

SITE DEVELOPMENT PLAN

VILLAGE OF RIVER HILL

SECTION 4 AREA 1 PHASE 1

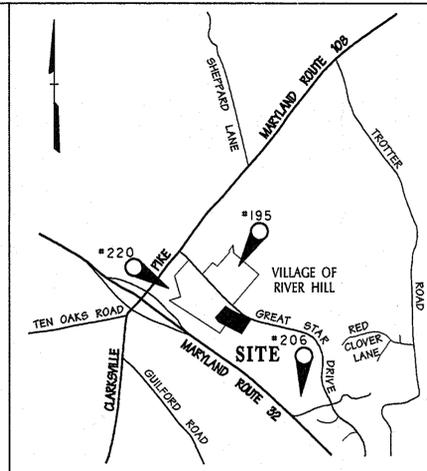
5th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

ADDRESS CHART			
LOT NO.	STREET ADDRESS	LOT NO.	STREET ADDRESS
D 131	0201 WHITE MARBLE CT.	D 98	0201 BLUE POINT CT.
D 69	0202 WHITE MARBLE CT.	D 97	0202 BLUE POINT CT.
D 69	0203 WHITE MARBLE CT.	D 98	0203 BLUE POINT CT.
D 70	0207 WHITE MARBLE CT.	D 99	0207 BLUE POINT CT.
D 71	0209 WHITE MARBLE CT.	D 100	0209 BLUE POINT CT.
D 72	0205 WHITE MARBLE CT.	D 101	0205 BLUE POINT CT.
D 73	0206 WHITE MARBLE CT.	D 102	0206 BLUE POINT CT.
D 74	0207 WHITE MARBLE CT.	D 103	0207 BLUE POINT CT.
D 75	0208 WHITE MARBLE CT.	D 104	0208 BLUE POINT CT.
D 76	0209 WHITE MARBLE CT.	D 105	0209 BLUE POINT CT.
D 77	0210 WHITE MARBLE CT.	D 106	0210 BLUE POINT CT.
D 78	0211 WHITE MARBLE CT.	D 107	0211 BLUE POINT CT.
D 79	0212 WHITE MARBLE CT.	D 108	0212 BLUE POINT CT.
D 80	0213 WHITE MARBLE CT.	D 109	0213 BLUE POINT CT.
D 81	0214 WHITE MARBLE CT.	D 110	0214 BLUE POINT CT.
D 82	0215 WHITE MARBLE CT.	D 111	0215 BLUE POINT CT.
D 83	0216 WHITE MARBLE CT.	D 112	0216 BLUE POINT CT.
D 84	0217 WHITE MARBLE CT.	D 113	0217 BLUE POINT CT.
D 85	0218 WHITE MARBLE CT.	D 114	0218 BLUE POINT CT.
D 86	0219 WHITE MARBLE CT.	D 115	0219 BLUE POINT CT.
D 87	0220 WHITE MARBLE CT.	D 116	0220 BLUE POINT CT.
D 88	0221 WHITE MARBLE CT.	D 117	0221 BLUE POINT CT.
D 89	0222 WHITE MARBLE CT.	D 118	0222 BLUE POINT CT.
D 90	0223 WHITE MARBLE CT.	D 119	0223 BLUE POINT CT.
D 91	0224 WHITE MARBLE CT.	D 120	0224 BLUE POINT CT.
D 92	0225 WHITE MARBLE CT.	D 121	0225 BLUE POINT CT.
D 93	0226 WHITE MARBLE CT.	D 122	0226 BLUE POINT CT.
D 94	0227 WHITE MARBLE CT.	D 123	0227 BLUE POINT CT.
D 95	0228 WHITE MARBLE CT.	D 124	0228 BLUE POINT CT.
D 96	0229 WHITE MARBLE CT.	D 125	0229 BLUE POINT CT.
D 97	0230 WHITE MARBLE CT.	D 126	0230 BLUE POINT CT.
D 98	0231 WHITE MARBLE CT.	D 127	0231 BLUE POINT CT.

