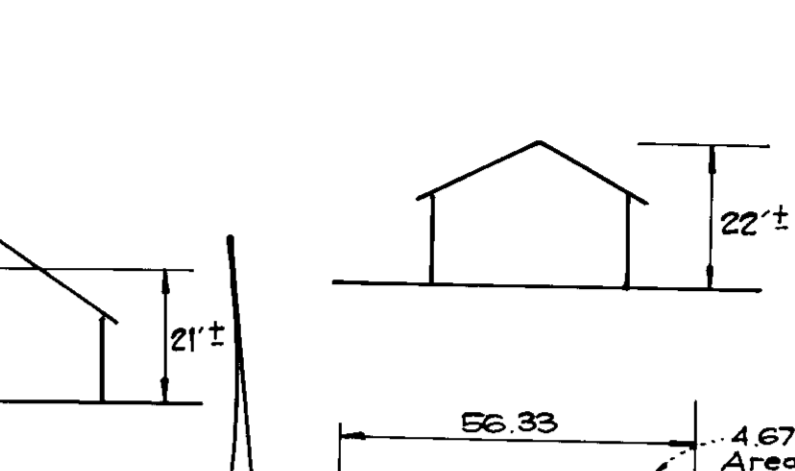
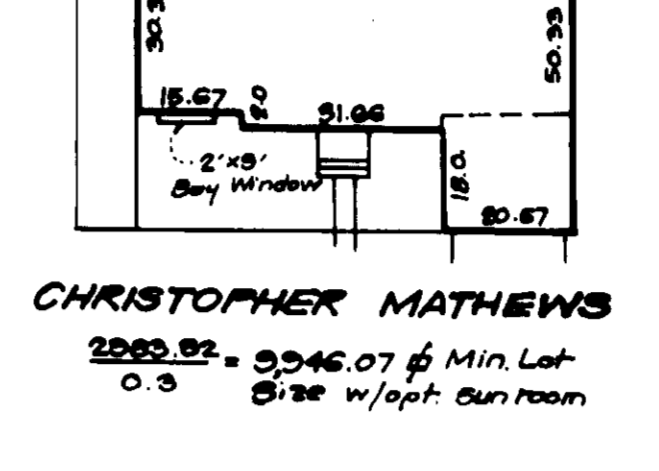
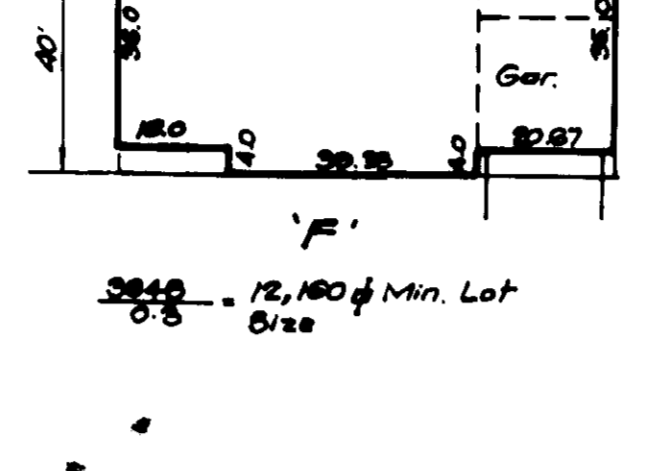
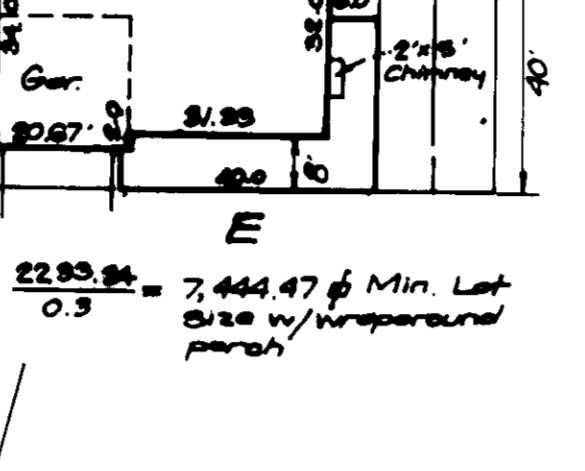
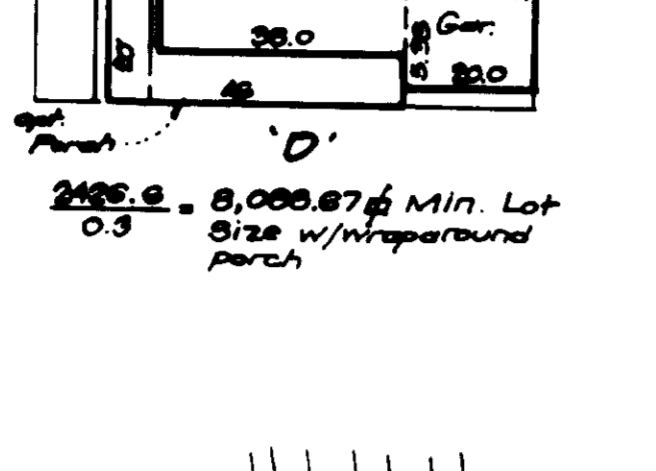
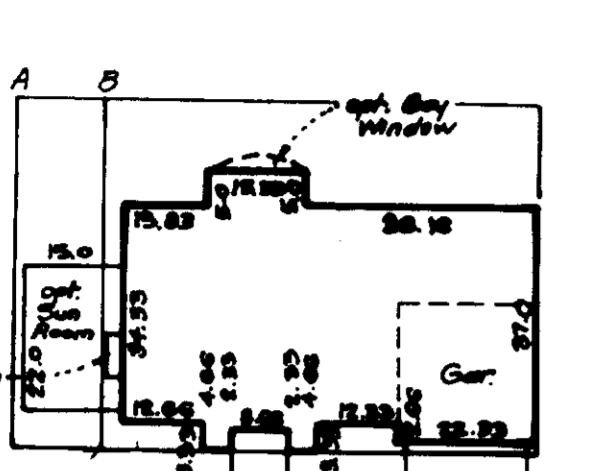
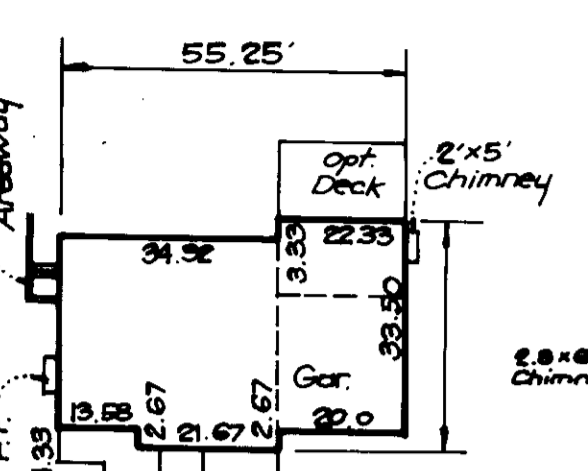
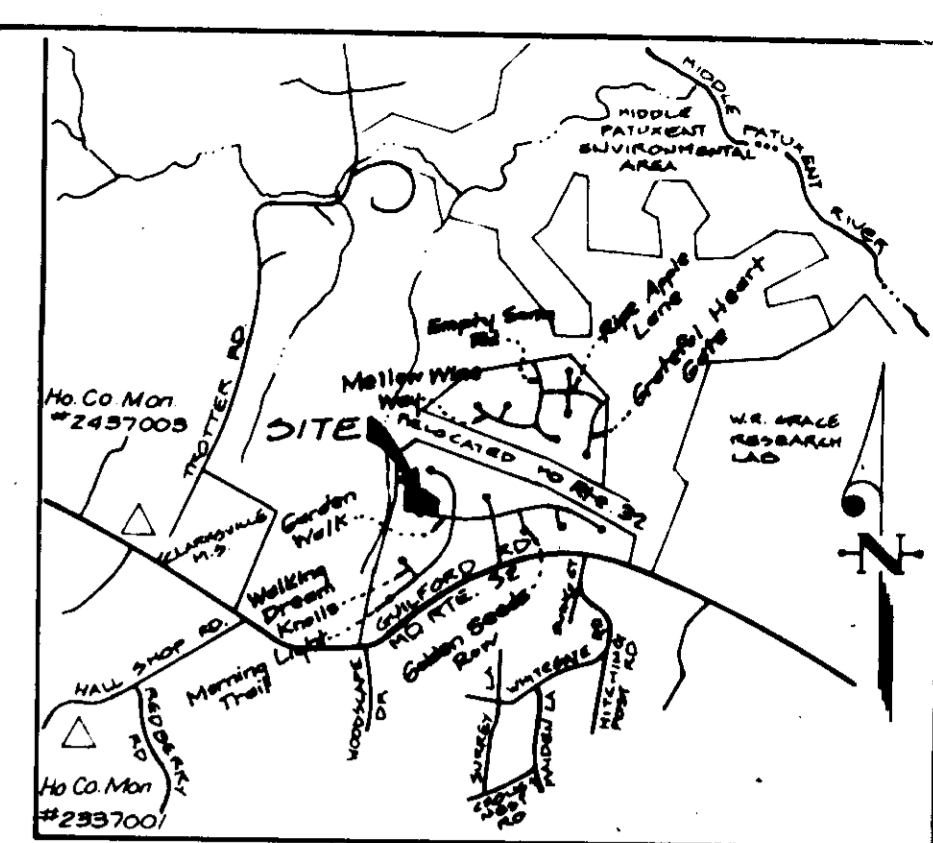


