

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition: Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
Purpose: To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

- Conditions Where Practice Applies:**
- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil is vegetated contains materials toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications:

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimentation Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regarding topsoil it shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
 - Where subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

Soil Amendments:

- For sites having disturbed areas over 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments relative to bringing the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

Note: Topsoil substitutes to amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority may be used in lieu of natural topsoil.

V. Topsoil Application:

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amount of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

1. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

- Composted sludge shall be supplied by or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
- Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
- Composted sludge shall be applied at a rate of 1 to 2 tons per 1,000 square feet.
- Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMITS FOR SINGLE FAMILY HOME CONSTRUCTION.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SUPER SILT FENCE. BEGON ROUGH GRADING.
- INSTALL UTILITIES AND BEGIN HOUSE CONSTRUCTION.
- INSTALL DRY WELLS AND FINE GRADE SITE AND CONSTRUCT DRIVEWAY.

UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.) for sodding.

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual ryegrass (8.2 lbs. per 1000 sq. ft.). For the period May 1 thru August 15, seed with 1 lb. per acre of creeping lovegrass (0.07 lbs. per 1000 sq. ft.) for the period November 16 thru February 28, protect site by applying 2 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of mulch material immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool (or 2 lb. gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 947 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.

Refer to the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for rate and methods not covered.

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Kathleen K. Pritchett 9.5.01
 DEVELOPER DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Charles J. Law 9.5.01
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers 9/10/01
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John Blanton 9/10/01
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James S. Swan 9/27/01
 DIRECTOR DATE

Chris Vaccaro 9/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Indy Hamite 9/25/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

5-17-02 ADDED ACTUAL HOUSES FOR LOTS 35, 36 & 37 AND REMOVED GARAGE BOX A

OWNER: KATHLEEN K. PRITCHETT
 6275 HANOVER CROSSING WAY
 HANOVER, MARYLAND 21076

DEVELOPER: PRITCHETT FAMILY HOMES, LLC
 6375 HANOVER CROSSING WAY
 HANOVER, MARYLAND 21076

PROJECT: NORDAU SUBDIVISION
 LOTS 35 - 37, PARCEL G
 A RESUBDIVISION OF NORDAU SUBDIVISION, LOT 3, SECTION G

AREA: ZONED R-12
 PARCEL 107 TAX MAP 42
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT CONTROL PLAN AND DETAIL SHEET

RIEMER MUEGGE
 a division of
Patton Harris Rust & Associates, pc
 ENGINEERS • SURVEYORS • PLANNERS
 LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
 8818 Caron Park Drive, Columbia, MD 21045 • tel 410.997.8000 fax 410.997.9282

9.5.01
 DATE
 DESIGNED BY: C.J.R.

DRAWN BY: DAM
 CHECKED BY: C.J.R.

PROJECT NO: SD176.DWG
 DATE: AUGUST 29, 2001
 SCALE: AS SHOWN
 DRAWING NO. 2 OF 2

CHRISTOPHER J. REID #19949

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1885).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SO, TEMPORARY SEEDING, AND MULCHING (SEC. 6.) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:**

TOTAL AREA OF SITE	0.94 ACRES
AREA TO BE ROOFED OR PAVED	0.94 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.64 ACRES
TOTAL FILL	600 CU. YARDS
TOTAL FILL AREA LOCATION TO HAVE ACTIVE GRADING PERMITS	600 CU. YARDS
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE OBTAINED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITTED FOR THEIR REMOVAL.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BULK QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT THE CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

PLAN
 SCALE: 1" = 30'

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

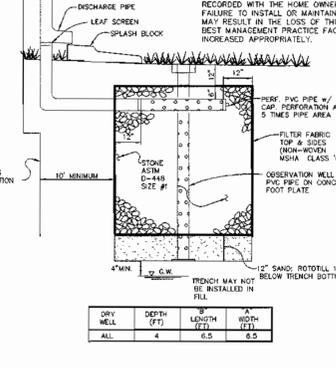
- Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs. per 1000 sq. ft.) and 1000 lbs. per acre (20 lbs. per 1000 sq. ft.) of 0-10-10 fertilizer (4 lbs. per 1000 sq. ft.) before seeding. Harrow or disc into upper 3 inches of soil.
- Acceptable - Apply 2 tons per acre dolomitic limestone (42 lbs. per 1000 sq. ft.) and 1000 lbs. per acre (20 lbs. per 1000 sq. ft.) of 0-10-10 fertilizer (4 lbs. per 1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq. ft.) of Kentucky 91 Tall Fescue. For the period May 1 thru August 15, seed with 60 lbs. Kentucky 91 Tall Fescue per acre and 2 lbs. per acre (0.02 lbs. per 1000 sq. ft.) of creeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- Use sod.
- Seed with 60 lbs. per acre Kentucky 91 Tall Fescue and mulch with 2 tons per acre of well-anchored straw.

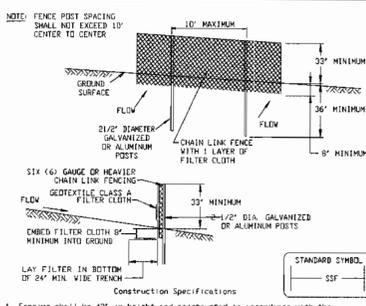
Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool (or 2 lb. gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 947 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

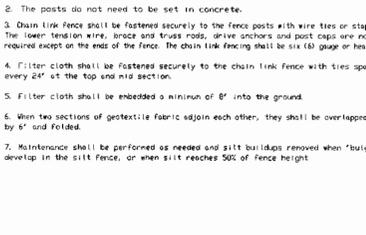


DRYWELL DETAIL

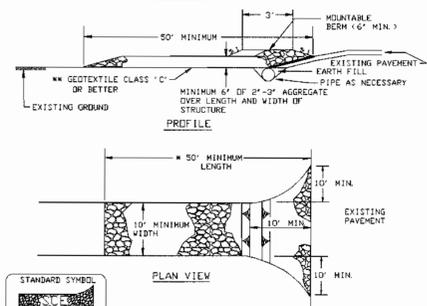
DETAIL 33 - SUPER SILT FENCE



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