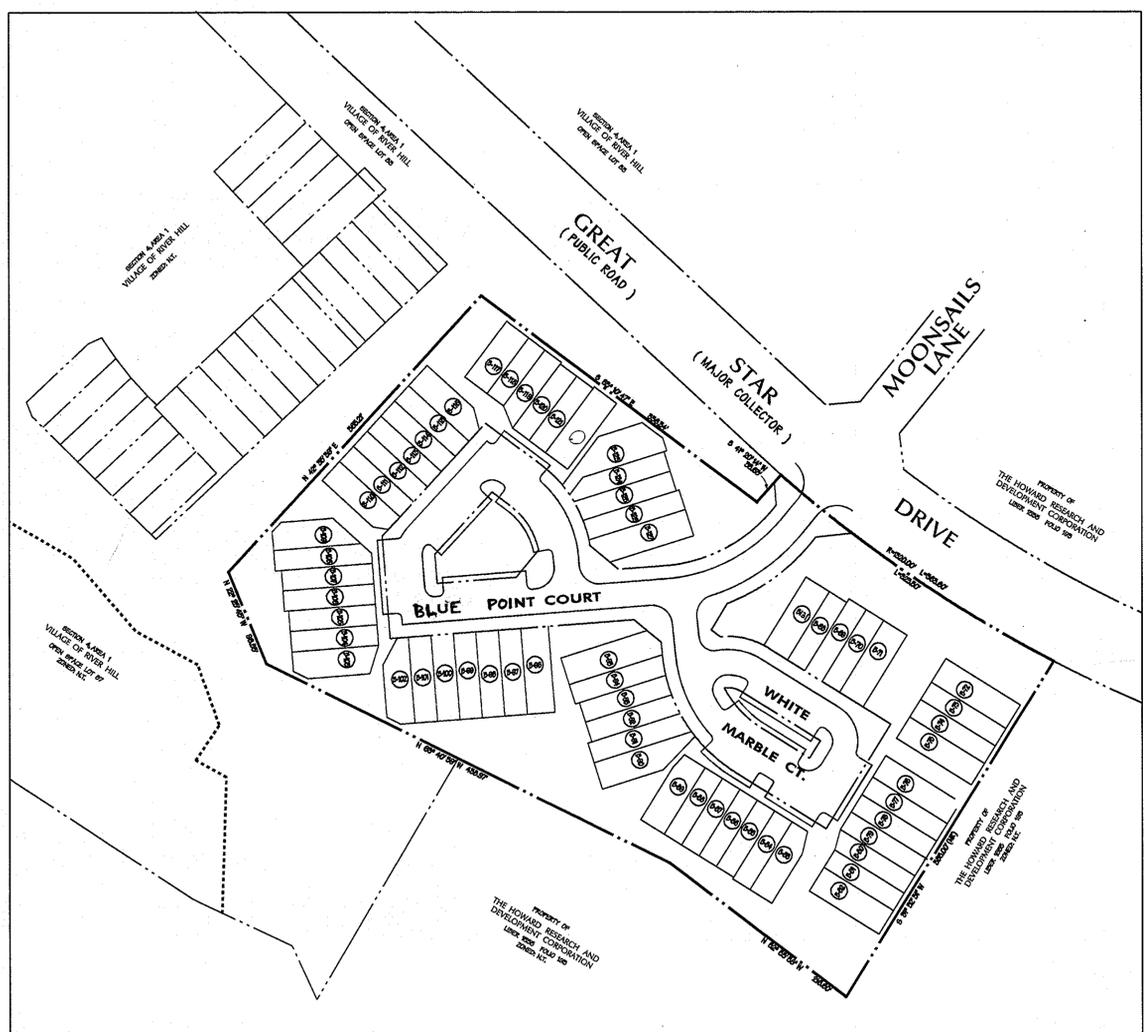
SHEET INDEX	
SHEET	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	GRADING AND SEDIMENT CONTROL PLAN
5	GRADING AND SEDIMENT CONTROL PLAN
6	DETAIL SHEET
7	LANDSCAPE PLAN
8	LANDSCAPE PLAN

MINIMUM SEWER ELEVATION CHART							
LOT	INV. AT E.	MCE	SLOPE	LOT	INV. AT E.	MCE	SLOPE
67	407.87	410.97	2%	99	413.70	417.0	2%
68	407.01	410.21	2%	100	414.1	417.5	2%
69	406.35	409.55	2%	101	414.26	418.10	2%
70	406.68	409.88	2%	102	414.85	418.1	2%
71	404.97	408.17	2%	103	415.92	418.5	2%
72	399.59	403.30	2%	104	415.4	418.6	2%
73	399.72	403.45	2%	105	415.4	418.6	2%
74	400.0	403.54	2%	106	416.0	419.2	2%
75	400.45	404.16	2%	107	416.5	419.7	2%
76	400.0	403.00	1%	108	417.0	420.2	2%
77	400.06	403.00	1%	109	417.62	420.8	2%
78	400.20	403.00	1%	110	422.05	424.50	2%
79	400.27	403.00	1%	111	421.78	424.85	2%
80	400.28	403.00	1%	112	421.45	424.85	2%
81	400.85	403.00	1%	113	421.19	424.7	2%
82	400.85	403.00	1%	114	421.05	424.25	2%
83	400.45	403.00	1%	115	420.82	424.0	2%
84	400.56	403.00	1%	116	420.98	424.20	2%
85	400.6	403.00	1%	117	421.54	424.54	2%
86	400.75	403.20	1%	118	421.44	424.44	2%
87	400.98	403.20	1%	119	421.56	424.56	2%
88	400.96	403.00	1%	120	420.07	423.5	2%
89	401.9	403.00	1%	121	419.74	422.9	2%
90	401.89	403.00	2%	122	419.12	422.5	2%
91	402.0	403.0	2%	123	419.92	422.5	2%
92	401.97	403.0	2%	124	419.22	421.4	2%
93	402.5	403.4	2%	125	418.67	420.10	2%
94	402.71	407.7	2%	126	418.55	419.5	2%
95	406.15	409.24	2%	127	414.56	417.4	2%
96	411.20	415.6	2%				
97	412.88	415.9	2%				
98	413.03	416.20	2%				



LOCATION MAP
SCALE: 1"=2000'

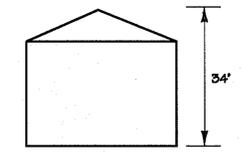
BENCHMARK DESCRIPTION		
POINT #	DESCRIPTION	ELEV.
195	1/2"x18" REBAR w/ TRAV. CAP	445.28 N 561932.019 E 133138.577
206	1/2"x18" REBAR w/ TRAV. CAP	374.53 N 559336.249 E 1332328.583
220	1/2"x18" REBAR w/ TRAV. CAP	457.14 N 562338.646 E 1329635.522



