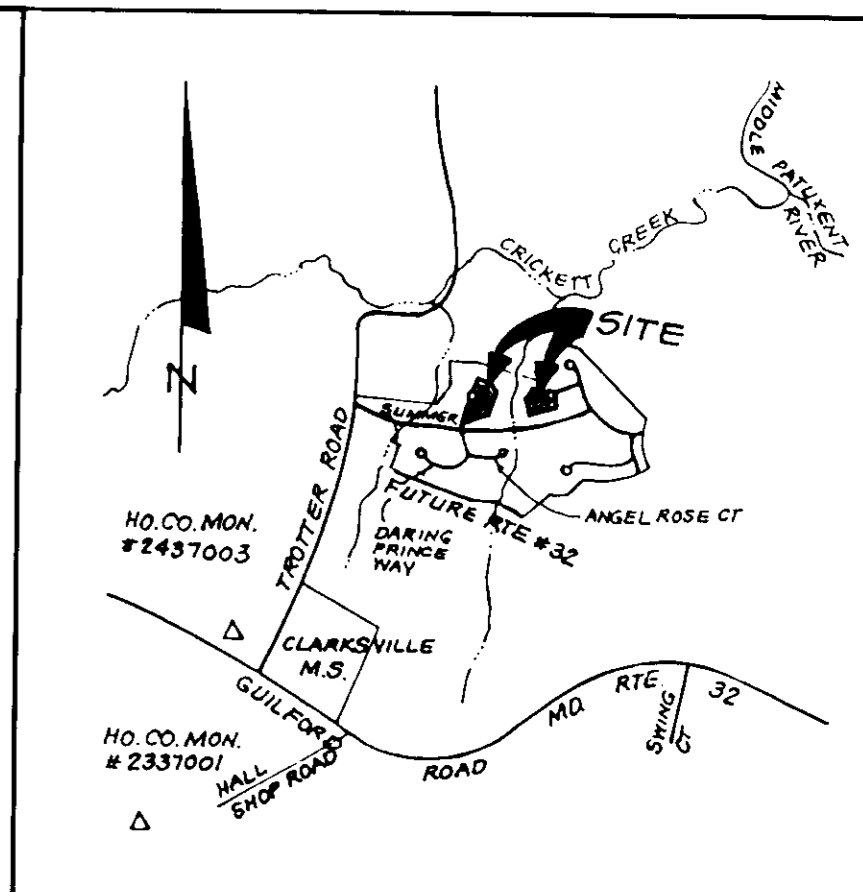
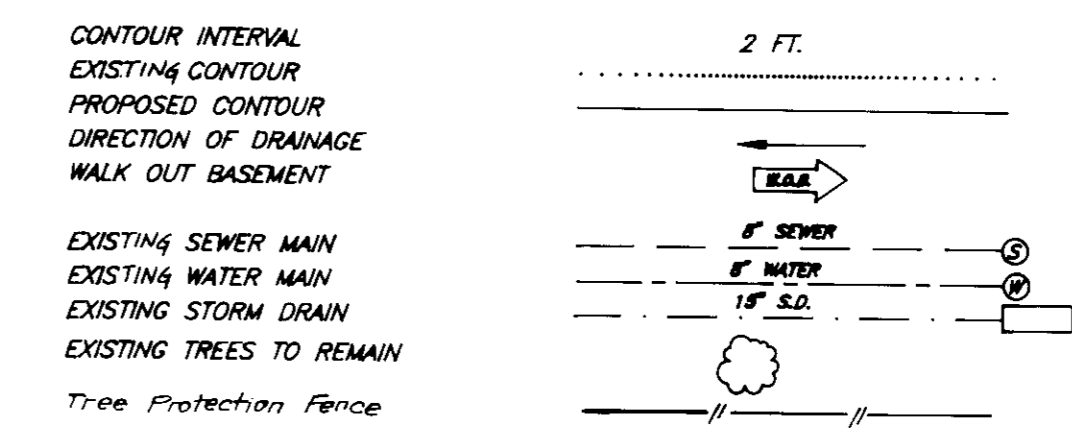


