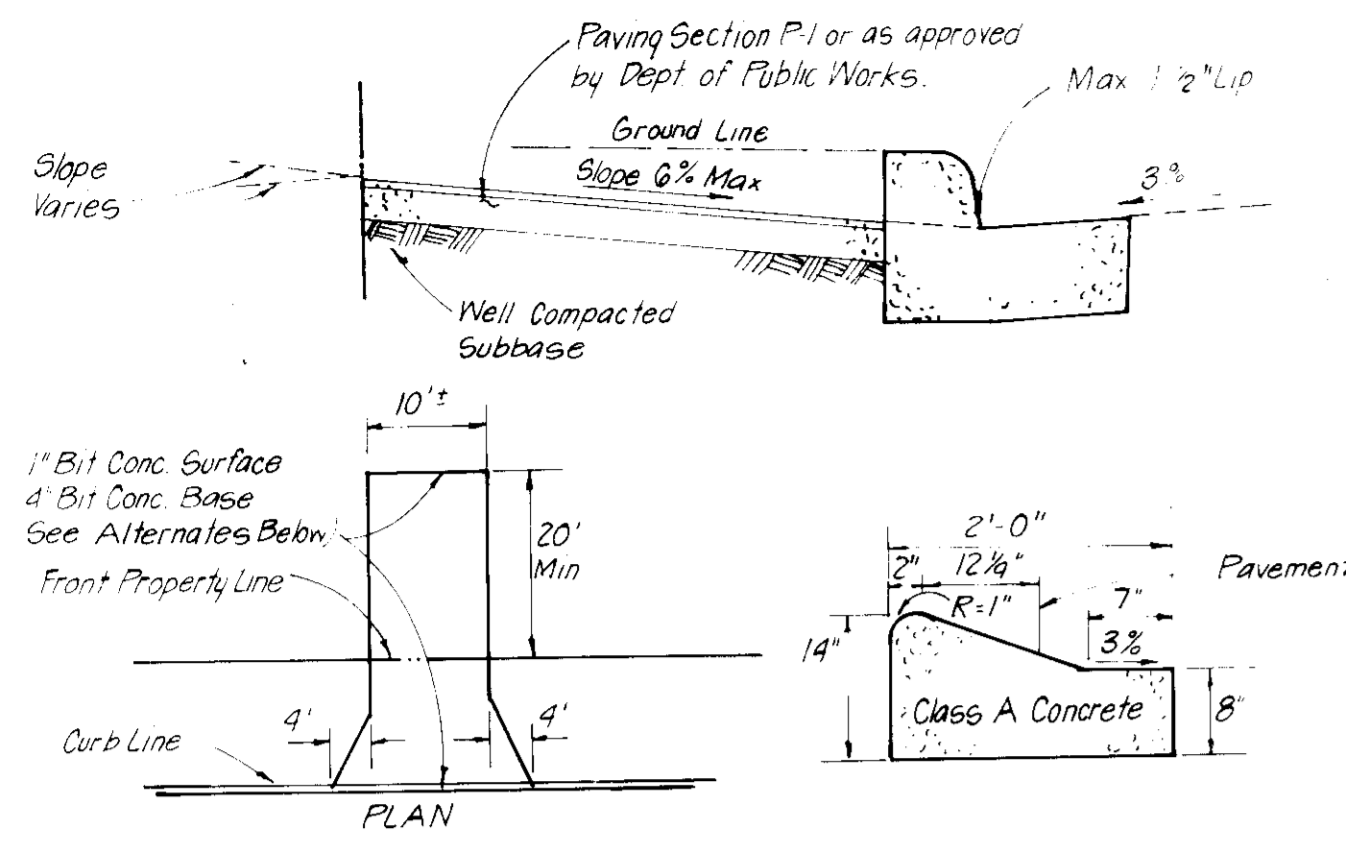


NOTE: Materials and Construction shall be done in accordance with Ho Co. Road Construction Code

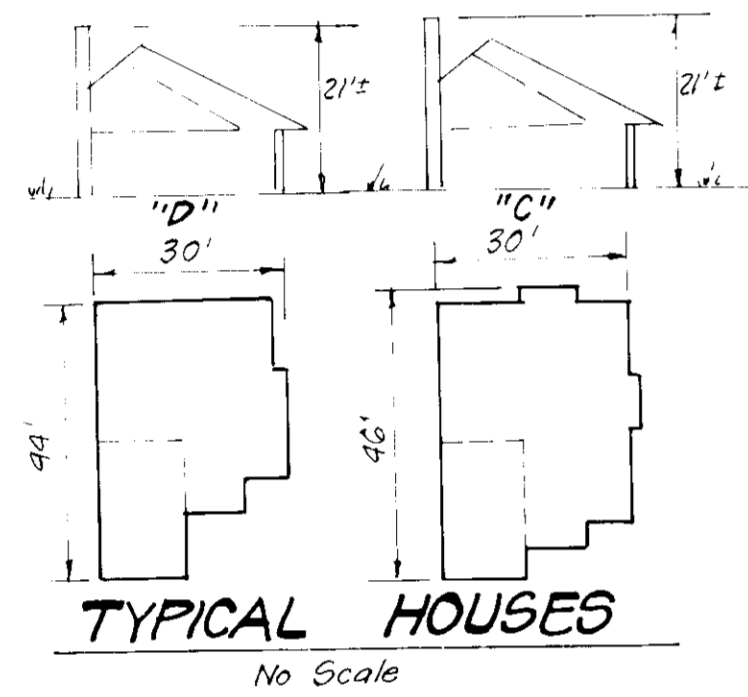


DRIVEWAY ABUTTING MODIFIED COMB CURB & GUTTER*

- ALTERNATE #1
 1" Bit Conc Surface
 2" Bit Conc Base
 5" Gravel
- * See Ho Co. Std. R-301 for Std 7" Comb Curb & Gutter necessary on the Cul-De-Sac.

