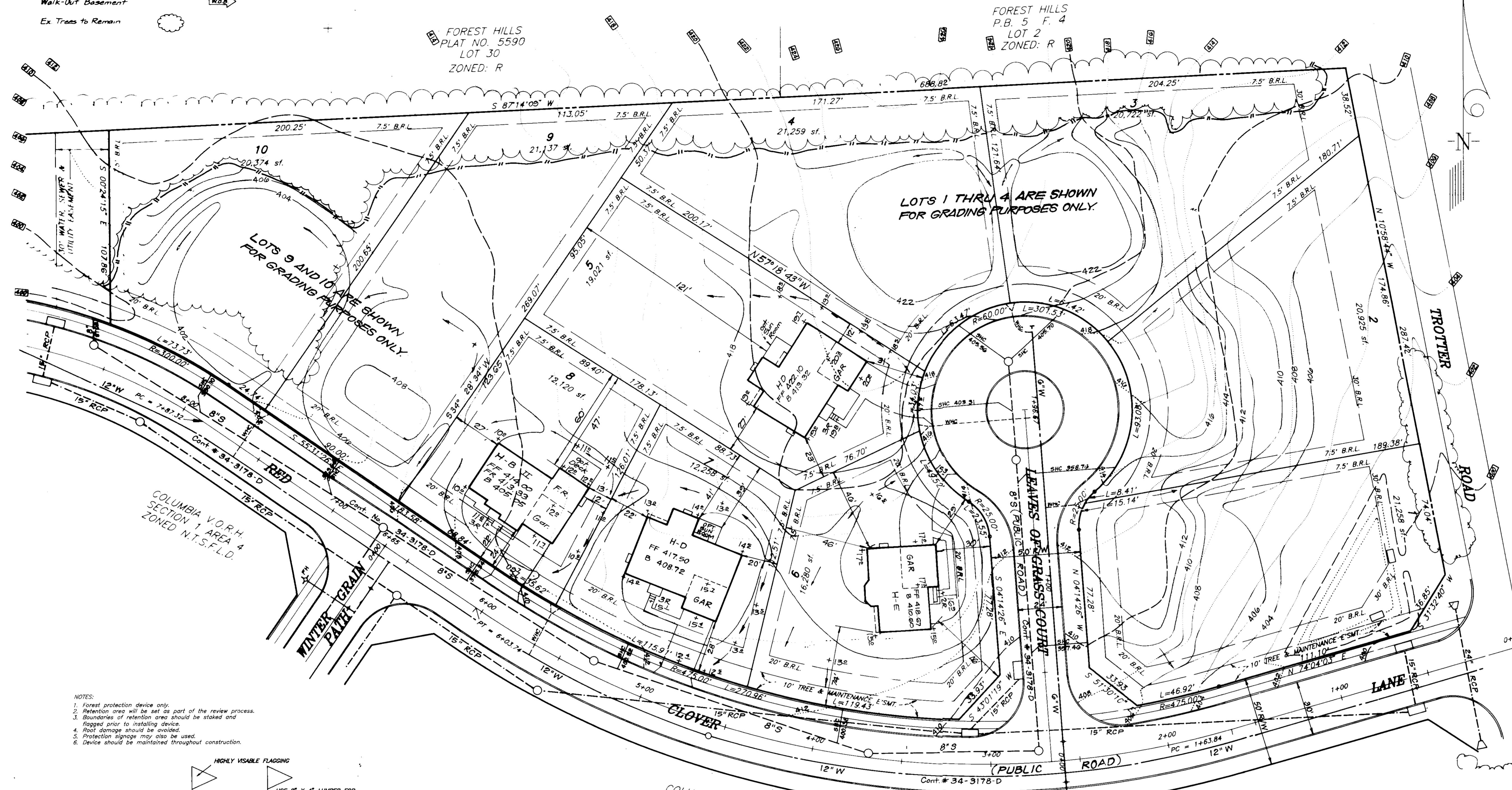
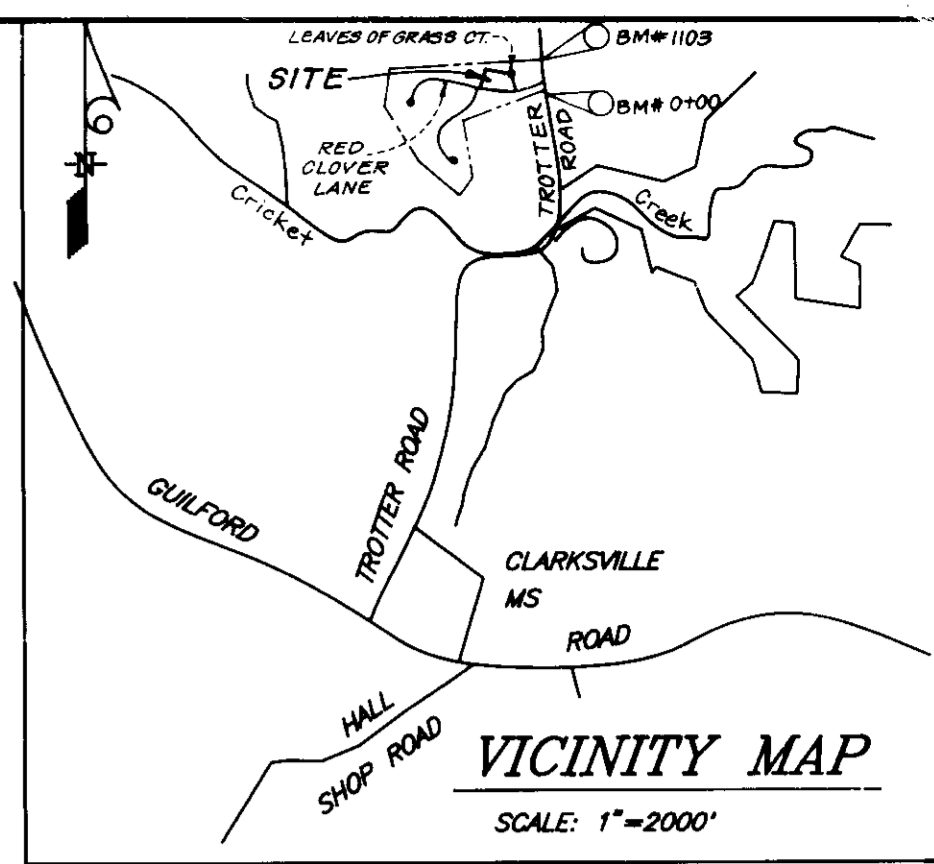


