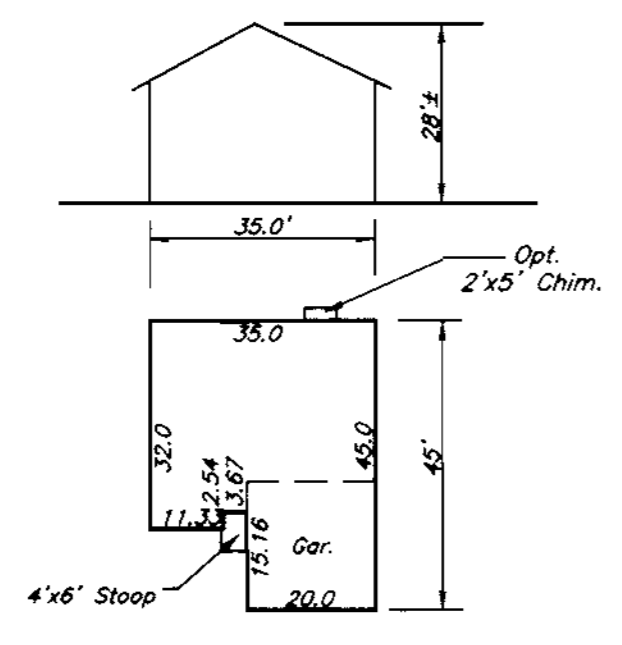
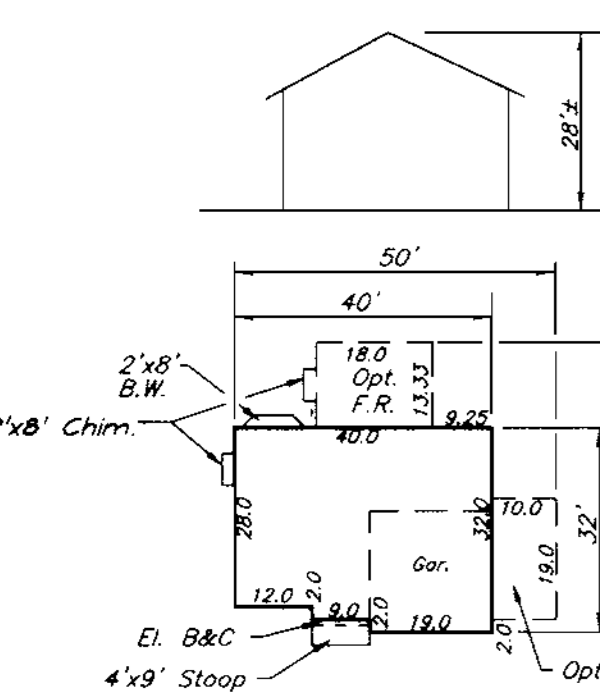


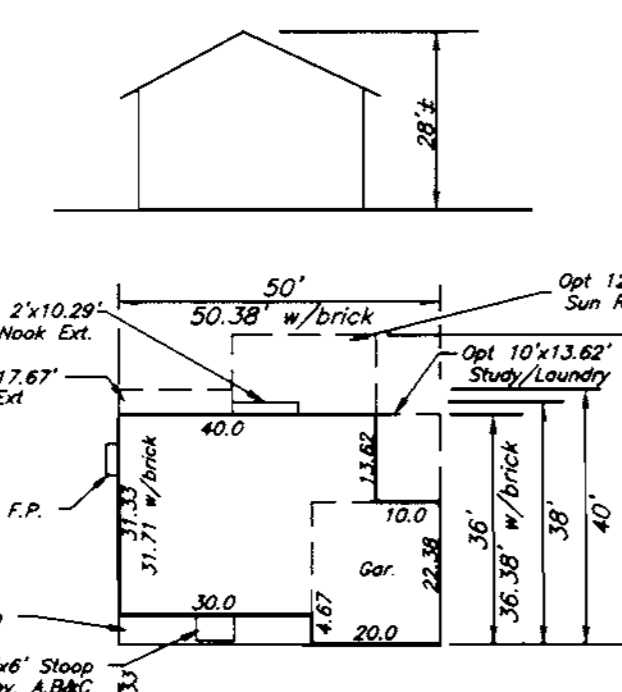
SOMERSET
1700.68 SF = 5668.93 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



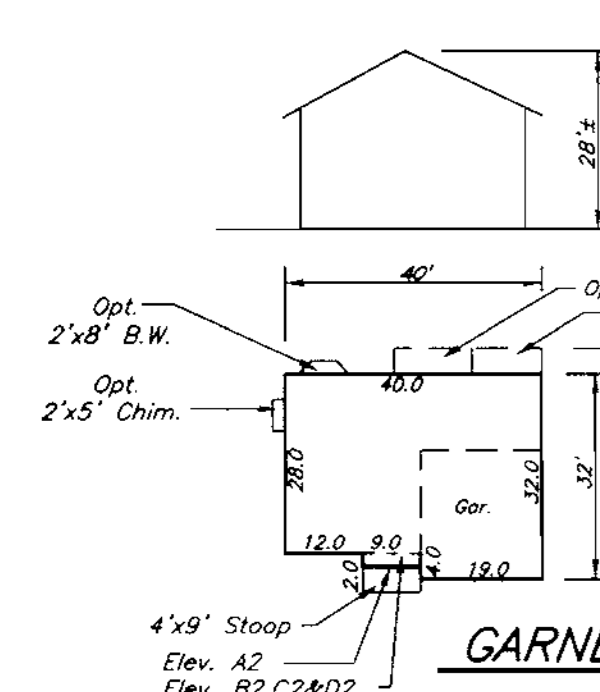
FENWICK
1566.40 SF = 5221.33 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



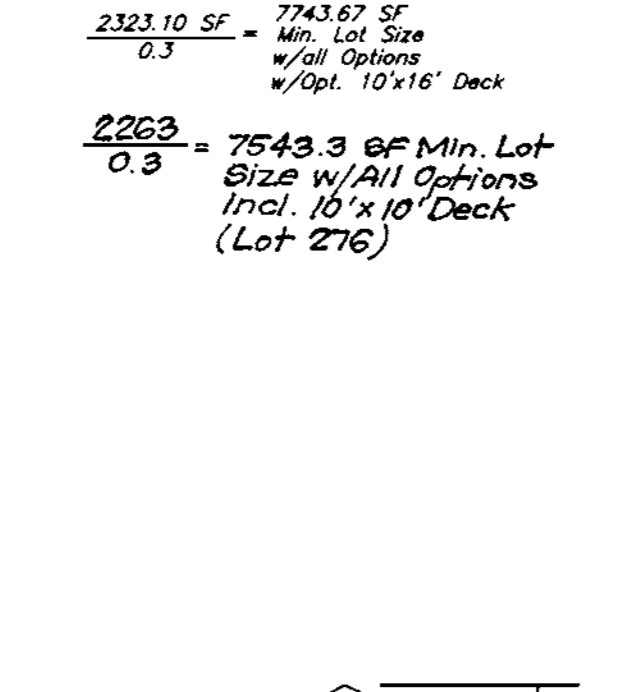
GARRISON
1899.03 = 6127 SF Min. Lot Size w/all Opt's, incl. 10'x11' Deck (For Lot 143)



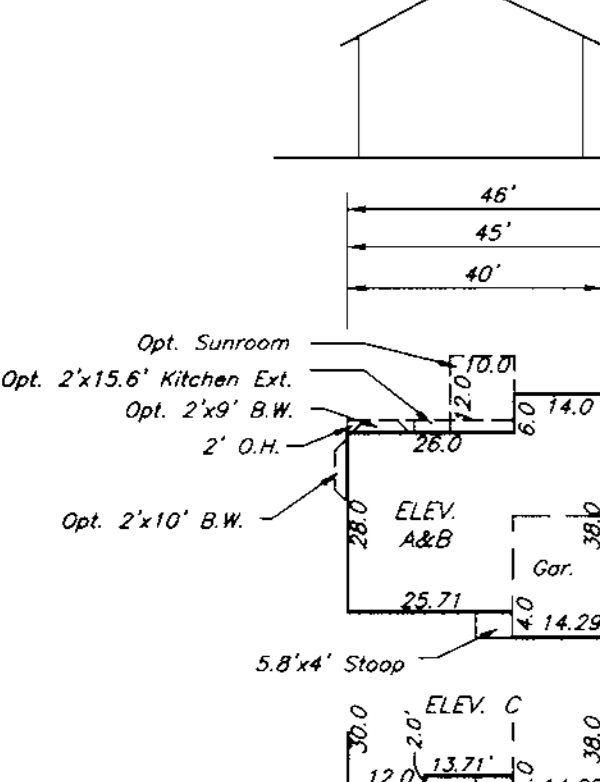
ASHLEY
2323.10 SF = 743.67 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