MINIMUM LOT SIZE

TYPE C = $\frac{1224.2}{3} = 4316.3 \text{ sq ft}$
 TYPE D = $\frac{1238.3}{3} = 4127.7 \text{ sq ft}$



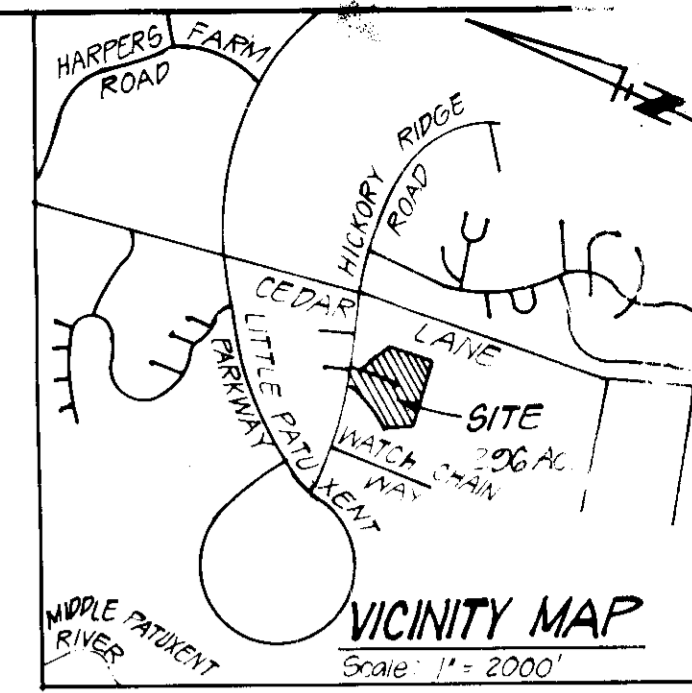
APPROVED:
 DIVISION OF LAND DEVELOPMENT &
 ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE 6-5-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER DATE 7-1-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR DATE 7-2-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR DATE 6-21-86

CHIEF BUREAU OF ENGINEERING DATE 6-26-86



GENERAL NOTES:

- The land included is zoned 'New Town SFMD'
- Coordinates are based upon traverse controls for Columbia established by Maps, Inc. in 1965 and Percum and Vesdike in 1968, which controls were tied to the Maryland Bureau of Control Surveys monuments and to 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 Developer's expense
- Total Area included: 2903 Ac.
- Total Number of Lots: 17
- Storm Water Management for this site has been provided in VOHR 3/1, F 83.120 and V.O.H.R. 3/6, F 84.51.
- Reference 'Final Development Plan Phase 1B1, Part 1' for zoning criteria.

LEGEND:

- Contour Interval 2'
- Existing Contour - R10
- Proposed Contour - 410
- Spot Elevation +105
- Direction of Drainage
- Existing Trees to be saved

LOT #	STREET ADDRESS
43	10800 BIRD SONG PASS
44	10804 " " " "
45	10808 " " " "
46	10812 " " " "
47	10816 " " " "
48	10820 " " " "
49	10824 " " " "
50	10828 " " " "
51	10832 " " " "
52	10840 " " " "
53	10844 " " " "
54	10837 " " " "
55	10833 " " " "
56	10829 " " " "
57	10825 " " " "
58	10821 " " " "
59	10817 " " " "

SUBDIVISION NAME	COLUMBIA	SECT./AREA	3 / 2	LOTS	43-59
VILLAGE OF	HICKORY RIDGE				
PLAT #	6704	BLOCK #	6	ZONE	SFMD
		TAX. ZONE MAP	35	ELEC. DIST.	5TH
				CENSUS TR.	6053.01
WATER CODE	I-15	SEWER CODE	659200C		

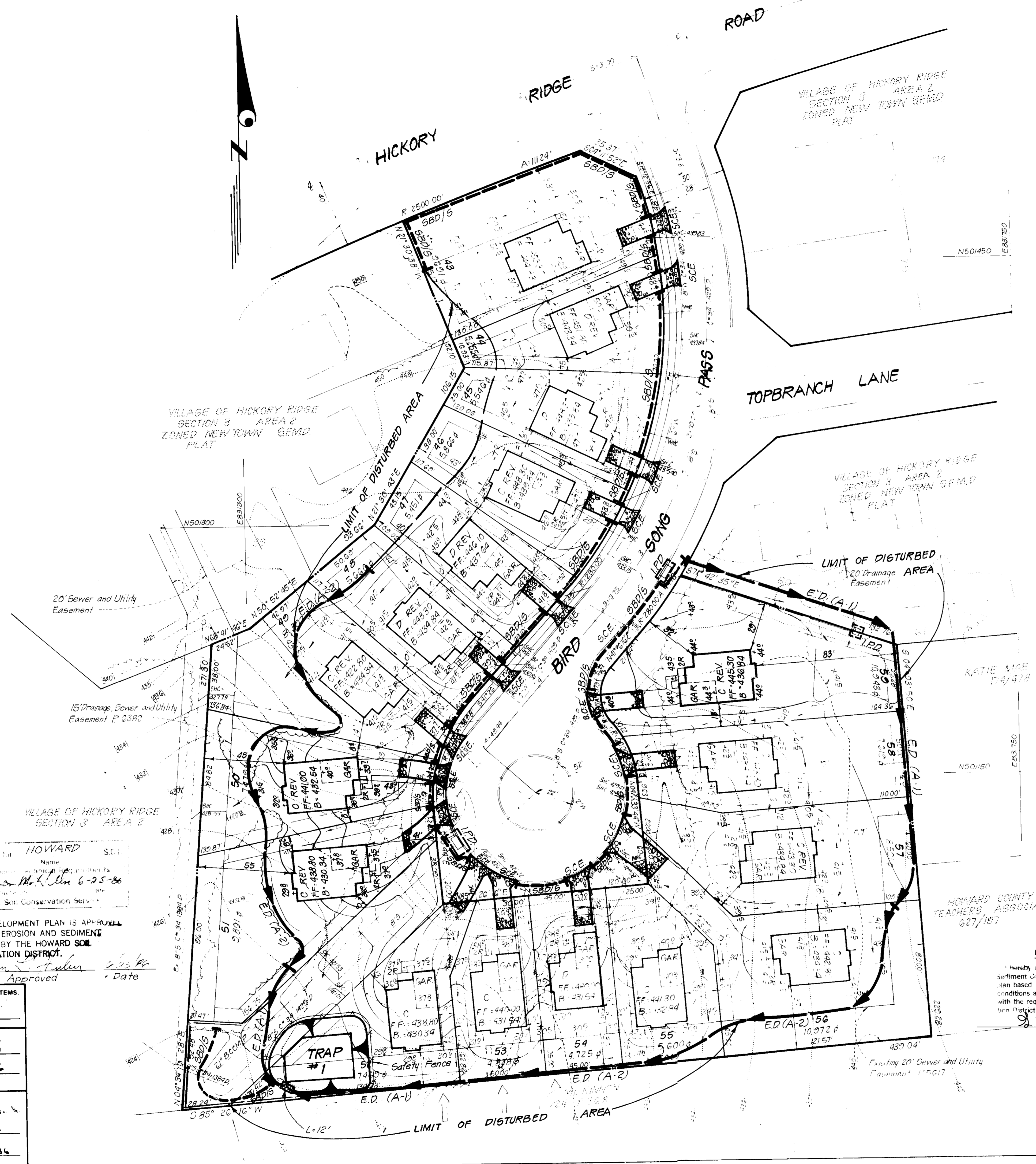
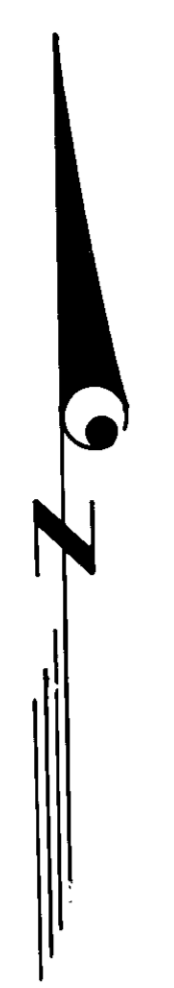
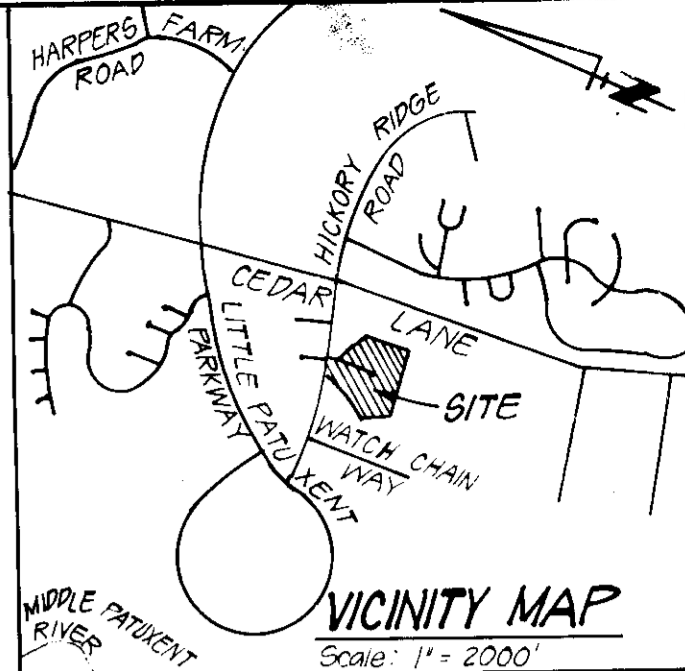
CLARK · FINEFROCK & SACKETT
 ENGINEERS · PLANNERS · SURVEYORS