LEGEND

- Contour Interval 2 FT
- Existing Contour 4/8
- Proposed Contour 4/8
- Direction of Drainage
- Walk-Out Basement
- Ex. Trees to Remain



GENERAL NOTES:

- The contractor shall notify the Department of Public Works/ Bureau of Construction Inspection a (301) 792-7272 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- The existing topography shown was taken from plans prepared by John R. Heinrichs, P.E. The contour interval is 2 feet.
- The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monument Nos. 1103 and 0+00.
- Storm water management is provided per: F-92-87.
- Any damage to county owned rights-of-way shall be corrected at the developer's expense.
- Utilities shown as existing are taken from approved water and sewer plan Contract #34-3178 D, approved road construction plans F-92-87, and actual field survey.
- Department of Planning and Zoning reference file numbers are: S-92-02, WP 92-22, F-92-87.
- All roadways are public and existing.
- Subject property is zoned: New Town per B-2-85 Comprehensive Zoning Plan.
- The total area included in this submission is: 4.255 Acres
- The total number of lots included in this submission are: 10
- The maximum lot coverage is: 30%
- Improvement to property: Single family detached
- For driveway entrance details refer to Howard County Design Manual Volume II, Std. Details 6.05 & 6.08.

SPECIAL NOTES:

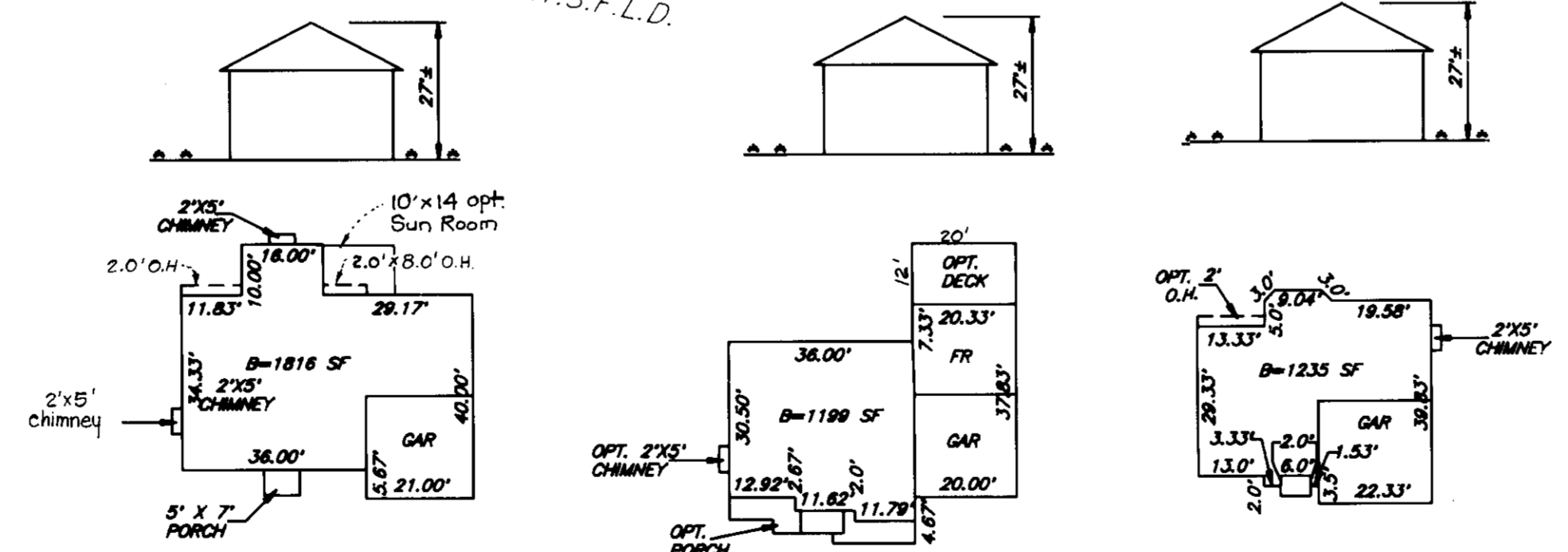
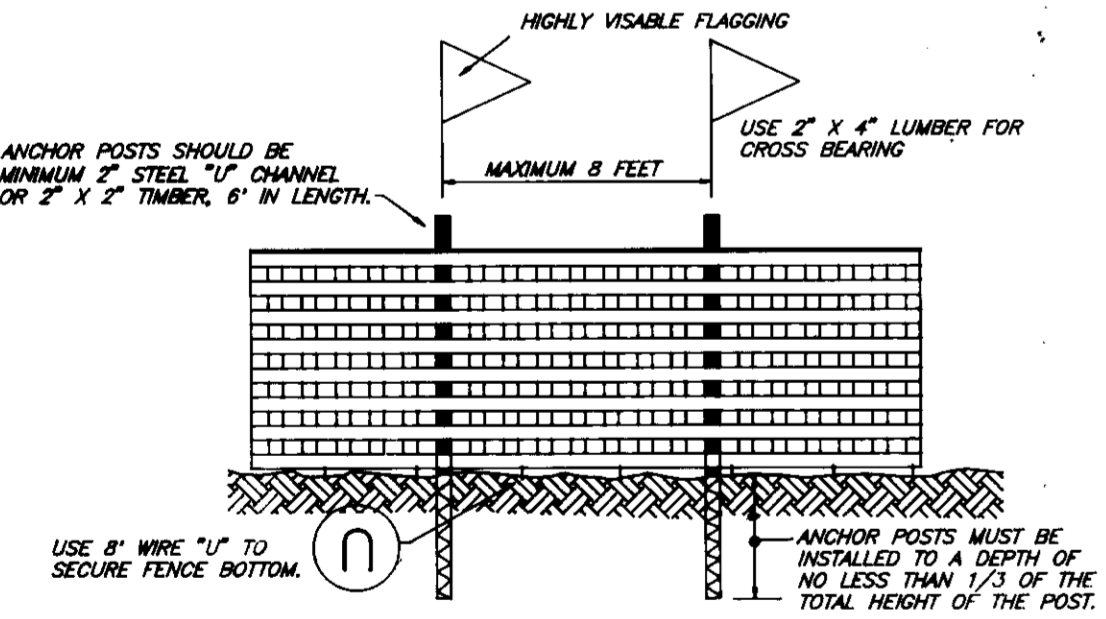
This plan is for house siting and lot grading only. Improvements shown within the rights-of-way on this S.D.P. are not to be used for construction. For construction, see approved Road Construction Plans F-92-87 and/or approved Water and Sewer Plans Contract #34-3178 D.

SHEET INDEX:

SHEETS 1 & 2 SITE DEVELOPMENT PLAN
SHEETS 3 & 4 SEDIMENT & EROSION CONTROL PLANS

LOT NO.	STREET ADDRESS
5	6005 RED CLOVER LANE
6	6001 RED CLOVER LANE
7	6008 RED CLOVER LANE
8	6012 RED CLOVER LANE
	RED CLOVER LANE
	RED CLOVER LANE
	RED CLOVER LANE
	RED CLOVER LANE
	RED CLOVER LANE
	RED CLOVER LANE

- NOTES:
- Forest protection device only.
 - Retention area will be set as part of the review process.
 - Boundaries of retention area should be staked and flagged prior to installing device.
 - Root damage should be avoided.
 - Protection signage may also be used.
 - Device should be maintained throughout construction.