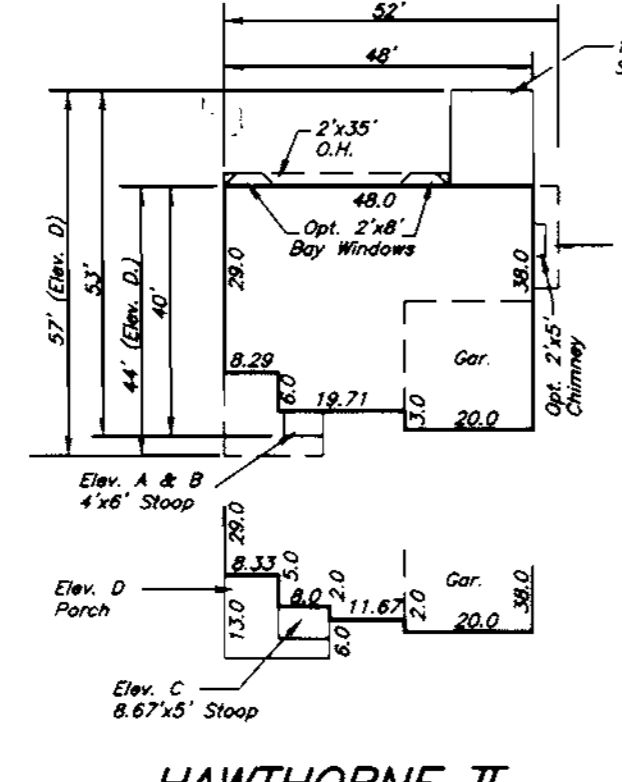
GARNETT 2
1528.50 SF = 5091.33 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



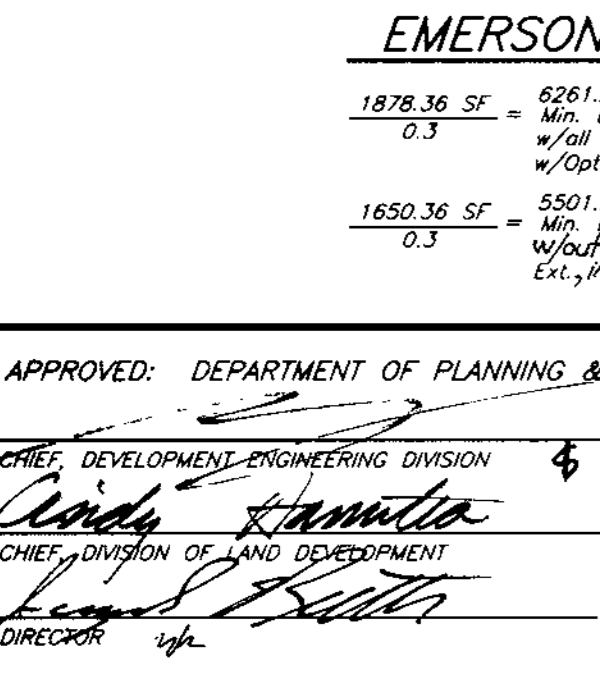
CAMERON
1751.92 SF = 5839.73 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



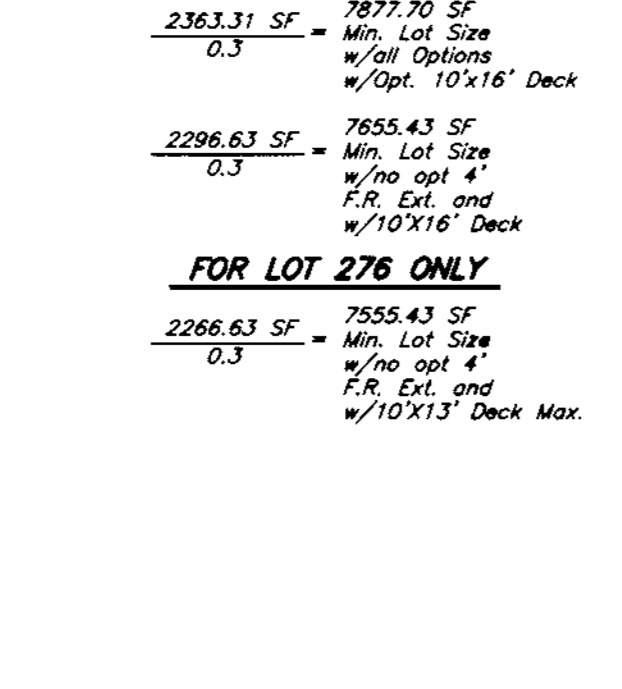
EMERSON
1878.36 SF = 6261.20 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



SUTTON
1640.00 SF = 5486.67 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



HAWTHORNE II
2363.31 SF = 7877.70 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck



GARNETT 1
2266.63 SF = 7555.43 SF Min. Lot Size w/all Options w/Opt. 10'x16' Deck

APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

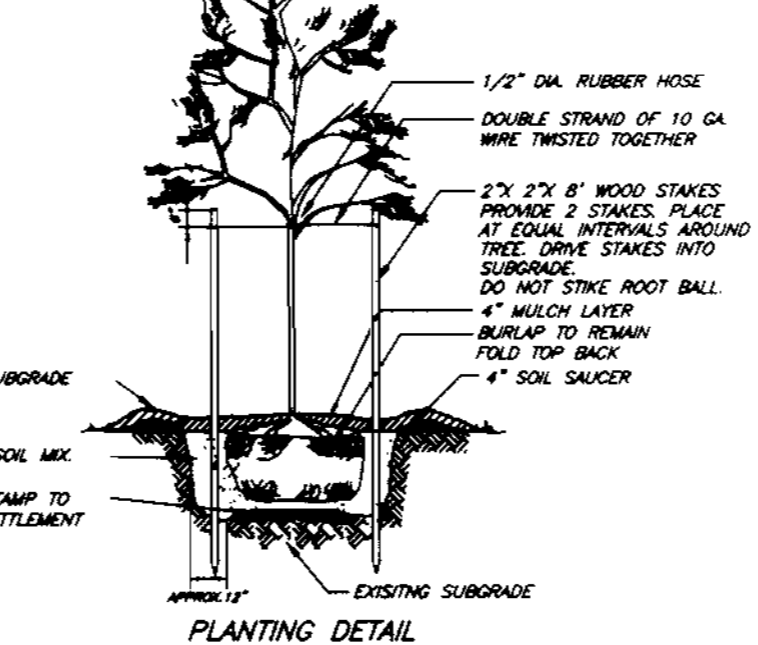
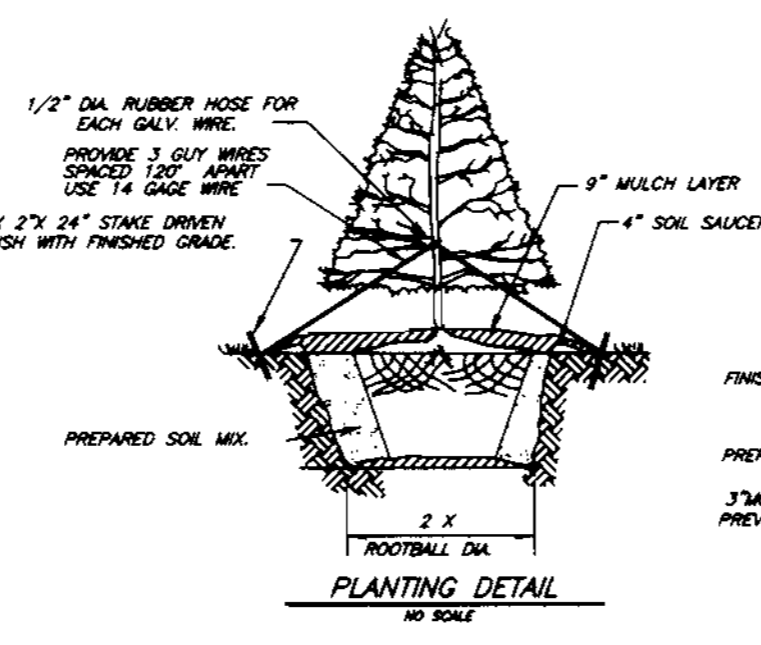
DATE: 9/1/00
 DATE: 10/2/00
 DATE: 10/2/00

SCHEDULE A PERIMETER LANDSCAPE EDGE	LOT 133	LOT 183
CATEGORY	A	B
LANDSCAPE TYPE	9	8
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	130	127
NUMBER OF PLANTS REQUIRED	3	3
SHADE TREES (1/30)	3	3
EVERGREEN TREES (1/40)	3	3
NUMBER OF PLANTS PROVIDED	3	3
SHADE TREES	3	3
EVERGREEN TREES	3	3
Surety Amounts	\$1350.00	\$1350.00

* Comments: Planting to be provided per the New Town Alternative Compliance method.

