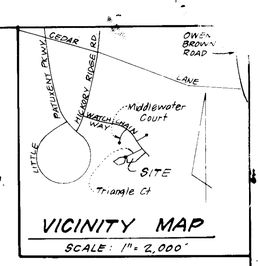
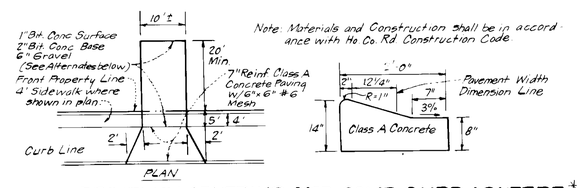
GENERAL NOTES

1. The land included is zoned NT SFMD (as per 8/2/85 zoning plan).
2. Coordinates shown hereon are based upon Howard County Control Points 2639002 & 2639003.
3. All roads are public and existing.
4. Any damage to county owned rights-of-way shall be corrected at the developer's expense.
5. The total area included: 2.4173 Acres
6. The total number of lots included: 8.
7. Storm water management for this site has been provided in F 83-120.
8. Reference final development plan, Phase 181, Part IV, for zoning criteria.



VICINITY MAP
SCALE: 1" = 2,000'



Note: Materials and Construction Shall be in accordance with Ho. Co. Rd. Construction Code

DRIVEWAY ABUTTING MOD. COMB. CURB & GUTTER *

NO SCALE

ALTERNATE #1
1" Bit. Conc Surface
4" Bit. Conc Base

ALTERNATE #2
1" Bit. Conc Surface
3" Bit. Conc Base
3" Gravel

* See Ho. Co. Std. R-3.01 for Std 7" Comb. Curb & Gutter

LEGEND:

1.	Contour Interval	2 Ft
2.	Existing Contour	390
3.	Proposed Contour	390
4.	Spot Elevation	+390.5
5.	Direction of Drainage	
6.	Walk-Out Basement	

BUILDING RESTRICTION LINES

Front : 20'
Sides : 7.5'
Rear : 7.5'

ADDRESS CHART

LOT	STREET ADDRESS
28	6103 Triangle Drive
29	6107 " "
30	6111 " "
31	6115 " "
32	6119 " "
33	6123 " "
34	6131 " "
35	6135 " "

SUBDIVISION NAME			SECT/AREA	LOTS
Columbia, Village of Hickory Ridge			3/12	28-35
PLAT #	BLOCK #	ZONE	TAX ZONE MAP	ELEC DIST	CENSUS TR
6846	11	N.T. S.F.M.D.	35	5TH	6053.01
WATER CODE			SEWER CODE	
W-27			6591000	

7-25-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT

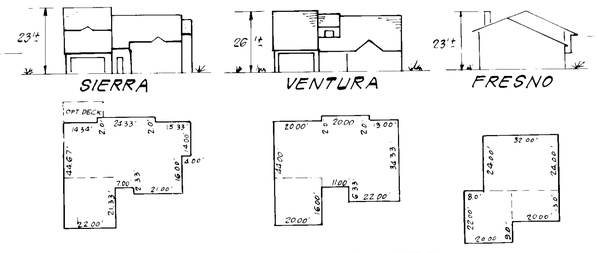
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

PLANNING DIRECTOR — DATE 8-26-86
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE

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

DIRECTOR — DATE 8-27-86
CHIEF BUREAU OF ENGINEERING — DATE



TYPICAL HOUSES
NO SCALE

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

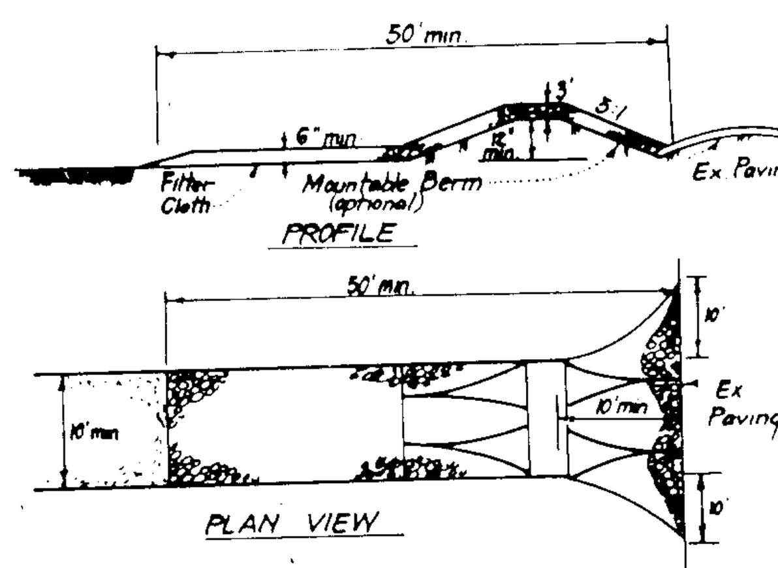
STATE OF MARYLAND — DONALD E. SACKETT — NO. 6068 — REGISTERED — PROFESSIONAL LAND SURVEYOR

CLARK · FINEFROCK & SACKETT
ENGINEERS • PLANNERS • SURVEYORS
11311 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED	C.J.S.	SITE DEVELOPMENT PLAN LOTS 28 THRU 35
DRAWN	V.L.M.	COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 12 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
CHECKED	J.M.E.	
DATE	6-18-86	FOR: ALLAN HOMES, INC. P.O. Box 1058 Columbia, Maryland 21044