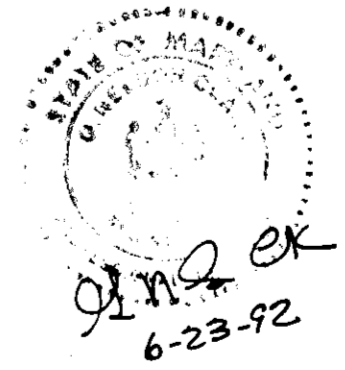
TYPICAL HOUSES

SCALE: 1"=30'

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT
DATE: 8-18-92

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
DATE: 8/27/92

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 8-12-92



SUBMISSION NAME	COLUMBIA VILLAGE OF RIVER HILL	SECTION/AREA	1/4	LOTS/PARCELS	5 THRU 8
PLAT NO.	10367	BLOCK NO.	8	TAX MAP NO.	NT SFLD 35
WATER CODE	I-10	SEWER CODE	6053500		

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

7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 • BALTO • (301) 621-8100 • WASH

DESIGNED: VLP
DRAWN: LAI
CHECKED: JME
DATE: 6/92

**SITE DEVELOPMENT PLAN - LOTS 5 THRU 8
GRADING PLAN - LOTS 1 THRU 4, 9 AND 10**

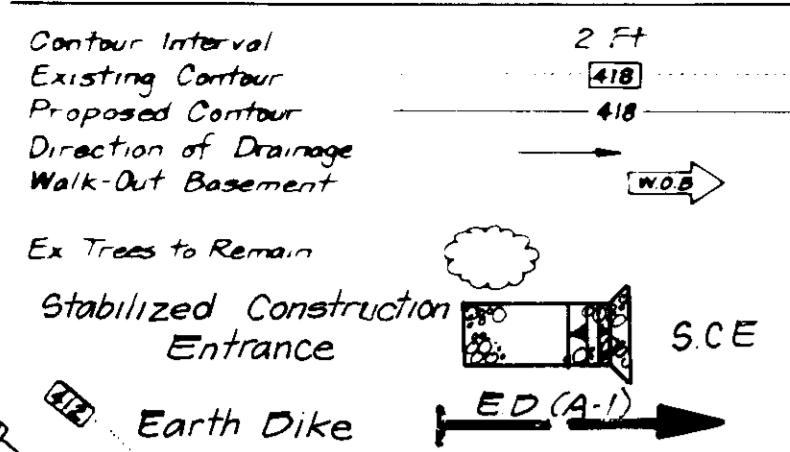
COLUMBIA
VILLAGE OF RIVER HILL
SECTION 1 AREA 4
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1"=30'
DRAWING: 1 OF 3
JOB NO: 92-095
FILE NO: 92-095 X