**LEGEND**



**VICINITY MAP**  
SCALE: 1"=2000'

**TRAP NO 2 SOST ST. W**  
 Drainage Area 0.7 Ac.  
 Storage Required 1260 CF  
 Storage Provided 1260 CF  
 Depth 3 Ft.  
 Top of Stone Weir 352.0  
 Cleanout Elev. 349.5  
 Bottom Elev. 348.0  
 Bottom Dimensions 12'x25'  
 L=4'  
 1:1 Side Slopes in Cut

**TRAP NO 1 SOS**  
 Drainage Area 0.3 Ac.  
 Top of Stone 362.0

**REDUCE SIZE OF EX. TRAP NO 3 (F-93-18) AS REQUIRED**  
 Drainage Area 0.4 Ac.  
 Storage Required 720 CF  
 Storage Provided 720 CF  
 Depth 3 Ft.  
 Top of Stone Weir 372.0  
 Bottom Elev. 368.0  
 Cleanout Elev. 365.5  
 Bottom Dimensions 6'x14'  
 L=4'  
 2:1 Side Slope

Reviewed for HOWARD S.C.D.  
 Name  
 and meets Technical Requirements  
 Signature [Signature] 9/15/93  
 US Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
[Signature] 9/3/93  
 Approved

**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 necessary."  
[Signature] 4-16-93  
 Signature Date

**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.  
[Signature] 4-16-93  
 Signature Date

**APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.**  
 HOWARD COUNTY HEALTH DEPARTMENT  
[Signature] 9/16/93  
 CHIEF HEALTH OFFICER DATE

**APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING**  
[Signature] 9/25/93  
 DIRECTOR DATE

**APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS**  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
[Signature] 9/10/93  
 CHIEF BUREAU OF ENGINEERING DATE

**CLARK • FINEFROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA MD 21045 • (301) 811-7500 BALTO • (301) 621-8100 WASH.

DESIGNED KIWM	<b>SEDIMENT &amp; EROSION CONTROL PLAN</b>  LOTS 7 thru 12 and 22 thru 25  <b>COLUMBIA</b> VILLAGE OF RIVER HILL SECTION 2 AREA 1 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 30'
DRAWN BAL		DRAWING 2 OF 3
CHECKED KIWM		JOB NO 93-051
DATE April 1993		FILE NO 93-0515e
		FOR: ALLAN HOMES, INC. 12860 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

**SEDIMENT AND EROSION CONTROL NOTES**

**PERMANENT SEEDING NOTES**

- 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 (AID 319-1B10)
- 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 SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, 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 perimeters 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 SPECS 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.

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

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

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq ft.) and 800 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq ft.) before seeding. Narrow 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.).
- 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. Narrow 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 (0.5 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 wet 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 wet anchored straw.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq ft.) of unrattled 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 reseeds.

**TEMPORARY SEEDING NOTES**

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

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 (0.7 lbs./1000 sq ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of wet 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 unrattled 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 (AID 319-1B10) AND MULCHING NOT COVERED.

**SITE ANALYSIS:**

Total Area of Site:	2.86 AC
Area disturbed:	1.02 AC
Area to be roofed or paved:	1.02 AC
Area to be vegetatively stabilized:	1.84 AC
Total Cut:	4040 CY
Total Fill:	5490 CY

Offsite Waste/Borrow Area Location:

