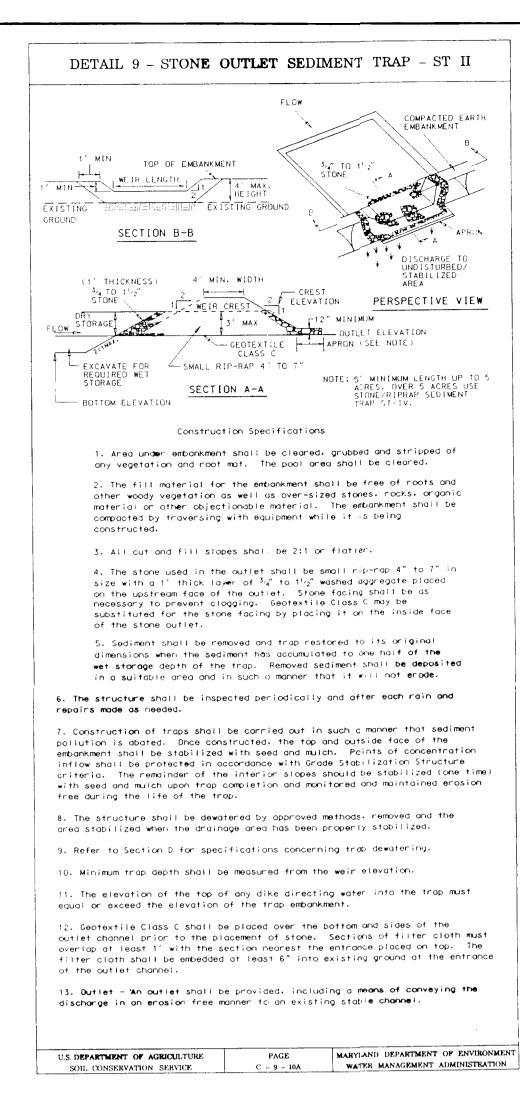
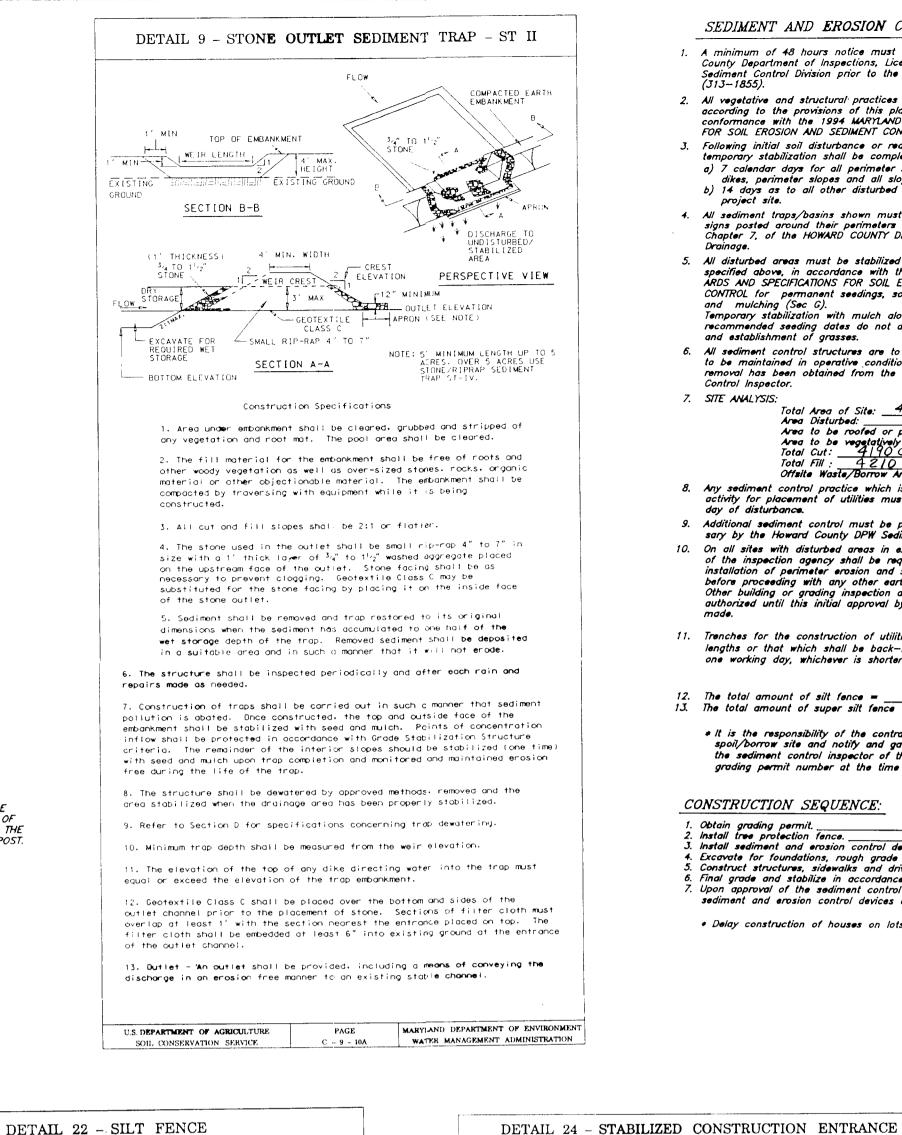


