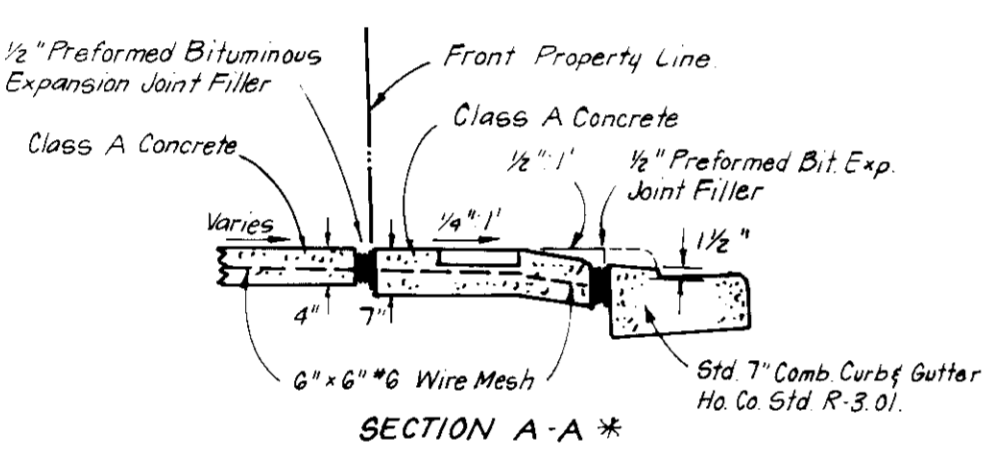
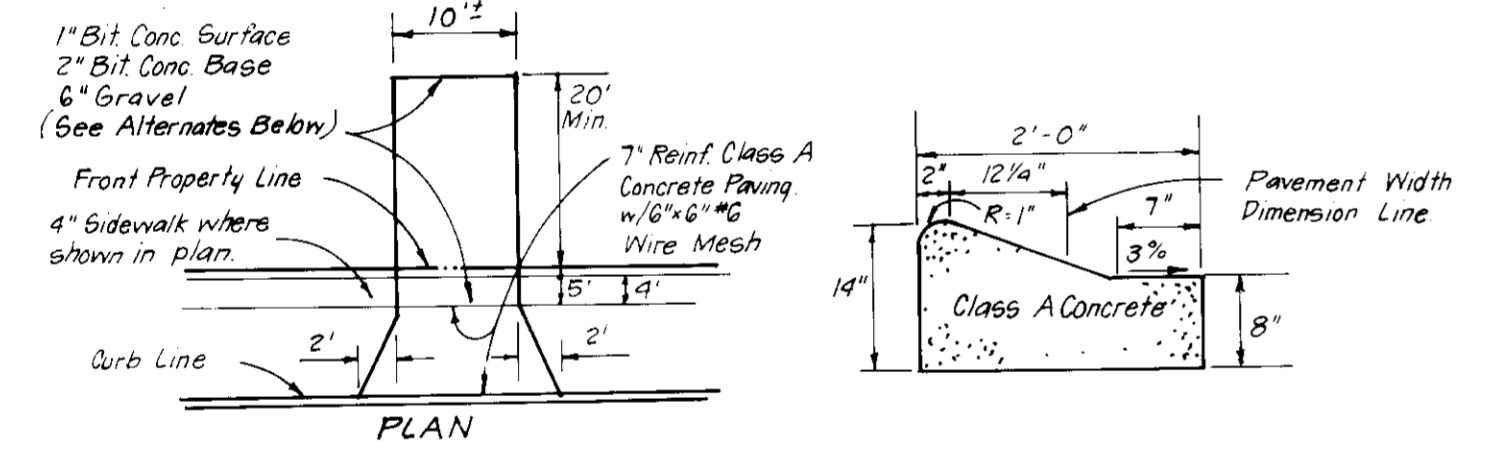


TYPICAL HOUSES
No Scale

NOTE: Materials and Construction shall be done in accordance with Ho Co Road Construction Code.