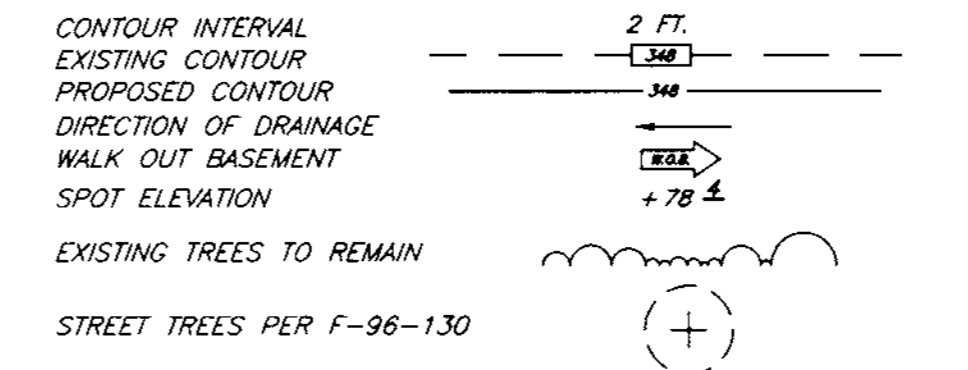
PLANT SCHEDULE				
KEY	PLANT NAME	SIZE	QUAN.	REMARKS
AR	ACER RUBRUM	24-3" CAL.	6	B&B
PS	PINUS STROBUS WHITE PINE	6-8" HT.	6	B&B

NOTES FOR COLUMBIA PLANT SCHEDULES:
 1. All plant material shall be full and heavy, be well formed and symmetrical, conform to the most current AAN specifications and be installed in accordance with HRD planting specifications.
 2. Contractor shall verify location of all underground utilities prior to digging.
 3. Final location of plant material may need to vary to meet final field conditions. Trees shall not be planted in the bottom of drainage swales.



SHEET INDEX	
DESCRIPTION	SHEET No.
SITE DEVELOPMENT PLAN	1 and 2 of 4
SEDIMENT AND EROSION CONTROL PLANS	3 and 4 of 4

LEGEND

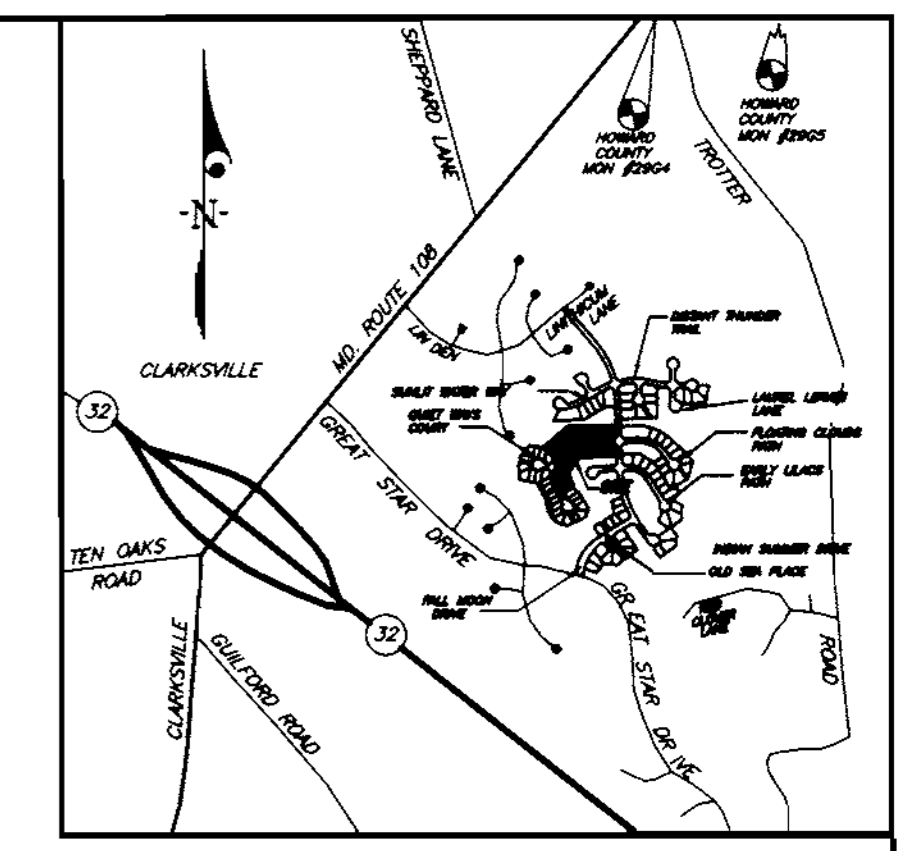


LOT NUMBER	STREET ADDRESS
133	12100 FLOWING WATER TRAIL
134	12104 FLOWING WATER TRAIL
135	12108 FLOWING WATER TRAIL
136	12112 FLOWING WATER TRAIL
137	12116 FLOWING WATER TRAIL
138	12120 FLOWING WATER TRAIL
139	12124 FLOWING WATER TRAIL
140	12128 FLOWING WATER TRAIL
141	12132 FLOWING WATER TRAIL
142	12136 FLOWING WATER TRAIL
143	12140 FLOWING WATER TRAIL
144	12144 FLOWING WATER TRAIL
145	12148 FLOWING WATER TRAIL
171	12149 FLOWING WATER TRAIL
172	12145 FLOWING WATER TRAIL
173	12141 FLOWING WATER TRAIL
174	12137 FLOWING WATER TRAIL
175	12133 FLOWING WATER TRAIL
176	12129 FLOWING WATER TRAIL
177	12125 FLOWING WATER TRAIL
180	12113 FLOWING WATER TRAIL
181	12109 FLOWING WATER TRAIL
182	12105 FLOWING WATER TRAIL
183	12101 FLOWING WATER TRAIL
218	12153 FLOWING WATER TRAIL
275	12121 FLOWING WATER TRAIL
276	12117 FLOWING WATER TRAIL

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
133	12100 FLOWING WATER TRAIL
134	12104 FLOWING WATER TRAIL
135	12108 FLOWING WATER TRAIL
136	12112 FLOWING WATER TRAIL
137	12116 FLOWING WATER TRAIL
138	12120 FLOWING WATER TRAIL
139	12124 FLOWING WATER TRAIL
140	12128 FLOWING WATER TRAIL
141	12132 FLOWING WATER TRAIL
142	12136 FLOWING WATER TRAIL
143	12140 FLOWING WATER TRAIL
144	12144 FLOWING WATER TRAIL
145	12148 FLOWING WATER TRAIL
171	12149 FLOWING WATER TRAIL
172	12145 FLOWING WATER TRAIL
173	12141 FLOWING WATER TRAIL
174	12137 FLOWING WATER TRAIL
175	12133 FLOWING WATER TRAIL
176	12129 FLOWING WATER TRAIL
177	12125 FLOWING WATER TRAIL
180	12113 FLOWING WATER TRAIL
181	12109 FLOWING WATER TRAIL
182	12105 FLOWING WATER TRAIL
183	12101 FLOWING WATER TRAIL
218	12153 FLOWING WATER TRAIL
275	12121 FLOWING WATER TRAIL
276	12117 FLOWING WATER TRAIL

BENCHMARKS:

Howard County Monument 2904
 Intersection of MD. Route 108 and Trotter Road
 Howard County Monument 2905
 an additional 2,544' ± Northeastly along MD. Route 108 away from Site



VICINITY MAP
 Scale: 1"=2000'

GENERAL NOTES:

