

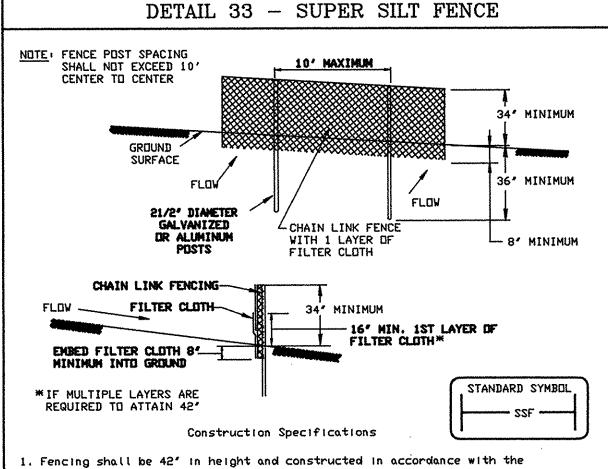
- 1. Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00
- 2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements

for Geotextile Class F Tensile Strength Test: MSMT 509 50 lbs/in (min.) Test: MSMT 509 Tensile Modulus 20 lbs/in (min.) 0.3 gal ft²/minute (max.) Test: MSMT 322 Flow Rate Test: MSMT 322 Filtering Eggeciency 75% (min.)

- 3. Where ends of geotextile fabric come together, they shall be overlapped. olded and stapled to prevent sediment bypass.
- 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION



latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42' fabric and 6' length

The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. 3. Filter cloth shall be fastened securely to the chain link fence with ties spaced

2. Chain link fence shall be fastened securely to the fence posts with wire ties.

every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8' into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped

develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for

Maintenance shall be performed as needed and silt buildups removed when "bulges"

Tensile Strength Tensile Modulus Flow Rate

Filtering Efficiency

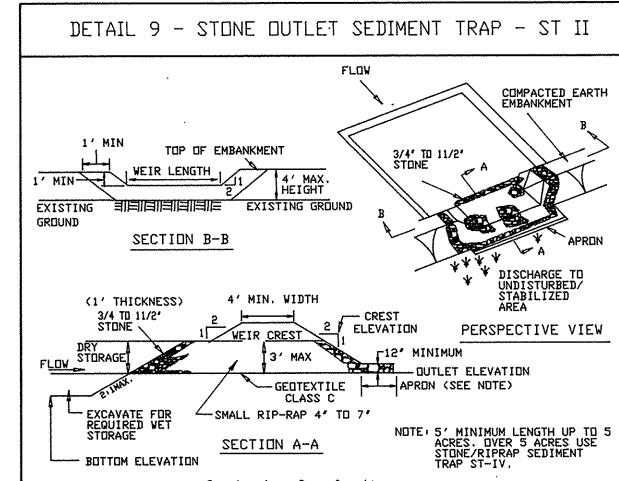
Geotextile Class Fi

APPROVED: DEPARTMENT OF PLANNING AND ZONING

50 lbs/in (min.) 20 lbs/in (min.) 0.3 gal/ft*/minute (max.) 75% (min.)

Test: MSMT 509 Test: MSMT 509 Test: MSMT 322 Test: MSMT 322

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

Constuction Specifications

- 1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- 2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be 4', measured at centerline of embankment.
- 3. All cut and fill slopes shall be 2:1 or flatter.
- 4. Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.
- 5. Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 10).
- 6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6' into existing ground at entrance of outlet channel.
- 7. Stone used in the outlet channel shall be 4" 7" placed 18" thick.
- 8. Dutlet An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable Channel. Protection against scour at the discharge end shall be provided as necessary.
- 9. Dutlet channel must have positive drainage from the trap.
- 10. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/4 of the wet storage depth of the trap (1350 cf/ac). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- 11. The structure shall be inspected periodically after each rain and repaired
- 12. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
- 13. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT SUIL CONSERVATION SERVICE C - 9 - 10WATER MANAGEMENT ADMINISTRATION

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of

1) Preferred-Apply 2 tons per acre dolomitic limestone (92 lbs/ 100 sq.ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs./ 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq.ft.) 2) Acceptable-Apply 2 tons per acre dolomatic limestone (92 lbs/ 1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10- fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

MAINTENANCE: Inspect all seeded areas and make needed repairs

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft).

SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.) For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November 1 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./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. (8 gal/1000 sa.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT

DETAI 24 - STABILIZED CONSTRUCTION ENTRANCE ----- MOUNTABLE BERM (6" MIN.) **PAVEMENT** - EARTH FILL ** GEOTEXTILE CLASS 'C' OR BETTER MINIMUM 6" OF 2"- 3" AGGREGATE OVER LENGTH EXISTING GROUND AND WIDTH OF STRUCTURE **PROFILE** PLAN VIEW Construction Specification

- 1. Length minimum of 50' (* 30' for a single residence lot).
- 2. Width 10' minimum, should be flared at the existing road to provide a
- 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. ** The plan approval authority may not require single family residences to use geotextile.
- 4. Stone crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of
- 5. Surface Water all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- 6. Location A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized con-struction entrance.

U.S. DEPARTMENT OF AGRICULTURE F - 17 - 3 MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

21.0 STANDARDS AND SPECIFICATIONS

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation

To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or

Conditions Where Practice Applies I. This practice is limited to areas having 2:1 or flatter

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. 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.

d. The soil is so acidic that treatment with

c. The original soil to be vegetated contains material toxic to plant growth.

II. 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 tion shown on the plans.

Construction and Material Specifications

I. 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 Experimental Station.

II. Topsoil Specifications — Soil to be used as topsoil must meet the following:

i. 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 a soil scientist and approved by the appropriate approval authority. Regardless, topsoil 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 that 1 and 1/2" in

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

ili. Where the 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.

II. For sites having disturbed areas under 5 acres: i. Place topsoil (if required) and apply soil amendments as specified in <u>20.0 Vegetative Stabilization</u> Section I — Vegetative Stabilization Methods and Materials.

2:1 SLOPE OR FLATTER

GRADE LINE

DETAIL 1 - EARTH DIKE

b 2:1 SLOPE OR FLATTER

7. All earth removed and not needed for construction shall be placed so that

PAGE

8. Inspection and maintenance must be provided periodically and after

it will not interfere with the functioning of the dike.

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

- EXCAVATE TO PROVIDE

REQUIRED FLOW WIDTH

-DIKE HEIGHT 12"

C-FLOW WIDTH

DIKE A DIKE B

STANDARD SYMBOL

A-2 B-3

---/---

FOR TOPSOIL

iii. For sites having disturbed areas over 5 acres: i. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required

Stabilization Methods and Materials.

V. Topsoil Application

to bring the soil into compliance with the following: a. pH for topsoil shall be between 6.0 and 7.5. If

elapsed (14 days min.) to permit dissipation

phyto-toxic materials. NOTE: Topsoil substitutes or amendments, as recommende

by a qualified agronomist or soil scientist and approved be the appropriate approval authority, may be used in lieu of

ii. Place topsoil (if required) and apply soil ammendments specified in 20.0 Vegetative Stabilization—Section I—Vegetative

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" — 8" higher in elevation.

or seeding can proceed with a minimum of additional soil

corrected in order to prevent the formation of depression

preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be

iii. 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

iv. Topsoil shall not be place 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.