SCALE	1" = 30'
DRAWING	1 OF 2
JOB NO.	86-060
FILE NO.	86-060

SDP-86-283

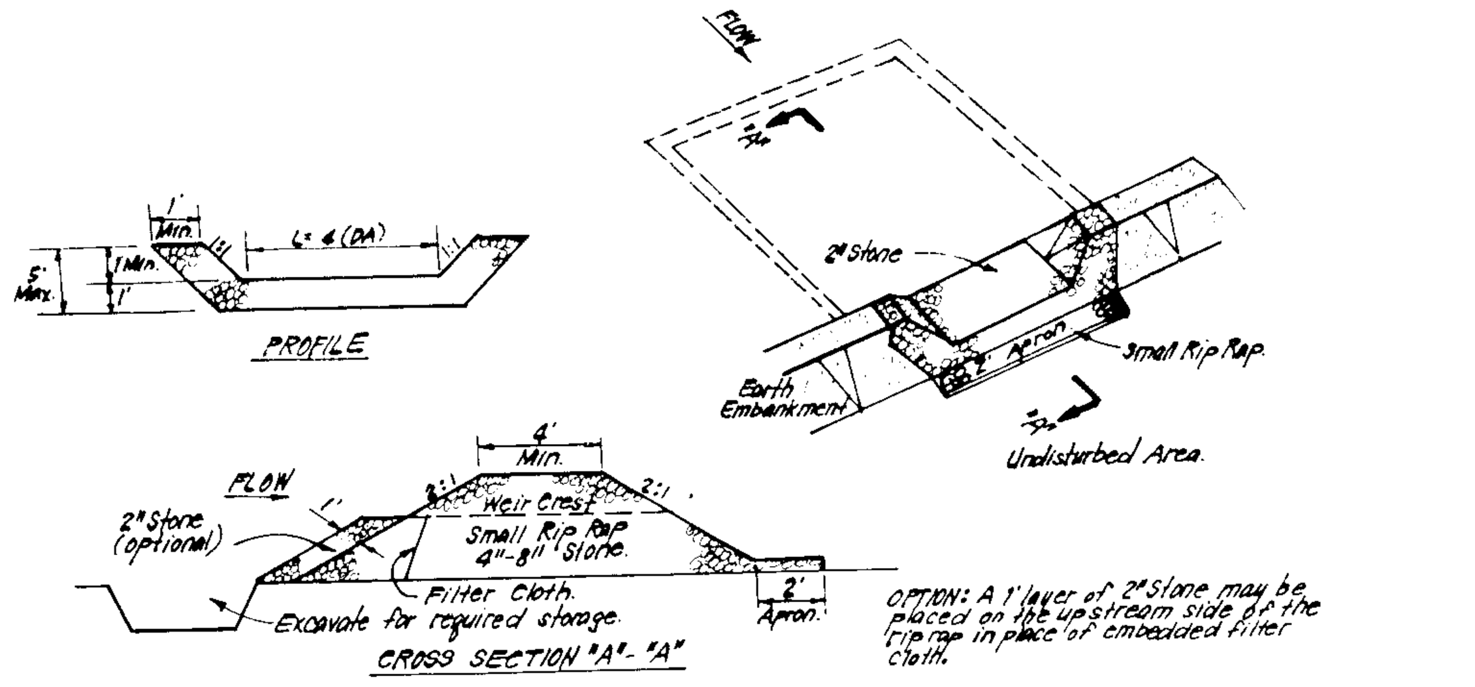


CONSTRUCTION SPECIFICATIONS:

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 residence 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 device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)

NO SCALE

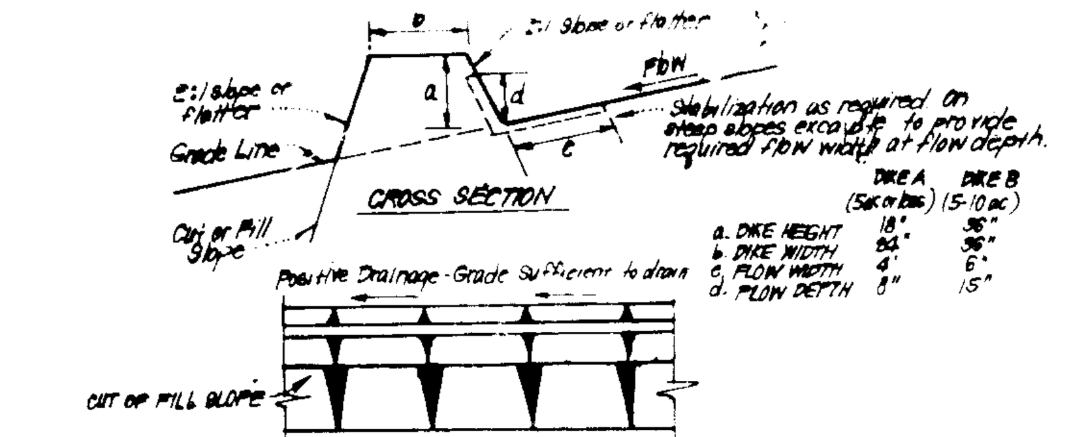


CONSTRUCTION SPECIFICATIONS:

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"-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 rap.
5. 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.
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 that erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

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

NO SCALE



	DIKE A (5ac or less)	DIKE B (5-10 ac)
a. DIKE HEIGHT	18"	36"
b. DIKE WIDTH	24"	36"
c. FLOW WIDTH	4'	6'
d. FLOW DEPTH	8"	15"

CONSTRUCTION SPECIFICATIONS:

1. All dikes shall be compacted by earth-moving equipment
2. All dikes shall have positive drainage to an outlet.
3. Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized safe outlet.
5. 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 adequately stabilized.
6. 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 chart below.

FLOW CHANNEL STABILIZATION

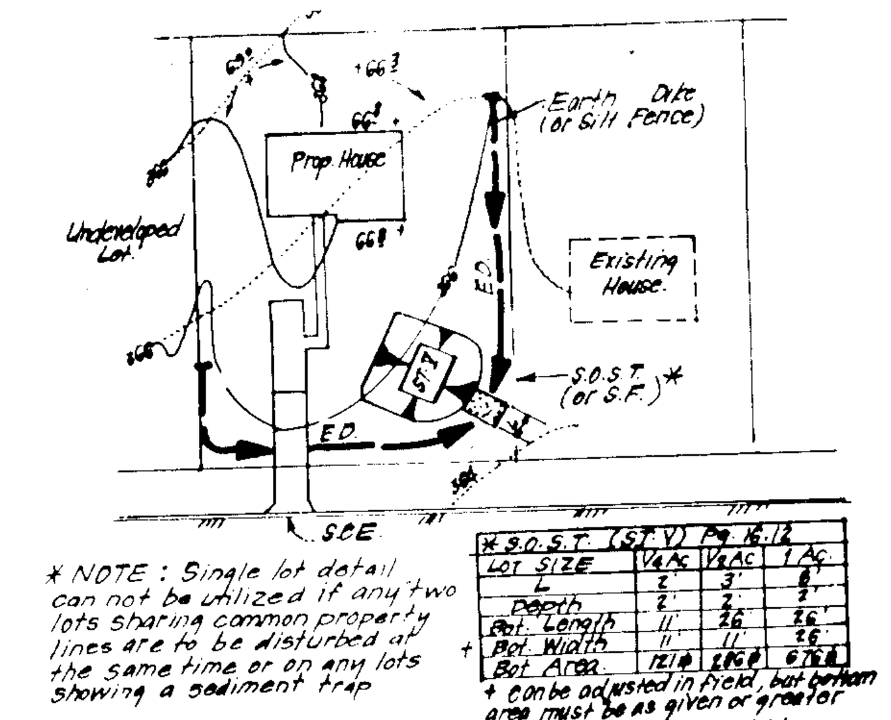
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1.	0.5-3.0%	Seed & Straw Mulch	Seed or Straw Mulch
2	3.1-5.0%	Seed & Straw Mulch	Seed w/Jute, or Excelsior; Sod; 2" Stone
3	5.1-8.0%	Seed w/Jute, or Sod; 2" Stone	Lined Rip Rap 4"-8" Stone
4	8.1-20.0%	Lined Rip Rap 4-8" Stone	Engineering Design

A. Stone to be 2" Stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
B. Rip Rap to be 4"-8" in a layer at least 8" thick, pressed into soil.
C. Approved equivalents can be substituted for any of the above materials.

7. Periodic Inspection and Required Maintenance must be provided after each rain.

EARTH DIKE DETAIL (E.D.)

NO SCALE



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

SINGLE LOT SEDIMENT CONTROL PLAN

NO SCALE

PERMANENT SEEDING NOTES

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.

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/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 (9 lbs/1000 sq ft).
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 thre 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 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 Fescue and mulch with 2 tons/acre well anchored straw.

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 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

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

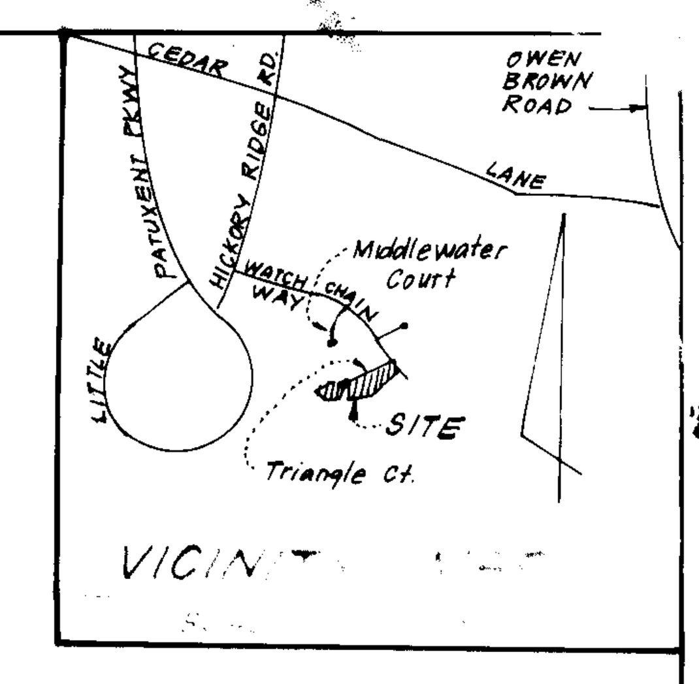
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

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 2½ 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 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 sod.