LEGEND
Contour Interval 2 Ft.
Existing Contour ---
Proposed Contour - - -
Spot Elevation + 92.8
Direction of Drainage
Existing Trees to be saved
Tree Protection Fence



- GENERAL NOTES:**
- Subject property is zoned: NT SFLD per 11-19-93 Comprehensive Zoning Plan.
 - The total area included in this submission is: 85,103 ϕ or 1.95 Ac.
 - The total number of lots included in this submission are: 5
 - Improvement to property: Single family detached
 - For driveway entrance details refer to Ho Co. Design Manual Volume III of Details R-6.05.
 - Department of Planning and Zoning reference file numbers are: F-33-01, S-31-03, F-32-15
 - Utilities shown as existing are taken from approved water and sewer plan Contract # 34-3210-D, approved road construction plans F-33-01, and actual field survey.
 - Any damage to county owned rights-of-way shall be corrected at the developer's expense.
 - Storm water management is provided per: F-33-01
 - All roadways are public and existing.
 - The existing topography shown from Field run Topography by Clark, Finckrock and Sackett, Inc.
 - 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. 2437003 and 2337001.
 - The contractor shall notify the Department of Public Works/Bureau of Construction Inspection at 1-410-313-1810 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.
 - Under certain conditions, decks and porches may only extend 3 feet into front and rear setbacks as defined in F-33-01 Phase 200.
 - The wetland/stream buffer indicated on the plan prohibits subsequent clearing, grading or construction in the buffer area. Maintenance of residences, landscaping and utilities is permitted.
 - Street trees shown were taken from approved Road Construction Plans (F-33-01) prepared by Fisher, Collins & Carter.
 - For driveway entrance details refer to Howard County Design Manual Volume III of Details R-6.05.
- SHEET INDEX**
Sheet 1 - Site Development Plan
Sheets 2 & 3 - Sediment and Erosion Control Plans

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-33-01 and/or approved Water and Sewer Plans Contract # 34-3210-D.