- Subject property is zoned: NTSFMD per 10-18-93 Comprehensive Zoning Plan.
- The total area included in this submission is: 4.48 Acres.
- The total number of lots included in this submission is: 27
- Improvement to property: Single Family Detached
- The maximum lot coverage permitted is: 30%
- Department of Planning and Zoning reference file numbers: 5-93-21, P-95-11, F-96-130
- Utilities shown as existing are taken from approved Water and Sewer plans Contract #34-3420-D, approved Road Construction plans F-96-130, and actual field survey.
- Any damage to county owned rights-of-way shall be corrected at the developer's expense.
- All roadways are public and existing.
- The existing topography was taken from Road Construction Plans prepared by Oatf, McCune and Walker in March 1996.
- The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monuments Numbers: 2904 & 2905
- The contractor shall notify the Department of Public Works/Division of Construction Inspection at (410) 315-1890 at least twenty-four (24) hours 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.
- For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R.6.03 & R.6.05.
- In accordance with FDP-222A, Part IV bay windows or chimneys not more than 10 feet in width may project not more than 4 feet into any setbacks; porches and decks may project not more than 3 feet into the front or rear setbacks. Exterior stairways/driveways may not project into any setbacks.
- Stormwater Management quantity and quality for the improvements from Bright Flow Meadows, Area North of Distant Thunder Trail Dr to M309 from Section 4 Area 5, F-96-102 will be provided by an excavated pond East of Distant Thunder Trail. Said pond will be jointly maintained. Stormwater Management quantity for the improvements West of Indian Summer Drive and South of Sunit Water Way is provided by Village of River Hill Section 4 Area 1, Phase 1, F-96-110. Water quality will be provided by bio-retention or shallow marsh at the storm drain outfalls and will be jointly maintained. Stormwater Management quantity for the improvements East of Indian Summer Drive and South of Distant Thunder Trail are provided for in Section 4 Area 1, F-96-110 by proposed features as described in a report prepared by Whitman, Reardon & Associates and approved as of 1/22/95. Water quality will be provided by bio-retention or shallow marsh at the storm drain outfalls and will be jointly maintained.
- SHC Elevations shown are at the property lines.
- This property is exempt from the forest conservation requirements per section 16.1202(b)(1)(v) of the Howard County Code because it is part of a planned unit development with preliminary plan approval prior to 12/31/92.
- This plan has been prepared in accordance with the provisions of section 16.124 of the Howard County code and Landscape Manual. Financial Surety for the trees in schedule A in the amount of \$2700.00 shall be part of the Builders Grading Permit applications.

SPECIAL NOTE:

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-96-130 and/or approved Water and Sewer Plans Contract #34-3420-D.

OWNER / DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.
 10275 LITTLE PATUENT PARKWAY
 COLUMBIA, MARYLAND 21044

SUBDIVISION NAME	COLUMBIA	SECTION/AREA	LOTS/PARCELS
VILLAGE OF RIVER HILL	4/4	133-145, 171-177, 180-183, 218, 275 & 276	
PLAT NO.	BLOCK NO.	ZONE	TAX MAP NO.
12926, 13206, # 13208	1	NTSFMD	35
WATER CODE	SEWER CODE	ELECTION DIST.	CENSUS TRACT
110	6653000	5TH	6055

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

DESIGNED	BAL	COVER SHEET	SCALE
DRAWN	ZH	LOTS 133-145, 171-177, 180-183, 218, 275 & 276	1" = 30'
CHECKED	JME	COLUMBIA VILLAGE OF RIVER HILL	DRAWING 1 OF 4
DATE	7-6-00	SECTION 4 AREA 4 FIFTH (5TH) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 00-039
		FOR: RYLAND GROUP, INC. 7250 PARKWAY DRIVE HANOVER, MARYLAND 21076	FILE NO. 00-039X

DEVELOPER'S/BUILDERS CERTIFICATE
 I/We certify that the landscaping shown on this plan will be done according to plan, section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certificate of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name: Bob Paccetti
 Date: 7-7-00



LEGEND

CONTOUR INTERVAL 2 FT.

