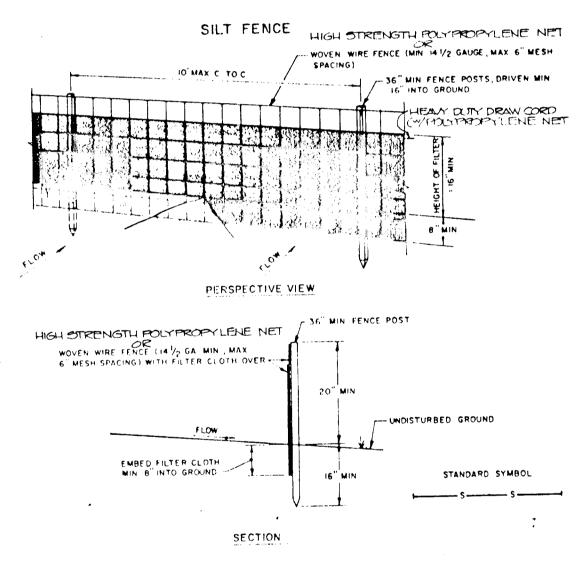


CONSTRUCTION SPECIFICATIONS

- 1. Stone Size Use 2" stone, or reclaimed or recycled concrete equivalent. 2. Length - As required, but not less than 50 feet (except on a single resi-
- dence lot where a 30 foot minimum length would apply). 3. Thickness - Not less than six (6) inches.
- 4. Width Ten (10) foot minimum, but not less than the full width at
- points where ingress or egress occurs. 5. Filter Cloth - Will be placed over the entire area prior to placing of stone.
- Filter will not be required on a single family residence lot. 6. Surface Water - All surface water flowing or diverted toward construction
- entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- 7. Maintenance The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- 8. Washing Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping
- 9. Periodic inspection and needed maintenance shall be provided after each rain.



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIE! OF STAPLES. 2. FILTER CLOTH TO BE FASTENED SE URLLY TO
- WOVEN WIRE FENCE WITH TIES SPA ED EVERY 24" AT TOP AND MID SECTION. 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-
- LAPPED BY SIX INCHES AND FOLDED. 4. MAINTENANCE SHALL BE PERFORMED AS

APPROVED. HOWARD COUNTY OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING DATE

CHIEF, LAND DEVELOPMENT DIVISION

SWWelland Rev 710 CHIEF, BUREAU OF HIGHWAYS

Wiedum & Caly

AND LAND DEVELOPMENT.

CHIEF, BUREAU OF ENGINEERING

parol 1. or cangle_ 7/13/1

- POSTS: STEEL EITHER TOF TYPE OF 1/4 X 1/4 Min (Actual) FINCE: WOVEN WIRE, 14. GA. 6" MAX. MESH OPENING HIGH STRENGTH POLY-PROPYLENE NETTING FILTER CLOTH: FILTER X,
 MIRAFI 100X, STABILINKA T140N OR APPROVED
- PREFABRICATED UNIT: GEOFAL, ENVIROFENCE, OR APPROVED NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOR IN THE SILT FENCE.

7.11.89

PERMANENT SELDING NOTES

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FUTURE DISTURBANCE WHERE A PERMANENT LONG - LIVED VEGETATIVE COVER IS NEEDED. Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: IN LIEU OF SOIL RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULE:

- 1.) Preferred Apply 2 tons per acre dolomitic limestone (92 lbs./1000 square 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 time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (91bs./1000
- 2.) Acceptable Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 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 Fedruary 28, protect site by: Option (1) 2 tons per acre of 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 Feacue and mulch with 2 tons/acre well enchored straw.

Mulching - Apply 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.fit:) 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

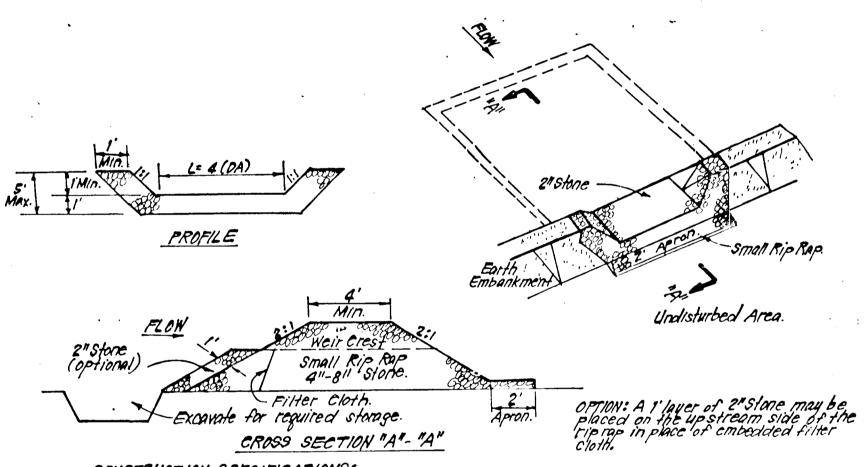
APPLY TO GRADED OR CLEARED AREA LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Apply 60 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 2½ bu. 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 16 thru February 28, protect site by applying 2 tons per acre of wall anchored straw mulch and seed as soon as possible in the spring, or use sad.