OWNER/DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT
10275 Little Patuxent Parkway
Columbia, Md. 21044

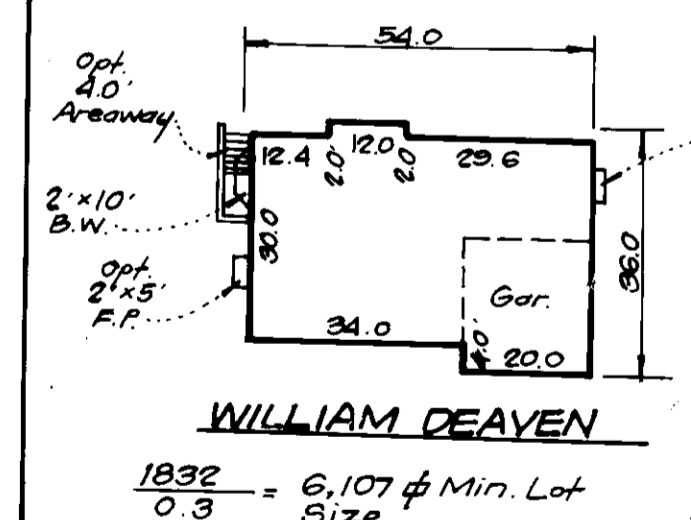
SUBDIVISION NAME	COLUMBIA Village of River Hill	SECTION/AREA	2/2 Ph 2	LOTS/PARCELS	47 thru 51
PLAT NO.	10394 #10885	BLOCK NO.	35	ELECTION DIST.	5TH
WATER CODE	B-01	SEWER CODE	2153000	CENSUS TRACT	G055

