

5.9 Sod Stabilization



Description

Sod stabilization is the permanent stabilization of disturbed soil by transplanting mats of pre-grown grass.

Use Criteria

Use sod stabilization as an alternative to permanent seeding where vegetation cannot be established from seed or where immediate vegetative cover is needed.

Sod does not contain enough topsoil to support healthy grass growth. Root growth should knit the sod layer to the topsoil it is placed upon. The receiving soil must have sufficient tilth with adequate nutrients and water-holding capacity to support rooting. Soil restoration (Chapter 1.4) may be necessary where grading and compaction have altered the soil profile.

Placing sod on frozen ground is not recommended. Sod placed during dry weather must be irrigated until rooted.

Apply sod stabilization to grass-lined channels only if sheer stresses permit vegetative stabilization.

Design Criteria

Sod accelerates grass establishment on post-construction stormwater management practices but could impede infiltration, invalidating the design infiltration rate. Specify the sod's root mass has a clay content less than 20 percent when applied to infiltration or runoff reduction stormwater management practices.

See the practice specification that follows.

Stormwater Pollution Prevention Plan

Include plans and specifications in a Stormwater Pollution Prevention Plan (SWP3) that describe the requirements for applying the practice to achieve its intended purpose. As a minimum, include the following in the SWP3.

- Indicate where to apply sod.
- Specify installation instructions that include minimum topsoil conditions, timing of placement, acceptable sod species, placement pattern, fertilizer requirements, and irrigation requirements.

Inspection and Maintenance

In the absence of adequate rainfall, irrigate new sod during the initial rooting period, usually four weeks after installation, in sufficient quantities to maintain moist soil to a depth of four inches. Daily watering during the first week after installation is recommended. Although watering needs may decline after this period, supplemental watering may be necessary throughout the first growing season.

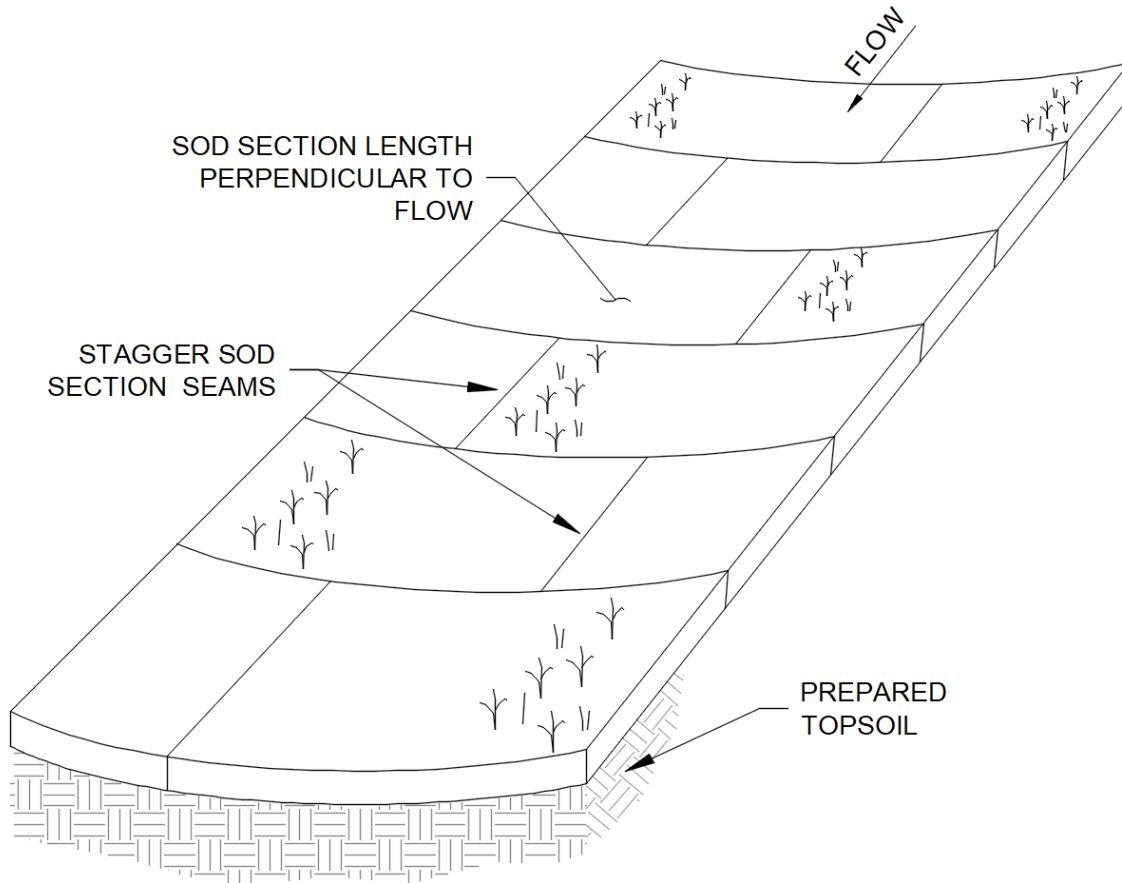
Initial rooting typically occurs 10 to 14 days after sod is laid - prohibit foot traffic and mowing during this time. Full establishment with deep rooting may take up to six weeks.