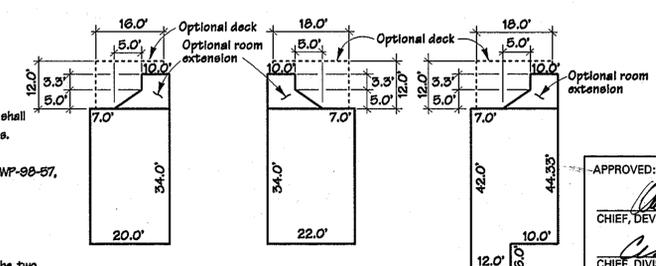
VICINITY MAP
SCALE: 1"=100'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standard and specifications if applicable.
2. The contractor shall notify the Department of Public Works/Bureau of Construction Inspection at (410) 792-7272 at least five (5) working days prior to the start of work.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
4. The contractor shall notify the Howard county Department of Public works, Bureau of Utilities at (410) 313-4900 at least five working days prior to starting any excavation work.
5. Existing topography is taken from approved road construction plans F-98-114.
6. Coordinates and bearings are based upon the MD State plan system (NAD '83) as projected by Ho.Co. Geodetic Control Stations No.'s 195, 206, 220.
7. All existing water and sewer shown is public, per contract 54-3675D.
8. Stormwater management quantity control is provided by a regional facility per F-98-110. Quality control is provided by stormceptor.
9. All existing public storm drain is per F-98-114.
10. Utility information taken from approved final construction plans for development.
11. Sidewalks adjacent to perpendicular parking shall be 6' wide, unless dimensioned otherwise. All other sidewalks shall be 4' wide, except where dimensioned otherwise. Provide 2' radius rounding at all angle breaks and intersections.
12. Project background: See Dept. of Planning & Zoning File Numbers: S-95-21, P-95-10, FDP-222A Pt 1, F-96-110, WF-98-57, 6P 98-08, GP-98-123, F-98-114.
13. Recording reference: Plat Nos. 13423-3430 (Prod. 13353-13354)
14. All proposed ramps shall be in accordance with current A.D.A. standards. Maximum sidewalk cross slope shall be two percent. Provide a five-foot by five-foot level (2 percent max.) landing at the top and bottom of all ramps and building entrances and exits.
15. For Gas, Telephone and Electric routing, see separate plan.
16. There are no lot line building setbacks, except as indicated from the public Right-of-Way. No parking area shall be located within 10' of any lot line except shared parking facilities between two or more lots and except as approved by the Howard County Planning Board. Approval for setback adjustment to Lots B-95 & B-127 on 9/9/98.
17. For driveway entrance details, refer to Ho.Co. Design Manual Vol. IV (detail R-6.03)
18. Any damage to county owned rights of way shall be corrected at the developer's expense.
19. Garages cannot be converted into living space, as they are included in the parking provided tabulation.
20. Under certain conditions, decks and porches may encroach no more than 3' into front and rear setbacks as stated in FDP-222A part 1.
21. There are no wetlands, floodplain or streams located within the limits of the subject property.
22. WF-98-57 approved 2-10-98 waives section 16-154(b)(1) allowing sidewalks on one side of a public road and section 16-155(a) allowing issuance of a grading permit prior to an approved Site Development Plan. Approved on 12-23-97, waiver of the Design Manual, Vol-III, Table 2-01 reducing the design speed of the public roads from 30 mph to 20 mph.
23. The following studies were approved in connection with F-98-110.
 - a. Floodplain study by Whitman, Reardon & Assoc. dated Jan. 20, 1995
 - b. Wetland delineation by Exploration Research Inc. dated Jan. 20, 1995
 - c. noise study by Stelano Engineering Inc. dated Jan. 20, 1995
 - d. Traffic study by Wells & Assoc. dated Jan. 20, 1995
 - e. Geotechnical report by R. Balter, Inc.
24. See soils map #25
25. Landscaping Bond of \$20,250.00 will be part of surety for Grading Permit.



TYPICAL BUILDING ELEVATION
No Scale



TYPICAL BUILDINGS
No Scale

SITE ANALYSIS

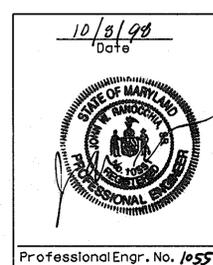
1. TOTAL AREA OF SITE	61 AC. (265,716 SF.)
2. EXISTING ZONING	NEWTOWN
3. PROPOSED USE	SINGLE FAMILY TOWNHOUSES
4. NO. OF LOTS PROPOSED	64
BUILDABLE	61
OPEN SPACE	3
5. NO. OF DWELLING UNITS PROPOSED	61
6. PARKING REQUIRED	122 SF. (2 SF/UNIT)
7. PARKING PROVIDED	142 SF. (23 SF/UNIT)
COURT	74
DRIVEWAY/GARAGE	68
8. AREA TABULATION	
A. PROJECT AREA	61 AC
B. LOT AREA	2,597 AC
C. PUBLIC ROAD AREA	1.42 AC
D. COMMUNITY OPEN SPACE	2,098 AC