EXISTING CONTOUR

PROPOSED CONTOUR

DIRECTION OF DRAINAGE

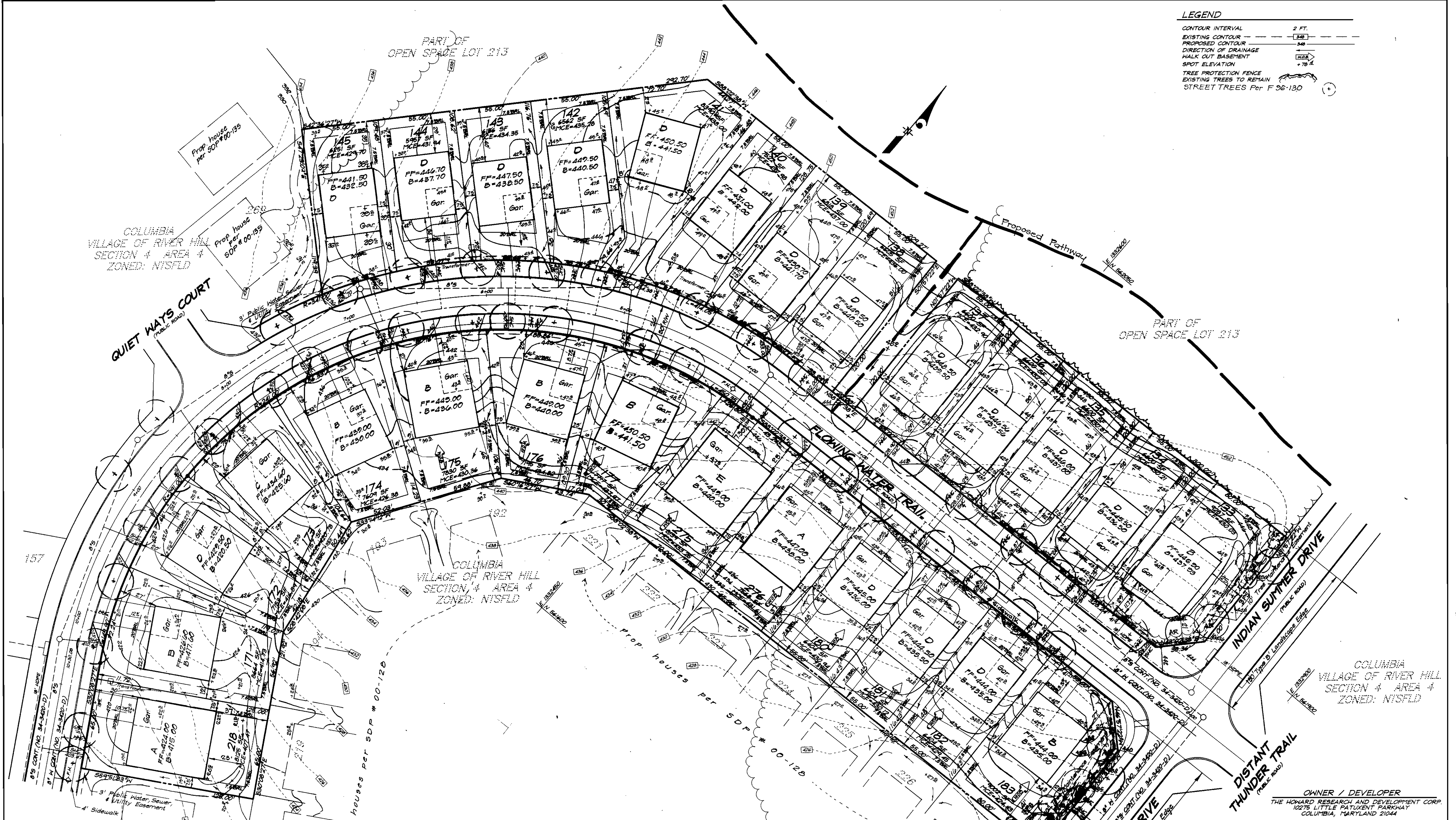
WALK OUT BASEMENT

SPOT ELEVATION

TREE PROTECTION FENCE

EXISTING TREES TO REMAIN

STREET TREES Per F 96-13D



APPROVED: DEPARTMENT OF PLANNING & ZONING

9/21/00

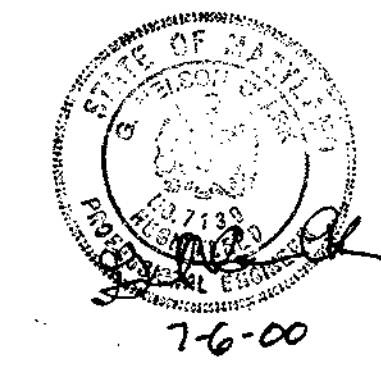
DATE

10/2/00

DATE

10/12/00

DATE



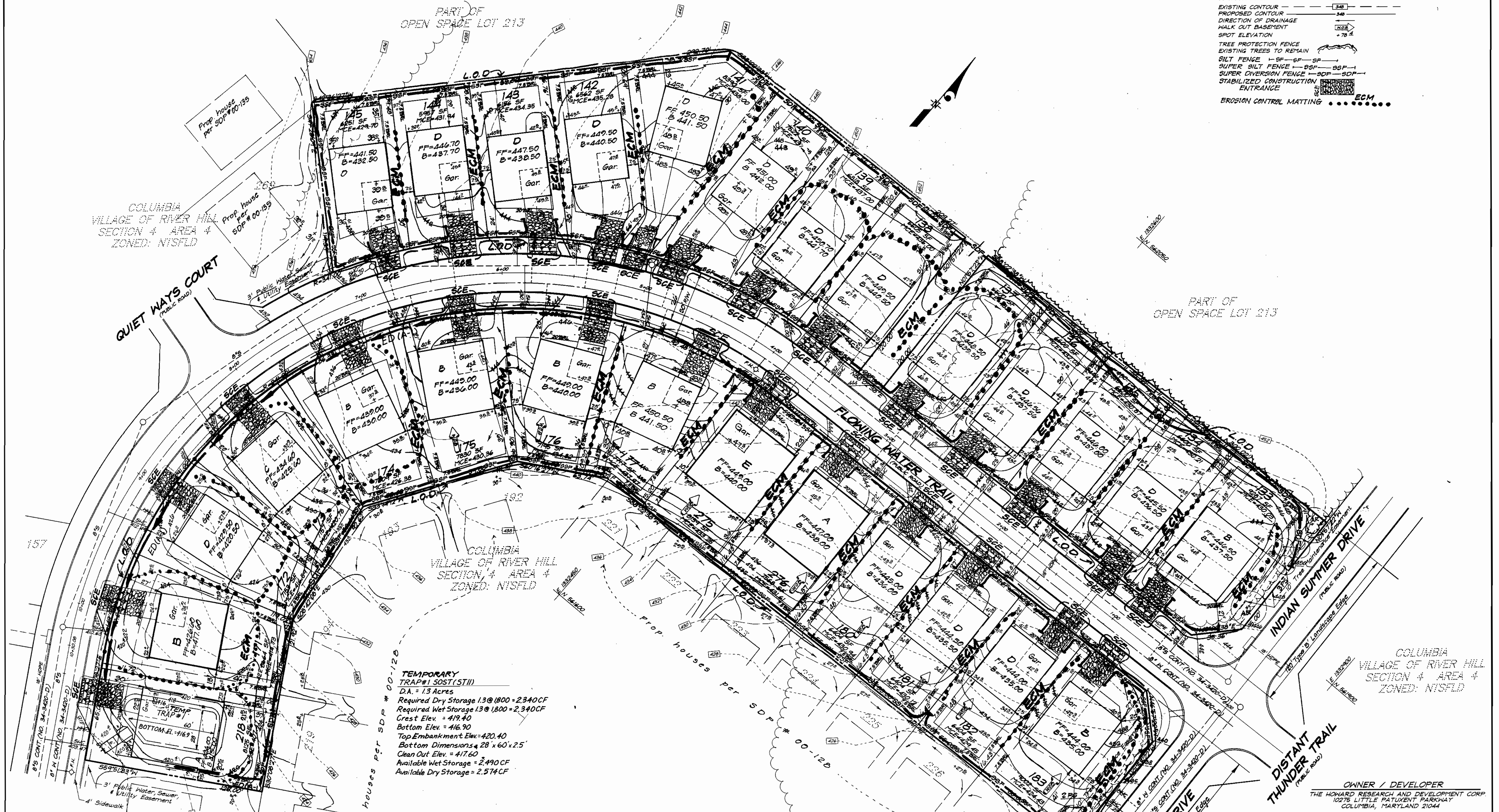
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED B.A.L.	SITE DEVELOPMENT PLAN LOTS 133-145, 171-177, 180-183, 218, 275 & 276	SCALE 1" = 30'
DRAWN K.L./K.B./Z.H.	COLUMBIA VILLAGE OF RIVER HILL	DRAWING 2 of 4
CHECKED J.M.E.	SECTION 4 AREA 4 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 00-039
DATE 7-7-00	FOR: RYLAND GROUP, INC. 7280 PARKWAY DRIVE HANOVER, MARYLAND 21076	FILE NO. 00-039X

LEGEND

CONTOUR INTERVAL	2 FT.
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
DIRECTION OF DRAINAGE	→
WALK OUT BASEMENT	---
SPOT ELEVATION	78.2
TREE PROTECTION FENCE	—
EXISTING TREES TO REMAIN	—
SILT FENCE	—
SUPER SILT FENCE	—
SUPER DIVERSION FENCE	—
STABILIZED CONSTRUCTION ENTRANCE	—
EROSION CONTROL MATTING	ECM



TEMPORARY TRAP #1 SOST (STII)
 D.A. = 1.3 Acres
 Required Dry Storage 1.3 @ 1800 = 2,340 CF
 Required Wet Storage 1.3 @ 1,800 = 2,340 CF
 Crest Elev. = 419.40
 Bottom Elev. = 416.90
 Top Embankment Elev. = 420.40
 Bottom Dimensions = 28' x 60' x 2.5'
 Clean Out Elev. = 417.60
 Available Wet Storage = 2,490 CF
 Available Dry Storage = 2,574 CF

APPROVED: DEPARTMENT OF PLANNING & ZONING

9/1/00
 DATE

9/12/00
 DATE

9/12/00
 DATE

Reviewed for: HOWARD S.C.D.
 and not Technical Requirements
 Signature: *John Sumner* 9/12/00
 U.S. National Resource Conservation Service

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

Signature: *John Sumner* 9/12/00
 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.

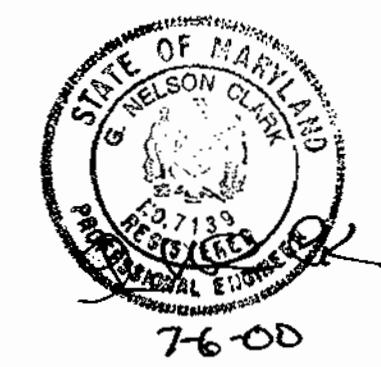
Signature: *Bob Padgett*
 NAME: BOB PADGETT
 DATE: 7-7-00

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*
 G. NELSON CLARK
 DATE: 7-6-00

