

December 2013, rev 00

## **32 9200 – Turfgrass Sodding**

### **PART 1 - GENERAL**

#### 1.01 Section Includes

A. This work consists of a complete installation of sodded areas which include:

1. Soil preparation.
2. Fertilize and sodding of all specified areas.
3. Securing sod and erosion protection.
4. Sodded area protection.
5. Cleaning up work area.
6. Maintenance and watering until final acceptance.

#### 1.02 Definitions

- A. Topsoil: Fertile, friable, natural soil of loamy character without admixture or subsoil material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sand, stones, plants, roots, sticks, and other foreign material, with acidity range of between PH 6.0 and 6.8.
- B. Pulverized Topsoil: Topsoil crushed and screened to be free of clumps, rocks and debris.
- C. Amended Topsoil: Soil produced by homogeneously blending and thoroughly incorporating 60% topsoil, 20% coarse sand and 20% mushroom compost.
- D. Finish Grade: Elevation of finished surface of planting soil.
- E. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- F. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- G. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.

- H. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
  - I. Surface Soil: Whatever soil is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoils.
- 1.03 Submittals
- A. Submit sod growers certification of grass species. Identify source location.
- 1.04 Quality Assurance
- A. Installer's Field Supervision: Require installer to maintain an experienced full-time supervisor, with a minimum of five years' experience, on Project site when work is in progress.
    - 1. Pesticide/Herbicide Applicator: State licensed, commercial.
  - B. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory.
    - 1. The soil-testing laboratory shall oversee soil sampling.
    - 2. Report suitability of tested soil for turf growth.
      - a. State recommendations for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
      - b. Report presence of problem salts, minerals, or heavy metals; if present, provide additional recommendations for corrective action.
      - c. Sod: comply with Turf Producers International (TPI) classes of sod materials.
- 1.05 Delivery, Storage And Handling
- A. Deliver and install sod cut within a 48-hour period.
  - B. Do not transport sod when moisture content may adversely affect sod survival. Any sod that has dried out will be rejected and shall be immediately removed from job site by the contractor.
  - C. Cover sod on pallets to prevent dehydration. Do not tear, stretch, or drop sod during handling and installation.
  - D. Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in TPI's "Guideline Specifications to Turfgrass Sodding." ( [www.turfgrassod.org/](http://www.turfgrassod.org/))

### 1.06 Project Conditions

- A. Work notification: Notify Owner’s representative at least two (2) working days prior to start of sodding operations.
- B. Fine grading must be approved by Owner’s representative prior to the start of sodding operations.
- C. Protect existing utilities, paving, and other facilities from damage caused by sodding operations.
- D. Perform sodding work only after planting and other work affecting ground surface has been completed.

### 1.07 Warranty

- A. Provide a uniform stand of grass by watering, mowing and maintaining lawn areas until Final acceptance. Re-sod areas with specified materials, which fail to provide a uniform stand of grass until all affected areas are accepted by the Owner’s representative.
- B. Special Warranty: Installer agrees to repair or replace turf that fails in materials, workmanship, or growth within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control.
  - 2. Warranty Periods from Date of Substantial Completion: 12 months

## PART 2 - PRODUCTS

### 2.01 Materials

- A. Topsoil: Topsoil shall be defined as a friable, loamy mixture surface soil. It shall not be extremely acid or alkaline nor contain toxic substances harmful to plant growth, and shall be of uniform color and texture. Topsoil shall be free from large roots, sticks, weeds, brush, subsoil, clay lumps, or stones larger than one (1") inch in diameter, or other litter and extraneous matter undesirable to plant growth. Topsoil will be inspected by the owner at the source of supply or as delivered. Topsoil shall meet the approval of the owner prior to use. Any topsoil placed without approval may be subject to removal at the discretion of the Owner’s representative.

- B. Turfgrass Sod: Locally grown. Certified, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.
1. IDOT Class 1 Mixture:
    - a. Proportioned by weight as follows:
      - 1). 25 percent Supranova Supina Kentucky Bluegrass
      - 2). 25 percent NuBlue Kentucky Bluegrass
      - 3). 30 percent Perennial Ryegrass
      - 4). 20 percent Creeping Red Fescue
  2. IDOT Class 1A Salt Tolerant Mixture:
    - a. Proportioned by weight as follows:
      - 1). 17 percent Supranova Supina Kentucky Bluegrass
      - 2). 17 percent NuBlue Kentucky Bluegrass
      - 3). 11 percent Audubon Red Fescue
      - 4). 11 percent Perennial Ryegrass
      - 5). 11 percent Rescue 911 Hard Fescue
      - 6). 33 percent Fults Salt Grass
- C. Inorganic Soil Amendments (added as necessary to attain proper soil preparation)
1. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent, Class T or Class O.
  2. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, and with a minimum of 99 percent passing through No. 6 sieve and a maximum of 10 percent passing through No. 40 sieve.
  3. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
  4. Aluminum Sulfate: Commercial grade, unadulterated.
  5. Perlite: Horticultural perlite, soil amendment grade.
  6. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 sieve.
  7. Sand: Clean, washed, natural or manufactured, and free of toxic materials.
  8. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

D. Organic Soil Amendments (added as necessary to attain proper soil preparation)

1. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3-4-inch sieve; soluble salt content of 5 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings.
2. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or of granular texture, with a pH range of 3.4 to 4.8.
3. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

E. Fertilizers (added as necessary to attain proper soil preparation)

1. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of four (4) percent nitrogen and twenty (20) percent phosphoric acid.
2. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
3. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
  - a. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
4. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - a. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.