ADDRESS CHARTS

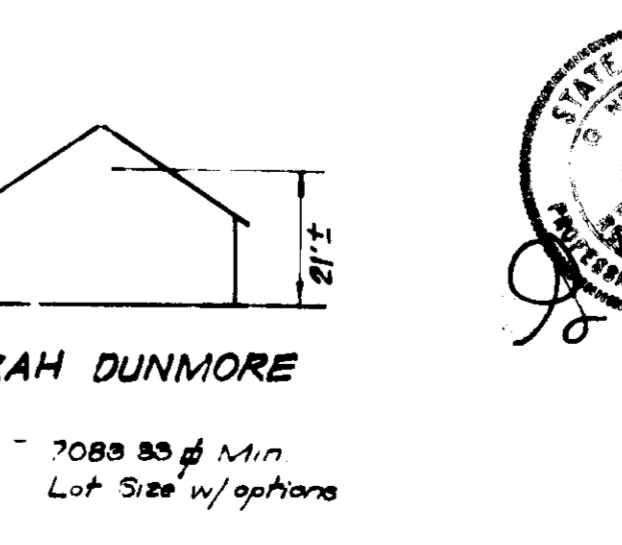
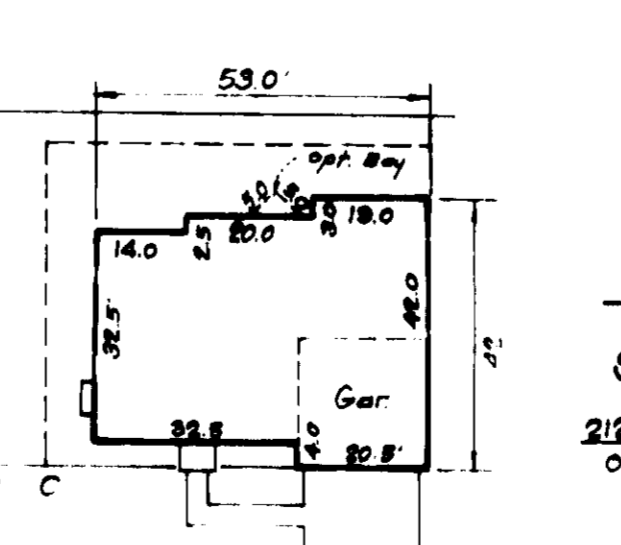
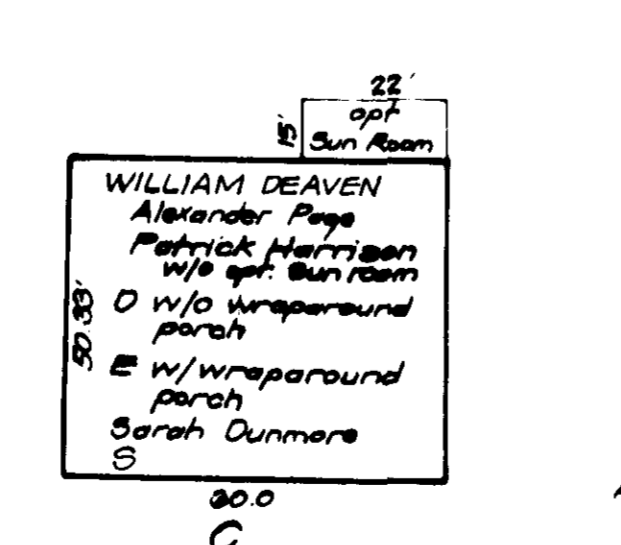
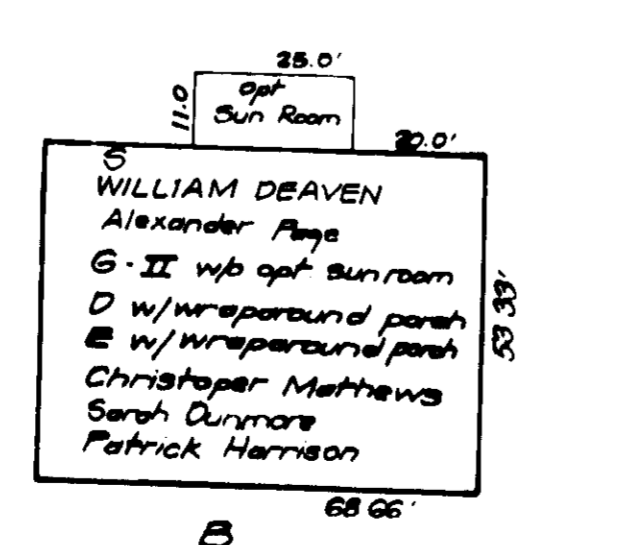
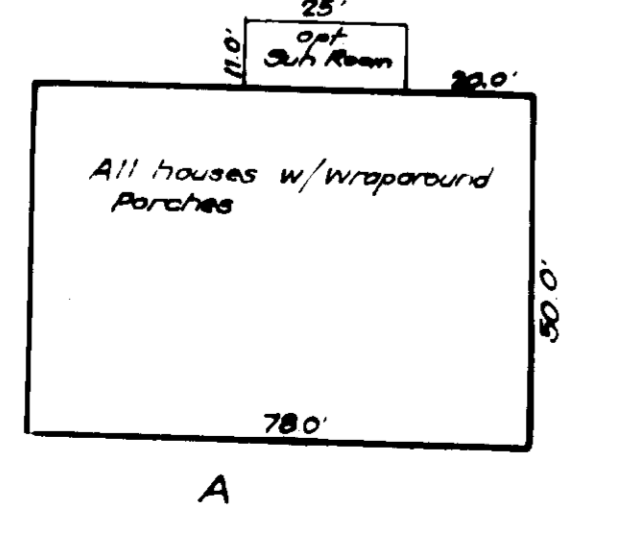
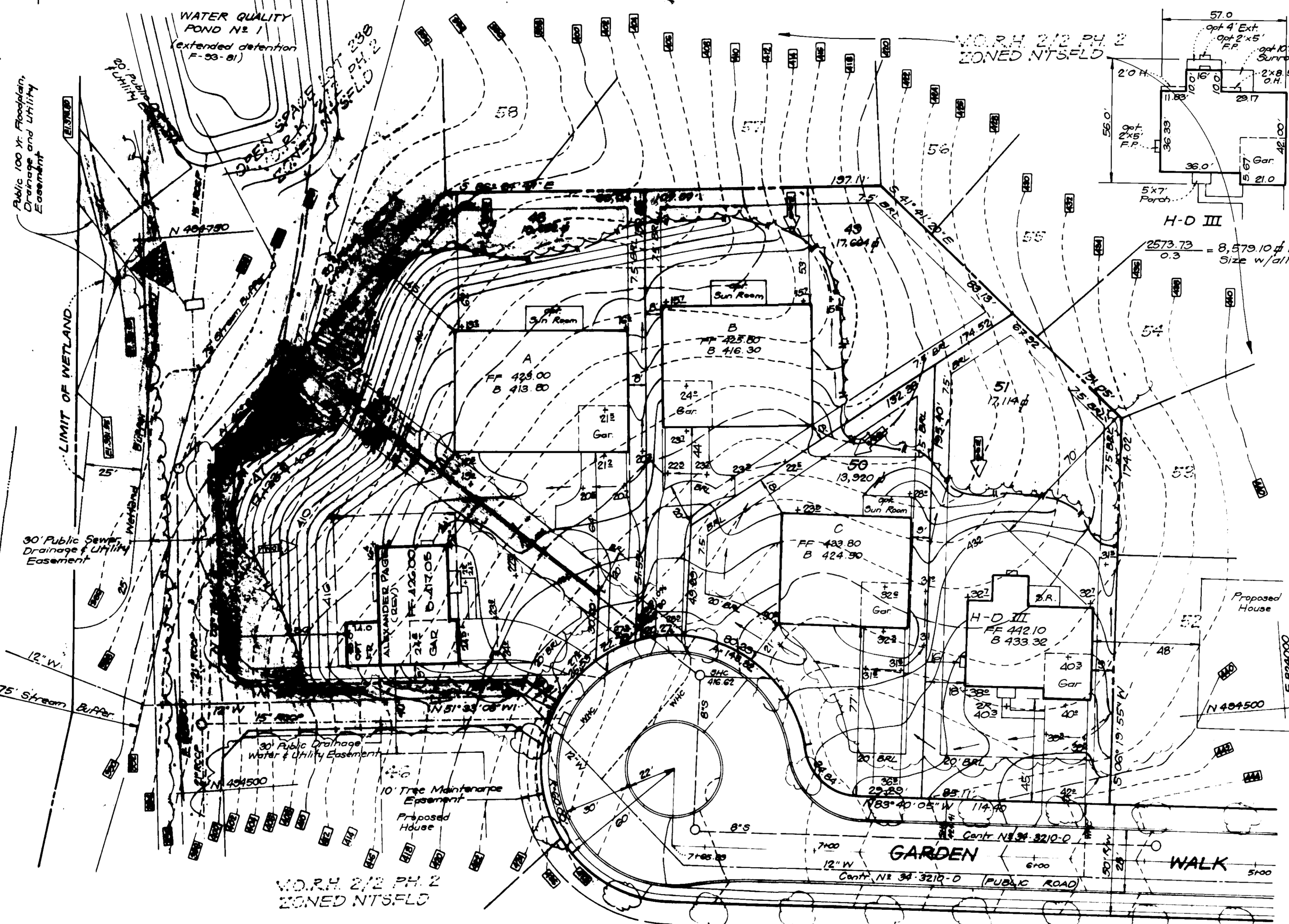
LOT No.	Street Address
47	7028 Garden Walk
48	7024
49	7020
50	7026
51	7022

REVISIONS

No.	REVISIONS	Date
4	Add S house type	8.6.96
3	Add William Deaven hse typical	5.29.96
2	Add hse typicals H-B and H-F	2-28-95
1	Rev. hse and grade lot 51, Add hse typical	2/14/95