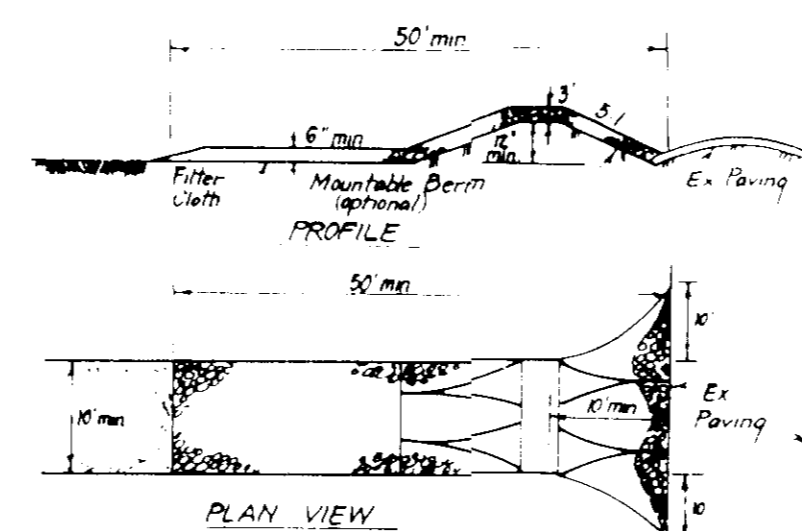
- Any sediment control practice which is disturbed by grading during placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County DWM Sediment Control Inspector. On all sites with disturbed areas in excess 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 authorized until this initial approval by the inspection agency is made.
- If houses are to be constructed on an "as sold" basis, at random, Single Family Sediment Control, as shown below shall be implemented.
- All pipes to be blocked at the end of each day (see detail this sheet).
- The total amount of silt fence = 690 LF

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 its grading permit number at the time of construction.

**CONSTRUCTION SEQUENCE:**

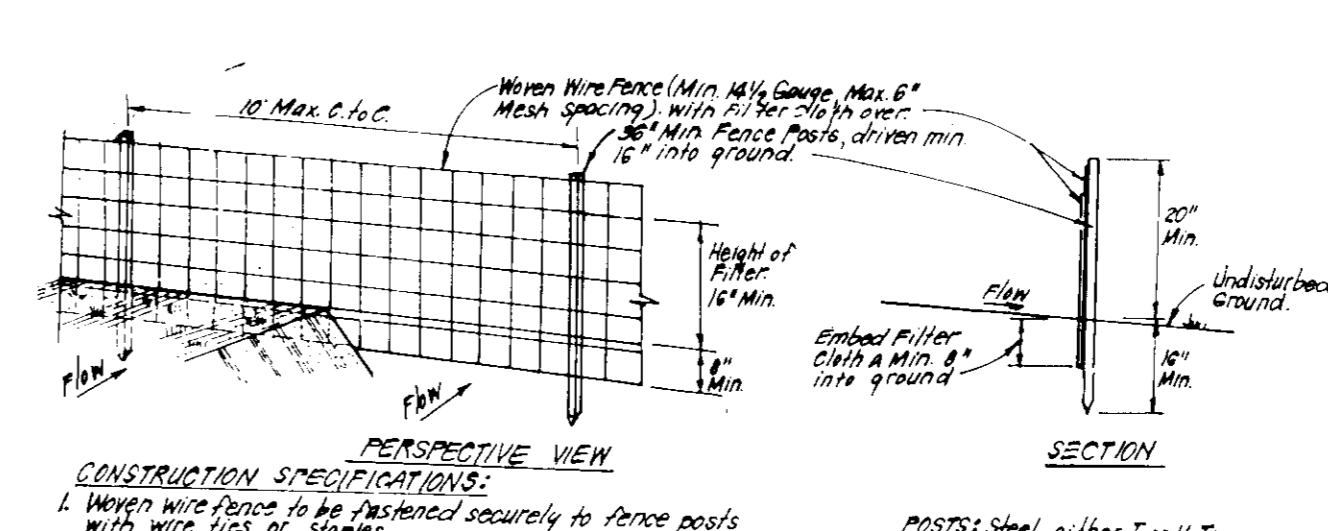
NO.	DESCRIPTION	NO. OF DAYS
A	Obtain grading permit	7
B	Install tree protection fence	7
C	Install sediment and erosion control devices and stabilize	14
D	Excavate for foundations, rough grade and temporarily stabilize	30
E	Construct structures, sidewalks and driveways	60
F	Final grade and stabilize in accordance with Sids. and Specs.	14
G	Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize	7

\* Delay Construction of house on lot 2 until area draining to lots has been stabilized.