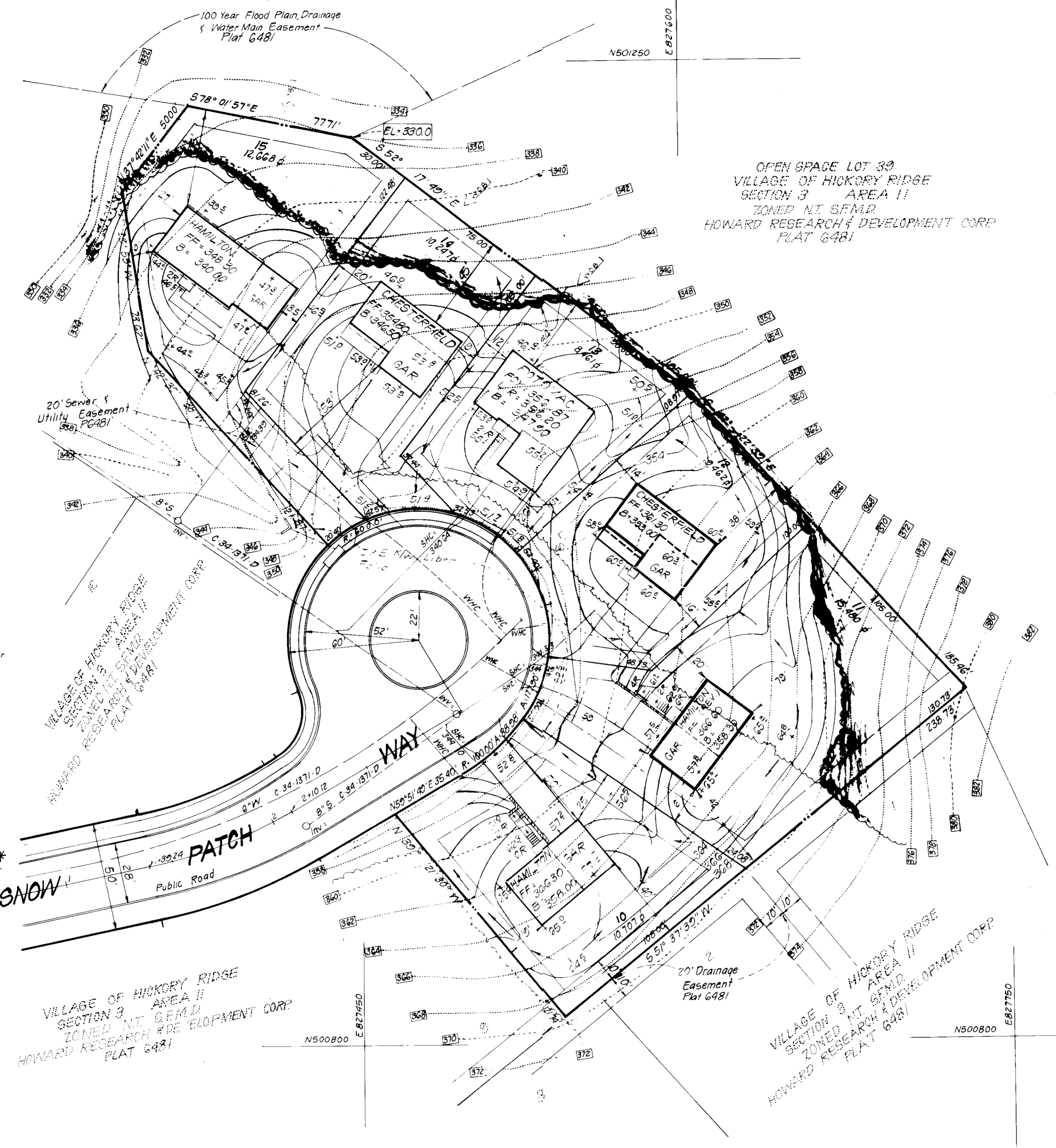


SECTION A-A *



DRIVEWAY ABUTTING MODIFIED COMB CURB & GUTTER *

- 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-301 for Std. 7" Comb Curb & Gutter necessary on the Col. De-Sac



GENERAL NOTES

- The Land included is zoned: New Town GFMD.
- Coordinates are based upon traverse controls for Columbia established by Maps, Inc. in 1965 and Purdum & Jeschke in 1968, which controls were tied to the Maryland Bureau of Control Survey Monuments and to the US Coast and Geodetic Survey Monuments in the Columbia Area.
- All roads are public and existing.
- Any damage to county owned rights-of-way to be corrected at the Developers expense.
- Total Area included: 182 Acres.
- Total Number of Lots: 6. Number of Units: 6.
- Storm Water Management for this site has been provided in VOHR #1, F83-120, VOHR #6, F84-51.
- Building Restriction Lines: Front: 20', Side/Rear: 7.5'
- Reference Final Development Plan Phase 1B1, Part III for zoning criteria.

LEGEND

- Contour Interval: 2 Ft
- Existing Contour: 380
- Proposed Contour: 380
- Spot Elevation: 82.5
- Direction of Drainage: (arrow)
- Existing Trees to be Saved: (tree symbol)
- Walk-Out Basement: (W.C.B. symbol)

ADDRESS CHART	
LOT No.	STREET ADDRESS
10	11814 SNOW PATCH WAY
11	11816 " " " "
12	11822 " " " "
13	11821 " " " "
14	11817 " " " "
15	11813 " " " "

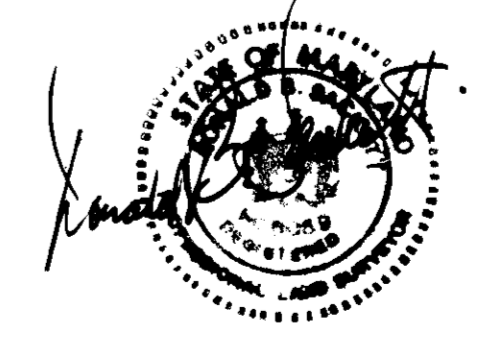
SUBDIVISION NAME	COLUMBIA	SECT./AREA	3/11	LOTS	10-15
PLAT #	64B1	BLOCK #	4	TAX ZONE MAP	35
WATER CODE	1-15	SEWER CODE	670000	ELEC. DIST.	5TH
				CENSUS TR.	6053.01