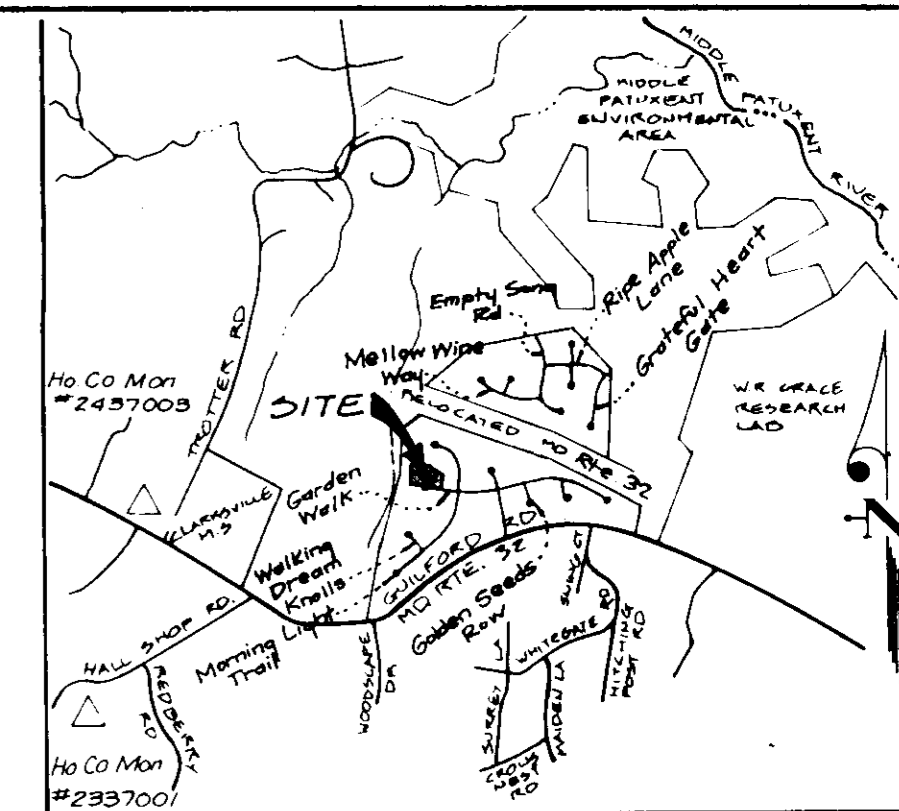
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
5/23/94
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE
5/20/94
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE
5/20/94



CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 - BALTO • (301) 621-8100 - WASH

SITE DEVELOPMENT PLAN
LOTS 47 thru 51
COLUMBIA
VILLAGE OF RIVER HILL
SECTION 2 AREA 2 PHASE 2
FIFTH ELECTION DISTRICT
HOWARD COUNTY MARYLAND
For WILLIAMSBURG BUILDERS
P.O. Box 1018
Columbia, Md. 21044

SCALE: 1"=30'
DRAWING: 1 OF 3
JOB NO: 94-016
FILE NO: 94-016X



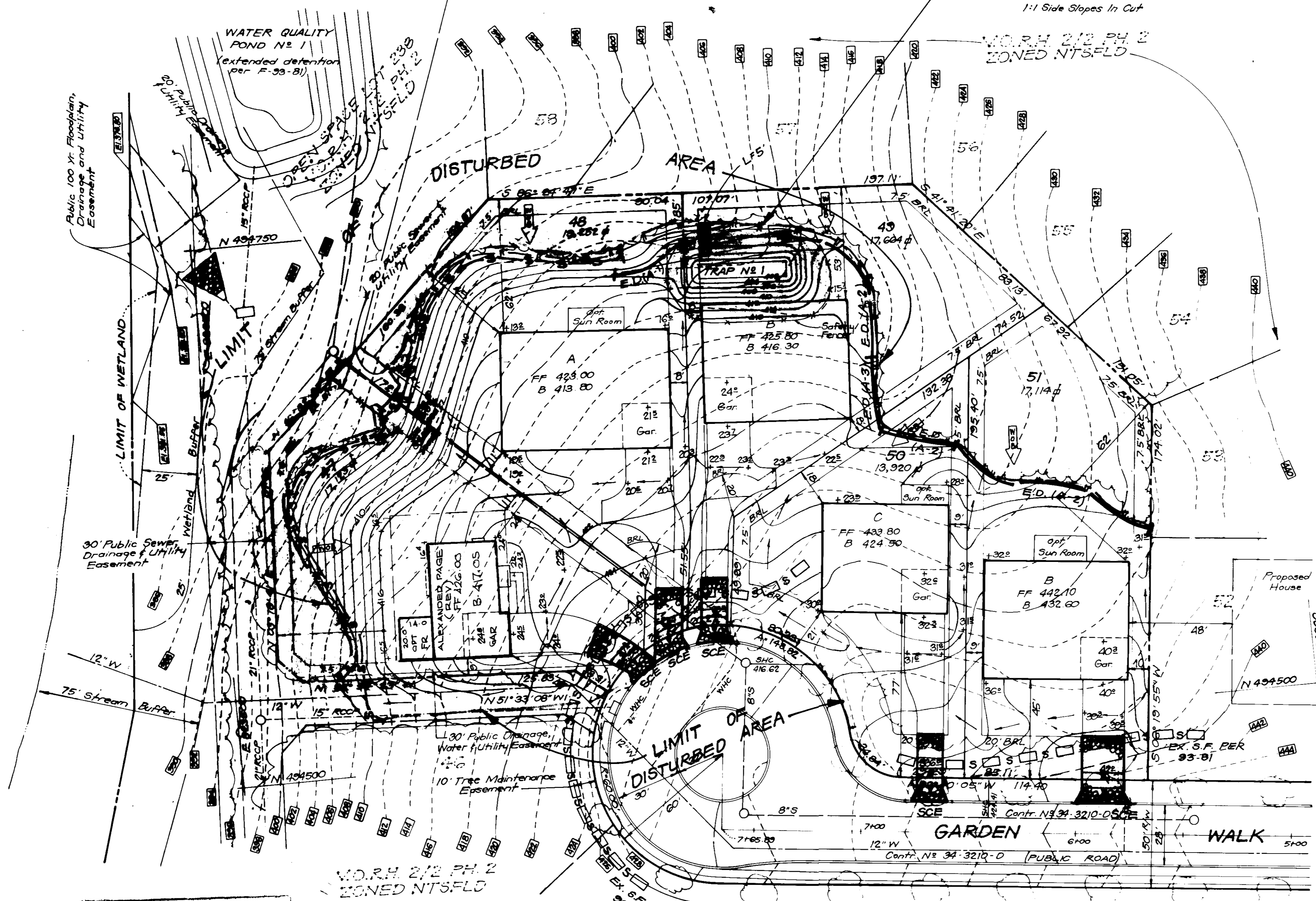
VICINITY MAP
SCALE: 1"=2000'