**CONSTRUCTION SPECIFICATIONS:**

- Stone size: Use 2" stone or equivalent in rounded concrete equivalent.
- Length: As required, but not less than 50 feet, except on a single residence lot where a 30 foot minimum length would apply.
- Thickness: Not less than six (6) inches.
- Width: Ten (10) feet maximum, but not less than the full width of a cut where ingress or egress occurs.
- Filter Cloth: Will be placed over the entire area prior to dumping of stone. Filter will not be required in a single family residence lot.
- Surface Water: All surface water flowing in quarter lower construction entrances shall be piped across the entrance. If piping is impractical, a mound side berm with 5' slopes will be permitted.
- 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/or use of equipment of any measure used to trap sediment. All sediment applied, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing: Wherever 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 device.
- Periodic inspection and needed maintenance shall be performed after each rain.

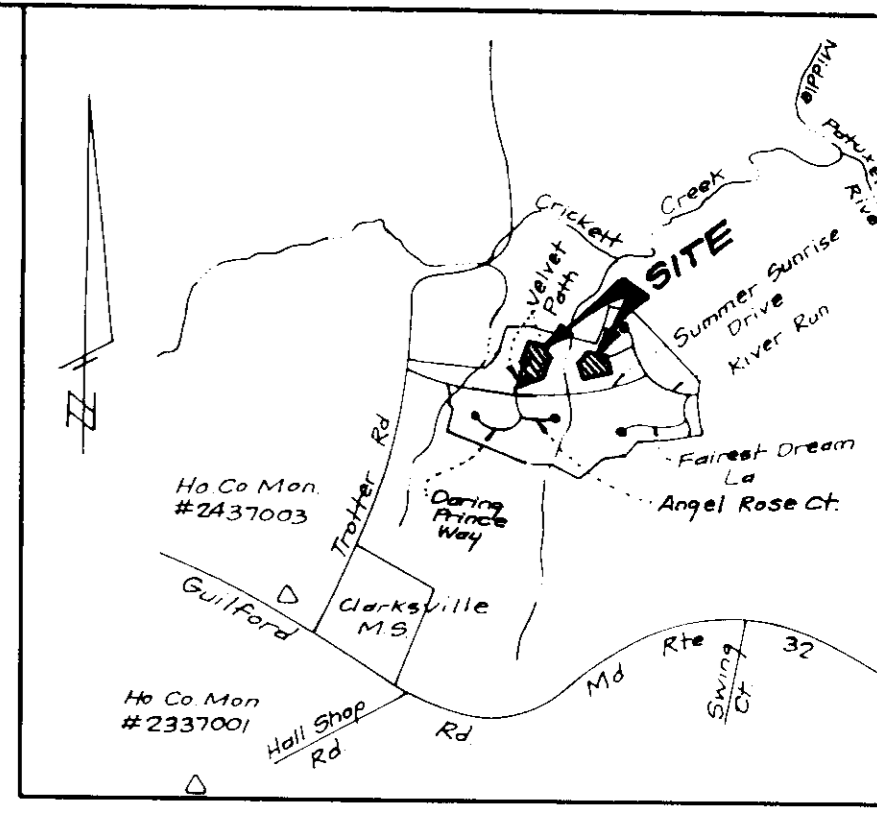


**SILT FENCE DETAIL (S)**  
NO SCALE

**CONSTRUCTION SPECIFICATIONS:**

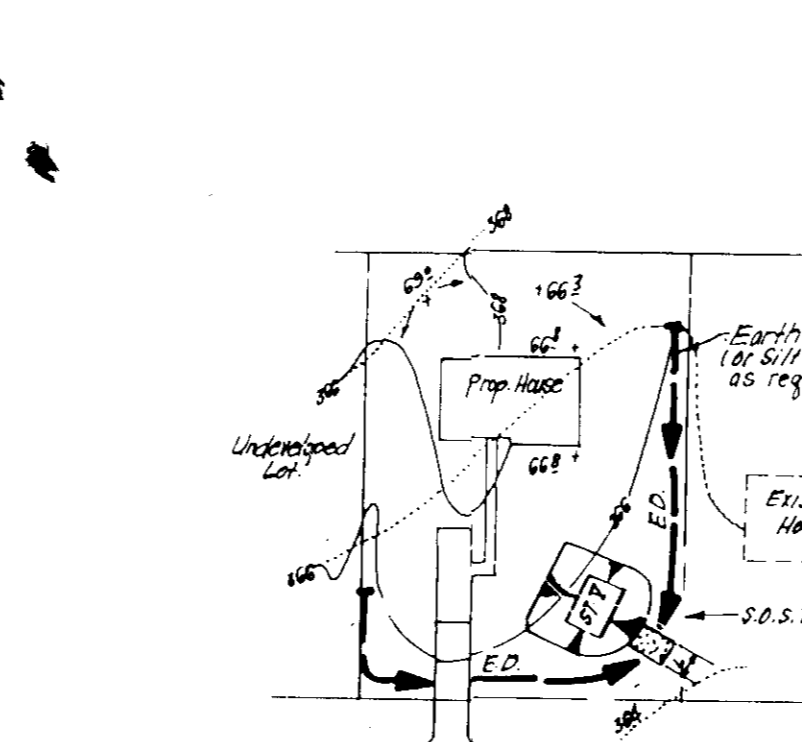
- When wire fence to be fastened securely to fence posts with wire ties or staples.
- Filter cloth to be fastened securely to seven wire fence posts with wire staples every 24" at top and mid section.
- When 2 sections of filter cloth join each other they shall be overlapped by 6" and stapled.
- Maintenance shall be performed as needed and material removed when bulges develop in silt fence.

POSTS: Steel either T-4 Type or 2" x 4" Heavy Wood. 1/2" Gauge FENCE: Heavy Wire, 1/2" Gauge. FILTER CLOTH: Filter Cloth, 6' Max. Mesh Opening. STABILIZED UNIT: Geotextile, Polypropylene, Strength equal.



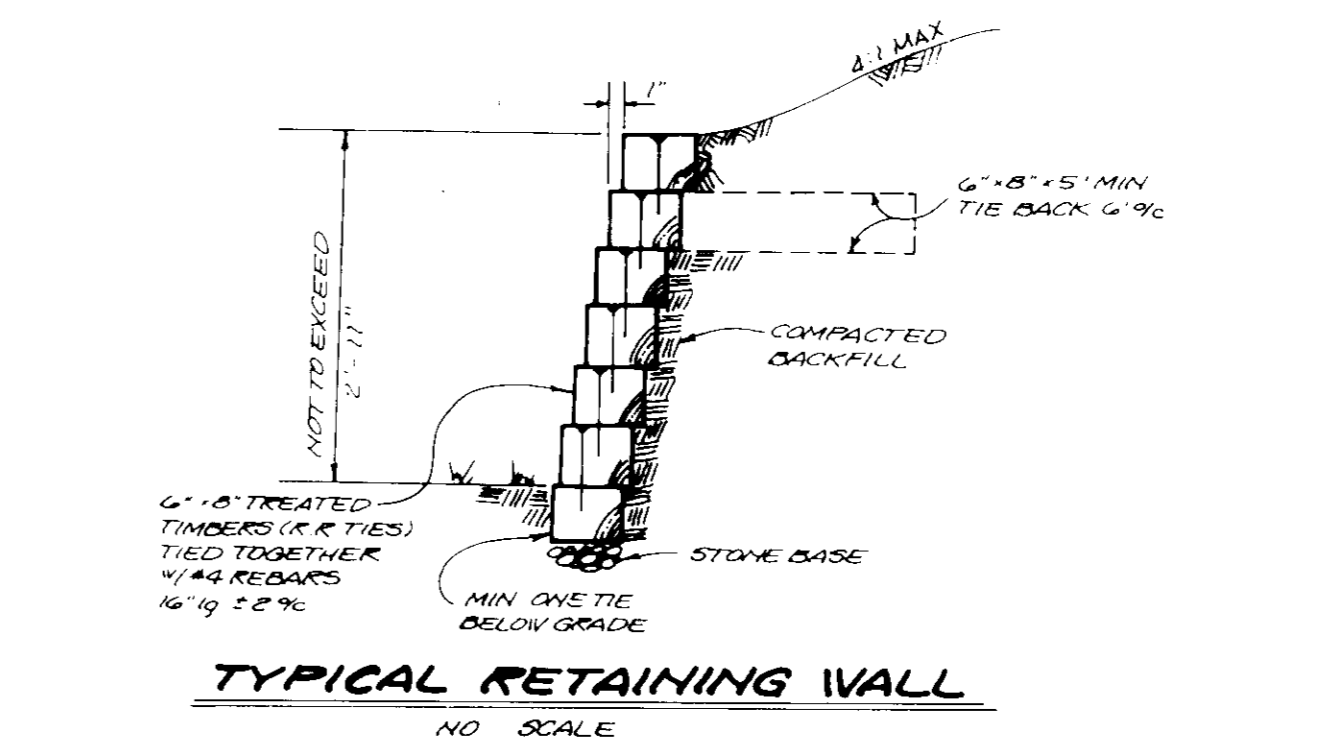
**VICINITY MAP**  
SCALE: 1"=2000'