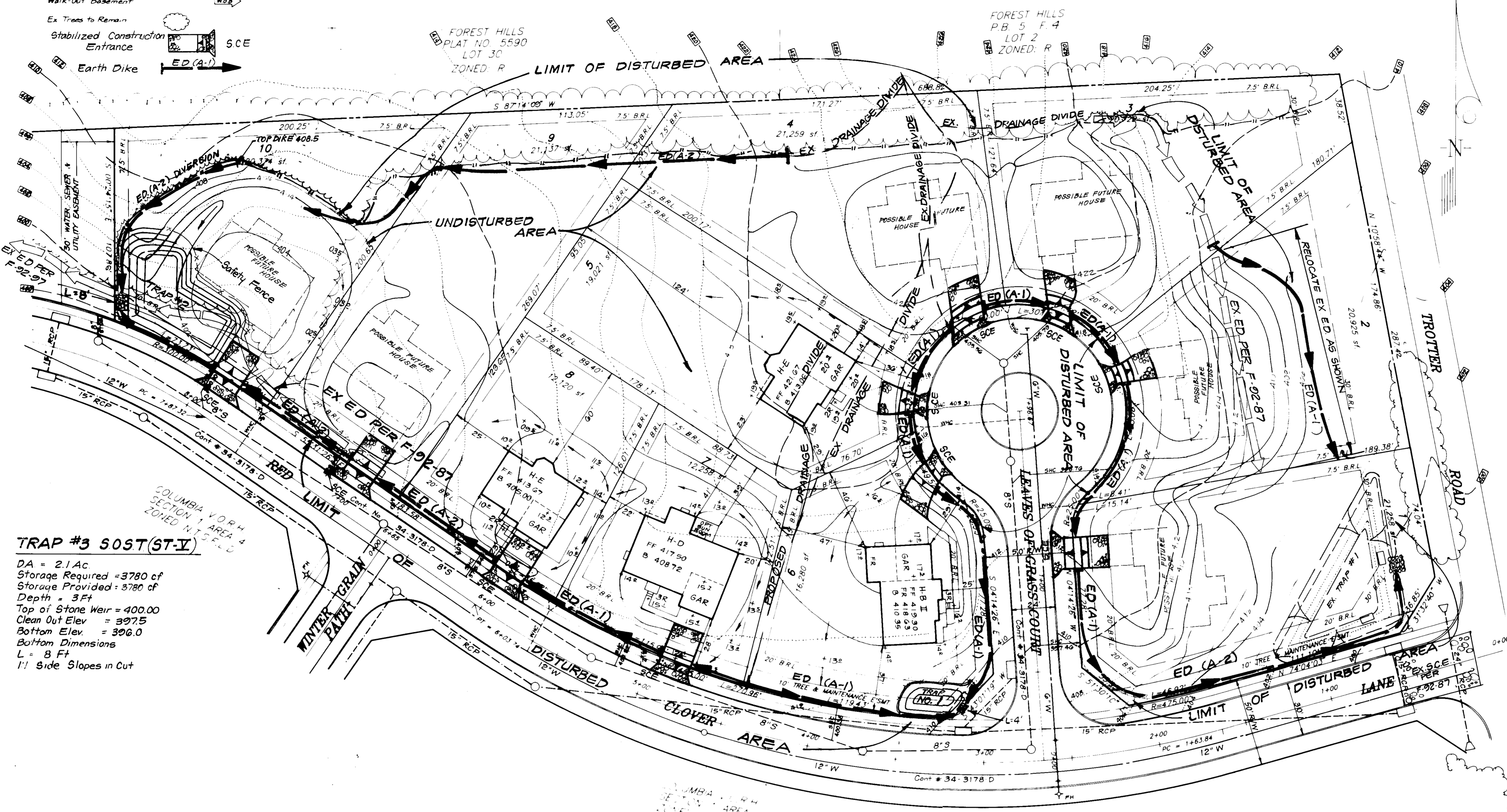
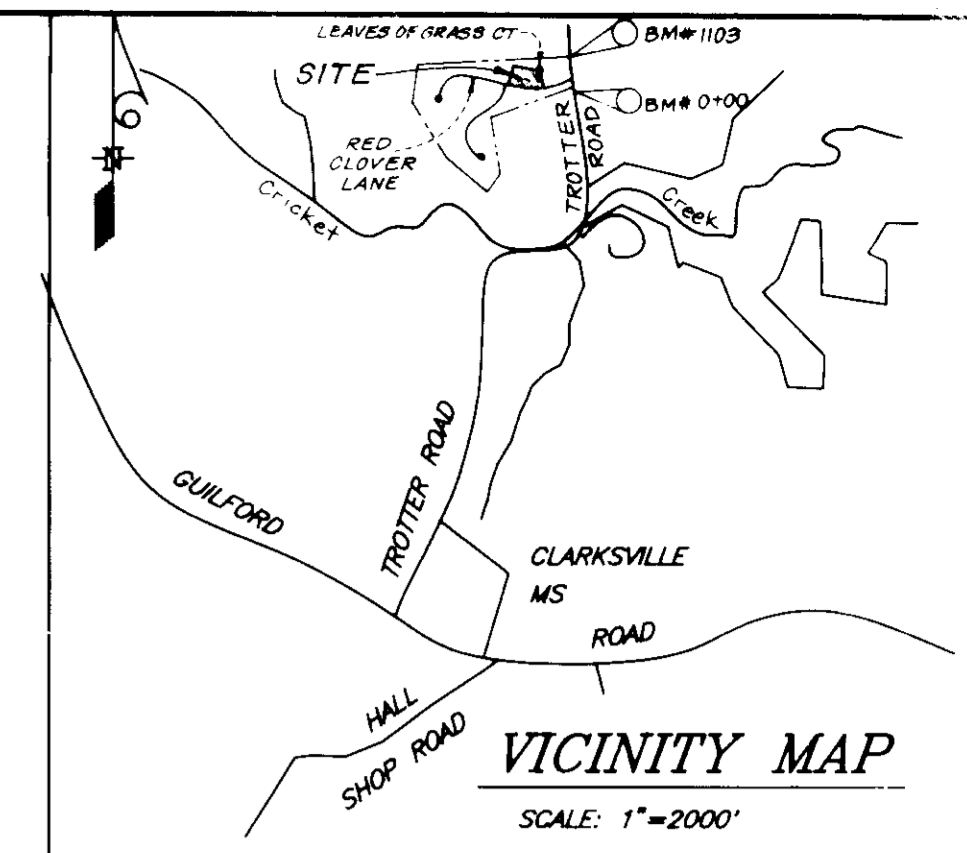
OWNER / DEVELOPER:
HOWARD RESEARCH AND DEVELOPMENT CORP.
10275 Little Patuxent Pkwy.
Columbia, MD 21044

REVISIONS:
3 Rev. hse. & grad. lot 8 11-8-93
2 Rev. hse. & grad. lot 6 7-20-93
1 Rev. hse. & grad. lot 5 3-19-93

LEGEND



NOTE: Delay construction on lot 10 until area draining to trap no. 2 has been stabilized.