Mulching: Apply 1½ 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 gal. per acro (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 348 gal. per acre (8 gal./ 1000 sq.ft.) for anchoring.

REFER TO THE 1983 MD. STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



CONSTRUCTION SPECIFICATIONS:

- 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The 1. Area under embankment shall be cleared, grubbed und stripped of ding voyellation as well as over.

 2. The fill moterial 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 mp 4"-8" along with 1' thickness of 2" aggregate placed on the up-grade side on the small rip rap or embedded filter cloth in the rip mp.

 5. Sediment shall be removed and trap restored to its orginal dimensions when the sediment has
- accumulated to 1/2 the design depth of the trap.

 6. The structure shall be inspected after each rain and repairs made as needed.
- 7. Construction operations shall be carried out in such a manner than erosion and water pollution is 8. The structure shall be removed and the area stabilized when the drainage area has been properly

STONE OUTLET SEDIMENT TRAP (S.O.ST.) ST.V.

U.S. SOIL CONSERVATION SERVICE THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL

CONSERVATION DISTRICT.

DEVELOPER'S / BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORD ING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CON-TROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

STANDARD AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

SPECIFICATIONS

- 1. Class of turfgrass sod shall be Maryland or Virginia State Certified, or Maryland or Virginia State approved sod.
- 2. Sod shall be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the tire of cutting. Measurement for thickness shall exclude top growth and thatch.
- 3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- 4. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.
- 5. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- 6. Sod shall be harvested, delivered and installed within a period of 36 hours. Sod not transplanted within this period shall be inspected and approved prior to its installation.

I. Site Preparation

Fertilizer and lime application rates shall be determined by soi) tests. Under unusual circumstances where there is insufficient time for a complete soil test, fertilizer and lime materials may be applied in amounts shown under B, below.

- A. Prior to sodding, the surface shall be cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations.
- B. Where the soil is acid or composed of heavy clays, ground limestone shall be spread at the rate of 2 tons/acre or 100 pounds per 1,000 square feet. In all soils 1,000 pounds per acre or 25 pounds per 1,000 square feet of 10-10-10 fertilizer or equivalent shall be uniformly applied and mixed into the top 3 inches of soil with the required lime.
- C. All areas receiving sod shall be uniformily fine graded Hard-packed earth shall be scarefied prior to placement of sod.

SEDIMENT CONTROL NOTES

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 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 1983 MARYLAND STAMBARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) 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: Area to be roofed or paved _____O.25__ Acres Area to be vegetatively stabilized 0.25 Acres Total Cut 100 Cu. yda Total Fill 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.
- 9) Additional sediment control must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
- 10) 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 authorized until this
- initial approval by the inspection agency is made. 11) If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be Implemented. ::
- 12) All pipes to be blocked at the end of each day (see detail 13) The total amount of straw bale dikes/silt fence equals

1,000 L.F.

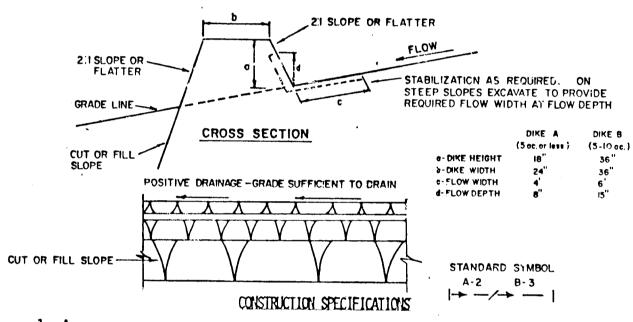
ENGINEER'S CERTIFICATE · I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORK-ABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORD-ANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOLL CONSERVATION DISTRICT.

11-14-88 DATE

GENERAL NOTES

control inspector and the

- 1) Refer to "1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control for standard details and detailed specifications of each practice specified herein.
- 2) With the approval of the sediment control inspector, minor field adjustments can and will be made to insure the control of any sediment. Changes in sediment control practices require prior approval of the sediment County Soil Conservation District.
- 3) At the end of each working day, all sediment control practices will be inspected and left in operational condition.
- 4) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a.) seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and b.) fourteen days as to all other disturbed or graded areas on the project site.
- 5) Any change to the grading proposed on this plan requires re-submission to Howard County Soil Conservation District for approval.
- 6) Dust control will be provided for all disturbed areas. Refer to 1983 Maryland Standards and Specification for Soil Erosion and Sediment Control, pp 6201 and 62.02 for acceptable methods and specifications for
- 1) Any variation from the sequence of operations stated on this plan requires the approval of the sediment control inspector and the County Soil Conservation District prior to the initiation of the change.
- 8) Excess cut or borrow material shall go to or come from, respectively, a site with an approved sediment control plan.
- The following item may be used as applicable:
- 9) Refer to "Maryland's Guidelines to Waterway Construction" by the Water Resources Administration (WRA), dated January, 1986 for standard details and detailed specifications of each practice specified herein for waterway construction.



- 1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE
- CROSSING BY CONSTRUCTION TRAFFIC. EIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION, RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT
- STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER

FLOW CHANNEL STABILIZATION

TYPE OF IREAIMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSION; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD;	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

- ENGINEERING DESIGN A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOLL WITH CONSTRUCTION EQUIPMENT.
 RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO
- C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
 PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE