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 9/9/98

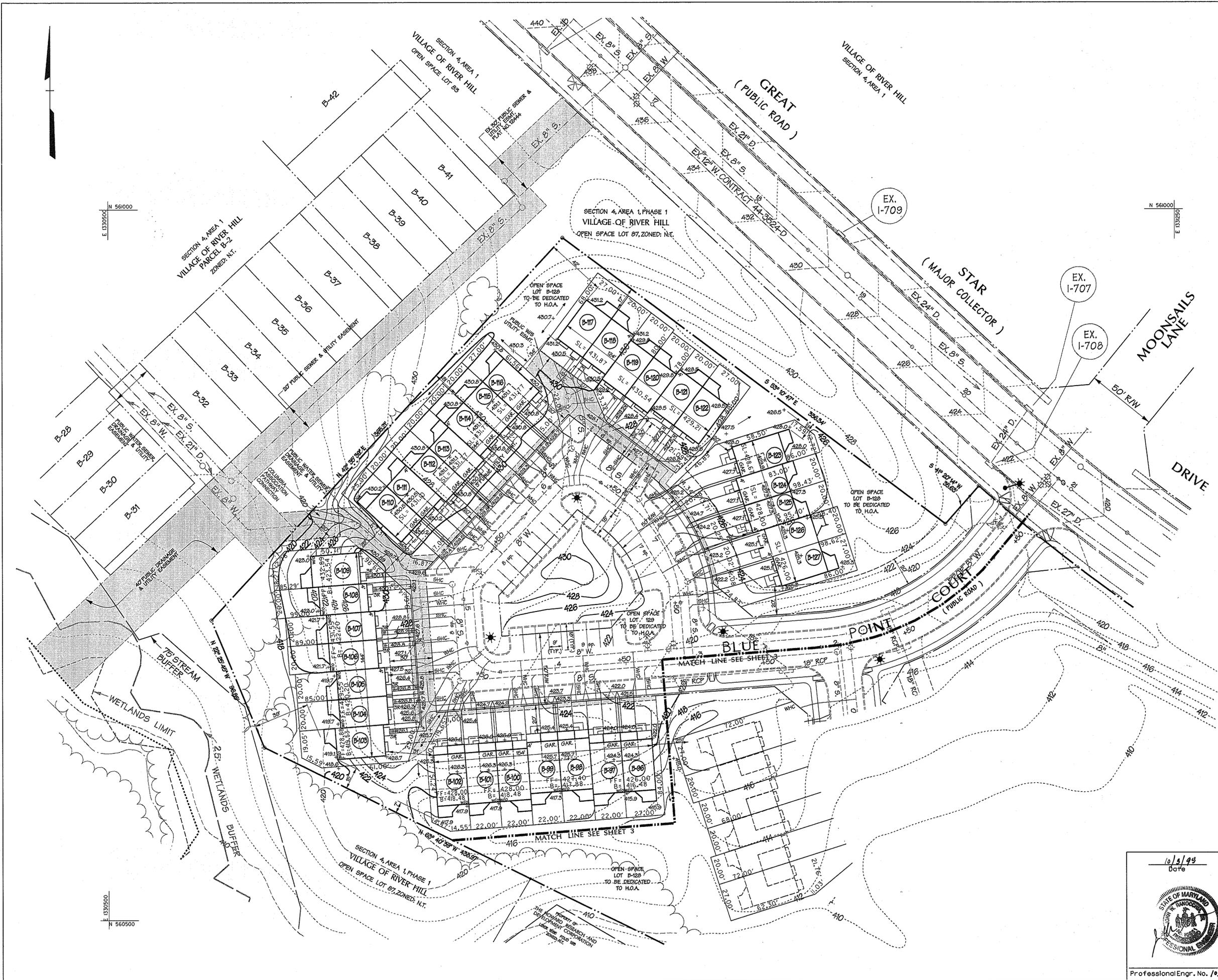
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING			
NAME	TITLE	DATE	
<i>John P. ...</i>	CHIEF, DEVELOPMENT ENGINEERING DIVISION	10/15/98	
<i>Cindy ...</i>	CHIEF, DIVISION OF LAND DEVELOPMENT	12/18/98	
<i>...</i>	DIRECTOR	12/21/98	

Date	No.	Revision Description

VILLAGE OF RIVER HILL			
SECTION FOUR - AREA ONE			
REGULATORY DIVISION OF PARCEL B-3,			
LOTS B-102 - B-127 & OPEN SPACE LOTS B-128 - B-130			
COLUMBIA, HOWARD COUNTY, MARYLAND			
OWNER The Howard Research & Development Corporation 10275 Little Patuxent Parkway Columbia, Maryland 21044		DEVELOPER / CONTRACT PURCHASER Columbia Builders, Incorporated Post Office Box 899 Columbia, Maryland 21044	
SUBDIVISION NAME VORH	SECTION/AREA 4/1	LOT/PARCEL # B 66 - B 131	
PLAT OR L/F 7	BLOCK # 39	TAX/ZONE MAP NT	ELECT. DISTRICT 5
WATER CODE I 10	SEWER CODE 6653000	CENSUS TRACT 6055	



DMW			
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals			
TITLE			
COVER SHEET			
Des By	MJP	Scale	as noted
Dwn By	KDM	Date	10-07-98
Chk By	JWR	Approved	
Professional Engr. No. 10557			Proj. No. 97126
			1 OF 8



APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE 9/9/98

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division 10/5/98 DATE
 Chief, Division of Land Development 12/18/95 DATE
 Director 12/21/98 DATE

Date	No.	Revision Description
VILLAGE OF RIVER HILL		
SECTION FOUR - AREA ONE		
RESUBDIVISION OF PARCEL B-3,		
LOTS B-128 - B-127, B-131 & OPEN SPACE LOTS B-128 - B-130		
COLUMBIA, HOWARD COUNTY, MARYLAND		
OWNER	DEVELOPER / CONTRACT PURCHASER	
The Howard Research & Development Corporation 10275 Little Patuxent Parkway Columbia, Maryland 21044	Columbia Builders, Incorporated Post Office Box 998 Columbia, Maryland 21044	

DMW
 Daft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-5833
 Fax 296-4706
 A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

10/5/98
 Date
 PROFESSIONAL ENGR.
 TITLE
SITE DEVELOPMENT PLAN
 Des By MJP Scale 1" = 30' Proj. No. 97126
 Dm By KDE Date 10-07-98
 Chk By JWR Approved
 Professional Engr. No. 14557
 2 OF 8

Professional Engr. No. 14557
 2 OF 8

DEVELOPER'S CERTIFICATION:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY 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.