STANDARD SYMBO

HARYLAND DEPARTMENT OF ENVIRONMENT VATER HANAGEMENT ADMINISTRATION





SEDIMENT AND EROSION CONTROL NOTES 1. 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 (J13-1855).

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL FROSION AND SEDIMENT CONTROL and revisions thereto 3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: 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 4. 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

 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 arasses 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: Total Area of Site: 4.76 ac
Area Disturbed: 3.9 ac
Area to be roofed or paved: 1.3 ac
Area to be vegetatively stabilized: 2.6 ac
Total Cut: 4/90 CY
Total Fill: 42/0 CY
Offsite Waste/Borrow Area Location:

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 lenaths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

12. The total amount of silt fence = 1370 L.F.

13. The total amount of super silt fence = 260 L.F.

sediment and erosion control devices and stabilize.

• Delay construction of houses on lots: 93

* 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 . Obtain grading permit. _____.

. Install tree protection fence. 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

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLE<mark>ARED AREAS NOT</mark> 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

the following schedules: 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 sa.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 three inches of soil.

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, replacements and reseedings.

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. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT

DETAIL 1 - EARTH DIKE

STANDARD SYMBOL

A-2 B-3

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2:1 SLOPE OR FLATTER EXCAVATE TO PROVIDE DIKE A DIKE B

a-DIKE HEIGHT 18" b-DIKE WIDTH 24" C-FLOW WIDTH 4' d-FLOW DEPTH 12" CUT OR FILL SLOPE -- V V

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

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

or other irregularities which will impede normal flow.

it will not interfere with the functioning of the dike.

U.S. DEPARTMENT OF AGRICULTURE PAGE SOIL CONSERVATION SERVICE

2:1 SLOPE OR FLATTER -

PLAN VIEW

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.

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

6. Fill shall be compacted by earth moving equipment.

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

8. Inspection and maintenance must be provided periodically and after

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

OWNER | DEVELOPER The Howard Research & Development Corp. 10275 Little Patuxent Parkway Columbia, Maryland 21044

21.0 STANDARDS AND SPECIFICATIONS

<u>FOR</u>

<u>TOPSOIL</u>

Definition

Placement of topsoil over a prepared subsoil prior to

To provide a suitable soil medium for vegetable growth.

levels, low pH, materials toxic to plants, and/or

is not adequate to produce vegetative growth.

Conditions Where Practice Applies

zone is not deep enough to support plants or furnish

c. The original soil to be vegetated contains

d. The soil is so acidic that treatment with

II. For the purpose of these Standards and Specifications,

consideration and design for adequate stabilization. Areas

having slopes steeper than 2:1 shall have the appropriate

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used

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

II. Topsoil Specifications — Soil to be used as topsoil

Topsoil shall be a loam, sandy loam, clay loam,

ii. Topsoil must be free of plants or plant parts such

as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison

composed of heavy clays, ground limestone shall be spread at the rate of 4–8 tons/acre (200–400 pounds per 1,000 square

iii. Where the subsoil is either highly acidic or

distributed uniformly over designated areas and worked into

the soil in conjunction with tillage operations as described

i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization
Section I - Vegetative Stabilization Methods and Materials

i. When topsoiling, maintain needed erosion and

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

iii. Topsoil shall be uniformly distributed in a 4" -8" layer and lightly compacted to a minimumckness of 4". Spreading shall be performed in such a manner that sodding

or seeding can proceed with a minimum of additional soil

corrected in order to prevent the formation of depressions

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.

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

feet) prior to the placement of topsoil. Lime shall be

II. For sites having disturbed areas under 5 acres:

sediment control practices such as diversions, Grade

Stabilization Structures, Earth Dikes, Slope Silt Fence and

silt loam, sandy clay loam, loamy sand. Other soils may be

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

used if recommended by an agronomist or a soil scientist and

provided that it meets the standards as set forth in these

areas having slopes steeper than 2:1 require special

continuing supplies of moisture and plant nutrients.