References

Delaware. 2019. Delaware Sediment and Erosion Control Handbook. Division of Watershed Stewardship.

Pound W., Street J., 1991. Lawn Establishment Bulletin 546. The Ohio State University.

Practice Specification Sod Stabilization



INSTALLATION DETAIL
Not to Scale

Scope

Provide and install sod stabilization at locations shown on the plans or as directed by the engineer.

Materials

1. Sod should be cool season grasses such as Tall Fescue (*Lolium arundinaceum*), Kentucky Bluegrass (*Poa pratensis*), Perennial Ryegrass (*Lolium perenne*), or Fine Fescue (*Festuca sp. and ssp.*) that are adapted to the site and intended purpose. Use only high-quality sod of known genetic origin, free of noxious weeds, disease, and insect infestations. It should appear healthy and vigorous.
2. Sod shall be machine cut at a uniform soil thickness of one-half to three-quarter inches at the time of cutting (excluding shoots and thatch). Sod sections must be strong enough to support their weight and retain their shape when lifted. Broken pads and torn or uneven ends will not be accepted.

Installation

1. Harvest, deliver, and install sod within 48 hours. Sod that is not transplanted within this period shall be inspected and approved prior to its installation.
2. Place sod according to the timeframes in Table 5.9.1.

Table 5.9.1 Ohio Sod Placement Dates

March 15 to May 31	Spring sodding window
June 1 to July 31	Sod with supplemental irrigation throughout the summer
August 1 to October 15	Fall sodding window
October 15 to December 1	Weather dependent ¹
December 1 to March 14	Winter sodding is not recommended

Footnotes:

1. Frost-heave can be a problem if rooting has not occurred. Sod should be laid no later than 4 weeks before the ground freezes to ensure good root establishment.

3. Prior to placing sod, prepare the topsoil by:
 - a. clearing the surface of debris, roots, branches, stones, and soil clods larger than 2 inches in diameter;
 - b. level the ground to avoid low spots of standing water;
 - c. lightly loosen the soil surface with a disk, harrow, or other implement (Dense or crusted topsoil will result in poor establishment of the sod. Roots will not penetrate and join the sod with the soil. Runoff and erosion can occur between the sod and soil further disconnecting the layers.); and
 - d. mix fertilizer and/or lime into the topsoil as identified by a soil test.
4. Moisten the topsoil before laying down the sod.
5. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and butting tightly against each other (loose seams can cause drying of the roots and erosive flow paths). Joints should be staggered in a brick-like pattern. Do not stretch or overlap the sod.
6. Install sod strips with the longest dimension perpendicular to a slope. Anchor sod placed on slopes 3:1 or steeper with pegs or staples.
7. Roll installed sod immediately following installation to provide firm contact between roots and soil. After rolling irrigate until the soil is wet 4 inches below the sod. Keep sodded areas moist to a depth of 4 inches until the grass takes root. This can be determined by gently tugging on the sod. Maintain soil moisture for 30 days after rolling.
8. Re-sod areas where an adequate stand of sod is not obtained.