11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED JME	SITE DEVELOPMENT PLAN LOTS 43 THRU 59 COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 2 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 30'
DRAWN VHL		DRAWING 1 of 3
CHECKED JME		JOB NO. 85-138
DATE 5-6-86		FILE NO. 85-138-X
FOR:		GOODIER BUILDERS, INC., R.C. 233 Deep Dale Drive Timonium, MD 21093

SDP-86-248.





LEGEND:

- 1 Contour Interval
- 2 Existing Contour
- 3 Proposed Contour
- 4 Spot Elevation
- 5 Direction of Drainage
- 6 Existing Trees to be saved
- 7 Earth Dike
- 8 Straw Bale Dike / Silt Fence
- 9 Inlet Protection Dike
- 10 Stabilized Construction Entrance

DEVELOPER'S/BUILDERS CERTIFICATE

I hereby certify that all development and construction will be done in accordance with the plan and that all necessary permits for the construction project will have been obtained from the appropriate agencies. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as may be deemed necessary.

[Signature] 5-7-86
 Signature of Developer/Builder 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.

[Signature] 5-10-86
 G. Nelson Clark Date

Reviewed by: **HOWARD** SC-1
 Name: *[Signature]*
 Date: 6-25-86
 U.S. Soil Conservation Service
 Approved: *[Signature]* Date: 6-25-86

APPROVED
 6-5-86
[Signature]

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
 HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 7-1-86
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
[Signature] 7-2-86
 PLANNING DIRECTOR DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 6-24-86
 DIRECTOR DATE

SUBDIVISION NAME: COLUMBIA VILLAGE OF HICKORY RIDGE	SECT/AREA: 3/2	LOTS: 43-50
PLAT #: 6704	BLOCK #: 35	ELEC. DIST: 5TH
WATER CODE: I-15	SEWER CODE: 6502000	

CLARK • FINEFROCK & SACKETT ENGINEERS • PLANNERS • SURVEYORS		
11315 LOCKWOOD DRIVE	SILVER SPRING, MARYLAND 20904	(301) 593-3400
DESIGNED: JK	SEDIMENT & EROSION CONTROL PLAN	SCALE: 1" = 30'
DRAWN: VHL	LOTS 43 THRU 50	DRAWING: 2 of 3
CHECKED: JK	COLUMBIA	JOB NO: 25-138
DATE: 5-6-86	VILLAGE OF HICKORY RIDGE	FILE NO: 47-13-50
	SECTION 3 AREA 2	
	5TH ELECTION DISTRICT	
	HOWARD COUNTY, MARYLAND	
	FOR: GOODIER BUILDERS INC, R/C	
	233 Deep Dale Drive	
	Tunnam, MD 21023	

SDP-86-248

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. (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 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	2,842 Acres
Area Disturbed	2,473 Acres
Area to be roofed or paved	2,050 Acres
Area to be vegetatively stabilized	1,223 Acres
Total Cut	Cu. yds
Total Fill	Cu. yds
Offsite waste/borrow area Location	
- 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 725 L.F.

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

- 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.
- 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 50 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (0.05 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 1 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 straw 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 reseeding.

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)