**STABILIZED CONSTRUCTION ENTRANCE (SCE)**  
NO SCALE



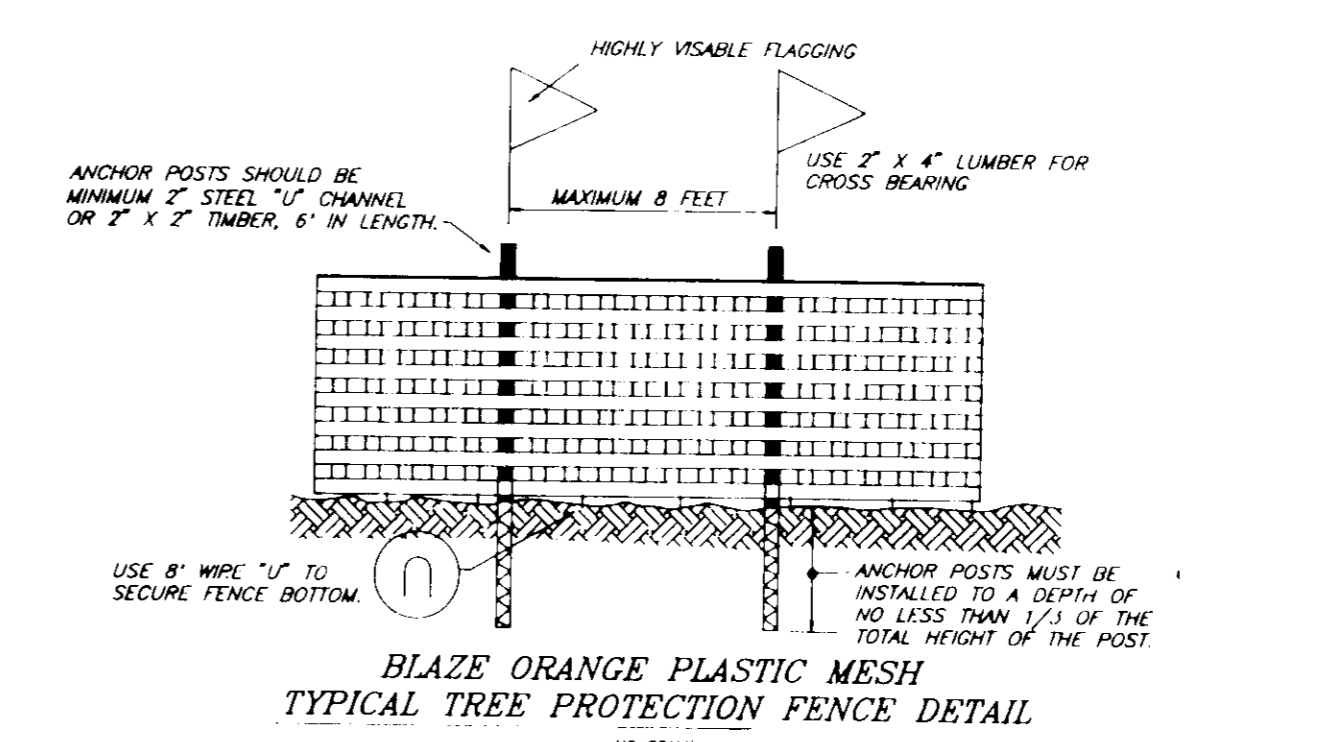
\* NOTE: Single lot retaining wall can not be utilized if any two lots sharing common property lines are to be disturbed at the same time or on any lots showing a sediment trap.