F. Pesticides:

1. General: Pesticide, registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

G. Herbicides:

1. General: Herbicide, registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

### PART 3. - EXECUTION

#### 3.01 Inspection

- A. Examine finish surfaces, grades, topsoil quality, and depth. Do not start sodding work until unsatisfactory conditions are corrected.

#### 3.02 Preparation

- A. Limit preparation to areas which will be immediately sodded.
- B. Loosen or till topsoil of areas to be sodded to a minimum depth of four (4) inches. Remove all clumps, clay and sod clods, stones over one (1) inch in any dimension, sticks, roots, and undesirable extraneous material and legally dispose of them off Owner's property prior to final grading.
- C. Finish Grading: Grade areas to be sodded to a smooth, uniform, free draining even surface with a loose, moderately coarse (uniformly fine) texture. Roll and rake, remove ridges, and fill depressions as required to drain and meet finish grade elevations.
  1. Reduce elevation of topsoil along edge of walks, curbs and pavements one (1) inch to allow for soil thickness of sod. Taper finish grade uniformly away from these walk, curb and pavement edges.
- D. Apply Starter fertilizer by mechanical or handheld rotary type distributor, thoroughly and evenly incorporated with soil to a depth of 3” by disking or other approved method.
- E. Thoroughly blend any amended topsoil or soil amendments.
- F. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed after fine grading and prior to sodding.
- G. Before sodding, obtain Owner’s representative’s acceptance of finish grading.
- H. Unchanged Subgrades: If turfgrass sod is to be placed in areas unaltered or undisturbed by excavating, grading, or surface-soil stripping operations, prepare surface soil as follows:
  1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.

2. Loosen surface soil to a depth of at least three (3) inches. Apply soil amendments and fertilizers according to topsoil mix proportions and mix thoroughly into top three (3) inches of soil. Till soil to a homogeneous mixture of fine texture.
  - a. Apply fertilizer directly to surface of soil before loosening.
3. Remove stones larger than 1-1/2 inch in any dimension as well as all sticks, roots, trash, and other extraneous matter.
4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.

### 3.03 Installation

#### A. Sodding.

1. Sod immediately after preparation of finish grade.

#### B. Lay sod within 24 hours of harvesting. Do not lay dormant sod or install sod on saturated or frozen soil.

#### C. Lay sod to form a solid mass with tightly fitted joints. Do not stretch or overlap butt ends and edges of sod. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with finish grade, eliminate air pockets, and form a smooth surface. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

1. Lay sod across angle of slopes exceeding 1:3. Install initial row of sod in a straight line, beginning at bottom of slopes, perpendicular to direction of the sloped area.
2. Anchor sod on slopes exceeding 1:6 with Greenscapes Bio-degradable Stakes, or equivalent, spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.

#### D. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

#### E. Roll with light lawn roller to ensure contact with finish grade.

### 3.04 Maintenance

- A. Maintain all sodded lawn areas for a period of at least 60 days or until Final Acceptance by the Owner's representative.

- B. All sodded lawn areas shall be protected using four foot poly fence, or simple four foot wood stakes, string and yellow caution flags. This warning fence shall be maintained until the ENTIRE project is completed and accepted by the Owner. Maintain fence at regular intervals.
- C. Maintain and establish sodded areas by watering, fertilizing, spot weeding, mowing, trimming, application of herbicides, fungicides, insecticides, and resodding until a full, uniform stand of grass free of weed, undesirable grass species, disease, and insects is achieved and accepted by the Owner's representative.
  - 1. Water sod thoroughly as required to establish proper rooting.
  - 2. Repair, rework, and resod all areas that have washed out or are eroded. Replace undesirable or dead areas with new sod.
- D. Mowing: Mow turf as soon as top growth reaches a three (3) inch height. Cut back to two inch (2") height. Repeat mowing as required to maintain specified height.
- E. Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- F. Initial Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is laid and continue until acceptable sod is established but not prior to final acceptance of the project by the Owner's representative.

### 3.05 Acceptance

- A. Sodded areas will be inspected at completion of installation and accepted subject to compliance with specified materials and installation requirements.
  - 1. Sodded areas will be acceptable provided all requirements, including maintenance, have been complied with and a healthy, even colored viable lawn is established, free from weeds, undesirable grass species, disease, and insects.

### 3.06 Cleaning

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from sodding operations.



End of Division 32 9200

**This section of the NIU Design Requirements establishes minimum requirements only.  
It should not be used as a complete specification.**