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

beedbed Preparation. Loosen upper three inches of soil by raking. discing or other acceptable means before seeding. seal Amendments Apply 0-20-20 fertilizer at the rate of 600 lbs. per

wre. harrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3%. Lawns or high maintenance areas will be dragged and livered with a York take. At the time of seeding, apply 400 lbs. of 0-0-0 ureatism fertilizer and 500 lbs. of 10-20-20 or equivalent ertilizer per autt-Sections: For the periods March 1 thre April 30, and August 1 thrusticober 15, seed with 40 lbs. per acre (1 lb/1000 sq.ft.) of a mixture

t certified Merion Kentucky bluegrass; common Ketucky bluegrass & 40 lbs. per acre 1 lb. 1000 sq.ft l and Red Fescue, Pennlawn or Jamestown 20 lbs. per acre (0.5 lb./1000 sq.ft.) for the period May 1 thru July 12. seed with 40-46-20 mix as specified above and 2 lbs. per acre (0.05 ts. 11000 scitil of weeping lovegrass. Juring the period of October lo bru February 28, protect site by (Option 1) 2 tons per acre of well-anthorec straw mulch and seed as soon as possible in the spring. Option 2) (se sod. (Option 3) Seed with 40-40-20 mix specified above nd multi with I tonstacre well-anchored straw

Maiching. Apply 12 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unroited 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.)

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

TEMPORARY SEEDING NOTES

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

Seedbed Preparation Loosen upper three inches of soil by raking, fishing or other acceptable means before seeding.

cil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 bs./1000 sq.ft.) Where soil is highly acidic, apply dolomitic limes: one at the rate of 1 ton per acre.

Seeding For periods March 1 thru April 30 and from Agust 15 thru November 15, seed with 140 lbs. 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 well anchored straw mulch and seed as soon as possible in the spring, or use

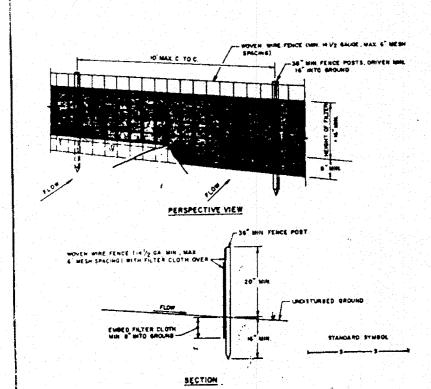
Muiching: Apply 15 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 216 gal. per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, & ft. or higher, use 348 gal. per acre (8 gal./1000 sq.ft.) for

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437)
- 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 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 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.
- 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,
- Total Area of Site Area Disturbed Area to be roofed or paved Area to he vegetatively stabilized

total Fill

- 15 acres
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of distrubance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
- O. Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition. . Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.



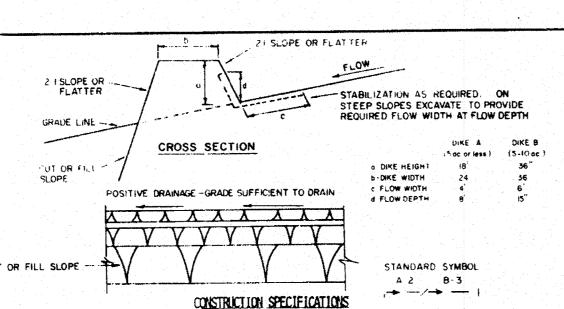
CONSTRUCTION NOTES FOR FABRICATED SILT FEAT

MOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH TO BE FASTMED SECURELY TO NOVEN HIRE FENCE HITH FIES SPACED EVERY 24" AT TOP AND MID SECTION

POSTS STEEL EITHER T OR U FLO Hy EN HIRE, 14: GA.

HIGH THO SECTIONS OF HEILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. PAINTENANCE SHALL BE DEFENDED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

SILT FENCE HO GVALF



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 FIELD 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. PLINOFF 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 SEEL

AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

ADEQUATELY STABILIZED.

FLOW CHANNEL STABILIZATION

TYPE OF REAIMENT	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" STON
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST. INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.

RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO

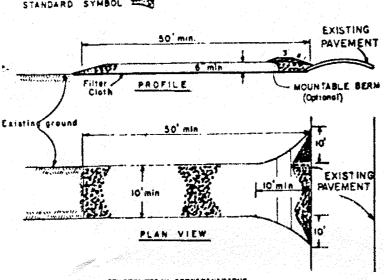
LINED RIP-RAP 4-8"

APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

ENGINEERING DESIGN

EARTH DIKE

NO SCALE



- CONSTRUCTION SPECIFICATIONS
- 1. Stone Size Use 2º stone, or reclaimed or recycled concrete equivalent. 2. Length - As required, but not less than 50 feet (except on a single rest-
- dence lot where a 10 foot minimum length would apply).
- 4. Midth Ten (10) foot minimum, but not less than the full width points where ingress or egress occurs.

 Filter Cloth - Will be placed over the antire eres prior to placing of stone
 Filter will not be required on a single family residence lot.
- 5. Surface Mater All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with Sil alopes will be permitted. 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sadiment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repal and/or cleanout of any measures used to trap sediment. All
- 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 atone and which drains into an approved sadiment trapping 9. Periodic inspection and needed asintenance shall be provided after each rain.

sediment spilled, dropped, washed or tracked onto public rights- of- way sust

STABILIZED CONSTRUCTION

ENTRANCE

LENGTH OF MEIR (b)

MAX DEPTH OF FURM

Manager Constitution of the Constitution of th

L STONE CHIEF DUTLET CHARMEL AS PER TABLE ST VINCHARME, MAT ME. CURVED TO FIT ESISTING TOPOGRAPHY)

- MITER CLOTH LEMBEDOED MIN 4" AT UPSTREAM END) -

PERSPECTIVE VIEW

CONSTRUCTION SPECIFICATIONS FOR ST-VI

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 five (5) feet, measured at centerline of embankment.