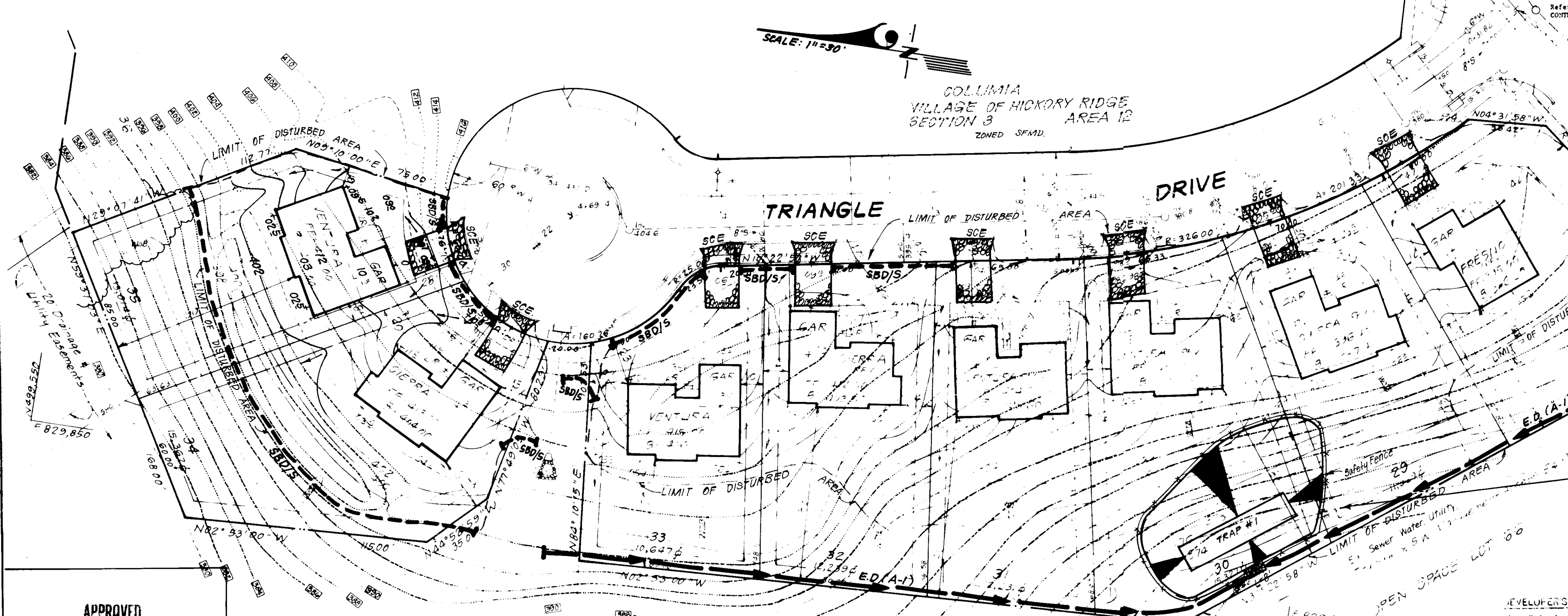
Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



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 STANDARDS 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:
   - Total Area of Site 2.417 Acres
   - Area Disturbed 1.925 Acres
   - Area to be roofed or paved 0.483 Acres
   - Area to be vegetatively stabilized 1.442 Acres
   - Total Cut ______ Cu. yds
   - Total Fill ______ Cu. yds
   - Offsite waste/borrow area location N/A
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 below).
13) The total amount of straw bale dikes/silt fence equals 465 L.F.