John V. Rancchia, Sr.
 SIGNATURE OF DEVELOPER / CONTRACT PURCHASER
 PRINT NAME BELOW SIGNATURE
 DATE 10/8/98

ENGINEER'S CERTIFICATION:

I 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.

John V. Rancchia, Sr.
 SIGNATURE OF ENGINEER
 PRINT NAME BELOW SIGNATURE
 DATE 10/8/98

LEGEND

- | SYMBOL | DESCRIPTION |
|--------|----------------------------------|
| | STABILIZED CONSTRUCTION ENTRANCE |
| | SILT FENCE |
| | SUPER SILT FENCE |
| | L.O.D. LIMIT OF DISTURBANCE |

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE 9/9/98

10/9/98
 Date

Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Cindy Hamilton 12/15/95
 CHIEF, DIVISION OF LAND DEVELOPMENT 105 DATE

Mr. Damann 11/19/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE

David Smith 12/21/98
 DIRECTOR DATE

VILLAGE OF RIVER HILL
 SECTION FOUR - AREA ONE - PHASE 1
 REGUIDIVISION OF PARCEL B-3,
 LOTS B-108 - B-127 & B-131 & OPEN SPACE LOTS B-128 - B-130
 COLUMBIA, HOWARD COUNTY, MARYLAND

OWNER: The Howard Research & Development Corporation
 DEVELOPER / CONTRACT PURCHASER: Columbia Builders, Incorporated

DMW
 Daft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4706

A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

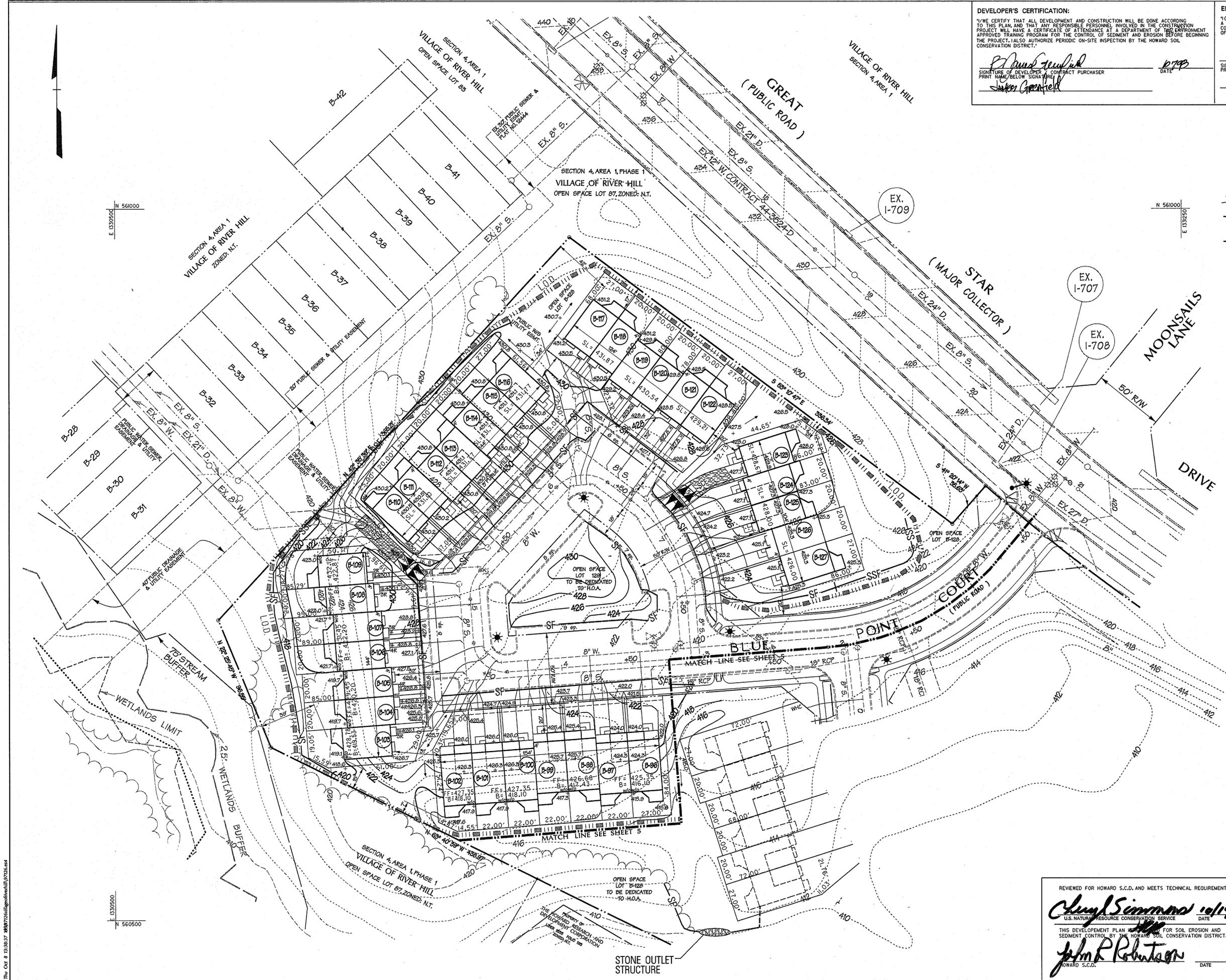
REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Clyde Simmons 10/14/98
 U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