4. Elevation of the top of any dike directing water into trap must equal or

5. Storage area provided shall be figured by computing the volume available

6. Filter cloth shall be placed over the bottom and sides of the outlet

least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at

7. Stone used in the outlet channel shall be four (4) to eight(8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be

one (1) foot thick layer of two (2) inch or finer aggregate shall be

8. Sediment shall be removed and trap restored to its original dimensions

when the sediment has accumulated to 1/2 the design depth of the trap.

Removed sediment shall be deposited in a suitable area and in such a

9. The structure shall be inspected after each rain and repaired as newled.

10. Construction operations shall be carried out in such a manner that erosion

11. The structure shall be removed and the area stabilized when the trainage

12. Drainage area for this practice is limited to 15 acres or less.

RIP RAP OUTLET

SEDIMENT TRAP

Kli cx Ail

behind the outlet channel up to an elevation of one (1) foot below the

channel prior to placement of stone. Sections of fabric must overlap at

embedded one (1) foot back into the upstream face of the outlet stone or

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

exceed the height of embankment.

entrance of outlet channel.

manner that it will not erode.

and water pollution are minimized.

area has been properly stabilized.

placed on the upstream face of the outlet.

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

-APRON LENGTH IS MA

- CHANNEL SIDE PORNED BY COMPACTED ENBANCHENT OR EXCAVATION INTO. EXISTING GROUND

2 CLEAR AND GRUB FOR INSTALLATION OF SEDIMENT CONTROLS ONLY. (I DAY) 3. INSTALL STABILIZED CONSTRUCTION ENTRANCE; EARTH DIKES, SILT FENCE

AND SEDIMENT TRAPS. (3 DAYS)

5 INSTALL UTILITIES AND COMPLETE PENAINING CONSTRUCTION (8 WEEKS) G STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT

REMOVAL IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

SEQUENCE OF CONSTRUCTION

I OBTAIN A GRADING PERMIT

4 CLEAR AND GRADE REMAINDER OF SITE AND ROUGH GRADE. (2 WEEKS)

SEEDING NOTES. (3 DAYS) 7. UPON PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROLS AND STABILIZE AREAS DISTURBED IN THEIR BY THE HAVELOUFER: STOPPORTORISM ALL DEVELORMENTS AND FOONE-AS FORDING TO THESE STLANS CASE STONE SEED STONE. PERSONALIS INVOLVED IN SHIP SONSTRUCTION OF SHEET 1111 TATE RESOURCES APPROVED STRAINING PROGRAM FOR THE EDIMENT AND EROSEON BEFORE BEGINNING THE PROJECTION ROVIDE THE HOWARD SOIL CONSERVATION TO TRIFT WITHOUT AS BUILD PLAN OF THE POND WITHIN GUDAYS OF COMPLET, C. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWAR Kuland C Sound, Projet Executive BY THE ENGINEER: THEREITY THAT THE PLAN FOR POND ONSTRUCTION, TROY AND SEDIMENT CONTROL REPRESENTS A PROJETCAL AND WORKARD PLAN BASED ON MY PERSONAL KNOW EDGE OF THE STATE ONI-LIPONS THIS PLAN WAS PREPARED IN ACCORDANCE STATE IS REGULERMENTS OF THE HOWARD SOLL CONSTRUCTION DISTRIBIT. HAVE NOTIFIED THE DEVELOPER THAT OF MUST PROVIDE OF HOWARD SOLE CONSERVATION DISTRICT WITH AN CALL BUILD OF Y THE POND WITHIN TO DAY: OF COMPLETION." 5.13.87 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD CO. CONSERVATION DISTRICT AND MEET THE FECHNICAL REQUIREMEN SOIL EROSION AND SEDIMENT SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD RE ONSERVATION DESTRICT. HOWARD COUNTY HEALTH DEPARTMENT. DEVELOPMENT AND ZONING ADMINISTRATION DRAINAGE SYSTEMS AND PUBLIC ROADS. 1: (

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, JOH

HOWARD COUNTY DEPARTMENT OF PUBLIC WORK

DATE Wiesen & Red 5-20-87 FILED MIT CHIEF, BUREAU OF ENGINFERING

REVISION DATE NO WATERLOO LAND LIMITED PARTHERSHIP OWNER SUITE IOI 8350 BRISTOL COURT JESSUP, MARYLAND 2075A SIENA CORPORATION

SUITE IOI 8350 BRISTOL COURT JEGGUP, MARYLAND 20794

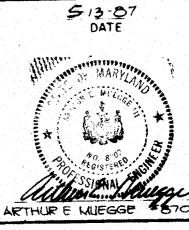
WATERLOO MINI-STORAGE

AREA YAX MAP 43 WITH ELECTION DISTRICT HOWARY COUNTY MARYCALIE SEDIMENT CONTROL NOTES AND DETAILS

APPROVLU DIVISION OF LAND DEVELOPMENT

HOWARD COUNTY, MARYLAND DATE 3-18-87 -M/278

THE RIEMER GROUP, INC The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm 3106 Health Park Drive, Ellicott City, Maryland 21043 (301) 461 2690



DESIGNED BY JAB DRAWN BY MAL PROJECT NO 3450 k DATE FEBRARY 13, 1087 SCALE AS SHOWN DRAWING NO 5 OF 6

5DP-87-153