Soils of concern have low moisture content, low nutrient

I. This practice is limited to areas having 2:1 or flatter

a. The texture of the exposed subsoil/parent material

b. The soil material is so shallow that the rooting

establishment of permanent vegetation.

unacceptable soil gradation.

material toxic to plant growth.

stabilization shown on the plans.

Agricultural Experimental Station.

ivy, thistle, or others as specified.

in the following procedures.

Sediment Traps and Basins.

must meet the following:

Reviewed for HOWARD and meets Jechnical Requirements Signature to Date U.S. Natural Resolution Conservation Service

DETAIL 5 - RIP-RAP+ INFLOW PROTECTION

GEDTEXTILE-

CROSS SECTION

CLASS 'C'

Construction Specifications

1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal

The channel shall be lined with 4' to 12' rip- rap to a depth of 18'.

cross section with 2:1 or flatter side slopes and 3' (min.) bottom width.

2. Filter cloth shall be installed under all rip-rap. Filter cloth shall

3. Entrance and exit sections shall be installed as shown on the detail

4. Rip-rap used for the lining may be recycled for permanent outlet

5. Gabion Inflow Protection may be used in lieu of Rip-rap Inflow

6. Rip-rap should blend into existing ground.

protection if the basin is to be converted to a stormwater management

7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale

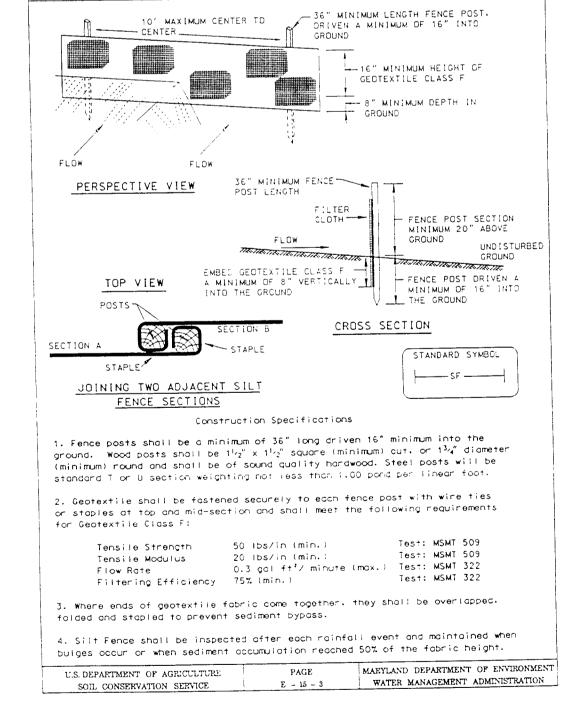
2:1 SLOPE OR FLATTER

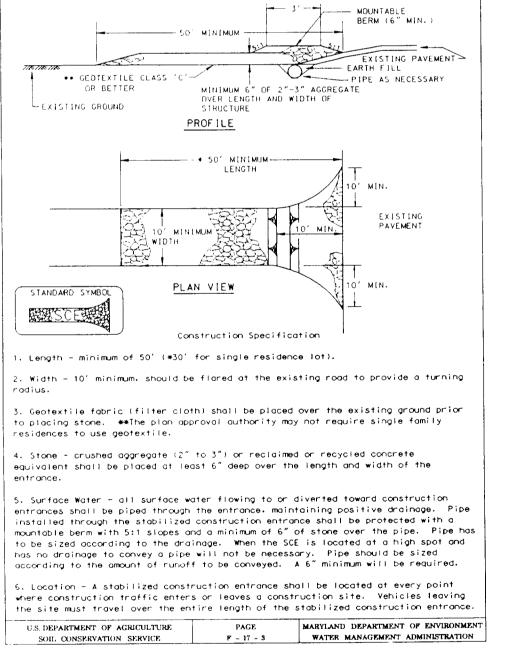
PERSPECTIVE VIEW

Protection.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

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





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 District.

RICHARD J.H. STEPP DATE





CLARK • FINEFROCK & SACKETT, INC. ENGINEER • ANNERS • SURVEYORS 7135 MINSTREL WAY . CO. MRIA M. 1045 . 410 381 . BALTO . 301 621 8100 AASH SCALE DESIGNED SEDIMENT AND EROSION CONTROL DETAILS OAB ___ LOTS 88-93, 11**5-117, 143** AND 149-150 COLUMBIA DRAWING DRAWN VILLAGE OF RIVER HILL ZAH 5 of 5 SECTION 2 AREA 6 PHASE 2 JOB NO CHECKEL FIFTH (5th) ELECTION DISTRICT DAB HOWARD COUNTY, MARYLAND 97-053 FOR: NANTUCKET ISLAND HOMES 8835-P COLUMBIA 100 PARKWAY FILE NO

97-053-SE

COLUMBIA, MARYLAND 21045