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT
DATE: 5-21-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
DATE: 5-22-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 5-11-86

APPROVED: DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY
DATE: 4-14-86



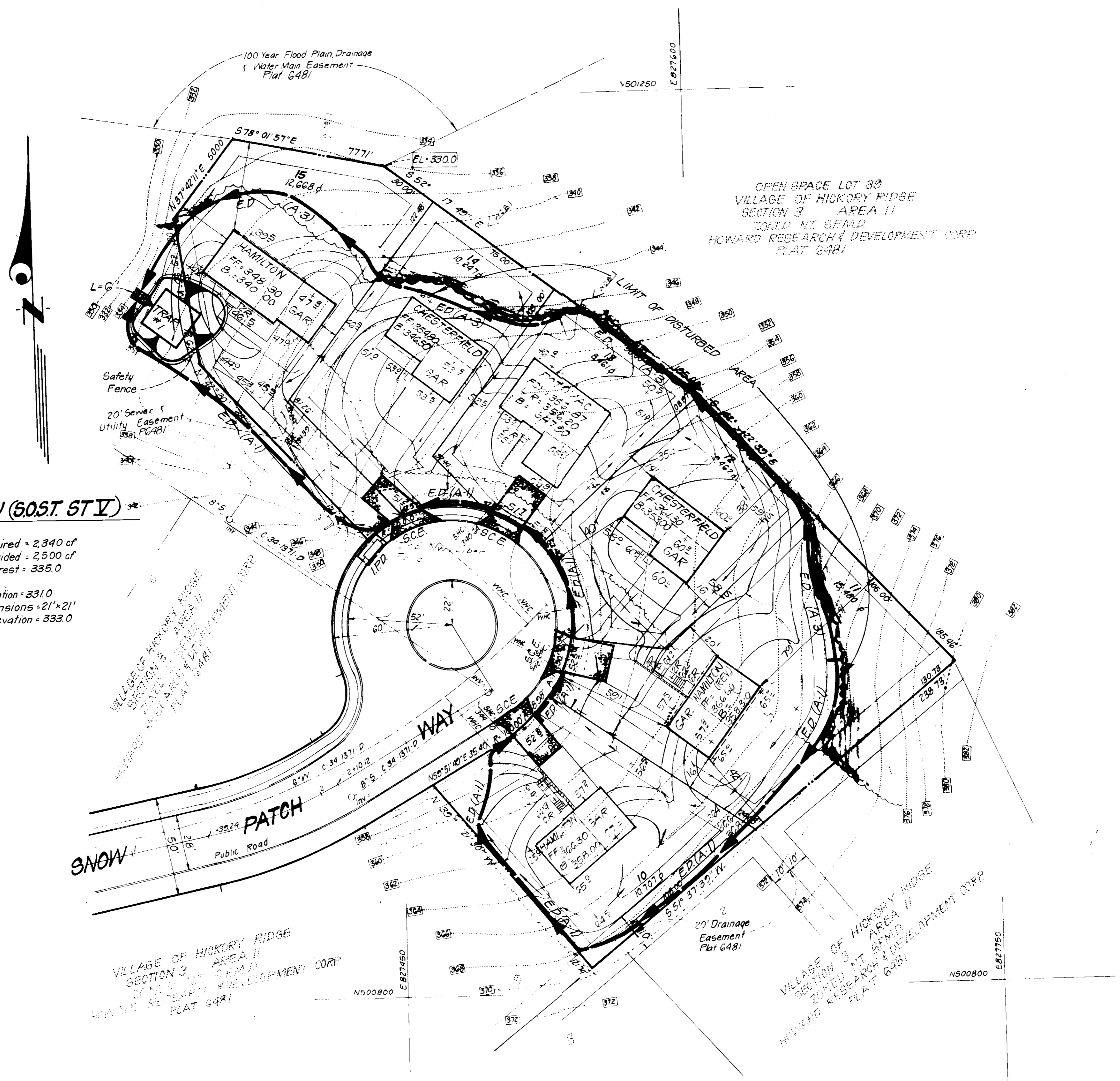
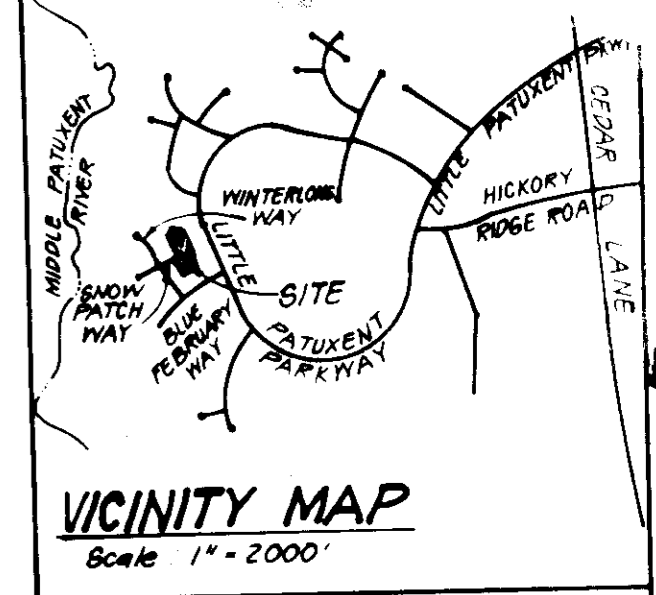
CLARK · FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS
11315 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 · (301) 593-3400