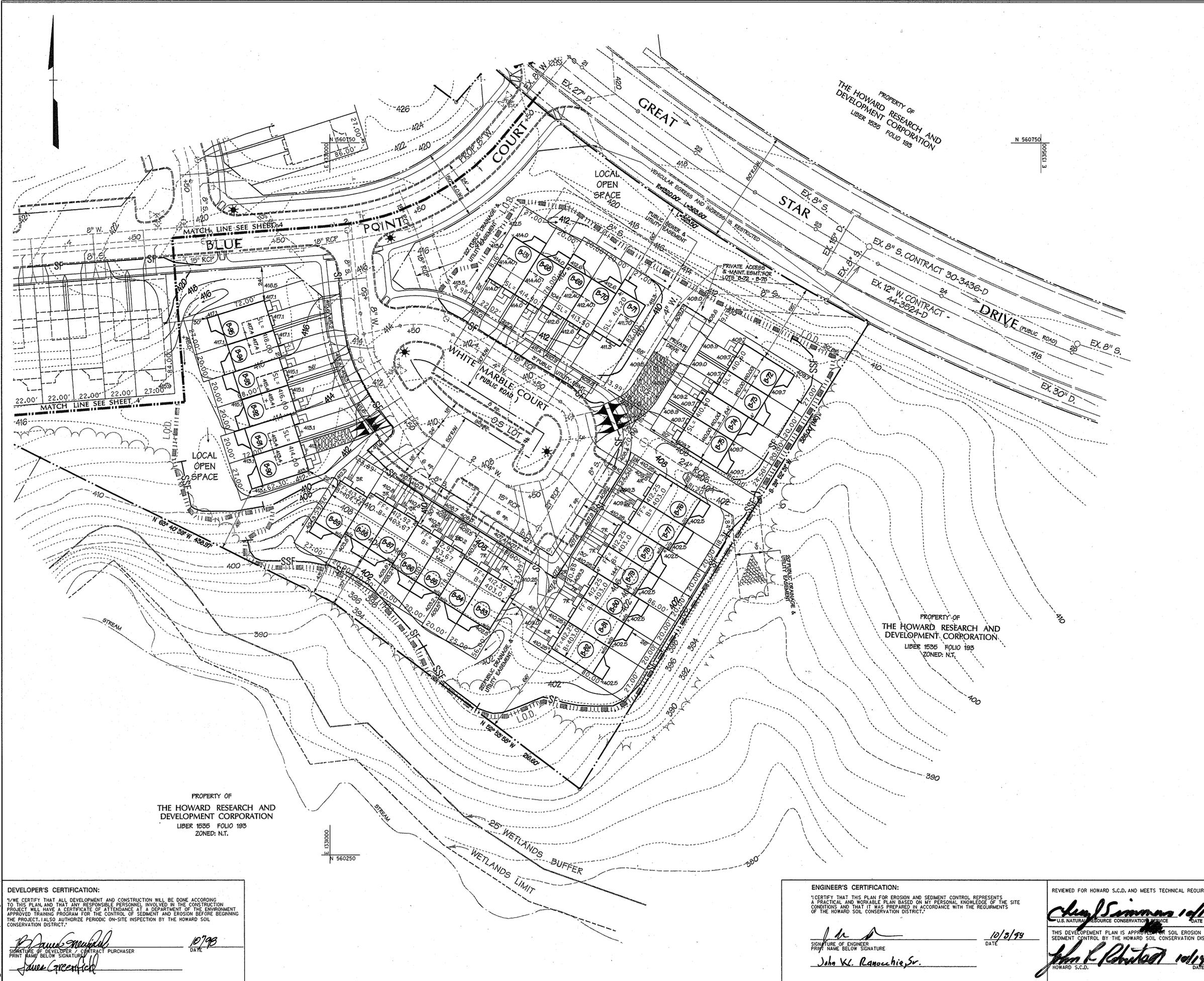
THIS DEVELOPMENT PLAN IS FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John P. Robertson
 HOWARD S.C.D. DATE

AREA	SECTION 4, AREA 1, PHASE 1				
TAX MAP	35				
PARCEL	B-3				
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND					
TITLE	SEDIMENT & EROSION CONTROL PLAN				
Des By	MJP	Scale	1" = 30'	Proj. No.	97126
Dm By	MSSRLH	Date	10-07-98		
Chk By	JWR	Approved			4 OF 8



The Oct. 9, 1998, 4687761 (gmd/wet/mf) 07/25/98



LEGEND	
SYMBOL	DESCRIPTION
	STABILIZED CONSTRUCTION ENTRANCE
SF	SILT FENCE
SSF	SUPER SILT FENCE
L.O.D.	LIMIT OF DISTURBANCE

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 9/9/98

10/8/98
Date

Professional Engr. No. 1055

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
<i>Cindi Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	12/15/98 DATE
<i>John P. Suter</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	11/19/98 DATE
<i>John P. Suter</i> DIRECTOR	12/21/98 DATE

VILLAGE OF RIVER HILL
SECTION FOUR - AREA ONE - PHASE 1
RESUBDIVISION OF PARCEL B-3,
Lots B-65 - B-127 & B-131 & OPEN SPACE LOTS B-128 - B-130
COLUMBIA, HOWARD COUNTY, MARYLAND

OWNER: The Howard Research & Development Corporation
DEVELOPER / CONTRACT PURCHASER: Columbia Builders, Incorporated

DMW
Duff McCann Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 286-5939
Fax 296-4705

A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

DEVELOPER'S CERTIFICATION:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY 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/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

John P. Suter
SIGNATURE OF DEVELOPER / CONTRACT PURCHASER
10/98
DATE

ENGINEER'S CERTIFICATION:
I 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.