HEIGHT (FT.)	NO. R/S	NO. TIES	TIE
4	2	2	1/2"
6	3	3	1/2"
8	4	4	1/2"
10	5	5	1/2"

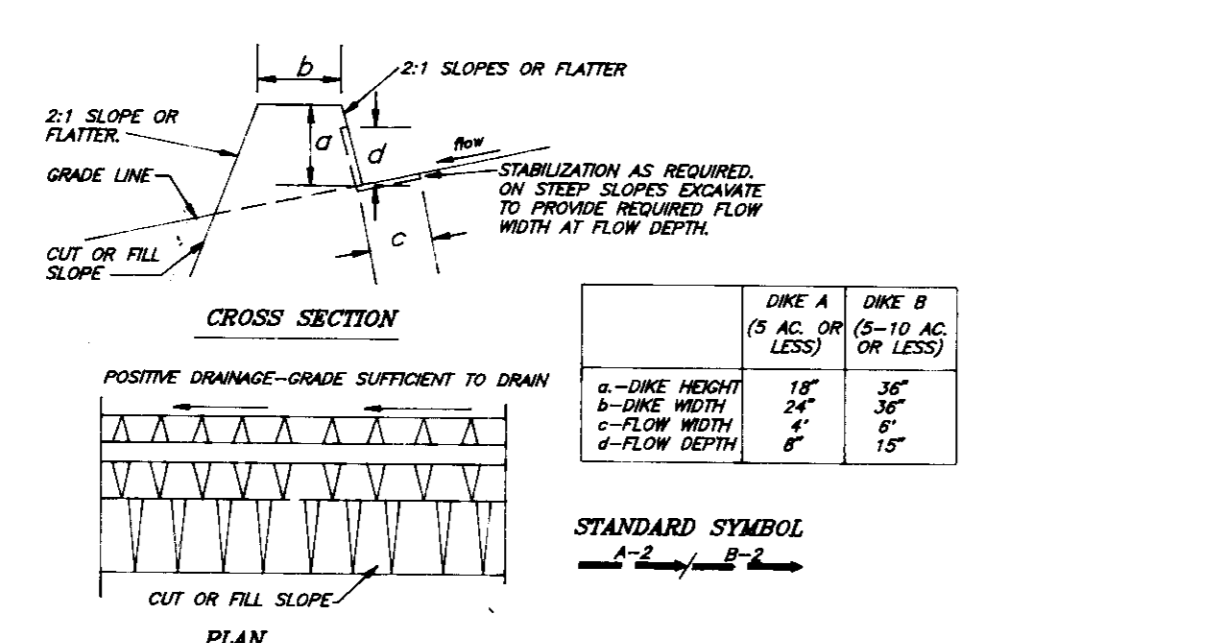
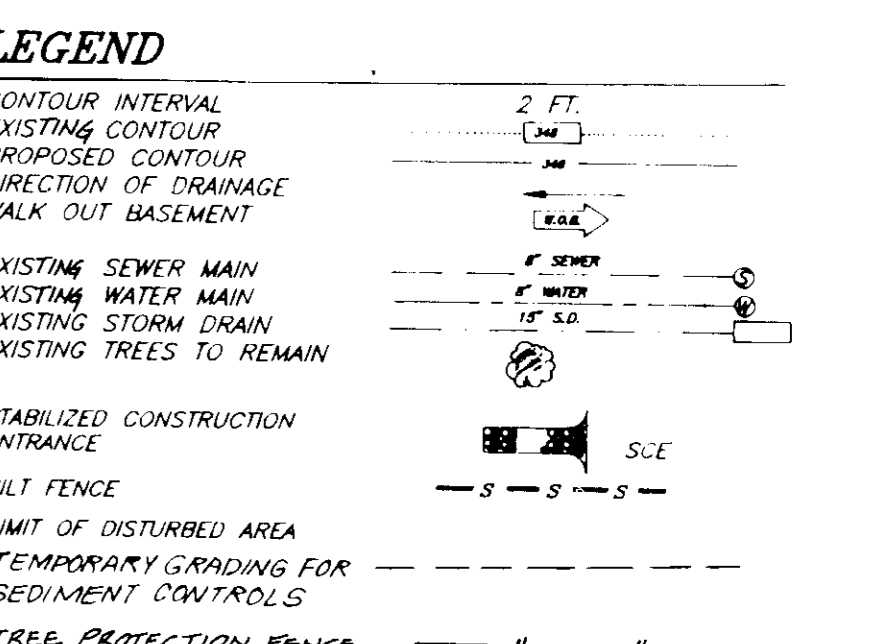