LEGEND

- Contour Interval 2 Ft
- Existing Contour
- Proposed Contour
- Spot Elevation
- Direction of Drainage
- Existing Trees to be saved
- Tree Protection Fence
- Silt Fence
- Earth Dike
- Existing Silt Fence
- Stabilized Construction Entrance w/ Mountable Berm

TRAP NO. 1 506T ST-V

Drainage Area 1.1 Ac.
Storage Required 1980 CF
Storage Provided 1980 CF
Depth 4'
Top of Stone Crest 407.0
Bottom Elev. 402.0
Clearout Elev. 404.0
Bottom Dimensions 41'x7'
L=5'
1:1 Side Slopes In Cut



OWNER / DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT
10275 Little Patuxent Parkway
Columbia, Md. 21044



DEVELOPER'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 may be deemed necessary."

G. Nelson Clark
Signature of Developer 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
Signature of Engineer Date 3-17-94

Reviewed for HOWARD S.C.D. Name
and meets Technical Requirements
Patricia England 5/17/94
Signature Date
U.S. Soil Conservation Service

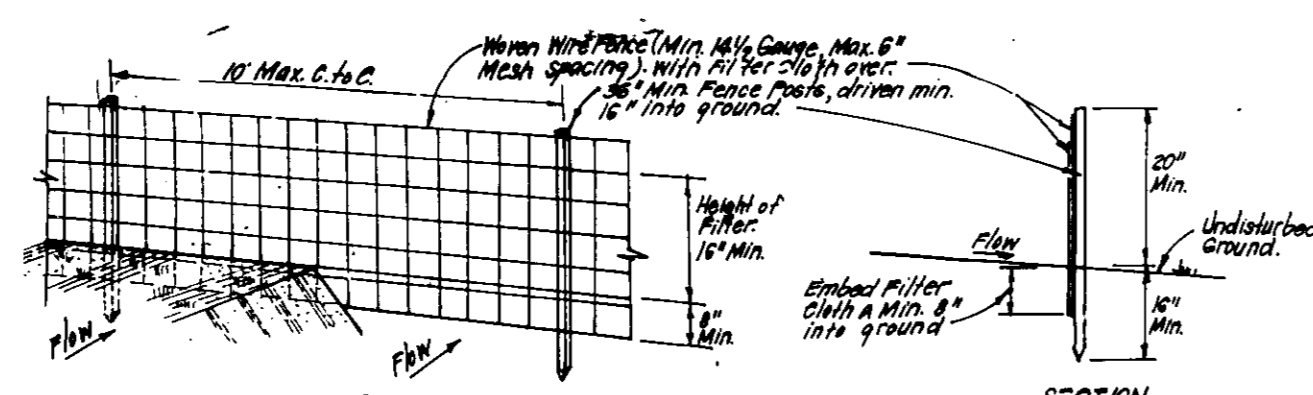
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 5/17/94
Approved Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
David S. Carter 5/23/94
DIRECTOR DATE
Quin Summery 5/23/94
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. Ferguson 5/20/94
DIRECTOR DATE
William J. ... 5/20/94
CHIEF BUREAU OF ENGINEERING DATE

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED ULS	SEDIMENT & EROSION CONTROL PLAN LOTS 47 thru 51 COLUMBIA VILLAGE OF RIVER HILL SECTION 2 AREA 2 PHASE 2 FIFTH ELECTION DISTRICT HOWARD COUNTY MARYLAND For: WILLIMSBURG BUILDERS P.O. Box 101B Columbia, Md. 21044	SCALE 1"=30'
DRAWN BAL		DRAWING 2 OF 3
CHECKED ULS		JOB NO 94-016
DATE 3-17-94		FILE NO 94-016SE
SDP 94-104		



CONSTRUCTION SPECIFICATIONS:

- When wire fence is to be installed, secure to fence posts with wire ties or staples.
- Filter cloth to be fastened securely to woven wire fence with ties spaced every 24\"/>
- When 2 sections of filter cloth join each other they shall be overlapped 24\"/>
- Maintenance shall be performed as needed and material removed when "bulges" develop in silt fence.

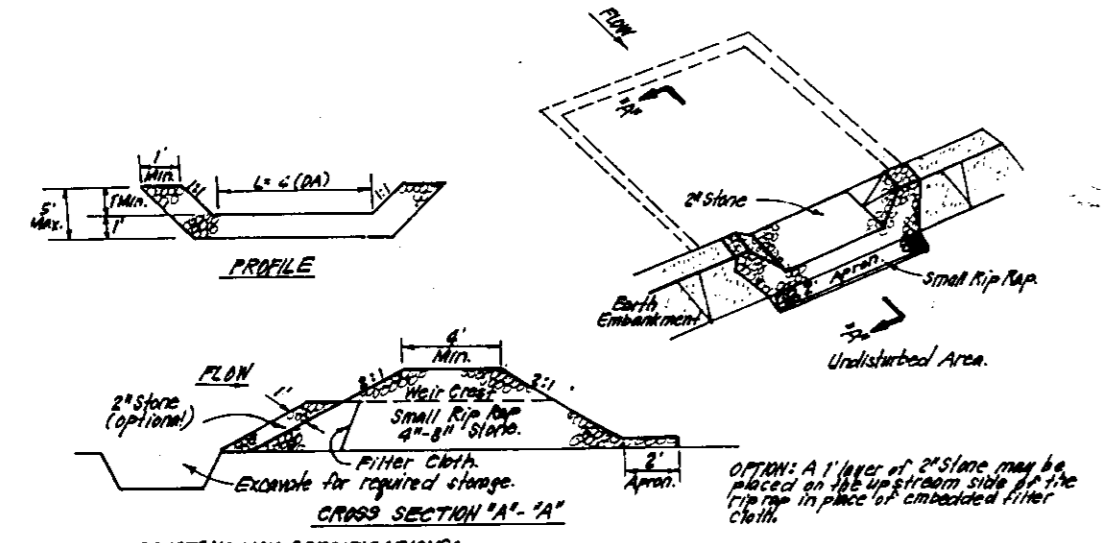
POSTS: Steel (either T or U Type or 2\"/>