7-6-00

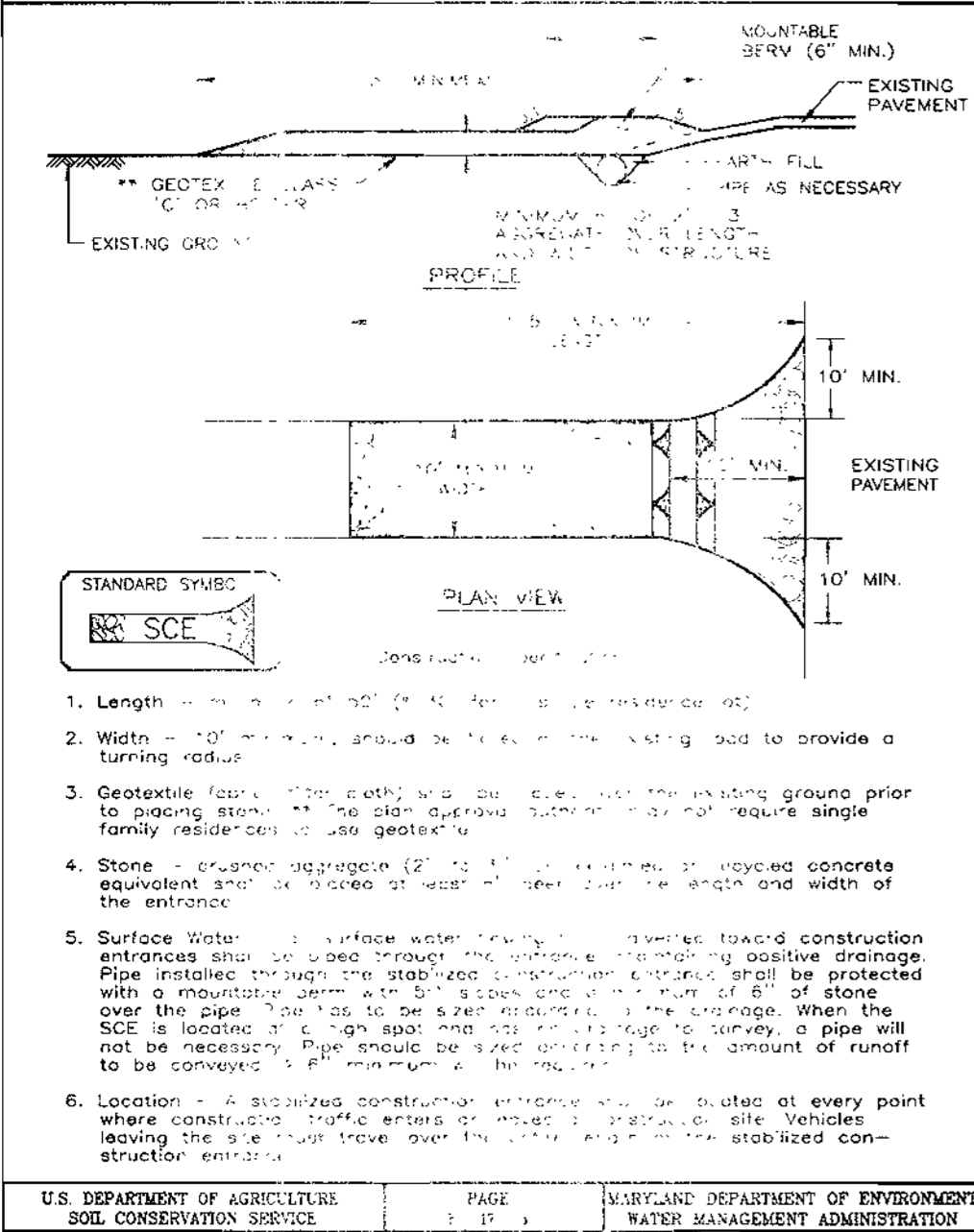


CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED PAC	SEDIMENT EROSION CONTROL PLAN LOTS 133-145, 171-177, 180-183, 218, 275 & 276	SCALE 1" = 30'
DRAWN K.B./ZH	COLUMBIA VILLAGE OF RIVER HILL	DRAWING 3 of 4
CHECKED PAC	SECTION 4 AREA 4 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 00-039
DATE 7-7-00	FOR: RYLAND GROUP, INC. 7250 PARKWAY DRIVE HANOVER, MARYLAND 21076	FILE NO. 00-039-SE

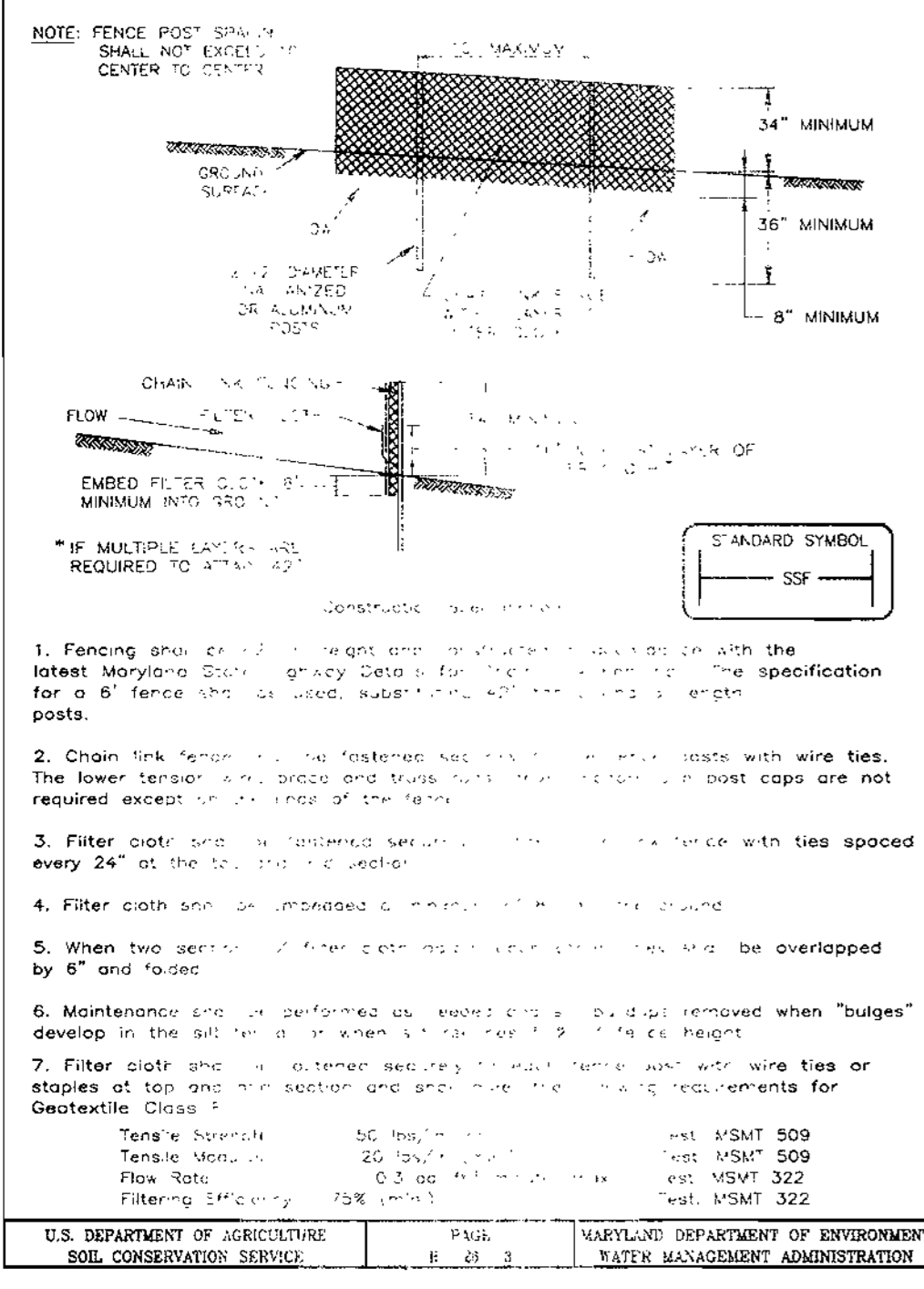
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



1. Length shall be 10' minimum... 2. Width shall be 10' minimum... 3. Geotextile fabric... 4. Stone... 5. Surface water... 6. Location...

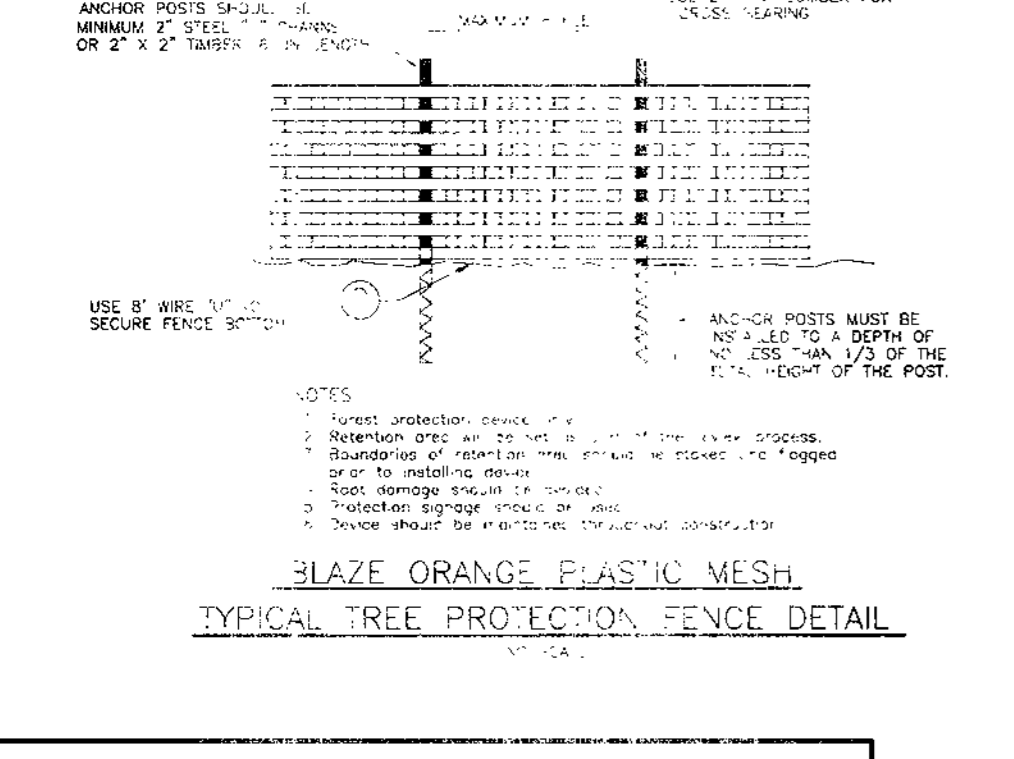
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 2 OF 2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE



