heating or dehydration will be rejected.
- E. Do not tear, stretch, or drop sod during handling and installation.
- F. Deliver fertilizer to site in original, unopened, and non-damaged containers, each bearing manufacturer's guaranteed analysis.

SCHEDULING

- A. Notify the Engineer or his representative at least two (2) days prior to the start of sodding operations.
- B. Perform sodding operations after all land-disturbing activity is completed, and after the sod bed has been approved by the Engineer or his representative.

PRODUCTS-

- A. Sod shall be a well-established, well-rooted, healthy nursery-grown sod blend of improved Kentucky Bluegrass, no less than 18 months old, with a uniform color, leaf texture, density, and varieties consisting of a minimum of three cultivars.
- B. Fertilizer shall comply with the rules of the Iowa Department of Agriculture and as follows:
 - 1. The grade of fertilizer will be identified according to the percent nitrogen (N), percent of available phosphoric acid (P_2O_5), and percent water soluble potassium (K_2O), in that order, and approval will be based on that identification.
 - 2. All fertilizer shall be furnished from an established fertilizer dealer. The fertilizer supplier shall provide a guaranteed percentage analysis on each container with the proper scale weight records.
 - 3. Fertilizer shall be of a type that can be uniformly distributed by the application equipment. Fertilizer may be furnished in a dry (granular) or liquid form.
 - 4. When applied dry, the fertilizer shall be a granular, non-burning chemically combined product composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer. Granular or pellet form shall be uniform in composition, dry, and free flowing without caking or other damage not suitable for use.
 - 5. When applied in a liquid form, fertilizer may be chemically combined or may be furnished as separate ingredients.
- C. Stakes shall be wood or metal meeting the requirements of Iowa D.O.T. Standard Road Plan RC-12, Erosion Control Details (Sod).
- D. Water shall be free of substances that may be harmful to the growth of sod.

EXECUTION-

- A. Finish Grading-
Prior to the sodding contractor beginning sodding operations, the Contractor shall grade areas to prevent ponding of water.
- B. Preparation of sod bed-
 - 1. Limit preparation to areas, which will be immediately sodded.
 - 2. Where weed growth has developed, remove all weeds and weed debris. Weed growth removal process to be approved by Engineer, without additional compensation.
 - 3. Contractor shall shape and fine grade to remove washes or gullies, water pockets, and irregularities to a smooth, firm, and even surface true to grade and cross-section.
 - 4. Rototill and cultivate sod bed to a minimum three inch (3") depth to a fine and mellow condition. Clear the top three inches (3") of soil lumps, stones over 3/4 inch, and foreign material using hand labor as required.
- C. Sod Installation-
 - 1. Sod shall not be installed between the dates of June 15 to August 15, unless authorized by Engineer.
 - 2. Do not lay sod on frozen soil or when frost is anticipated within twenty four (24) hours.
 - 3. Do not lay dormant or frozen sod.
 - 4. Dampen dry soil prior to sodding. Sod shall be moist when placed.

5. Sod shall be carefully placed in rows or strips evenly, with longest joint parallel to the finished contours and at right angles to the centerline of ditches and channels. On slopes, sodding shall begin at the bottom and progress upward.
6. Minimize traffic on newly laid sod during installation. Provide plank or wood sheets as may be required to protect sod already laid, without extra compensation during sodding operations.
7. Lay each strip with tightly fitted joints against each other without voids. Do not overlap edges. Joints at the ends of sod strips shall be staggered with adjacent strips of sod.
8. Finish sod edges at walks, curbs, planting, mulch edges, and other vertical surface by cutting neatly and fitting tightly to edge and line.
9. Lay sod mat approximately one inch (1") below finished height of walks, pavement, curbs, etc., measured from top of soil. Any sod not conforming to this requirement will be removed, the subgrade adjusted, and the sod re-laid.
10. Where new sod joins existing lawns, cut straight and neatly into existing lawn and level subgrade to allow height to match.
11. Stake sod on grades exceeding 4:1 and in drainage channels. Stake each roll at minimum two-foot (2') intervals to prevent movement under rainfall conditions.
12. Soil shall be firmed or healed in along the edges of the sodded areas.
13. Roll sod that has been lightly watered with small mechanical or hand roller to sufficiently set or heal sod into soil and remove lumps. Roll as required to firm and level the sodded areas.

D. Watering-

1. Sod shall be saturated with water once each day for a minimum period of fifteen (15) days. All watering shall be sufficient to saturate thoroughly the sod, sod bed and adjacent disturbed areas to a depth of approximately 4 inches. Apply water uniformly and consistently on all sodded areas to prevent damage to sod and existing or recently planted trees and shrubs. Each watering shall provide necessary saturation without runoff.
2. Not more than 1 hour shall elapse between the laying and initial watering of the sod.
3. Natural precipitation may take the place of the watering requirements above at the discretion of the Engineer or his representative.

E. Maintenance-

1. Begin maintenance immediately following installation of sod and continue for a period until sodded areas are established with sod knitted in place. Maintenance period shall be a minimum of thirty (30) days.
2. Maintenance of sodded areas shall include watering, and replacement and installation of sod as originally specified for sodded areas failing to survive. Mowing shall be by others.

F. Clean-up-

1. Perform cleaning during installation of work and upon completion.
2. Remove from site all excess materials, debris, and equipment.
3. Hose down and/or broom clean all paved surfaces.
4. Repair any damage resulting from sodding operations.

ACCEPTANCE

A. Sod acceptance shall be based on the following criteria:

1. All requirements for the completed installation and maintenance have been provided.
2. Sodded areas shall consist of healthy, even-colored viable lawn this is free of weeds, undesirable grass species, disease, and insects.
3. Sod shall be "knitted down" to the soil so that it cannot be pulled up.
4. Sodded areas are without scattered bare spots, dead or dormant sod.
5. Clean-up operations are completed.

B. Replacement sod work shall be re-inspected in accordance with A. above before acceptance.

C. Projects will be accepted no sooner than sixty (60) days from the date that all activities were completed. However, the contractor shall guarantee growth; (1) until May 15th of the following year if sodding operations are conducted after August 10th and/or; (2) until November 30 if sodding operations are conducted prior to August 10th. Should undesirable growth be present as stipulated in paragraph A above, as determined by the engineer, the contractor shall re-sod at contractor's expense.