TRAP #3 SOST (ST-V)

DA = 2.1 Ac
 Storage Required = 3780 cf
 Storage Provided = 3780 cf
 Depth = 3 Ft
 Top of Stone Weir = 400.00
 Clean Out Elev = 397.5
 Bottom Elev = 396.0
 Bottom Dimensions
 L = 8 Ft
 1:1 Side Slopes in Cut

**REFURBISH AS NECESSARY
 EXISTING TRAP #1 SOST ST-V**

As Per F-92-87
 Drainage Area 2.35 Ac
 Storage Required 4230 cf
 Storage Provided 4440 cf
 Depth 3'
 Top of Stone Weir 399.0
 Cleanout Elev 396.75
 Bottom Elev 395.0
 Bottom Dimensions Δ 45'x45'x76'
 L=9'

TRAP #1 SOST (ST-V)

DA = 0.5 Ac
 Storage Required = 900 cf
 Storage Provided = 900 cf
 Depth = 3 Ft
 Top of Stone Weir = 409.5
 Clean-Out Elev = 408.0
 Bottom Elev = 406.5
 Bottom Dimensions = 6'x10'
 2:1 Side Slope
 L = 4'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *Joseph M. ...* DATE: 8-18-92

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Emma ... DATE: 8/27/92

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *James ...* DATE: 8-12-92

CHIEF BUREAU OF ENGINEERING: *...* DATE: 8/1/92

Reviewed for HOWARD S.C.D. Name: *...*
 and meets Technical Requirements
 Signature: *...* Date: *8/2/92*
 US Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *John ...* Date: *8/7/92*
 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: *Joseph E. Link* Date: *8/22/92*