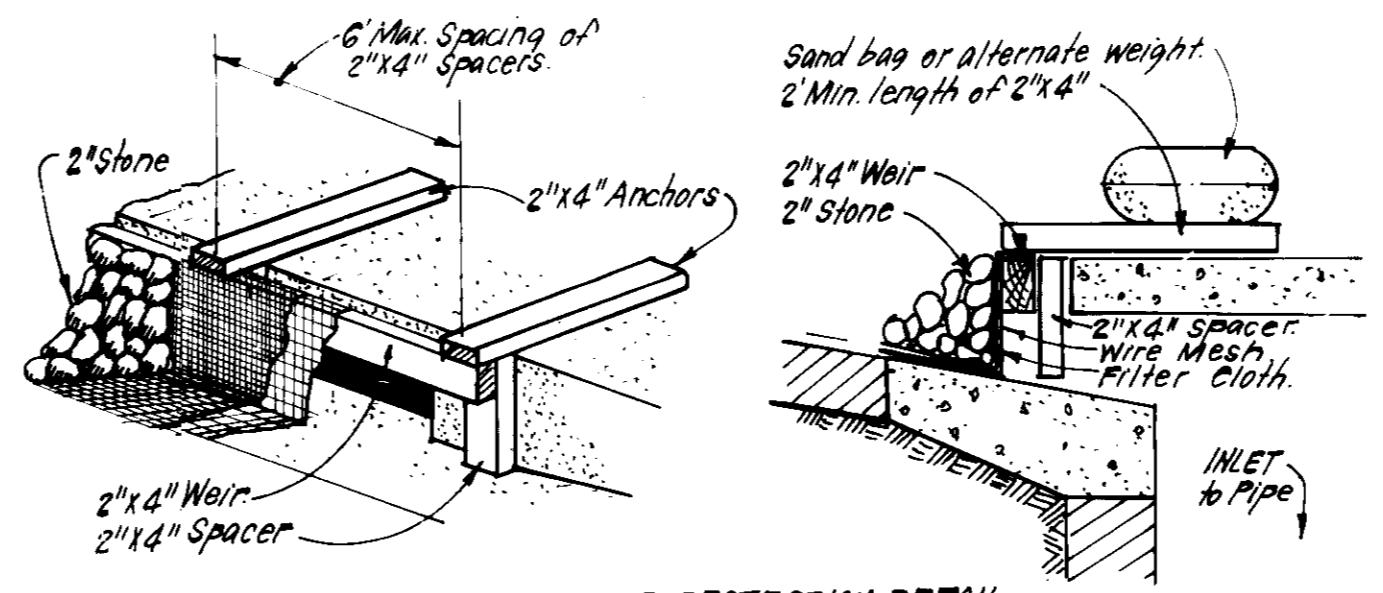
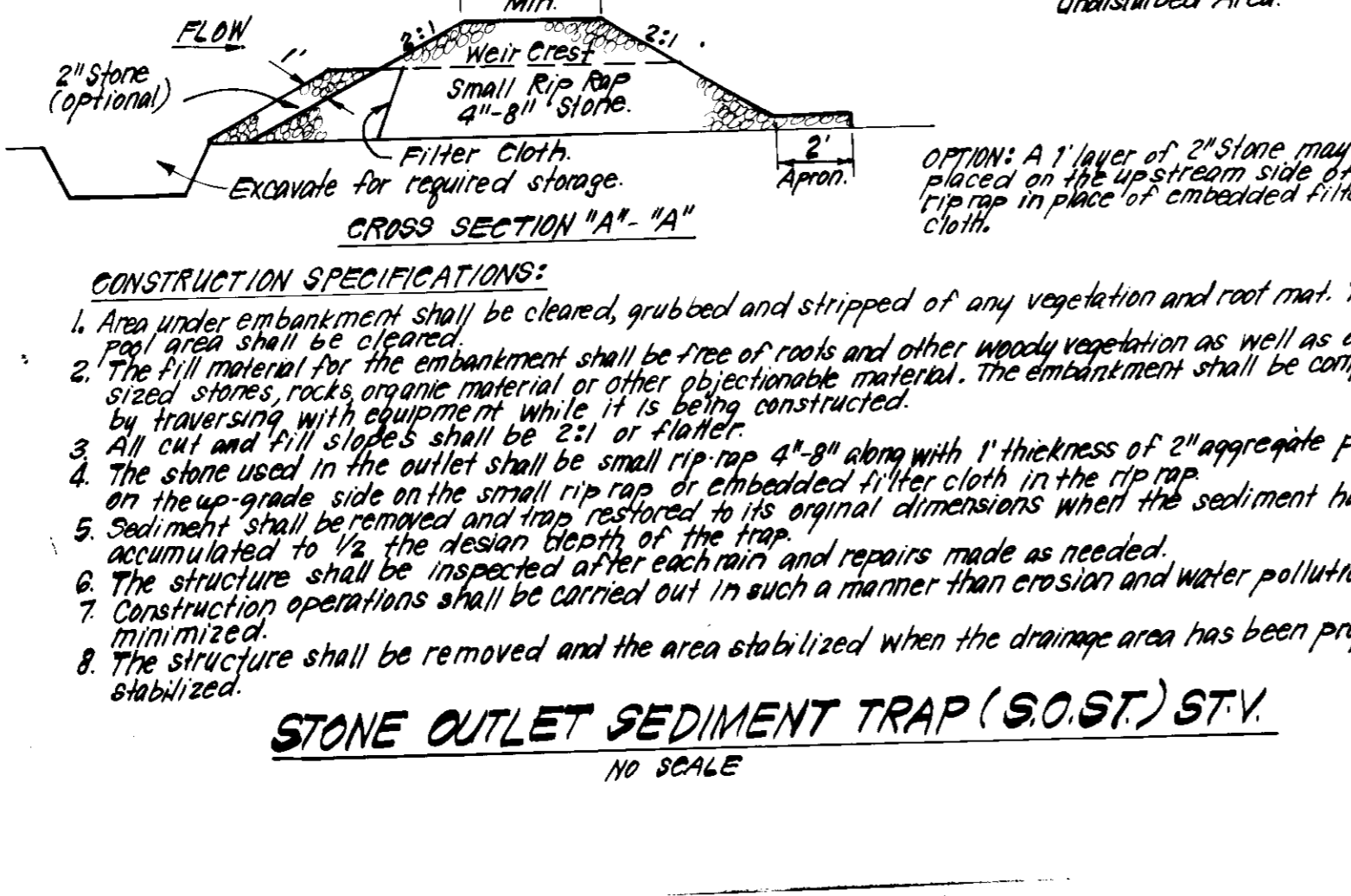
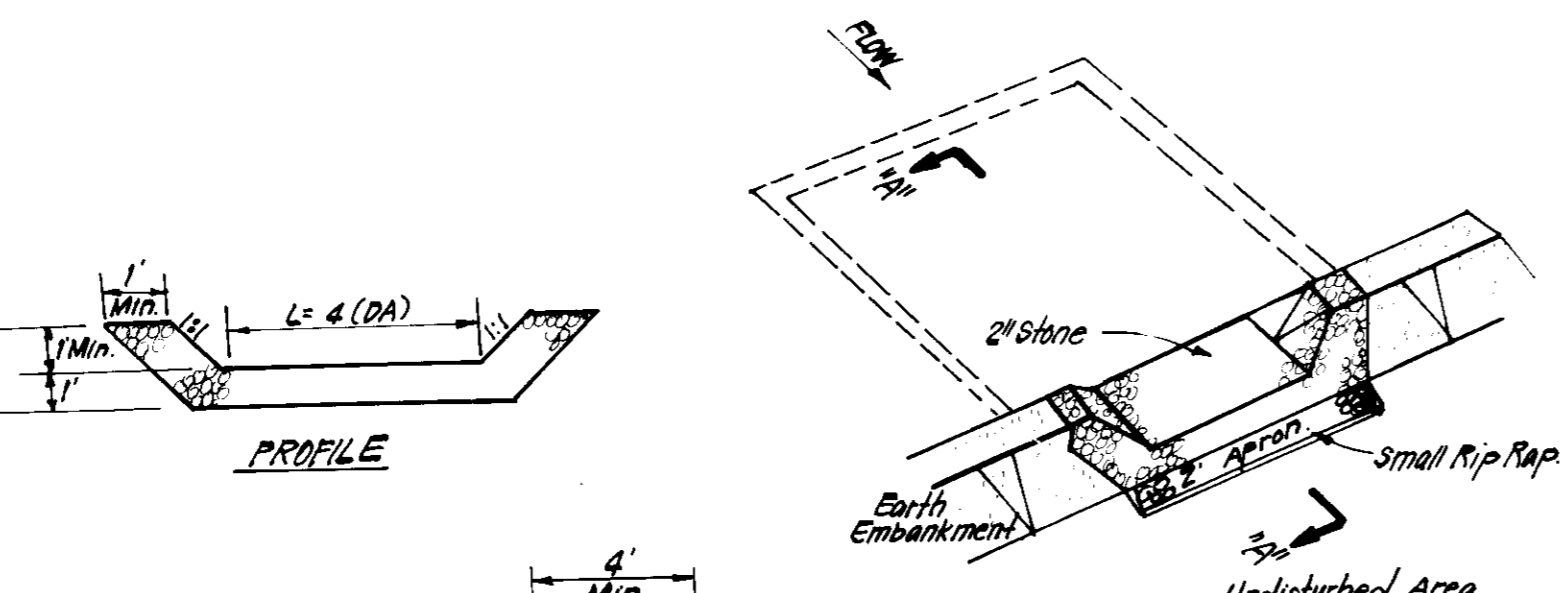
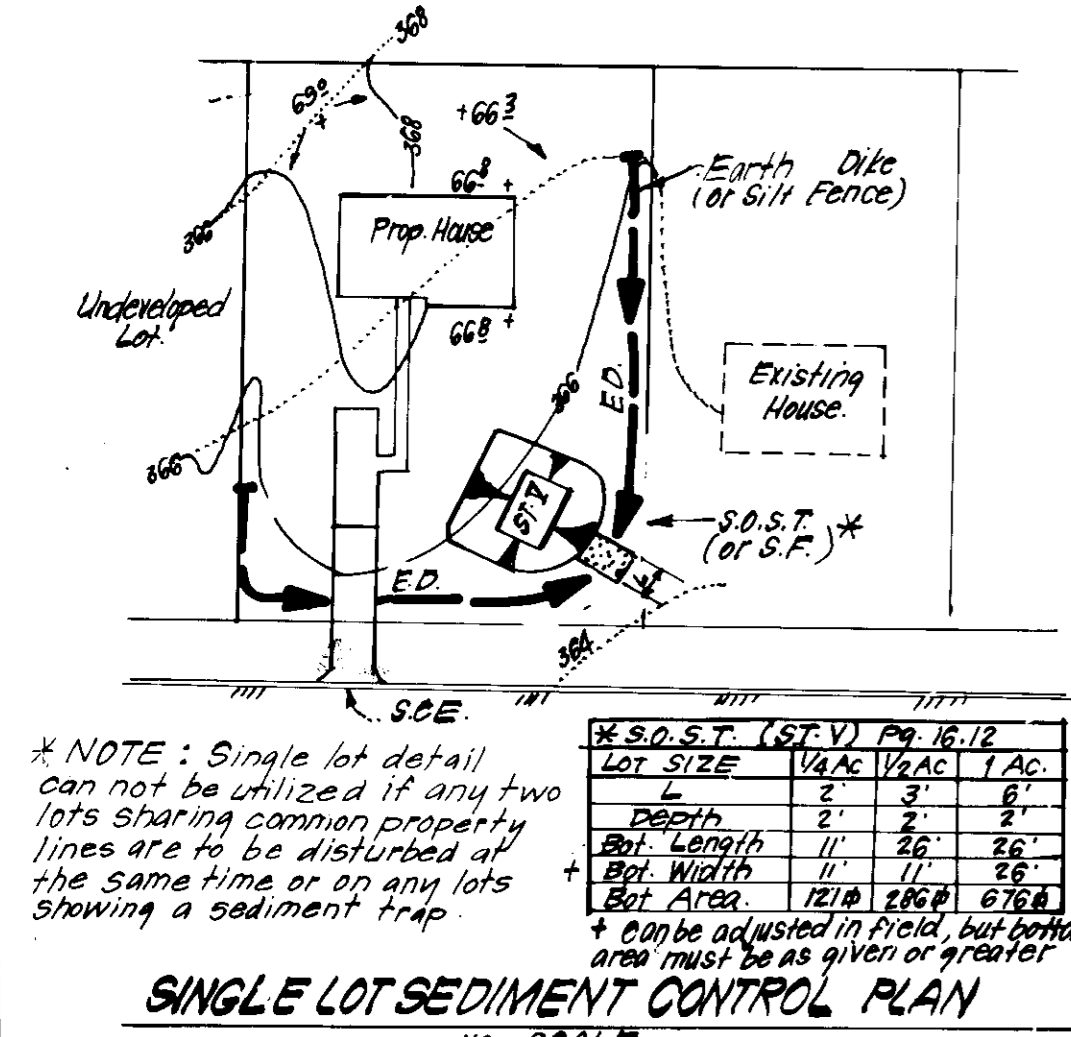
Seeding - For periods March 1 thru April 30 and from August 15 thru November 15, seed with 25 bushel per acre of annual ryegrass (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, 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 1 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 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.