DESIGNED: BAF
DRAWN: VHL
CHECKED: BAF, J.M.E.
DATE: March 5, 1986

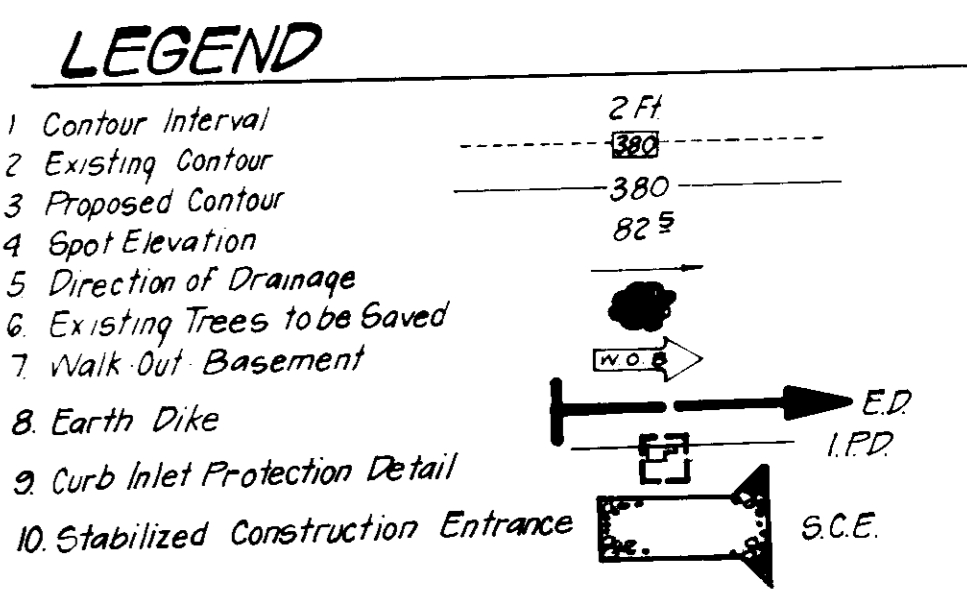
SITE DEVELOPMENT PLAN
LOTS 10 THRU 15
COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA II
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
FOR: THE RYLAND GROUP, INC.
780 Minstreil Way, Suite 215
Columbia, MD 21045

SCALE: 1" = 30'
DRAWING: 1 of 3
JOB NO.: 86-017
FILE NO.: 86-017-X

S.D.P. 86-193 c



- TRAP #1 (60ST. ST V) ***
1. DA = 13 Ac.
 2. Storage Required = 2,340 cf
 3. Storage Provided = 2,500 cf
 4. Top of Stone Crest = 335.0
 5. Depth = 4'
 6. Bottom Elevation = 331.0
 7. Bottom Dimensions = 21' x 21'
 8. Clean-Out Elevation = 333.0



Reviewed for HOWARD SC.
 Comments: 5-14-86
 Date: 5-14-86
 Service: [Signature]

THIS DEVELOPMENT PLAN IS APPROVED
 FOR THE HOWARD SOIL CONSERVATION DISTRICT.

Stephen L. Hinder 5/14/86
 Approved Date

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: [Signature] DATE: 5-21-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR: [Signature] DATE: 5-22-86
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

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

DIRECTOR: [Signature] DATE: 5-14-86
 CHIEF BUREAU OF ENGINEERING: [Signature] DATE: 5-14-86

APPROVED
 DIVISION OF LAND DEVELOPMENT &
 ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE: 4-14-86
 [Signature]

INDIVIDUAL PROFESSIONAL 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.

Maria M. Hopkins 3-14-86
 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.

G. Nelson Clark 3-14-86
 Date

SUBDIVISION NAME	COLUMBIA	SECT./AREA	10/15
VILLAGE OF HICKORY RIDGE	3/11	LOTS	10/15
FLAT#	6481	BLOCK#	35
WATER CODE	I-15	TAX/ZONE MAP	5TH
		ELEC DIST	5TH
		SEWER CODE	670000

DESIGNED MCB	DRAWN VHL	CHECKED MCB	DATE March 14, 1986	CLARK · FINEFROCK & SACKETT ENGINEERS · PLANNERS · SURVEYORS 11315 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 · (301) 593-3400	SCALE 1" = 20'
					SEDIMENT & EROSION CONTROL PLAN LOTS 10 THRU 15 COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 3 AREA II 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR THE RYLAND GROUP INC 7180 Minstrel Way, Suite 215 Columbia, MD 21045
					JOB NO. 86-07
					FILE NO. 86-07

SDP-86-193c

SEDIMENT CONTROL 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. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS 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 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.
- Site Analysis:

Total Area of Site	160 Acres
Area Disturbed	130 Acres
Area to be roofed or paved	0.81 Acres
Area to be vegetatively stabilized	0.22 Acres
Total Cut	4160 Cu. yds
Total Fill	1700 Cu. yds
Offsite waste/borrow area location	N/A
- 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 necessary by the Howard County DPW 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-Built" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
- All pipes to be blocked at the end of each day (see detail below).
- The total amount of straw bale dikes/silt fence equals L.P.