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: *6-23-92*

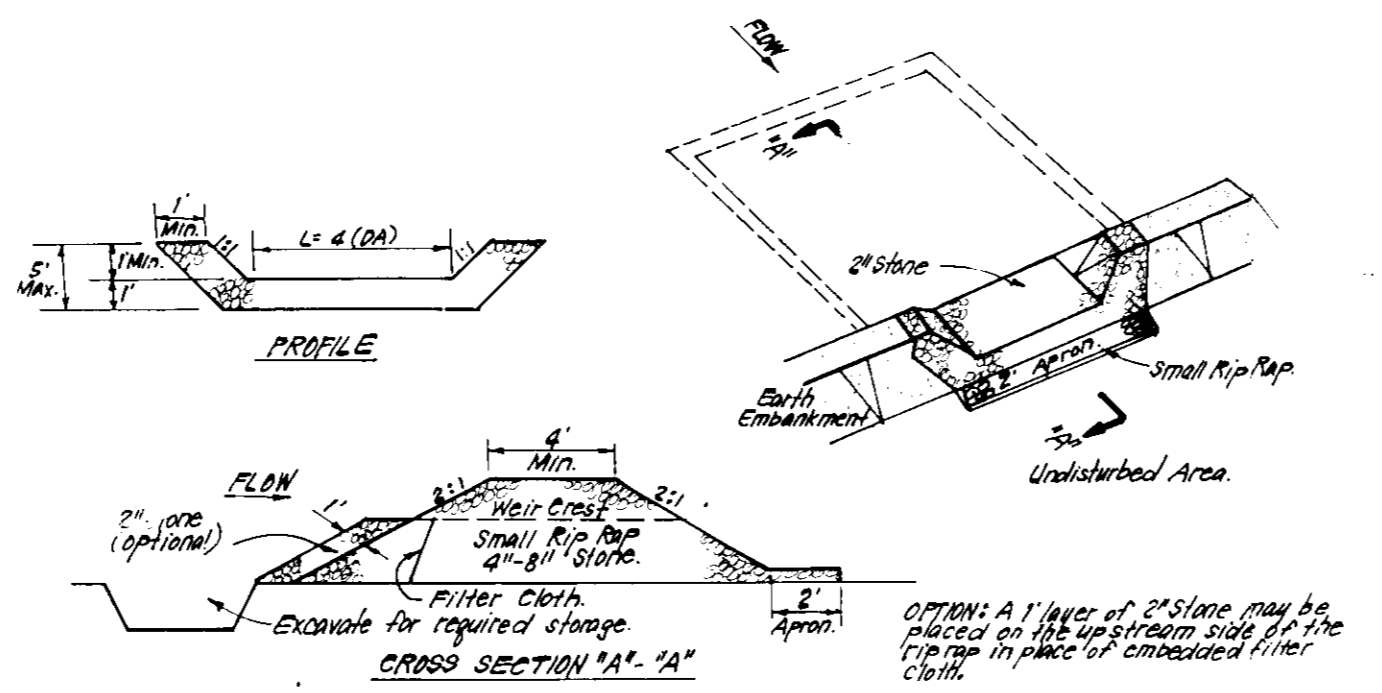