John K. Rancic, Sr.
SIGNATURE OF ENGINEER
10/2/98
DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 10/14/98
U.S. NATURAL RESOURCE CONSERVATION SERVICE
DATE

John K. Rancic, Sr. 10/14/98
HOWARD S.C.D.
DATE

AREA	SECTION 4, AREA 1, PHASE 1
TAX MAP	35
PARCEL	B-3
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND	
TITLE	SEDIMENT & EROSION CONTROL PLAN
Des By	MJP
Scale	1" = 30'
Proj. No.	97126
Dm By	MSSRLH
Date	10-07-98
Chk By	JWR
Approved	
	5 OF 8

STANDARD 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 vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
- The original soil to be vegetated contains materials toxic to plant growth.
- The soil is so acidic that treatment with limestone is not feasible.

- 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 plan.

Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in conjunction with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistles, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

- For sites disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1% percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No seed or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Note: 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.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I Vegetative Stabilization Methods and Materials.

- Topsoil Application
 - 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.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that seeding or sodding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

- Alternative for Permanent Seeding - Instead of applying the amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 9.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb./1000 square feet, and 1/2 the normal lime application rate.

- References: Guidelines Specifications, Soil Preparation and Seeding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1976.

7. Site Analysis:

Total area of site	6.1 acre
Area disturbed	3.2 acre
Area to be roofed or paved	1.1 acre
Area to be vegetatively stabilized	2.1 acre
Total cut	n/a cubic yards
Total fill	n/a cubic yards

Off-site waste/borrow area location waste = n/a

- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DPM, 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 grading or sediment control approval may not be authorized until this initial approval by the inspection agency is made.

SEDIMENT CONTROL GENERAL NOTES

* MARS GRADING PER. OF - 88-128

All erosion material to be taken to a site with approved EDC plan & active grading.

PERMANENT SEEDING NOTES

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

Soil preparation - Loosen upper three inches of soil by raking, disking 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 (82 lb./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 Fertilizer (14 lb./1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs. per acre D-O-O Urea-form Fertilizer (9 lb./1000 sq. ft.)
- Acceptable** - Apply 2 tons per acre Dolomitic Limestone (82 lb./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 Fertilizer (23 lb./1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 80 lbs. per acre (14 lb./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 (20 lb./1000 sq. ft.) of creeping lovegrass. During the period of October 15 thru February 28, provide 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 seed. Option (3) - seed with 80 lbs./acre Kentucky 31 tall fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1/2 to 2 tons per acre (70 - 80 lb./1000 sq. ft.) of untreated well anchored straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 3 ft. or higher, use 340 gal. per acre (8 gal./1000 sq. ft.) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

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

Soil preparation - Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

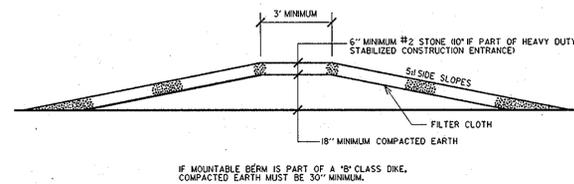
Soil amendments - Apply 800 lbs. per acre 10-10-10 Fertilizer (14 lb./1000 sq. ft.)

- Seeding** - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 242 lbs. per acre of annual ryegrass (52 lb./1000 sq. ft.). For the period May 1 thru August 14, seed with 0 lbs. per acre of creeping lovegrass (27 lb./1000 sq. ft.). For the period November 15 thru February 28, provide site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use seed.
- Mulching** - Apply 1/2 to 2 tons per acre (70 - 80 lb./1000 sq. ft.) of untreated well anchored straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 3 ft. or higher, use 340 gal. per acre (8 gal./1000 sq. ft.) for anchoring.

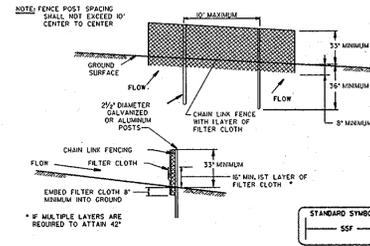
Refer to the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for additional rates and methods not covered.

PERMANENT SEEDING NOTES

MOUNTABLE BERM DETAIL

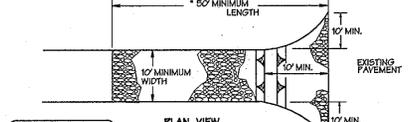
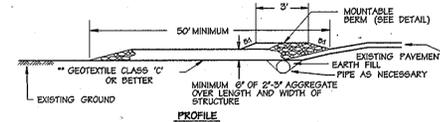


IF MOUNTABLE BERM IS PART OF A 'B' CLASS DIKE, COMPACTED EARTH MUST BE 30" MINIMUM.



CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used substituting 42" fabric and 6' length posts.
- The posts do not need to be set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and fruse rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be 1/4" gauge or heavier.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" of the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" on the ends.
- Maintenance shall be performed as needed and silt buildup removed when "bumps" develop in the silt fence, or when silt reaches 50% of fence height.



CONSTRUCTION SPECIFICATION

- Length - minimum of 50' (50' for single residence lots).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric Class C (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or directed toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slope and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

DEVELOPER'S CERTIFICATION:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY 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.

