

SECTION 20 – SODDING, SEEDING AND LANDSCAPING

20.1 SODDING *(Rev. 10-01-09)*

Sod is generally placed on slopes steeper than 3:1; in front of dwellings with maintained lawns, in ditches with grade of 1% or over, and in areas where mulch seeding will not perform satisfactorily. It should be noted that sod placed on steep slopes must be pegged. The surface on which the sod is to be placed must be of sufficient depth below adjacent areas so that newly laid sod will be level with the surrounding surface.

All soil on which sod is to be laid must be treated with fertilizer as designated in the SS and SP. Sod laid during the months of June, July, and August, is subject to the following conditions:

1. Sod must be in good, live and growing condition at time of cutting.
2. Sod must be placed within 36 hours after cutting and during that period be protected from damage.

Winter sodding will be permitted when the temperature is above 35°F, and when both the sod and soil are not frozen. Sod must be properly protected from drying out and must be laid within 48 h after cutting.

The cost of furnishing and placing fertilizer used in sodding is included in the price per square yard of sod and is not to be paid for as a separate item. Water is not paid for as a separate item unless it is after the initial 30 day maintenance period.

20.2 SEEDING *(Rev. 10-01-09)*

The primary purpose of seeding is for erosion control and the secondary purpose is beautification. Sections of bare earth and the length of their exposure to erosion should be minimized. Large cut and fill slopes should be stage seeded as soon as they are finished. Taking time to include seeding operations as soon as possible, as often as possible, can help to reduce soil erosion. This should also prevent time lost to redress slopes after rain events.

Temporary seeding is applied prior to permanent seeding as a temporary erosion control feature. This operation is usually done one or more times during the contract as graded areas are completed or nearly completed. This involves the moving in and out of the seeding equipment in a disjointed fashion as opposed to the massive, one time, application associated with the permanent seeding operation.

There are two kinds of seeding, plain seeding and mulched seeding. The only difference between the two is that a mulching material is placed on those areas where mulched seeding is required.

Seeding may be paid for as mulched seeding by the square yard, or as separate bid items for seed by the pound, fertilizer by the ton, and mulching material by the ton. Check the

special provisions for each project, as different projects may require different quantities of seed and fertilizer.

All seeding operations require some inspection to ensure correct quantities, proper mixing of seed, correctly prepared seedbed, and any additional information to make detailed reports.

Fertilizer and seed must be applied with a sufficient amount of water when hydro-seeders are used to ensure a dampening effect, thus yielding a visual means of inspection for even distribution.

Some contractors and subcontractors may experience difficulty in obtaining the specified 12-12-12 fertilizer and request substitutes. The substitutes must be made of a balanced mix, such as 10-10-10. The application rate, however, must be adjusted to compensate for any change. Application of fertilizer will be based on the rate of 800 lb/ac for seeding and 400 lb/ac under sod unless otherwise specified in the contract or otherwise directed.

For example, a change from 12-12-12 to 10-10-10 for 1 acre of seeding would mean the application of $1 \text{ ac} \times (12/10) \times 800 \text{ lb/ac} = 960 \text{ lbs}$ of fertilizer, but only 800 lbs would be paid for. In other words, areas where extra fertilizer is applied, the pay quantity using 10-10-10 would be 10/12 of the quantities applied. Accurate records must be maintained of all the fertilizer used and recorded in the contract and project records. The computations converting the total actual quantity used to equivalent ton of 12-12-12 must be shown for the final construction record.

If seeding is to be paid for by separate bid items, it is the duty of the PE/S to see that the amount of seed used is recorded each day and properly reported. It will be permissible to count sacks of seed and fertilizer used each day, and then multiply by the weight of one sack to get the daily record of each. It is best to keep accurate records of all fertilizer delivered to any contract, then deduct the amount of fertilizer used in sodding to get correct quantities for separate pay items used in seeding.

Mulching material is paid for by the ton, so each truckload must arrive on site with a weigh ticket. Representative samples must be taken from the mulching material to determine the amount of moisture in the material. These samples are to be weighed at time of delivery, then re-weighed when the mulching material is dry, to determine the moisture content. To determine moisture, the sample is placed in a large burlap sack and then placed in a suitable location to dry. The number of samples required will depend on the total amount of mulching required, weather conditions and sources of supply. It is the direct responsibility of the PE/S to see that all records are made and samples taken.

It is important to determine that the required amount of mulching material is placed and that it is uniformly distributed over the area. When too much mulch is placed, it is not only wasteful but may retard the growth of the vegetation. Too little mulch will not afford sufficient protective cover for the seed.