1. Fencing shall be 42 inch height... 2. Chain link fence... 3. Filter cloth... 4. Maintenance...

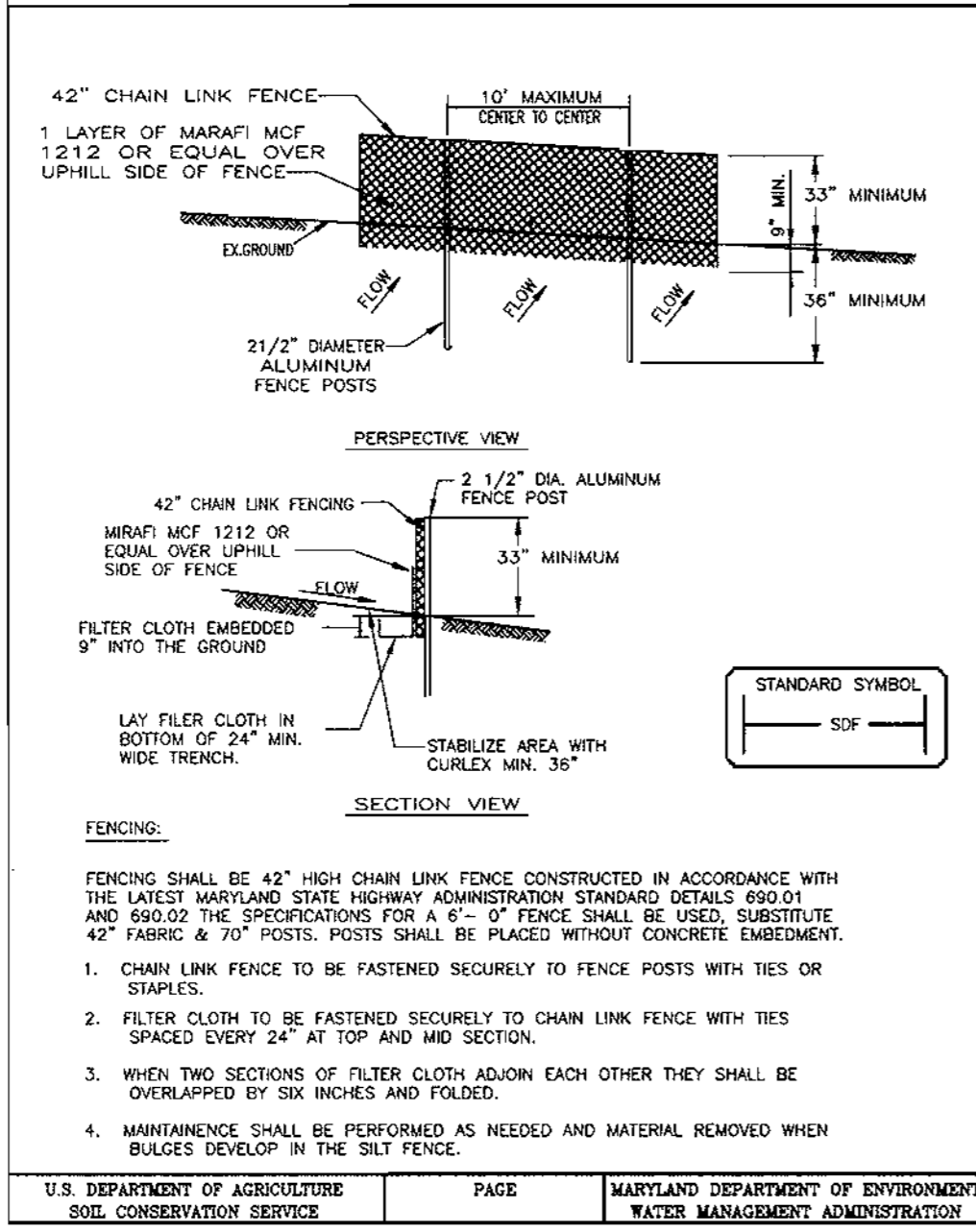
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 2 OF 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



APPROVED: DEPARTMENT OF PLANNING & ZONING

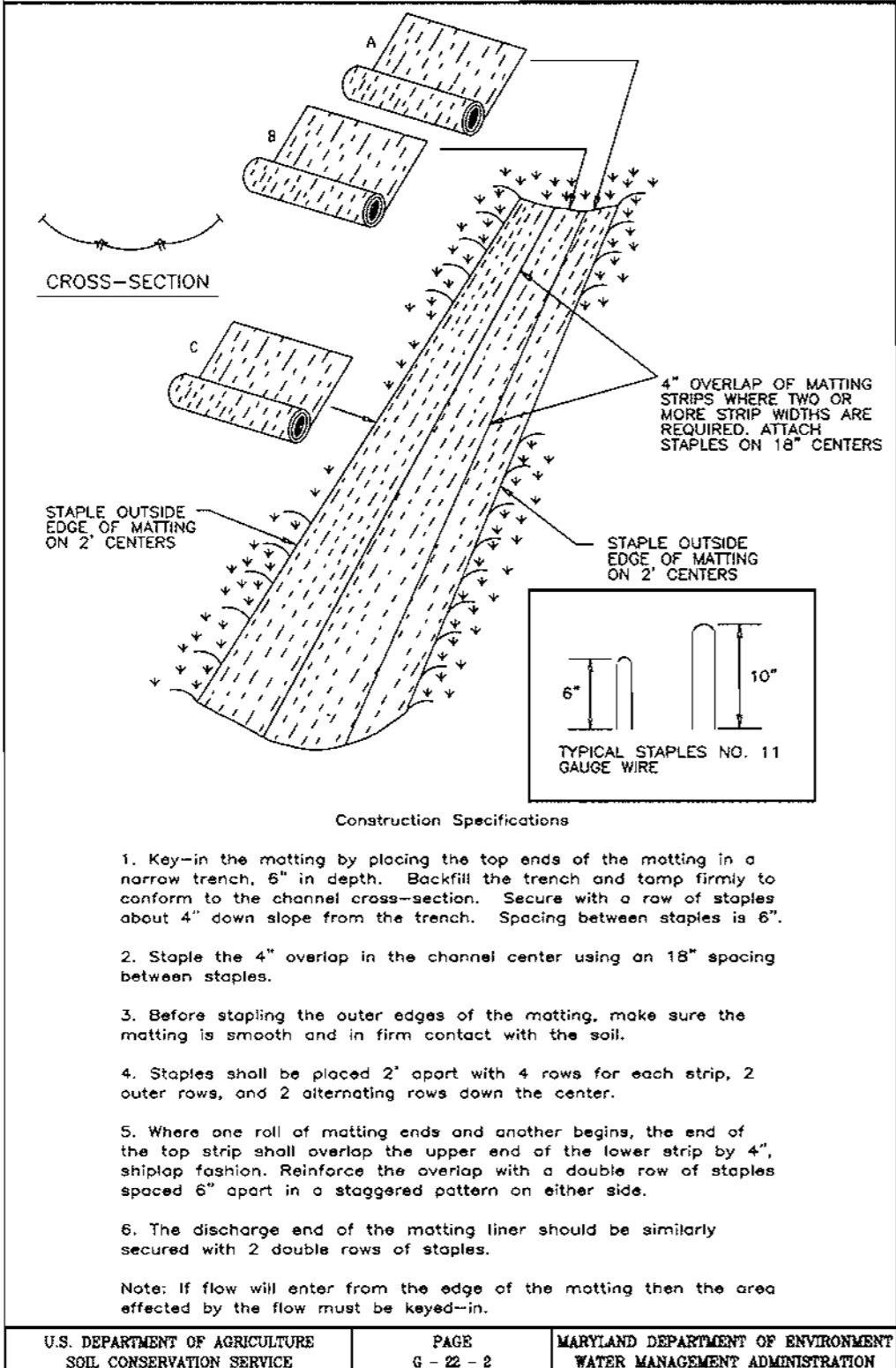
Signature and date for Department of Planning & Zoning approval.