- Following initial soil disturbance or redisturbance, permanent or the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise temporary stabilization shall be completed within: 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

 b. Organic content of topsoil shall be not less than 1.5 percent by weight.

 c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

 d. No sod or seed shall be placed on soil soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has placed (14 days min.) to permit dissingtion of
 - a) 7 calendar days for all perimeter sediment control stuctures, dikes, perimeter slopes and all slopes greater than 3:1
 b) 14 days as to all other disturbed or graded areas on the

2. All vegetative and structural practices are to be installed

All sediment traps/basins shown must be fenced and warning signs posted around their perimeters in accordance with Vol. 1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm

SEDIMENT AND EROSION CONTROL NOTES

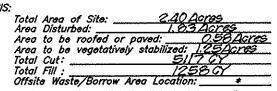
County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313–1855).

according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

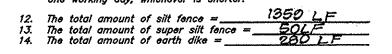
1. A minimum of 48 hours notice must be given to the Howard

- 5. All disturbed areas must be stabilized within the time period specified above, in accordance with the 1994 MARYLAND STAND—ARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT
- CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec G).

 Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6. 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. 7. SITE ANALYSIS:

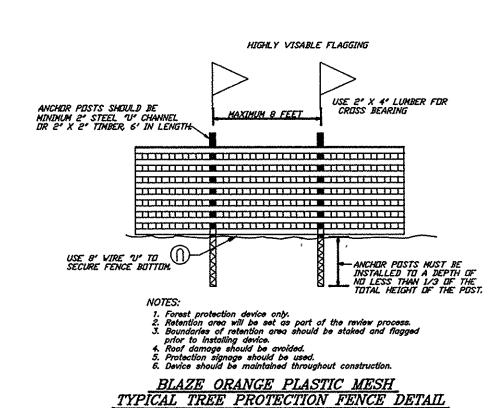


- 8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed neces-sary by the Howard County DPW Sediment Control Inspector.
- 10. On all sites with disturbed areas in excess of 2 acres, approva 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 authorized until this initial approval by the inspection agency is
- 11. 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.



* It is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

CONSTRUCTION SEQUENCE: NO. OF DAYS 1. Obtain grading permit.
2. Install tree protection fence. . Install sediment and erosion control devices and stabilize Install sediment and erosion control devices and stabilize.
 Excavate for foundations, rough grade and temporarily stabilize.
 Construct structures, sidewalks and driveways.
 Final grade and stabilize in accordance with Stds. and Specs.
 Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize. * Delay construction of houses on lot:____



NO SCALE

CROSS SECTION SUFFICIENT TO DRAIN CUT OR FILL SLOPE -LV PLAN VIEW FLOW CHANNEL STABILIZATION GRADE 0.5% MIN. 10% MAX. 1. Seed and cover with straw mulch. 2. Seed and cover with Erosion Control Matting or line with sod. 3. 4'' - 7'' stone or recycled concrete equivalent pressed into the soil 7" minimum Construction Specifications 1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%. 2. Runoff diverted from a disturbed area shall be conveyed to a sediment 3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity. 4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper 5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow. 6. Fill shall be compacted by earth moving equipment.

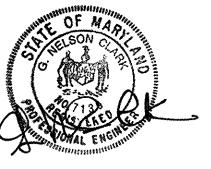
Reviewed for HOWARD

THIS DEVELOPMENT PLAN IS APPROVED FOR SOL EROSION AND SEDMENT CONTROL BY THE HOWARD SOL

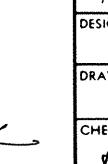
DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for sediment and erosion control and that all 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 inspection by the Howard Soil Conservation District or their authorized agents, as are deemed

ENGINEER'S CERTIFICATE I hereby certify that this plan for Sediment and Erosion 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



MARYLAND DEPARTMENT OF ENVIRONMENT



0-18-07

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH. DESIGNED SEDMENT AND EROSION CONTROL DETAILS

LOTS 202, 203, 208 THRU 211 TD COLUMBIA DRAWN VILLAGE OF RIVER HILL PS. HECKED PFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND

10260 Old Columbia Road, Rivers Corporate Park

FOR , ALLAN HOMES, Inc.

Columbia, Maryland 21046

SDP 98-31

"=30"

DRAWING

JOB NO.

FILE NO.

97-054

77-054se

3 of 3