Adequate provision for punching the mulch into the soil or for holding the mulching

material in place is likewise important. Unless the mulching material is retained in place, winds or traffic adjacent to the pavement edge will displace it.

There are a number of approved tie down methods that give satisfactory results. The PE/S should discuss with the contractor the proposed method of spreading and holding mulch in place prior to starting operations

Normally all areas inside slope stake locations not otherwise surfaced or sodded should be seeded. These areas include the radii at the top of cut slopes and bottom of fill slopes.

Plain seeding without mulch must not be done between May 1 and August 15. For permanent seeding performed from October 16 through January 31, the contractor is required to post a warranty bond for those contracts which are to be accepted prior to April 30.

The sodding and seeding work is generally sublet on many construction contracts. You should go over the job with the AE to determine where to place sod and seed well in advance of the contractor starting work on these items.

Be sure that all seed has been tested and approved. Discuss seed requirements with the contractor well in advance of the seeding operation to avoid unnecessary last minute delays.

20.3 LANDSCAPING *(Rev. 10-01-09)*

Landscaping contracts are to be administered the same as other construction contracts including the same supervisory checks such as weigh tickets, payrolls if minimum wages are applicable, etc. The Office of Environmental Services should be advised of the time and place for all pre-construction conferences so arrangements can be made for a representative of the landscaping section to attend. A careful study of the SS and SP should be made by the PE/S prior to starting work. Alternate sources of planting material to that originally submitted must be approved by prior to use.

Tree plantings and shrubs must comply with the clear zone distance (feet from the edge of the driving lane) policy as outlined in the Roadside Safety Section of the AASHTO Roadside Design Guide. Storage of equipment and materials is prohibited within 30 ft of the pavement edge. These distances are to be considered as minimums and where sufficient right-of-way is available and field conditions indicate more clearance is needed for safety, these distances should be increased.

Lance watering of planted material is not to be allowed. Backfill and mulch are not direct pay items. The backfill material within 6 in. of the plant ball must comply with the specifications and mulch must be placed to the depth and diameter specified. Guying and staking should be done strictly in accordance with the plans and specifications to ensure against damage to the plant, such as rubbing.

Landscape work and procedures are subject to frequent change and revisions. Therefore, the PE/S should refer to revised SS and SP pertaining to his particular contract and be

cognizant of all current instructions. The Office of Environmental Services is available for technical advice and interpretations and should be contacted when help is needed. "As built" plans are to be prepared and retained for all landscape contracts indicating any changes made during construction.

Section 107.01 of the Standard Specifications requires the contractor to observe all State, Federal and local regulations and quarantines pertaining thereto. The regulations and quarantines referred to pertain to various harmful pests such as, but not limited to, beetles. The quarantine applies to landscape plants, soils, sod, and used earthmoving equipment. When these items are moved from a generally infested area into an area that is considered not infested, or only partially infested, a proper permit or certificate must be obtained. Maps indicating the regulated areas are distributed to the DO and it is the PE/S's responsibility to determine when a certificate is required and that it is furnished. The contractor must furnish material accompanied by the proper certificate or permit when applicable. For material furnished to the contractor by a commercial nursery, the nursery will provide the certificate to the contractor. Out of state nurseries will provide the required certificate by cooperative agreement between the States. For material from a private source such as sod from a farmer, the contractor must contact the Entomology and Plant Pathology Division, IDNR for the location of a State or Federal inspector to secure the certificate, if the PE/S or DO is not able to furnish an inspector's name.

The PE/S should obtain copies of the required certificates or permits for items, including earthmoving equipment, moved into the non-infested counties, or partially infested counties. These copies should be retained in the project file.

20.4 MOWING AND HERBICIDE CONTRACTS *(Rev. 10-01-09)*

It is important that the contractor understand the exact areas that are to be mowed or treated with herbicides. This should be discussed and agreed upon at the pre-construction conference. If problems arise with interpretation of the SP, the Contracts and Construction Division should be contacted immediately. The contractor will be notified to begin each mowing cycle by registered mail.

20.5 PLANTS AND SEEDLINGS *(Rev. 10-01-09)*

The contractor must submit a list with the name and location of the source of plants to the PE/S. The PE/S will forward this list to the Office of Environmental Services, for approval. The plants should not be placed until approved.

The contractor should choose a source for seedlings that is on the List of Approved or Pre-qualified Materials, for immediate use. If the source for seedlings is not on this list, the same procedure will be followed as stated above for approval of plants.