SECTION 32 92 23

SODDING

PART 1 GENERAL

Areas shall be sodded as specified in this section.

Sodding shall not be performed until final grading is inspected and approved.

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. Unless specifically noted, the current edition of the reference will be used.

TURFGRASS PRODUCERS INTERNATIONAL (TPI)

TPI GSS	Guideline Specifications to Turfgrass Sodding.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 602	Agricultural Liming Materials
ASTM D 4972	pH of Soils
ASTM D 5268	Topsoil Used for Landscaping Purposes
ASTM D 5883	Standard Guide for Use of Rotary Kiln Produced Expanded Shale, Clay or Slate (ESCS) as a Mineral Amendment in Topsoil Used for Landscaping and Related Purposes

OKLAHOMA STATE UNIVERSITY (OSU); Cooperative Extension Service

HLA-6418	Selecting a Lawn Grass for Oklahoma
HLA-6419	Establishing a Lawn in Oklahoma

1.2 SUBMITTALS

Government approval is required for all submittals. The following shall be submitted in accordance with Section 01 33 00; SUBMITTAL PROCEDURES:

SD-07 Certificates

Sod, Fertilizer

Prior to the delivery of materials, submit certificates of compliance attesting that materials meet the specified requirements. Certified copies of the material certificates shall include the following:

1.2.1 Sod. A sod vendor's certified statement shall be submitted for each sod type stating the botanical and common name for the sod and its percentage of purity.

1.2.2 Fertilizer. Certificates of inspection and manufacturer's or vendor's certified analyses for fertilizer materials shall be submitted.

1.3 DELIVERY, STORAGE, AND HANDLING

1.3.1 Delivery

1.3.1.1 Packaged materials shall be delivered in containers showing the weight, analysis and name of manufacturer.

1.3.1.2 Sod shall be protected from deterioration, drying and contamination during delivery.

1.3.1.3 Soil Amendments

Soil amendments shall be delivered to the site in the original, unopened containers bearing the manufacturer's chemical analysis. In lieu of containers, soil amendments may be furnished in bulk. A chemical analysis shall be provided for bulk deliveries.

1.3.1.4 Inspection

a) Sod shall be inspected upon arrival at the job site for conformity to species and quality. Sod that is unacceptable shall be removed from the jobsite immediately.

b) Other materials shall be inspected for compliance with specified requirements. The following shall be rejected: open soil amendment containers or wet soil amendments.

Unacceptable materials shall be removed from the job site.

1.3.2 Storage

Materials shall be stored in designated areas.

1.3.2.1 Sod shall be sprinkled with water and covered with moist burlap, straw or another approved covering and protected from exposure to wind and direct sunlight. Covering shall be such that air can circulate and heat will not be confined.

1.3.2.2 Fertilizer shall be stored in cool, dry location away from contaminants.

1.3.2.3 Chemical treatment materials shall be stored according to the manufacturer's instructions and not with sodding operation materials.

1.3.3 Handling

Except for bulk deliveries of rock, sand or soil, materials shall not be dropped or dumped from vehicles.

PART 2 PRODUCTS

2.1 SOD

Sod shall be nursery grade cultivated grass sod to match existing fibrous root system and shall be free from stones and burned or bare spots and shall be 95 percent free from noxious weeds.

2.1.1 Sod Cutting

Cut sod using an approved method in accordance with Turfgrass Producers International standards. Cut sod in pieces not exceeding one square yard with a soil portion thickness a minimum of three fourths of an inch and a maximum of one inch.

2.2 SOIL AMENDMENTS

Soil amendments shall consist of fertilizer, organic material and soil conditioners. Vermiculite shall not be used.

2.2.1 Fertilizer

Fertilizer materials shall contain the following percentage of components by weight:

10% Nitrogen
20% Phosphoric Acid
10% Potash

2.3 WATER

Water shall be the responsibility of the Contractor, unless otherwise noted. Water shall not contain elements toxic to plant life.

PART 3 EXECUTION

3.1 PLANTING SEASON AND WEATHER RESTRICTIONS

3.1.1 Perform sodding during the planting season.

3.1.2 The Contractor may perform sodding during a non-planting season if the Contractor submits a written letter guaranteeing growth at the beginning of the next planting season and the guarantee is accepted by the CO.

3.1.3 If a non-planting season interrupts the placement of sod, resume work at the beginning of the next planting season.

3.1.4 If a non-planting season interrupts the placement of sod required for erosion control, then the Contractor shall install temporary sod on the areas.