CONSTRUCTION SEQUENCE:

A. Obtain Grading Permit and Install Sediment and Erosion Control Devices and Stabilize.	2
B. Excavate for Foundations and Rough Grade & Temporarily Stabilize.	210
C. Construct Structures, Sidewalks and Driveways.	120
D. Final Grade and Stabilize in accordance with Stds. & Specs.	14
E. Upon approval of the sediment control inspector, remove sediment and erosion controls and stabilize.	7



CONSTRUCTION SPECIFICATIONS:

MATERIALS:

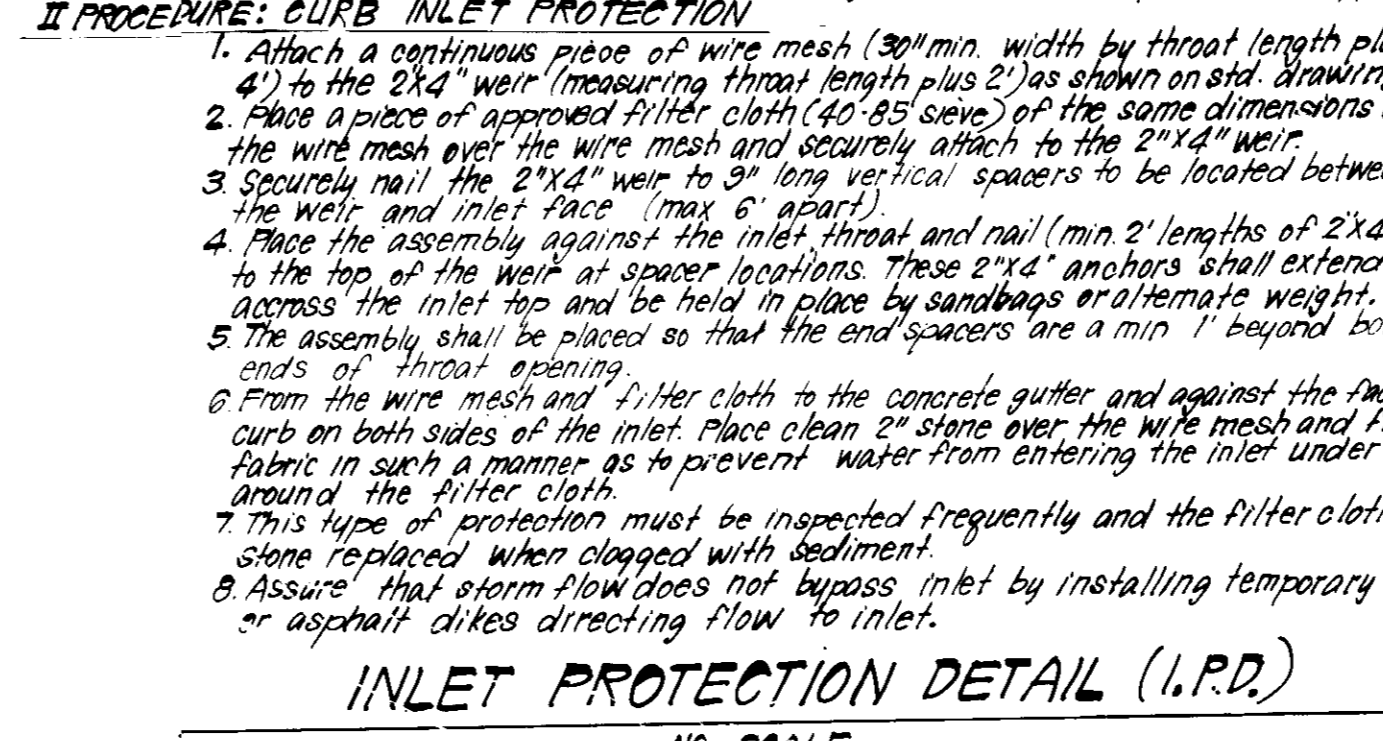
- Wooden frame is to be constructed of 2"x4" construction grade lumber.
- Wire mesh must be of sufficient strength to support 4" for fabric, and 2" for fabric, and 2" for fabric, and 2" for fabric.
- Filter cloth must be of a type approved for this purpose resistant to sunlight with sieve size, #20-40, to allow sufficient passage of water and removal of sediment.

PROCEDURE: SWALE, DITCHLINE OR YARD INLET PROTECTION

- Excavate completely around inlet to a depth of 18" below notch elevation.
- Drive 2"x4" post 1" into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2"x4" 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 elev. Fasten securely to frame. Ends must meet at post.
- Backfill around inlet in compacted 6" layers until layer of earth is even with notch 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).