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 schedule:

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 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 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. 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 15 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 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of rotted 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.

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

TEMPORARY SEEDING NOTES

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

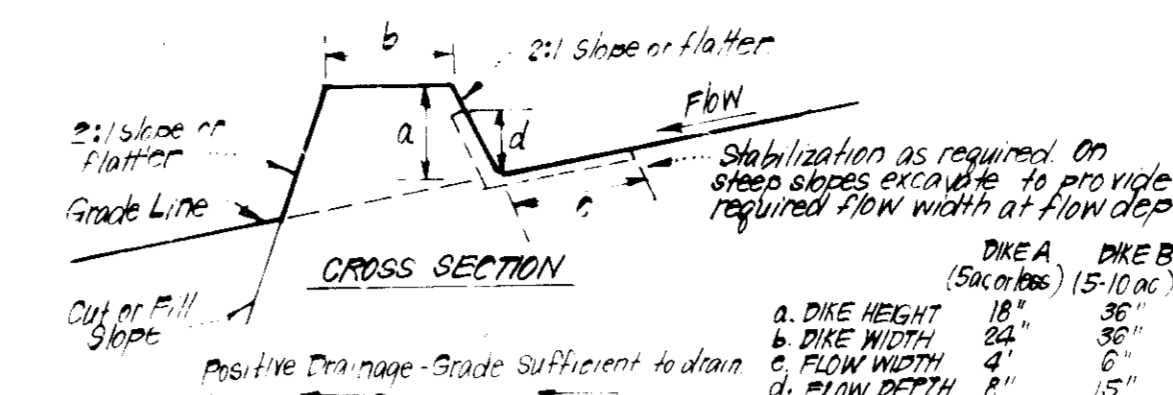
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendment: 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 25 bushel per acre of annual Ryegrass (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 1 lb 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 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of rotted 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 1981 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rates and methods not covered.



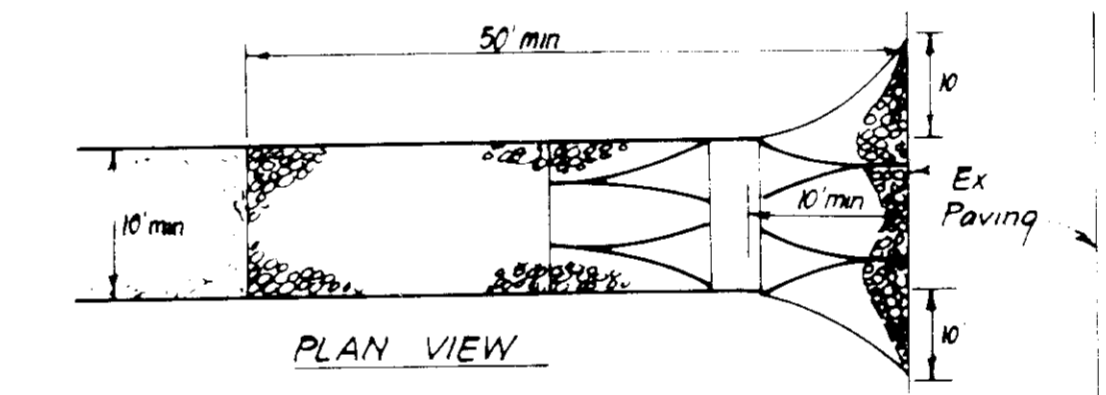
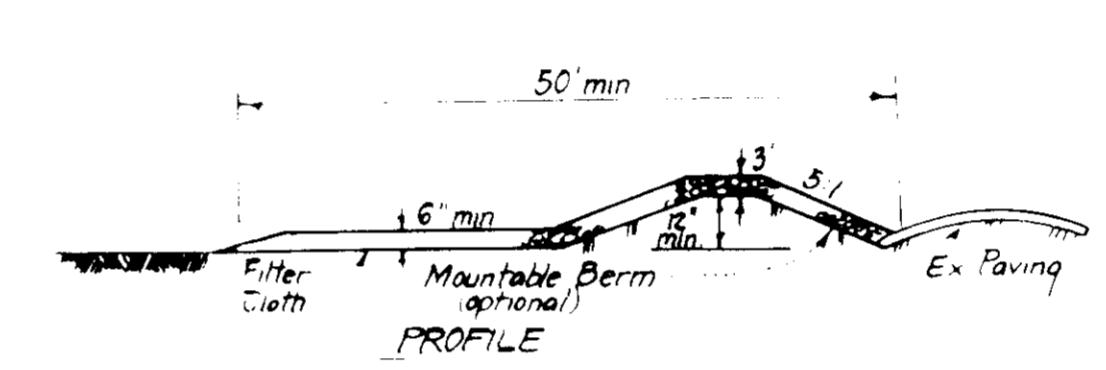
- CONSTRUCTION SPECIFICATIONS:**
- All dikes shall be compacted by earth-moving equipment.
 - All dikes shall have positive drainage to an outlet.
 - Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
 - Field location should be adjusted 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 in 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.
 - 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.