FENCE: Woven Wire, 1/4\"/>

FILTER CLOTH: Filteri, Mirafi, M61, Sublita, TIRON or Approved.

PREFABRICATED UNIT: Geotex, Envirofence, or approved equal.

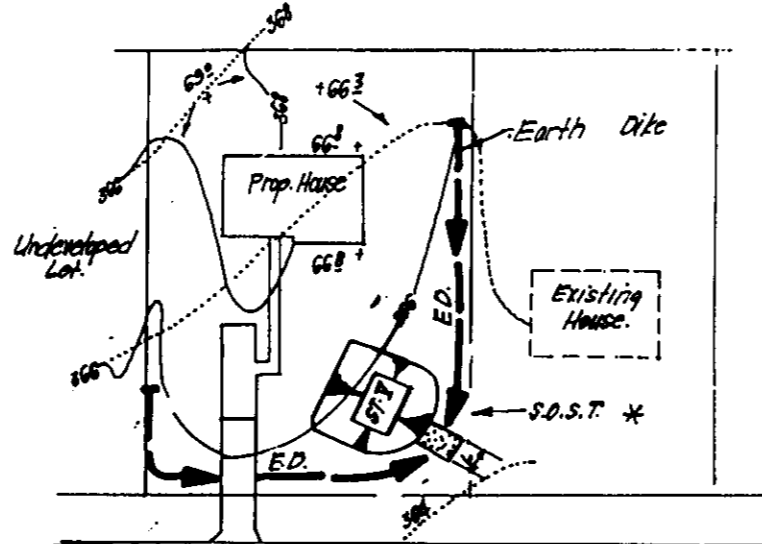
SILT FENCE DETAIL (S)
NO SCALE



CONSTRUCTION SPECIFICATIONS:

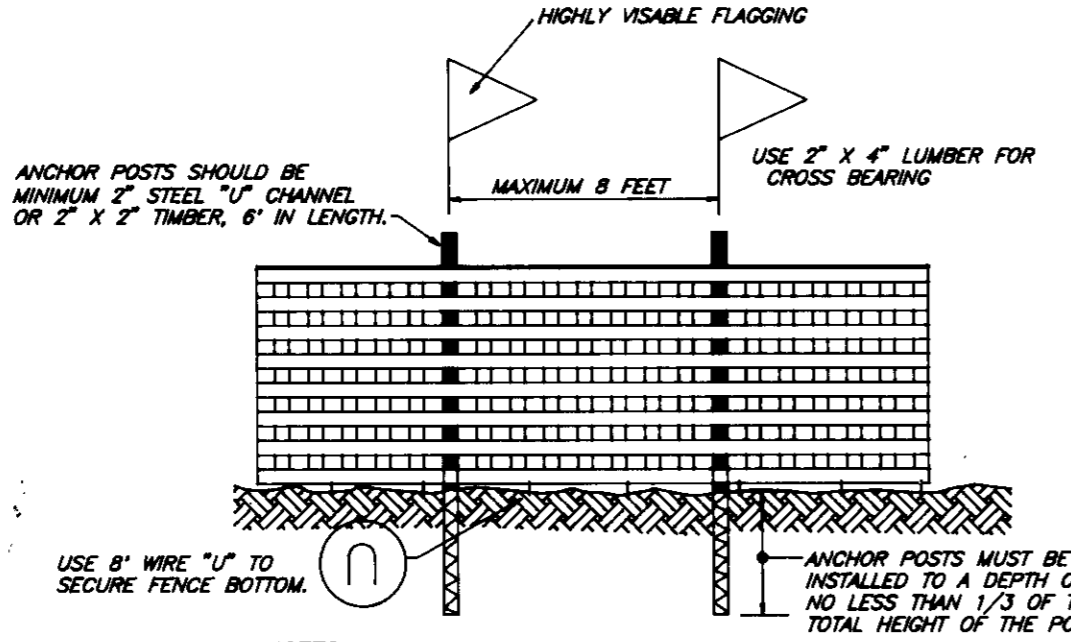
- Any under stabilization shall be cleared, graded and stripped of any vegetation and soil mat. The area shall be stabilized.
- The material for the stabilization shall be free of rocks and other debris and shall be compacted to a minimum density of 95% of the maximum dry density.
- The stabilization shall be 12\"/>
- The stabilization shall be 12\"/>
- The stabilization shall be 12\"/>
- The stabilization shall be 12\"/>
- The stabilization shall be 12\"/>
- The stabilization shall be 12\"/>

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) STY.
NO SCALE



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

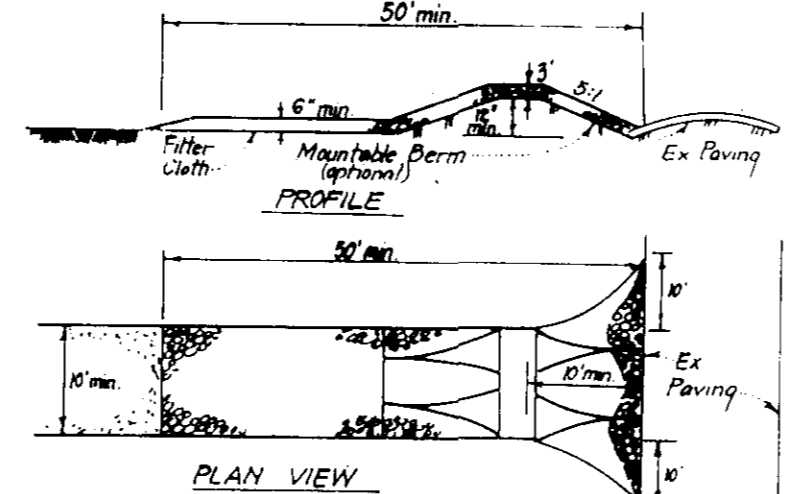
SINGLE LOT SEDIMENT CONTROL PLAN
NO SCALE



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.