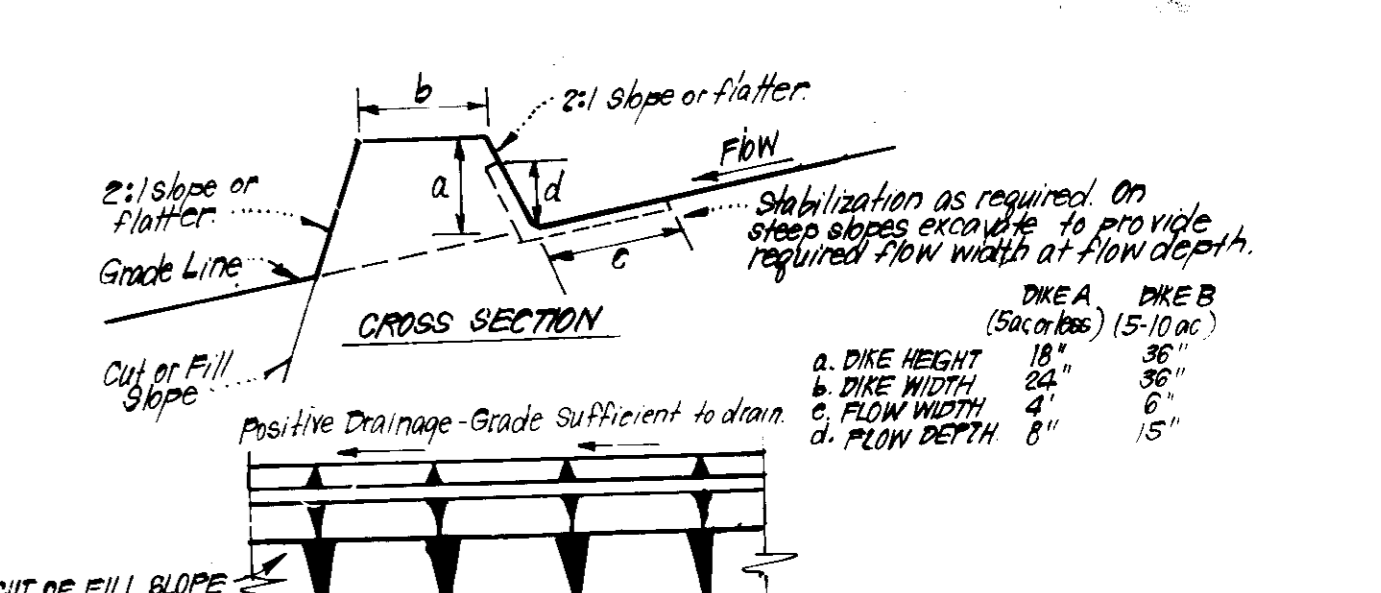
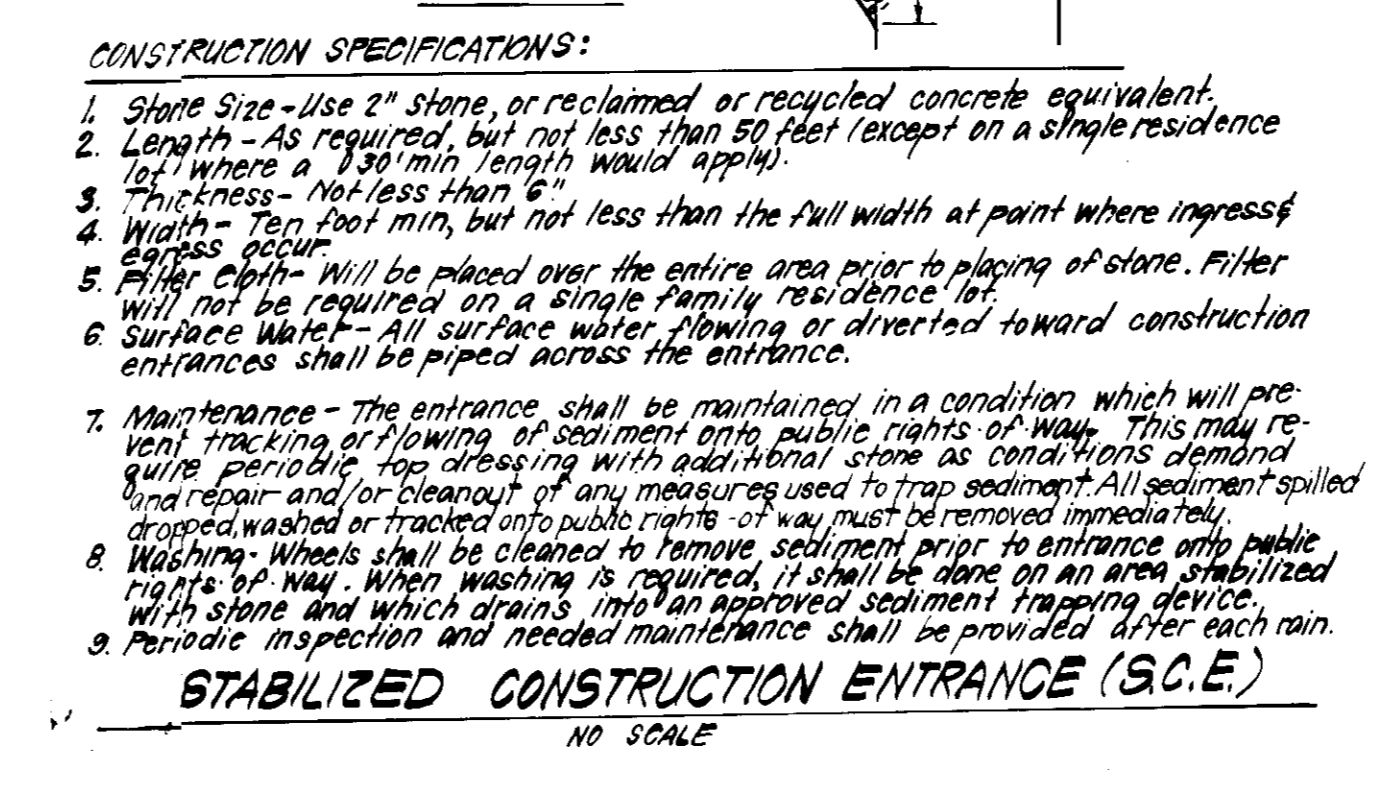
PROCEDURE: CURB INLET PROTECTION

- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2"x4" weir (measuring throat length plus 2") as shown on std. drawing.
- Place a piece of approved filter cloth (#20-40 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2"x4" weir.
- Securely nail the 2"x4" weir to 3" 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 2"x4" to the top of the weir at spacer locations. These 2"x4" 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 both 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.



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' min. length would apply).
- Thickness - Not less than 6"
- Width - Ten foot min, but not less than the full width at point where ingress 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 Mark - All surface water flowing or directed toward construction entrances shall be piped across the entrance.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking of loads 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.
- 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.



CONSTRUCTION SPECIFICATIONS:

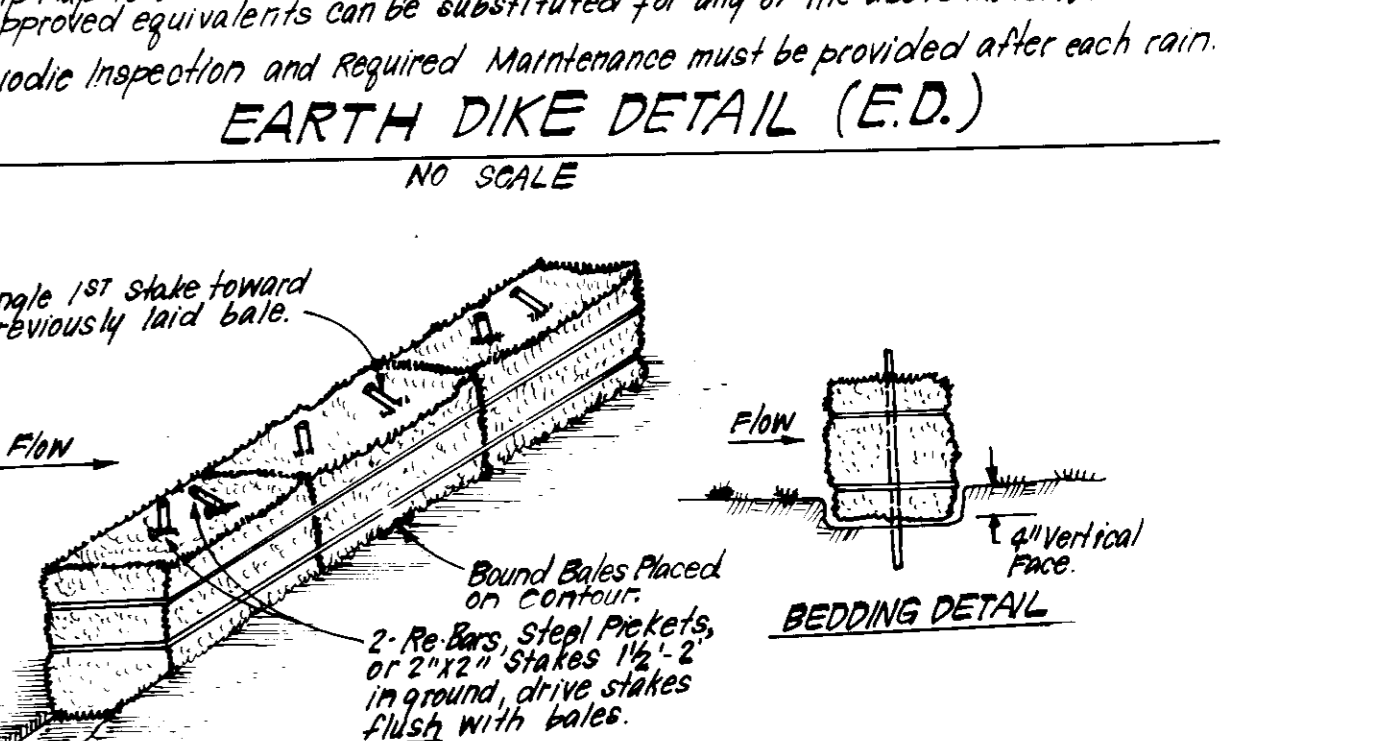
- All dikes shall be compacted by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
- Field location should be adjusted as needed to utilize a stabilized safe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