TYPE OF TREATMENT	CHANNEL GRADE	FLOW CHANNEL STABILIZATION	
		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/straw or Excelsior Sod, 2" Stone
3	5.1 - 8.0%	Seed w/straw or Sod, 2" Stone	Lined Rip Rap 4" or 6" Stone
4	8.1 - 20.0%	Lined Rip Rap 4" or 6" 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.

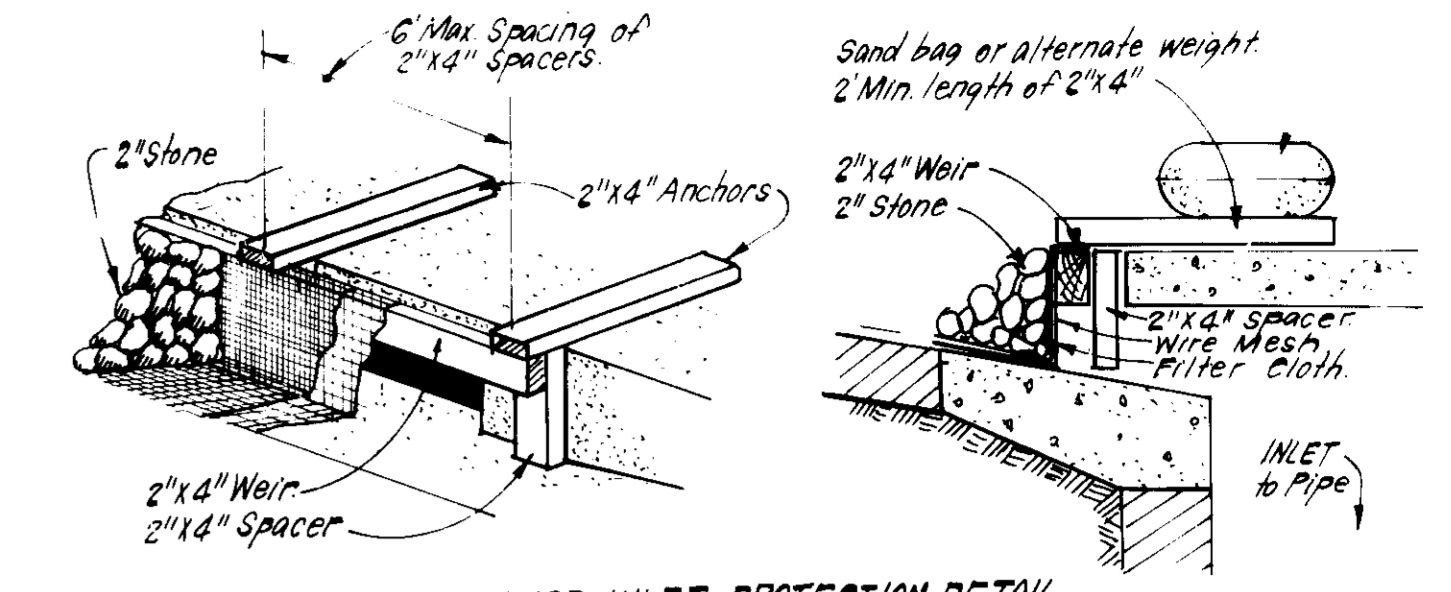
EARTH DIKE DETAIL (E.D.)



CONSTRUCTION SPECIFICATIONS:

- Stone size - Use 2" stone, or reclaimed or recycled 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) foot minimum, but not less than the full width at points where ingress or egress occurs.
- 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.
- 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.
- 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 cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- 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.
- Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)



CONSTRUCTION SPECIFICATIONS:

- I. MATERIALS:**
- Wooden frame is to be constructed of 2"x4" construction grade lumber.
 - Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
 - Filter cloth must be of a type approved for this purpose; resistant to sunlight with sieve size, E75, 40-85, to allow sufficient passage of water and removal of sediment.
 - Staples to be 2" in size and clean since fines would clog the cloth.