LEGEND

1. Contour Interval	2 Ft
2. Existing Contour	370
3. Proposed Contour	370
4. Spot Elevation	+70.5
5. Direction of Drainage	
6. Straw Bale Dike or Silt Fence	SBD/S
7. Earth Dike	E.D.
8. Stabilized Construction Entrance	SCE

TRAP #1 (SOST. ST-V)

D.A. = 1.8 Acres
Storage Required = 1.8(1800) = 3240 cf
Storage Provided = 3240 cf.
Depth = 3'
Stone Crest Elev. = 370.0
Bottom Elevation = 366.0
Clean Out Elev. = 367.5
Bottom Dimensions = 54' X 12'

CONSTRUCTION SEQUENCE:

	No. of Days
1. Obtain grading permit & install sediment & erosion control devices and stabilize.	5
2. Excavate for foundations & rough grade & temporarily stabilize.	30
3. Construct structures, sidewalks & drive ways.	230
4. Final grade in accordance w/Stds. & Specs.	15
5. Upon approval of sediment control inspector, remove sediment & erosion controls & stabilize.	3

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 erosion and sediment control 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 Soil Conservation District or their authorized agents, as are deemed necessary."

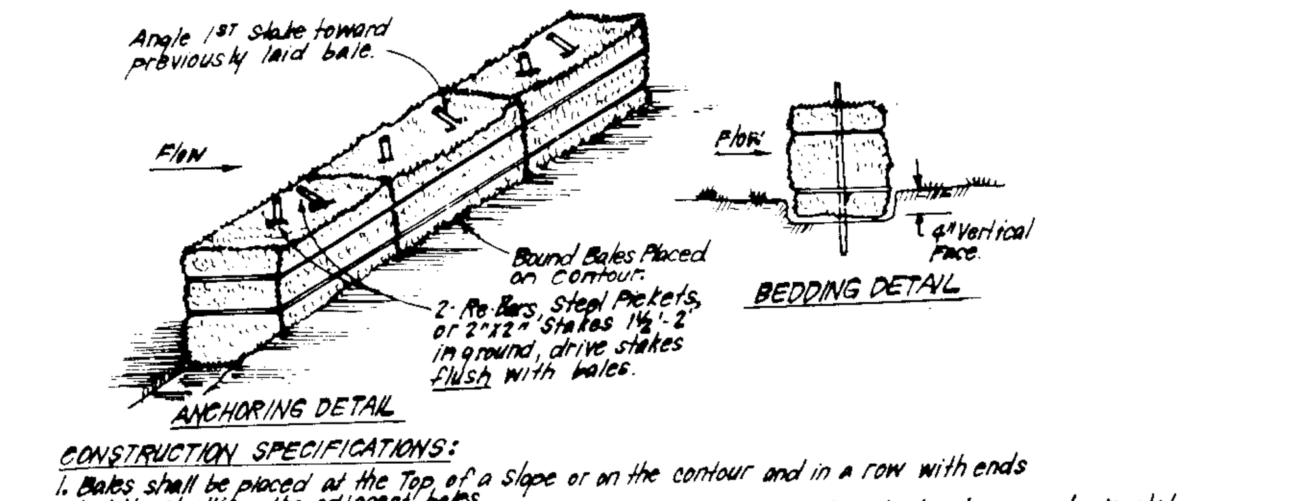
[signature] 7-15-86
Signature of Developer/Builder Date

APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 7-25-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT
[signature] 8-25-86
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
[signature] 8-25-86
PLANNING DIRECTOR DATE
[signature] 8-25-86
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE.
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[signature] 8-20-86
DIRECTOR DATE
[signature] 8-20-86
CHIEF BUREAU OF ENGINEERING DATE

