

CONSTRUCTION NOTES AND MATERIAL SPECIFICATIONS FOR STORMWATER FACILITIES

THESE NOTES MUST ACCOMPANY ALL STANDARD DRAWINGS.

GENERAL STORMWATER CONSTRUCTION NOTES

1. All Stormwater facilities must be constructed per the Design Manual, or as approved by the local jurisdiction.
2. Call the reviewing agency 48 hours in advance of constructing this facility so construction observation may be performed to identify variations in the field that may affect design and verify proper construction.
3. For infiltration facilities, exposed facility subgrade shall be fenced to prohibit impacts from construction (including materials and equipment storage). If unprotected subgrade has been exposed to rainfall, scarify the surface to a depth of 4 inches to restore filtration capacity.
4. Placement of amended native or imported soil mix shall occur as follows:
 - Conduct excavation, fine grading and placement work only when the facility and soil to be placed is dry. Do not place if soil is saturated.
 - Place soil in 8 inch maximum lifts.
 - Lightly compact each lift, (e.g. a water filled landscape roller) to achieve 85% compaction. Do not compact with heavy machinery or vibratory compaction.
5. All ground within the facility must be stabilized with one of the options below, also see Material Specifications for Stormwater Facilities.
 - **Hydroseeding** – Hydroseeding with tackifier.
 - **Matting** – Matting shall be used to hold the soil in place until vegetation becomes established. If hand seeding, place seed and then install erosion control matting. If planting, install erosion control matting and then install plants through the matting. Matting is not required on slopes 4H:1V or shallower, or on slopes that have been hydroseeded. Matting must be biodegradable.
 - **Mulch** – Mulch is not allowed below the water quality ponding depth or within the flow path of an inlet or outfall. Mulch shall be spread over bare soil or in a ring around plants. Ensure that mulch does not touch plant stems.
6. If soil is placed during the wet season the facility must be stabilized within one week of soil installation.

CONSTRUCTION NOTES FOR VEGETATED STORMWATER BMPS

7. Build and vegetate as early as possible to establish plantings prior to directing stormwater runoff to the BMP.
8. Contact approving jurisdiction 48 hours in advance of planting so that the jurisdiction can review soil installation and plant placement prior to plant installation.

CONSTRUCTION NOTES FOR PERVIOUS SURFACE STORMWATER BMPS

9. Contact the approving agency 48 hours prior to placing geotextile fabric. The approving agency may call the engineer of record in advance of constructing this facility so construction observation may be performed to identify variations in the field that may affect design and verify proper construction.

MATERIAL SPECIFICATIONS FOR STORMWATER FACILITIES

1. Growing media must be Imported Planting Soil or Amended Native Soil at the depths shown on the Standard Drawings and meet the following specifications:

- a) **Imported Water Quality Mixture** – Is based on the ODOT “Water Quality Mixture” 01012, and shall be comprised of soil meeting the gradation in the table below and compost meeting ODOT Standard Specification Section 03020.

Soil Gradation Requirements	
Sieve Size	Percent Passing (by Weight)
No. 4	100
No 10	95 - 100
No. 40	40 - 60
No. 100	10 - 25
No. 200	5 - 10

Mix the soil and compost so the Imported **Water Quality Mixture**:

- Is comprised of between 20%-25% compost and between 75%-80% soil.
- Has a pH between 5.5 and 8.0.
- Does not have clumps greater than 3 inches in any direction.

- b) **Amended Native Soil** – Add compost so that the top 18 inches is roughly 30% compost meeting ODOT Standard Specification Section 03020.
- i) The approving jurisdiction may request evidence that the Amended Native Soil or Imported Water Quality Mixture meets specification prior to placement. If requested, test data for the soil mix shall be provided by an accredited laboratory with current certification. The date of the analyses must be no more than 90 days prior to submittal. The report must include the following:
- Name and address of the laboratory
 - Phone, contact and email address of the laboratory
 - Test data, including date and name of the test procedure
 - Source of the topsoil
2. Mulch shall be a 2 inch thick layer of dye, pesticide, and weed free shredded wood chips or coarse compost.
 3. Stormwater facility geotextiles shall be ODOT Drainage Geotextiles Type 1, non-woven, per Standard Specification Section 03020. Geotextile under the road base in 4.5.3 shall be Subgrade Geotextile meeting ODOT Standard Specification Section 02320.
 4. Impermeable liners may be a 30 mil (minimum) high density polyethylene (HDPE), 30 mil (minimum) ethylene propylene diene monomer (EPDM), polyvinyl chloride (PVC), or bentonite clay mat per manufacturer guidance.
 - a. Stormwater facilities with liners that are planted with shrubs must have 24 inches of imported soil.
 5. Unless otherwise approved, rock for Pervious Surface BMP's and Stormwater Facilities shall be crushed rock per ODOT Standard Specification Sections 00430.11 (Granular Drain Backfill Material) or 02690.20 (Course Aggregate) and meet the following gradations:

	Percent Passing (by weight)		
	Designated Sizes		
	Granular Drain Backfill	Granular Drain Backfill	Course Aggregate
Sieve Size	1 1/2" - 3/4"	3/4" - 1/2"	3/8" – No. 8
2"	100	-	-
1 1/2"	95 - 100	-	-
1"	-	100	-
3/4"	0 - 15	90 - 100	-
1/2"	0 - 2	0 - 15	100
3/8"	-	-	85 - 100
1/4"	-	0 - 3	-
No. 4	-	-	10 - 30
No. 8	-	-	0 - 10
No. 16	-	-	0 - 5