II. PROCEDURE: SHALE DITCHLINE OR VARD-INLET PROTECTION

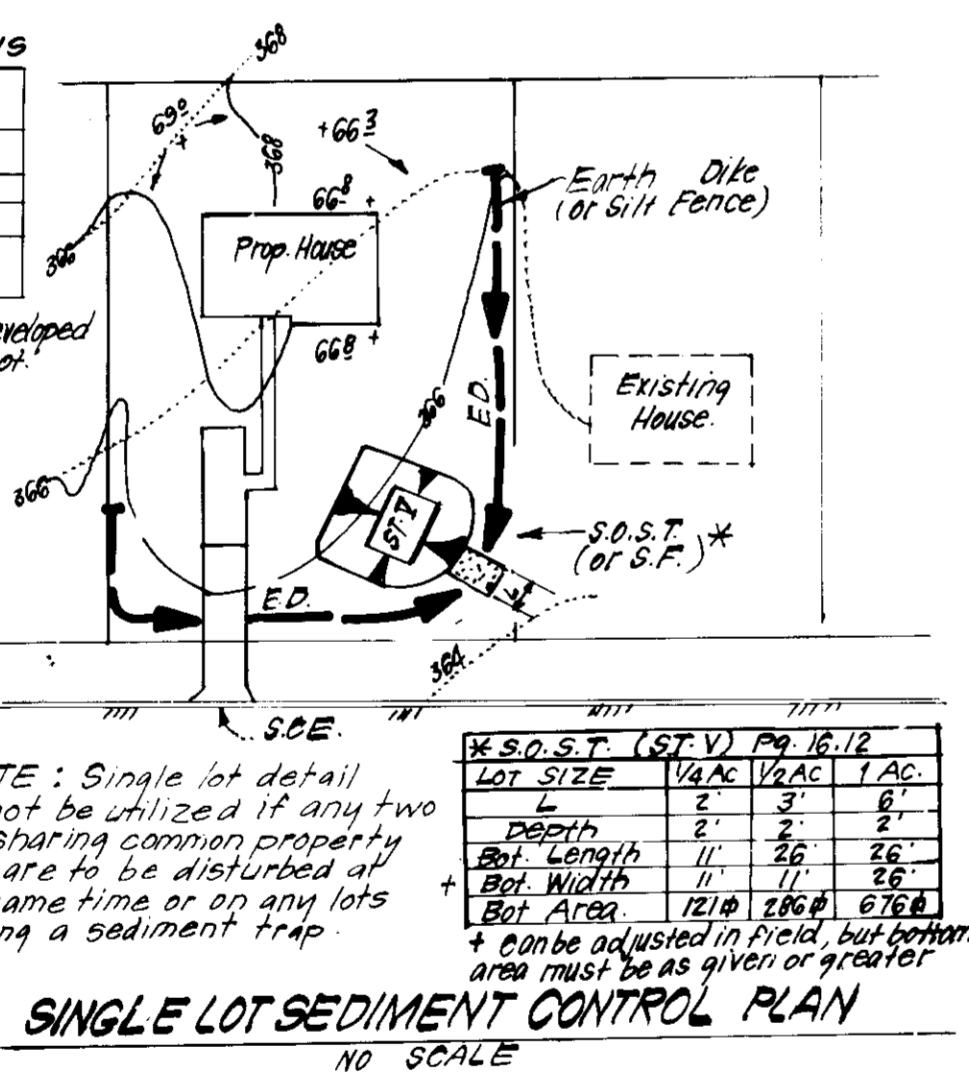
- Excavate completely around inlet to a depth of 18" below march elevation.
- Drive 2x4 post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2x4 frame using overlap joint shown. Top of frame weir must be 6" below edge of roadway adjacent to inlet.
- Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post. Stretch filter cloth tightly over wire mesh. The cloth must extend from top of frame to 18" below inlet notch level. Fasten securely to frame. Ends must meet at post, be overlapped and caulked, then fastened down.
- Backfill around inlet in compacted 6" layers until layer of earth is even with march elevation on ends and top elevation on sides.
- If the inlet is not in a low point, construct a compacted earth dike in the ditch line below it. The top of this earth dike is to be at least 6" higher than the top of frame weir.
- The structure must be inspected frequently and filter fabric replaced when clogged.