DETAIL - SUPER DIVERSION FENCE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 2 OF 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

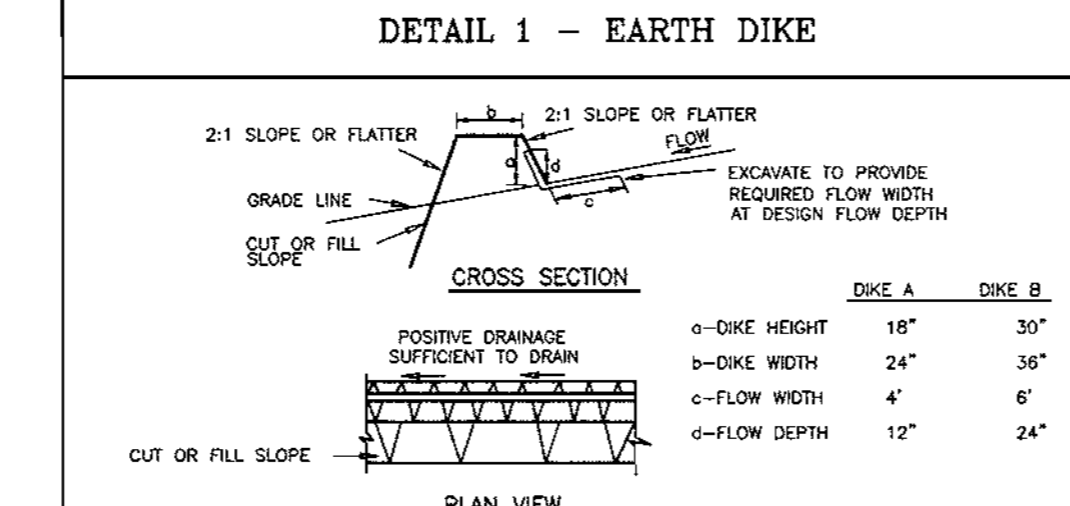
Definition: Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation. Purpose: To provide a suitable soil medium for vegetation growth. Conditions Where Practice Applies: 1. This practice is limited to areas having 2:1 or flatter slopes where: a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish containing supplies of moisture and plant nutrients. c. The original soil to be vegetated contains material toxic to plant growth. d. The soil is so acidic that treatment with limestone is not feasible.

2. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans. Construction and Material Specifications: 1. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. 2. Topsoil Specifications - Soil to be used as topsoil must meet the following: i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist... ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified. iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

3. For sites having disturbed areas over 5 acres: i. Place topsoil (if required) and apply soil amendments required to bring the soil into compliance with the following: a. pH for topsoil shall be between 6.0 and 7.5. b. Organic content of topsoil shall be not less than 1.5 percent by weight. c. Topsoil having soluble salt content greater than 500 parts per million shall not be used. d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control and sufficient time has elapsed (14 days min) to permit dissipation of phytotoxic materials. e. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. ii. Place topsoil (if required) and apply soil amendments specified in 20.0 Vegetative Stabilization Section - Vegetative Stabilization Methods and Materials.

4. For sites having disturbed areas over 5 acres: i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins. ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation. iii. Topsoil shall be uniformly distributed in a 4"-8" layer and lightly compacted to a minimum thickness of 4". iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition...

5. Topsoil substitutions or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. 6. Place topsoil (if required) and apply soil amendments specified in 20.0 Vegetative Stabilization Section - Vegetative Stabilization Methods and Materials.



1. Seed and cover with straw mulch. 2. Seed and cover with Erosion Control Matting or line with sod. 3. 4' - 7' stone or recycled concrete equivalent placed into the soil 7' minimum.

Construction Specifications: 1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. 2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device. 3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity. 4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike. 5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow. 6. Fill shall be compacted by earth moving equipment. 7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike. 8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 1 OF 1 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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 considered. SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules: 1) Preferred-Applies 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. 2) Acceptable-Applies 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding.

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 80 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 15 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 2-8 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 5 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

TEMPORARY SEEDING NOTES: SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously considered. 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 ryegrass (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 1 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 2-8 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 5 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT AND EROSION CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855). 2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in compliance with the 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereof. 3. 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 for 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 perimeters in accordance with Vol. 1, Chapter 7. 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec. 6). 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: 4.49 Acres. Area Disturbed: 4.49 Acres. Area to be roofed or paved: 1.65 Acres. Area to be vegetatively stabilized: 2.84 Acres. Total Cut: 14,359 CY. Total Fill: 7,881 CY. 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 DFW 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. Trenches for the construction of utilities shall be backfilled and stabilized within one working day, or is limited to three pipe lengths. 12. The total amount of earth dike = 520 LF. 13. The total amount of super silt fence = 860 LF. 14. The total amount of super diversion fence = 742 LF. It is the responsibility of the contractor to identify the soil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

CONSTRUCTION SEQUENCE:

	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, install Erosion Control Matting and stabilize in accordance with standards and specifications	14
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize	7

* Delay construction of houses on lots: N/A

APPROVED: DEPARTMENT OF PLANNING & ZONING

Signature and date for Department of Planning & Zoning approval.

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

Signature and date for HOWARD S.C.D. review.

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

Signature and date for HOWARD COUNTY CONSERVATION DISTRICT approval.

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 and date for Developer/Builder's certificate.

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 and date for Engineer's certificate.



CLARK · FINEFROCK & SACKETT, INC. ENGINEERS · PLANNERS · SURVEYORS. 7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500. SEDIMENT CONTROL DETAILS. LOTS 133-145, 171-177, 180-183, 218, 275 & 276. COLUMBIA VILLAGE OF RIVER HILL. SECTION 4 AREA 4 FIFTH (5TH) ELECTION DISTRICT HOWARD COUNTY, MARYLAND. FOR: RYLAND GROUP 7250 PARKWAY DRIVE HANOVER, MARYLAND 21076.

LEGEND

CONTOUR INTERVAL 2 FT.

EXISTING CONTOUR 340

PROPOSED CONTOUR 340

DIRECTION OF DRAINAGE

WALK OUT BASEMENT

SPOT ELEVATION 78.4

TREE PROTECTION FENCE

EXISTING TREES TO REMAIN

STREET TREES Per F 96-13D



APPROVED: DEPARTMENT OF PLANNING & ZONING

9/2/00

DATE

10/2/00

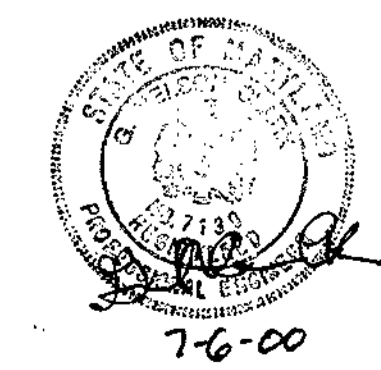
DATE

10/2/00

DATE

1 Rev. Hse. & Gar. on lot 180 from Gen. Box to Emerson to show As-Built Conditions 4-26-01

Revisions Date



OWNER / DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORP.

10275 LITTLE PATUXENT PARKWAY

COLUMBIA, MARYLAND 21044

CLARK • FINEFROCK & SACKETT, INC.		ENGINEERS • PLANNERS • SURVEYORS	
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.			
DESIGNED	SITE DEVELOPMENT PLAN		SCALE
B.A.L.	LOTS 133-145, 171-177, 180-183, 218, 275 & 276		1" = 30'
DRAWN	COLUMBIA VILLAGE OF RIVER HILL		DRAWING
K.L./K.B./Z.H.	SECTION 4 AREA 4		2 of 4
CHECKED	FIFTH (5th) ELECTION DISTRICT		JOB NO.
J.M.E.	HOWARD COUNTY, MARYLAND		00-039
DATE	FOR: RYLAND GROUP, INC.		FILE NO.
7-7-00	7250 PARKWAY DRIVE		00-039X
	HANOVER, MARYLAND 21076		