BLAZE ORANGE PLASTIC MESH TYPICAL TREE PROTECTION FENCE DETAIL
NO SCALE



CONSTRUCTION SPECIFICATIONS:

- Stone size - Use 2\"/>
- Length - As required, but not less than 50 feet (except on a single residential lot where a 25 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) feet minimum, but not less than the full width of 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 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 moundable berm with 5\"/>
- 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 to compensate for erosion and/or cleanup of any material used to trap sediment. All sediment applied, 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)
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, 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. Harrow 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. 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 (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 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 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 reseedings.

TEMPORARY SEEDING NOTES

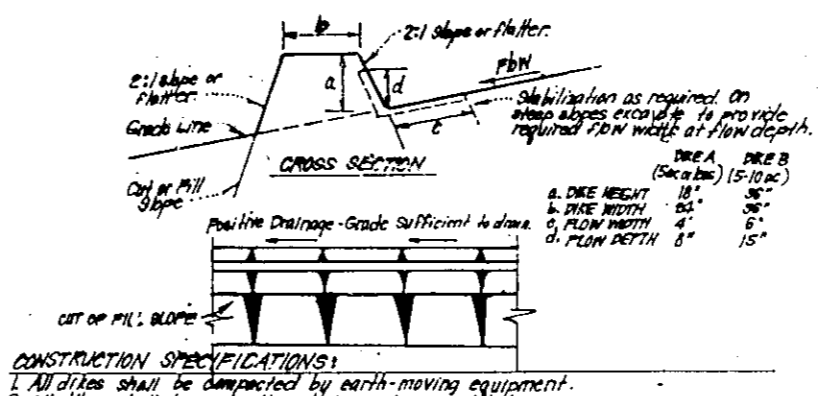
SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

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 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 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 FOR RATE AND METHODS NOT COVERED.



CONSTRUCTION SPECIFICATIONS:

- All dikes shall be constructed by earth moving equipment.
- All dikes shall have a minimum slope of 2:1.
- The width may be wider and soil slopes may be steeper if desired, to facilitate direction of sediment trapping.
- Final grade should be achieved as needed to utilize a stabilized earth dike.
- Earth dikes shall have a minimum height of 2 feet. Dikes shall be constructed to a minimum height of 2 feet. Dikes shall be constructed to a minimum height of 2 feet.
- Final grade and stabilize in accordance with State and Specs.
- Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.

PLAN CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL	DIKE A	DIKE B
1	1.5-2.0\"/>		

EARTH DIKE DETAIL (E.D.)
NO SCALE

SEDIMENT AND EROSION 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. (319-1855).
 - 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 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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec.31) and (Sec.34), temporary seeding (Sec.50) and mulching (Sec. 52). Temporary stabilization with sod 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:	1.95 Ac
Area Disturbed:	1.72 Ac
Area to be roofed or paved:	0.61 Ac
Area to be vegetatively stabilized:	1.11 Ac
Total Cut:	822 CY
Total Fill:	755 CY
 - 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.
 - All pipes to be blocked at the end of each day (see detail this sheet).
 - The total amount of silt fence = 390 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.

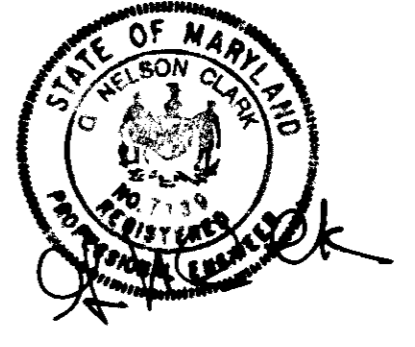
CONSTRUCTION SEQUENCE:

NO.	DESCRIPTION	NO. OF DAYS
1.	Obtain grading permit	7
2.	Install tree protection fence	7
3.	Install sediment and erosion control devices and stabilize.	14
4.	Excavate for foundations, rough grade and temporarily stabilize.	30
5.	Construct structures, sidewalks and driveways	60
6.	Final grade and stabilize in accordance with State and Specs.	30
7.	Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	30

*Delay construction of houses on lots 49 See single lot sediment control detail, this sheet.

OWNER / DEVELOPER

HOWARD RESEARCH AND DEVELOPMENT
10275 Little Patuxent Parkway
Columbia, Md. 21044



CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINISTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 - BALTO • (301) 621-8100 - WASH

DESIGNED	ULS	SCALE	As Shown
DRAWN	BAL	DRAWING	3 OF 3
CHECKED	ULS	JOB NO	93-016
DATE	3-17-94	FILE NO	94-0165e

For: WILLIAMSBURG BUILDERS
P.O. Box 1018
Columbia, Md. 21044

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Director: *[Signature]* 5/23/94
Date: 5/23/94

Chief Division of Land Development and Research

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

Director: *[Signature]* 5/20/94
Date: 5/20/94

Chief Bureau of Engineering

Reviewed for HOWARD S.C.D. Name: *[Signature]* 5/17/94
Signature: *[Signature]*
US Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved: *[Signature]* 5/17/94

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]
HARRYL LUNIB
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] 3-17-94
G. NELSON CLARK
Date