III. PROCEDURE: CURB INLET PROTECTION

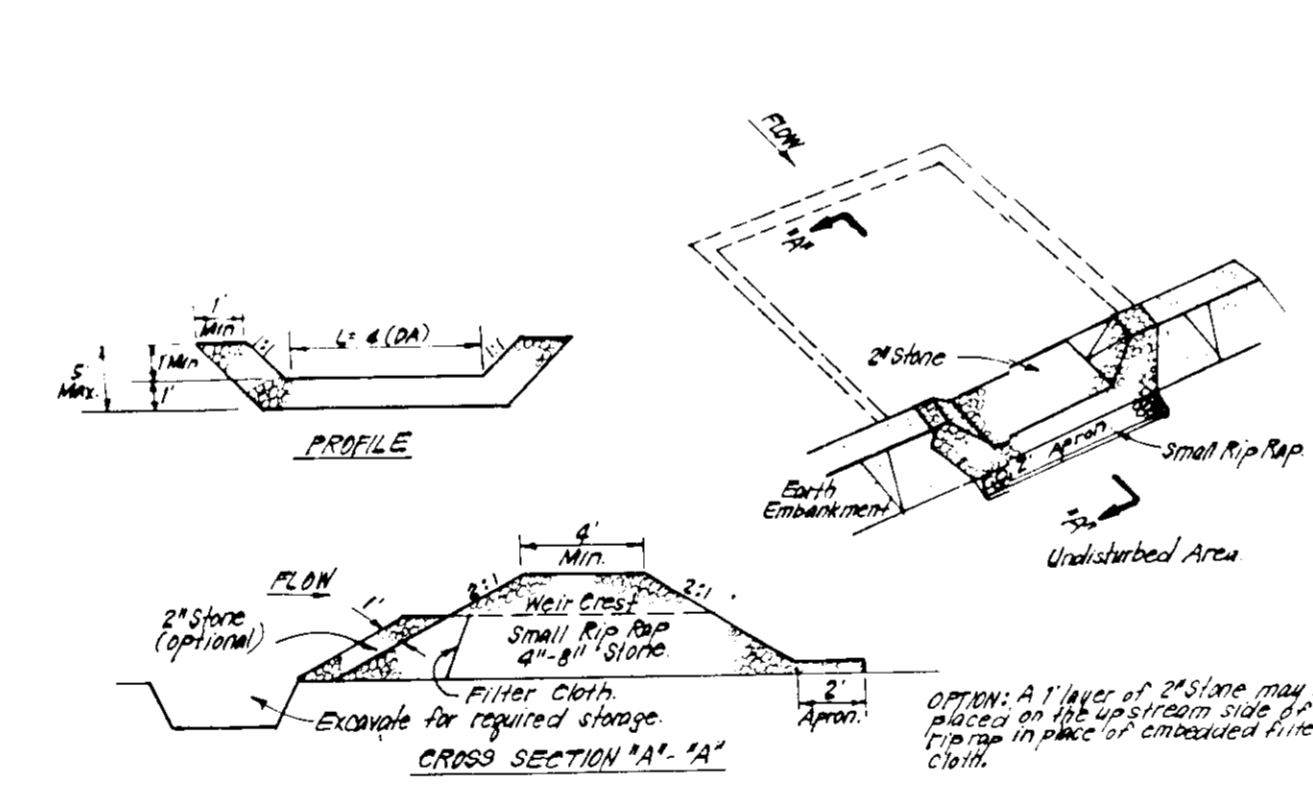
- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2x4 weir (measuring throat length plus 2") as shown on std. drawing.
- Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2x4 weir.
- Securely nail the 2x4 weir to 9" long vertical spacers to be located between the weir and inlet face (max 6" apart).
- Place the assembly against the inlet throat and nail (min 2" lengths of 2x4" to the top of the weir at spacer locations. These 2x4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
- The assembly shall be placed so that the end spacers are a min 1" beyond ends of throat opening.
- From the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow to inlet.

INLET PROTECTION DETAIL (I.P.D.)

CONSTRUCTION SEQUENCE:	No. of Days
A. Obtain Grading Permit and Install Sediment and Erosion Control Devices and Stabilize.	14
B. Excavate for Foundations and Rough Grade & Temporarily Stabilize.	7
C. Construct Structures, Sidewalks and Driveways.	30
D. Final Grade and stabilize in accordance with Stds. & Specs.	7
E. Upon approval of the sediment control inspector remove sediment and erosion controls and stabilize.	2



SINGLE LOT SEDIMENT CONTROL PLAN



CONSTRUCTION SPECIFICATIONS:

- Any under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The soil shall be compacted.
- The fill material for the embankment shall be free of rocks and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by tamping with equipment while it is being constructed.
- All cut and fill slopes shall be 2:1 or flatter.
- The stone used in the outlet shall be small rip rap 4" or 6" in diameter.
- 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.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) STV.

HOWARD COUNTY
 U.S. Environmental Service
 APPROVED: *Stephen L. Fisher* 3/14/86
 Approved Date

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 APPROVED: *Joseph P. ...* 5-21-86
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR
 APPROVED: *John W. ...* 5-22-86
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE
 STORM DRAINAGE SYSTEMS AND PUBLIC WORKS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR
 APPROVED: *...* 5-2-86

APPROVED: DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE: 4-14-86
...

ENGINEER'S CERTIFICATE
 I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable solution based on my professional knowledge. If the site conditions are not as shown, the Engineer shall be notified immediately.
 APPROVED: *Manuel M. ...* 3-14-86
 APPROVED: *G. Nelson Clark* 3-14-86
 Date

CLARK • FINEFROCK & SACKETT
 ENGINEERS • PLANNERS • SURVEYORS
 13135 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 (301) 593-3400

DESIGNED MCB	SEDIMENT & EROSION CONTROL PLAN LOTS 10 THRU 15	SCALE As Shown
DRAWN VHL	COLUMBIA VILLAGE OF HICKORY RIDGE	DRAWING 3 of 3
CHECKED MCB	SECTION 3 AREA II 5 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO 86-017
DATE March 14 th 1986	FOR: THE RYLAND GROUP, INC. 7130 Minstrel Way Suite 215 Columbia, MD 21045	FILE NO 86-017 GE

SDP-86-193c