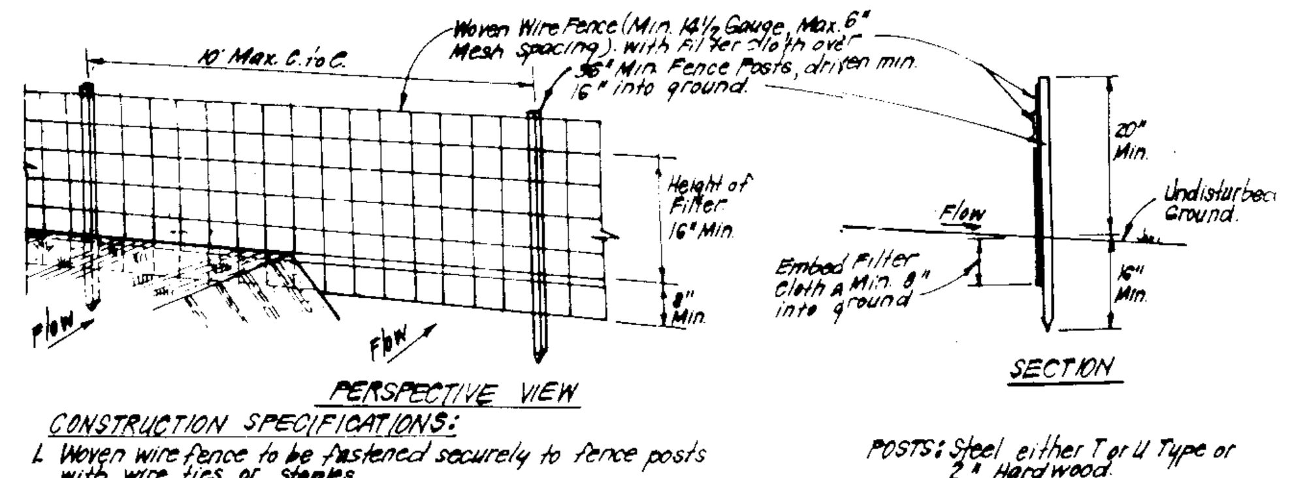


CONSTRUCTION SPECIFICATIONS:

1. Bales shall be placed at the Top of a Slope or on the contour and in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a min. of 4" and placed so the bindings are horizontal.
3. Bales shall be securely anchored in place by either 2 stakes or re-bars driven thru the bale. The 1st stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bale.
4. Inspection shall be frequent and repair replacement shall be made promptly as needed.
5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BALE DIKE DETAIL (SBD)

NO SCALE



CONSTRUCTION SPECIFICATIONS:

1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter Cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section
3. When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and folded.
4. Maintenance shall be performed as needed and material removed when "bulges" develop in Silt Fence

POSTS: Steel either T or U Type or 2" Hardwood.
FENCE: Woven Wire, 14½ Gage 6" Max. Mesh Opening.
FILTER CLOTH: Filter X, Mirafi 100X, Stablinka, T140N or Approv. equal
PREFABRICATED UNIT: Geofab, Envirofence or Approv. equal

SILT FENCE DETAIL (S)

NO SCALE

Reviewed for ______ S.C.D. and meets Technical Requirements
[signature] 5-18-86
Signature Date
Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
[signature] 8/18/86
Approved Date

ENGINEER'S CERTIFICATE

"I hereby certify that this plan for Erosion and Sediment 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."

Jeffrey L Schwab [signature] 7/16/86
Date

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

CLARK · FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS
1131F LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904

DESIGNED	SEDIMENT & EROSION CONTROL PLAN	SCALE
C.J.S.	LOTS 28 THRU 35	1"=30'
DRAWN	COLUMBIA	DRAWING
V.L.M.	VILLAGE OF HICKORY RIDGE	2 of 2
CHECKED	SECTION 3 AREA 12	JOB NO
J.M.E.	5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	86-060
DATE	FOR: ALLAN HOMES, INC P.O. Box 258 Columbia, Maryland 21044	FILE NO
7-15-86		86-060 SE

SDP-86-283c