3.1.5 The CO reserves the right to suspend sodding operations during periods of excessively cold, hot, wet or dry conditions.

3.2 PREPARATION OF SUBGRADE FOR SOD

3.2.1 Fine grade sub-grade, eliminating uneven areas and low spots. Maintain lines, levels, profiles, and contours. Make changes in grade gradual. Blend slopes into level areas.

3.2.2 Remove foreign materials, undesirable plants and their roots, stones and debris. Do not bury foreign material beneath areas to be sodded. Remove sub-soil which has been contaminated with petroleum products.

3.3 LAYING SOD

3.3.1 Sodding shall be accomplished in accordance with the TPI Guideline Specifications for Sodding. Sod shall always be laid at right angles to slopes or the flow of water. On slope areas, sodding shall be started at the bottom of the slope. Sod sections shall be anchored on slopes steeper than 3-horizonal-to-1-vertical. Anchoring may be required when surface weight or pressure upon placed sod sections is anticipated to cause lateral movement. Sod anchors shall be placed a minimum 2 feet on caters with a minimum 2 anchors per sod section.

3.3.2 Lay sod as soon as possible after delivery to prevent deterioration.

3.3.3 Lay sod closely knit together with no open joints visible, and pieces not overlapped. Lay smooth and flush with adjoining grass areas and paving. Frayed edges shall be trimmed, and holes or missing corners shall be patched.

3.3.4 Water sodded areas immediately after installation. Apply sufficient water to saturate the new sod and the upper 4 inches of soil.

3.3.5 After the sod and soil have dried sufficiently to prevent damage, roll sodded areas to ensure good bond between sod and soil and to remove minor depressions and irregularities. Ensure rolling equipment weight is not over 250 pounds or less than 150 pounds.

3.4 ESTABLISHMENT OF TURF

3.4.1 The Contractor shall care for the sodded areas after installation until the acceptance of the entire project.

3.4.2 Establishment of turf shall include watering, mowing, and protection of embankments and ditches from erosion.

3.4.3 Watering

Newly sodded areas shall be watered frequently to maintain an adequate supply of moisture within the root zone, but not less than one inch of absorbed water per week shall be furnished.

3.4.4 Mowing

Sodded areas shall be mowed to a height of one and one-half inches whenever the average height of grass becomes three inches.

3.4.5 Fertilizing

An application of fertilizer (10-20-10) shall be made one week after sodding at the rate of 1.8 lb. of nitrogen per 1,000 square feet.

3.4.5.1 Fertilizer shall not be applied without prior written notice as to the quantity and area to be covered. Fertilizer to be used shall be stored on the site and not used until it is inspected and approved by the Contracting Officer as to its conformance to quality requirements. Any fertilizer applied without prior knowledge or observation by the Contracting Officer will be at contractor's expense and considered as not applied.

3.4.6 Maintenance During Establishment

3.4.6.1 Maintenance of the sodded areas shall include eradicating weeds, insects, and diseases; protecting embankments and ditches from surface erosion; maintaining erosion control materials; protecting installed areas from traffic; mowing; watering; and post-fertilization.

3.5 SURFACE EROSION CONTROL

3.5.1 Surface Erosion Control Material

3.5.1.1 Where indicated or as directed, surface erosion control material shall be installed in accordance with manufacturer's instructions. Placement of the material shall be accomplished without damage to installed material or without deviation to finished grade.

3.6 QUANTITY CHECK

For materials provided in bags, the empty bags shall be retained for recording the amount used. For materials provided in bulk, the weight certificates shall be retained as a record of the amount used. The amount of material used shall be compared with the total area covered to determine the rate of application used. Differences between the quantity applied and the quantity specified shall be adjusted as directed.

3.7 RESTORATION AND CLEAN UP

3.7.1 Restoration

Existing turf areas, pavements, and facilities that have been damaged from the sodding operation shall be restored to original condition at Contractor's expense.

3.7.2 Clean Up

Excess and waste material shall be removed from the sodded areas and shall be disposed offsite. Adjacent paved areas shall be cleaned.

3.8 PROTECTION OF SODDED AREAS

Sodded areas shall be protected from damage or disturbance after planting operations are complete.

Damage resulting from erosion, gullies, washouts, or other causes, shall be repaired by filling with topsoil, tamping, and re-sodding by the Contractor at his expense, if such damage occurs prior to acceptance of the project.

- End of Section -