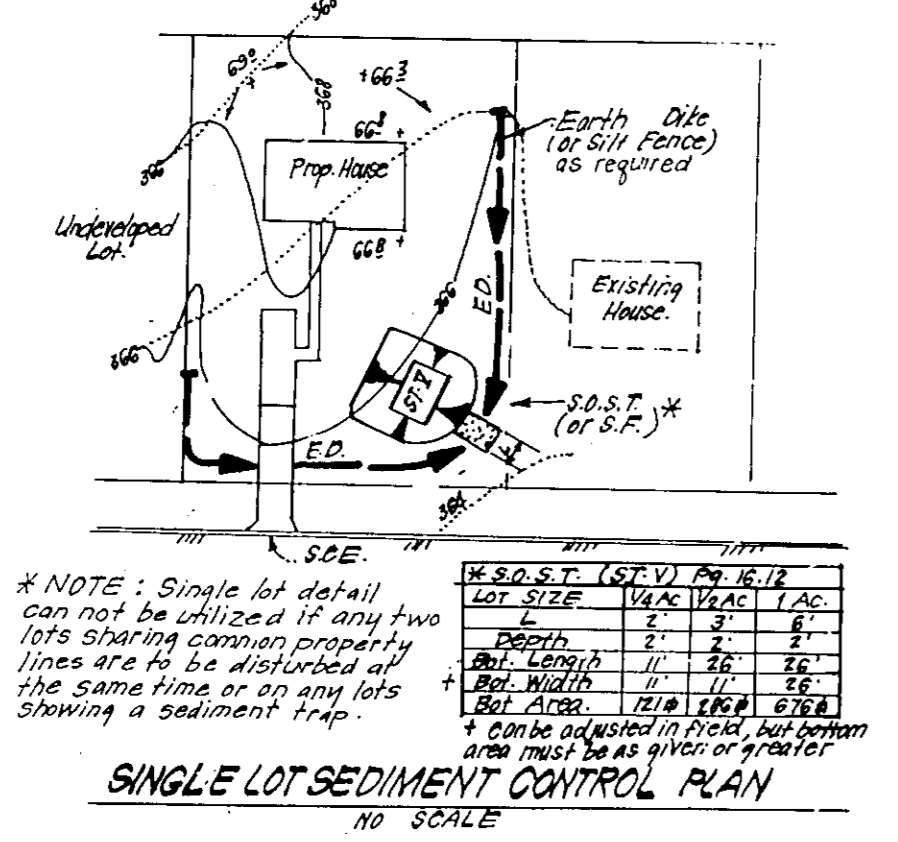
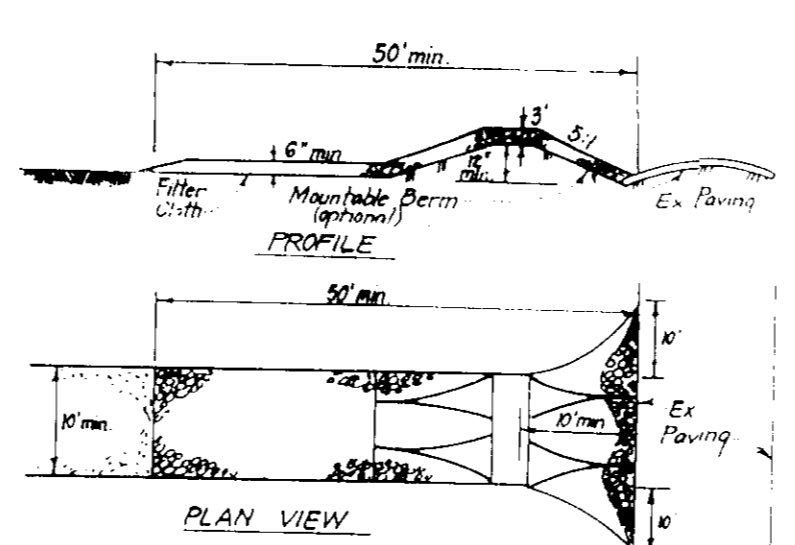
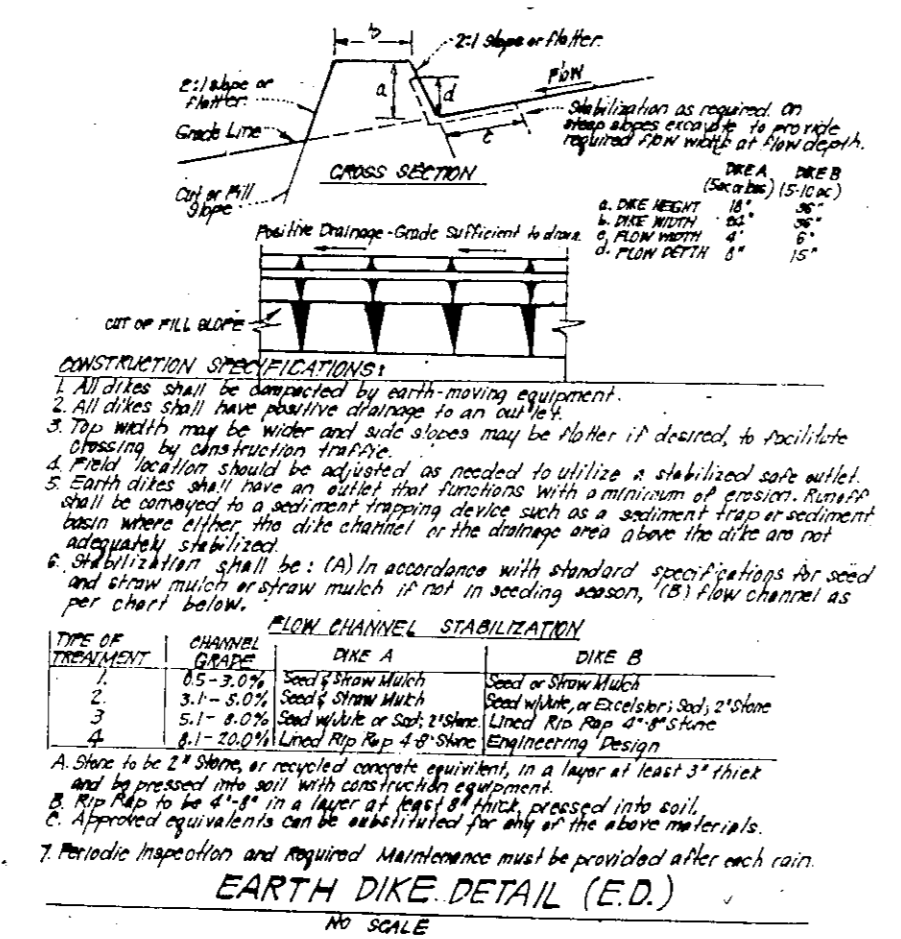


CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS

DESIGNED: KIMS
 DRAWN: LAI
 CHECKED: KIMS
 DATE: 6/92

SCALE: 1" = 30'
 DRAWING: 2 OF 3
 JOB NO: 92-095
 FILE NO: 92-0958E

OWNER / DEVELOPER:
 HOWARD RESEARCH AND DEVELOPMENT CORP.
 10275 Little Patuxent Pkwy
 Columbia, MD 21044



PERMANENT SEEDING NOTES

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

Seeded 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:

- 1) 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. Narrow 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. 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 (.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 acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw. 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 untreated 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 for anchoring. 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 redistributed where a short-term vegetative cover is needed.

Seeded 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 25 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 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of untreated 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 redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter 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, Chapter 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	4.255 Acres
Area Disturbed	3.12 Acres
Area to be roofed or paved	0.90 Acres
Area to be vegetatively stabilized	2.92 Acres
Total Cut	5954 Cu. yds
Total Fill	2124 Cu. yds
Offsite waste/borrow area location	*
- 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-Built" 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 L.F.

*** It is the responsibility of the contractor to identify the spoil/borrow site and notify HOSCD of the site and its grading permit no. at the time of construction.**

CONSTRUCTION SEQUENCE:

	No. of Days
A. Obtain Grading Permit and Install Sediment and Erosion Control Devices Tree Protection Fence and Stabilize*	7
B. Excavate for foundations and Rough Grade & Temporarily Stabilize.	30
C. Construct Structures, Sidewalks and Driveways.	90
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

*** Tree Protection Fence is to be added at the drip line of existing trees to remain.**

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

Signature: [Signature] DATE: 8-18-92

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Signature: [Signature] DATE: 8/27/92

Signature: [Signature] DATE: 8/25/92

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

Signature: [Signature] DATE: 8-12-92

Signature: [Signature] DATE: 8-12-92

Reviewed for HOWARD COUNTY S.C.D. and meets Technical Requirements

Signature: [Signature] DATE: 8/27/92

U.S. 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 erosion and sediment 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: [Signature] DATE: 6/22/92

Joseph E. Link

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: [Signature] DATE: 6-23-92

G. Nelson Clark



OWNER / DEVELOPER: HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 Little Patuxent Pkwy Columbia, MD 21044

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

7145 MINTHUR WAY • COLUMBIA, MD 21045 • (410) 391-7990 • BALTO • (410) 421-1000 • WASH

DESIGNED K/IME	SEDIMENT & EROSION CONTROL PLAN LOTS 1 THRU 10 COLUMBIA VILLAGE OF RIVER HILL SECTION 1 AREA 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 30'
DRAWN LAI		DRAWING 3 OF 3
CADD		JOB NO 92-095
CHECKED K/IME		FILE NO 92-0955E
DATE 6/92		FOR: HULLMARK BUILDERS, INC. P.O. BOX 1018 COLUMBIA, MARYLAND 21044

SDP-92-124