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL	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 or Straw Mulch or Excelsior Spd. 2" Stone
3	5.1 - 8.0%	Seed or Straw Mulch or 2" Stone	Lined Rip Rap 4" Stone
4	8.1 - 20.0%	Lined Rip Rap 4" Stone	Engineering Design

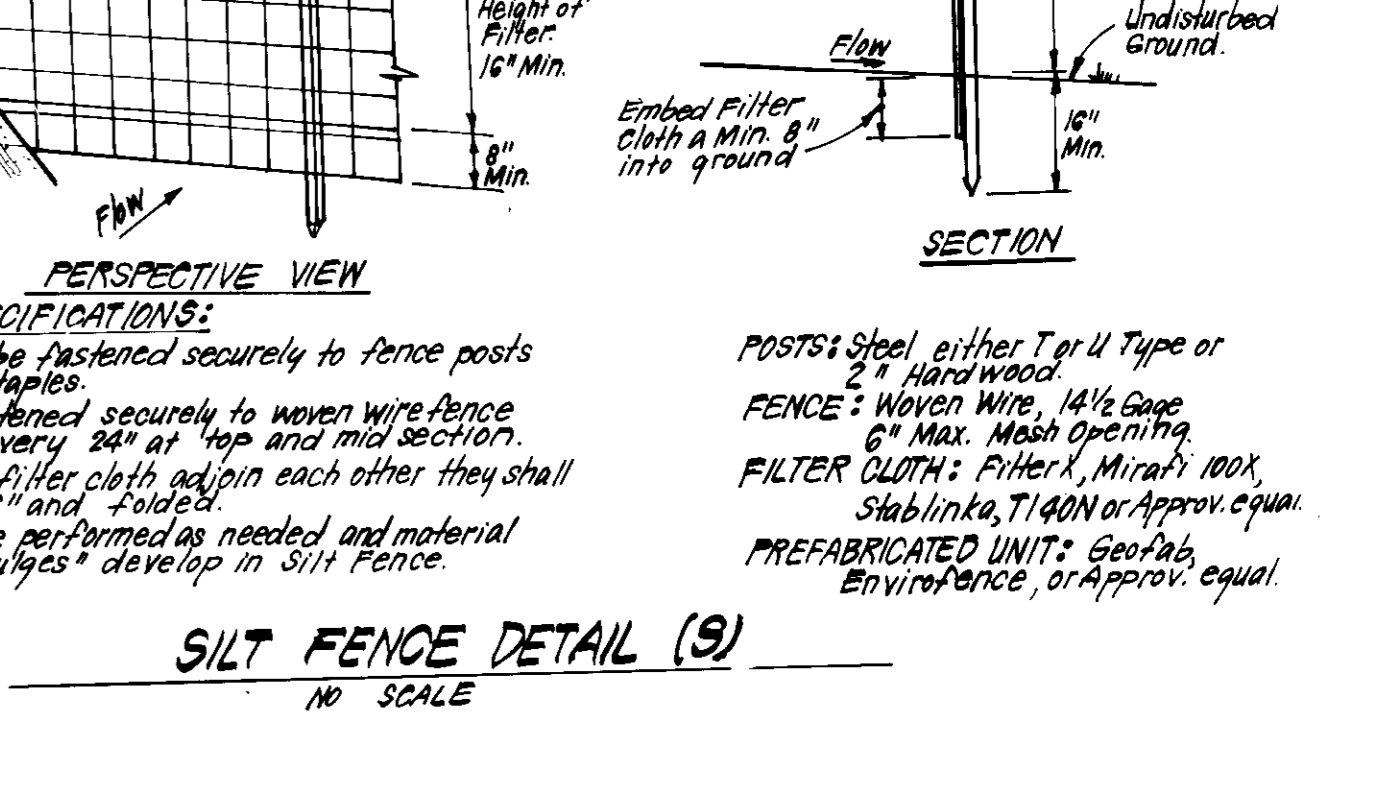
A Stone to be 2" stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
B Rip Rap to be 4"-8" in a layer at least 6" thick, pressed into soil.
C Approved equivalents can be substituted for any of the above materials.

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



CONSTRUCTION SPECIFICATIONS:

- 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.
- Each bale shall be embedded in the soil a min. of 4" and placed so the bindings are horizontal.
- 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 flush with the bale.
- The bales shall be driven flush with the bale.
- The bales shall be frequent and repair replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.



CLARK · FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS

11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED	SCALE
JK	As Shown
DRAWN	DRAWING
VHL	3 of 3
CHECKED	JOB NO.
JK	85-138
DATE	FILE NO.
5-6-86	85-138-3E

SEDIMENT & EROSION CONTROL PLAN
LOTS 43 THRU 50
COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 2
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: GOODIER BUILDERS, INC., RC
233 Deep Dale Drive
Timonium, MD 21093

SDP-86-248.

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

John Bayler 7-1-86
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John MacArthur 7-2-86
PLANNING DIRECTOR DATE

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

John MacArthur 7-2-86
DIRECTOR DATE

APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY MARYLAND
DATE 6-5-86

Reviewed by: **HOWARD COUNTY**

John MacArthur 6-23-86
DATE

DEVELOPER'S BUILDER'S CERTIFICATE

I hereby certify that all development and construction will be done according to the plans and specifications and for erosion and sediment control and that the construction will be in accordance with the construction contract and that the construction will be in accordance with the requirements of the Howard County Department of Public Works and the Howard County Department of Planning and Zoning.

John MacArthur 5-7-86
Signature of Developer/Builder 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 County Department of Public Works.

John MacArthur 5-6-86
Signature of Engineer Date