**TYPICAL RETAINING WALL**  
NO SCALE

**SINGLE LOT SEDIMENT CONTROL PLAN**  
NO SCALE



**BLAZE ORANGE PLASTIC MESH TYPICAL TREE PROTECTION FENCE DETAIL**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS:**

- 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.
- 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. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where after the outlet or the drainage area above the dike are not adequately stabilized.
- 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 the chart below.

**FLOW CHANNEL STABILIZATION**

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A (5 AC OR (8-10 AC LESS) OR LESS)	DIKE B (8-10 AC LESS) OR LESS)
1	0.5-1.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	1.1-5.0%	SEED AND STRAW MULCH	SEED USING MULCH, OR EXCELSON, SOIL, 2" STONE
3	5.1-8.0%	SEED WITH MULCH, OR SOIL	LINED WITH 4"-6" STONE
4	8.1-20%	LINED WITH 4"-6" STONE	ENGINEERING DESIGN

**EARTH DIKE (ED)**  
NO SCALE



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Reviewed for: HOWARD S.C.D. Name: Howard

Signature: John R. Plutonski 9/13/93

US Soil Conservation Service

**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 necessary."

Signature: Olga Wachob Date: 4-16-93

**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.

Signature: G. Nelson Clark Date: 4-16-93



OWNER: HOWARD RESEARCH AND DEVELOPMENT CORPORATION, 10275 Little Patuxent Parkway, Columbia, Maryland 21044

**CLARK • FINEFROCK & SACKETT, INC.**  
ENGINEERS • PLANNERS • SURVEYORS

7115 MINISTERS LANE • COLUMBIA, MD 21046 • 410.737.7200 • BALTIMORE, MD 410.528.1000 • WASHINGTON, DC 202.462.1000

DESIGNED KIWM	SEDIMENT AND EROSION CONTROL PLAN LOTS 7 THRU 12 AND 22 THRU 25	AS SCALE
DRAWN BAL	COLUMBIA VILLAGE OF RIVER HILL SECTION 2 AREA 1 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 3 OF 3
CHECKED KIWM	FOR ALLAN HOMES, INC. 10260 Old Columbia Rd Columbia, Md. 21046	JOB NO 93-051
DATE April 1993		FILE NO 93 051 SE

SDP 93-08