Signature: *John W. Ranocchia, Jr.*
Date: 10/10/98

ENGINEER'S CERTIFICATION:
I 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: *John W. Ranocchia, Jr.*
Date: 10/10/98

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Signature: *John W. Ranocchia, Jr.*
Date: 10/10/98

AREA	SECTION 4, AREA 1, PHASE 1
TAX MAP 35	PARCEL B-3
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND	
SEDIMENT CONTROL DETAILS	
Des By	MJP
Drn By	MSS/RLH
Chk By	JWR
Scale	AS SHOWN
Date	10-07-98
Approved	
Proj. No.	97126
6 OF 8	

APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE 9/9/98



Professional Engr. No. 457

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Signature: *Chris Hantha*
Date: 10/15/98

Signature: *John W. Ranocchia, Jr.*
Date: 10/15/98

Signature: *John W. Ranocchia, Jr.*
Date: 10/15/98

VILLAGE OF RIVER HILL

SECTION FOUR - AREA ONE - PHASE 1
RESUBDIVISION OF PARCEL B-3,
LOTS B-68-B-127 & B-131 & OPEN SPACE LOTS B-128 - B-130
COLUMBIA, HOWARD COUNTY, MARYLAND

OWNER: The Howard Research & Development Corporation
DEVELOPER / CONTRACT PURCHASER: Columbia Builders, Incorporated

DMW
Duff McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 298-3333
Fax: 298-4708

A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

AREA: SECTION 4, AREA 1, PHASE 1
TAX MAP 35: PARCEL B-3
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL DETAILS

Des By: MJP
Drn By: MSS/RLH
Chk By: JWR

Scale: AS SHOWN
Date: 10-07-98
Approved: [Signature]

Proj. No.: 97126
6 OF 8



APPROVED
 A PLANNING BOARD
 OF HOWARD COUNTY
 DATE 9/9/98

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief Development Engineering Division 10/16/98
 Chief, Division of Land Development 12/15/98
 Director 12/21/98

Date	No.	Revision Description

VILLAGE OF RIVER HILL
 SECTION FOUR - AREA ONE
 RESUBDIVISION OF PARCEL B-3
 LOTS B-68-B-127 & B-131 & OPEN SPACE LOTS B-128 - B-130
 COLUMBIA, HOWARD COUNTY, MARYLAND

OWNER: The Howard Research & Development Corporation
 DEVELOPER/CONTRACT PURCHASER: Columbia Builders, Incorporated

DMW
 Daft McCune Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-8838
 Fax 296-4705

A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

10-8-98
 Date


 Professional Engr. No.

TITLE
LANDSCAPE PLAN

Des By	MJP	Scale	1" = 30'	Proj. No.	97126
Dwn By	KDE	Date	10-07-98		
Chk By	JWR	Approved			7 OF 8

SCHEDULE C
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

Number of Dwelling Units	61
Number of Trees Required (1:1 DU SFA / 1:3 DU APTS)	61
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	61

SCHEDULE A
PERIMETER LANDSCAPE EDGE

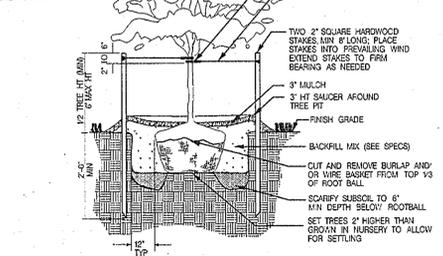
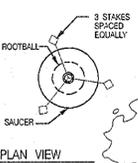
Category	Adjacent to Roadways
Landscape Type	B
Linear Feet of Roadway Frontage/Perimeter	235
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	NA
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	NA
Number of Plants Required Shade Trees Evergreen Trees Shrubs	5 6
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	5 6



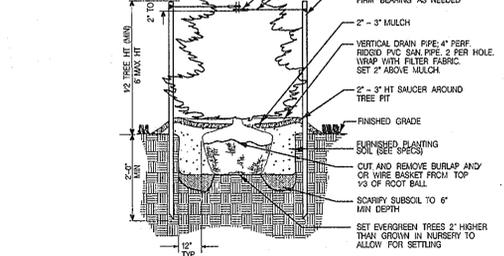
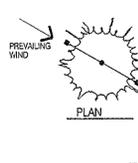
PROPERTY OF
THE HOWARD RESEARCH AND
DEVELOPMENT CORPORATION
138R 132E K01.0 130
ZONE: R1, N1

PLANTING NOTES

- All planting shall be done in accordance with Columbia, H.R.D. planting specifications.
- Final location of plant material may vary per final field conditions.
- Existing street trees shown per F-98-114.
- All plant material to meet AAN standards.
- No substitutions shall be made without consent of the Landscape Architect or Owner.
- Landscape Contractor to verify location of all utilities prior to planting.
- This plan has been prepared in accordance with the provisions of section 16.124 of the Howard County Code & the Landscape Manual following the alternative compliance method. Financial Surety for the required landscape trees in the amount of \$20,250 must be posted as part of the grading permit. (65 shade trees, 5 evergreen trees)
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant material shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- DEVELOPER'S/BUILDER'S CERTIFICATE
I/We certify that the landscaping shown on this plan will be done according to the plan, section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion, a certification of landscape installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the department of planning and zoning. Financial surety for the required landscaping shall be posted as part of the grading permit.



TREE PLANTING - LESS THAN 3" CALIPER
NOT TO SCALE



EVERGREEN TREE PLANTING
NOT TO SCALE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 9/9/98

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Chief, Development Engineering Division	<i>W. D. ...</i>	DATE 10/15/98
Chief, Division of Land Development	<i>C. ...</i>	DATE 12/15/98
Director	<i>J. ...</i>	DATE 12/31/98

VILLAGE OF RIVER HILL
SECTION FOUR - AREA ONE
RESUBDIVISION OF PARCEL B-3,
LOTS B-68 - B-127 & B-131 & OPEN SPACE LOTS B-128 - B-130
COLUMBIA, HOWARD COUNTY, MARYLAND

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A Team of Land Planners,
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Environmental Professionals

10-8-98
Date

Melanie Mose
Professional Engr. No.

TITLE			
LANDSCAPE PLAN			
Des By	MJP	Scale 1" = 30'	Proj. No. 97126
Drn By	KDE	Date 10-07-98	
Chk By	JWR	Approved	8 OF 8