

GENERAL NOTES

- 1) THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 10-18-83 COMPREHENSIVE ZONING PLAN. ALL ADJACENT PROPERTIES ARE ZONED RC-DEO PER THE 10-18-83 COMPREHENSIVE ZONING PLAN.
- 2) WATER AND SEWER WILL BE PRIVATE.
- 3) THE EXISTING TOPOGRAPHY SHOWN IS BASED ON FIELD SURVEY BY J. A. RICE, INC. IN SEPTEMBER, 2002, AND SUPPLEMENTED WITH DIGITAL GIS TOPOGRAPHY PURCHASED FROM HOWARD COUNTY.
- 4) WETLAND DELINEATION PROVIDED BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER, 2001.
- 5) TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ON THIS SITE.
- 6) MINIMUM BUILDABLE LOT SIZE SHALL BE 40,000 SQUARE FEET OR 33,000 SQUARE FEET FOR LOTS THAT UTILIZE A COMMUNITY SEPTIC RESERVE AREA.
- 7) A WAIVER REQUEST TO SECTION 2.5.2.M OF THE HOWARD COUNTY DESIGN MANUAL VOL. III, ROADS AND BRIDGES (REQUESTING SUFFICIENT DISTANCE TO THE RIGHT FOR A STOPPED CAR TO MAKE A LEFT TURN) TO WAIVE THE REMAINING 50' OF THE REQUIRED 50' SIGHT DISTANCE WAS GRANTED ON MAY 20, 2002 SUBJECT TO COMPLETION OF THE PROPOSED GRADING AS SHOWN ON THE SIGHT DISTANCE PROFILE AND PROVIDING ACEL AND DECEL LANES AT THE ENTRANCE.
- 8) THERE SHALL BE NO DISTURBANCE WITHIN THE 100-YR FLOODPLAINS, WETLANDS, STREAMS, THEIR BUFFERS OR STEEP SLOPES THAT ARE AT LEAST 20,000 S.F. EXCEPT THE DESIGNATED NECESSARY ROAD CROSSINGS AND AS PER WP-02-64.
- 9) BOUNDARY IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED DURING JULY, 2001 BY FISHER, COLLINS & CARTER, INC.
- 10) TRAFFIC STUDY WAS PREPARED BY MARS TRAFFIC GROUP IN OCTOBER, 2001 AND REVISED IN JANUARY, 2002.
- 11) FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS IN OCTOBER, 2001, AND REVISED IN JANUARY, 2002.
- 12) THIS PROJECT IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT.
- 13) THE STORMWATER MANAGEMENT SYSTEM SHOWN ON THIS PLAN IS AN APPROXIMATION OF THE SIZE, SHAPE AND LOCATION. IT IS UNDERSTOOD THAT THIS SYSTEM HAS NOT BEEN DESIGNED AND THE ACTUAL DESIGN MAY CHANGE ALTERING THE NUMBER OF UNITS ALLOCATED FOR THIS DEVELOPMENT.
- 14) THE STREAM CROSSINGS SHOWN ALONG CASTLEBRIDGE ROAD (FORMERLY ROAD 'A') ARE STRATEGICALLY LOCATED WHERE THE CHANNEL IS NARROWEST AND AVOIDS IMPACT TO WETLANDS. THERE ARE NO WETLANDS WHERE THESE CROSSINGS WILL OCCUR. THE DEPARTMENT OF PLANNING AND ZONING HAS MADE THE DETERMINATION THAT THE 3 SOUTHERN STREAM CROSSINGS FOR PROPOSED CASTLEBRIDGE ROAD ARE TO BE CONSIDERED ESSENTIAL DISTURBANCES IN ACCORDANCE WITH SECTION 16.116(a) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS BASED ON THE JUSTIFICATION SUBMITTED BY THE DEVELOPER WITH THE REVISED PLAN DATED JANUARY 17, 2002.
- 15) A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- 16) THIS PLAN IS SUBJECT TO COMPLIANCE WITH THE FOURTH EDITION OF THE SUBDIVISION REGULATIONS AS A CONDITION OF ITS SUBMISSION PRIOR TO 11-1-2001. THIS PROJECT IS SUBJECT TO COMPLIANCE WITH COUNTY COUNCIL BILL 50-2001 WHICH AMENDS PORTIONS OF THE ZONING REGULATIONS AS A CONSEQUENCE FOR NOT HAVING PRELIMINARY PLAN APPROVAL PRIOR TO 11-1-2001.
- 17) WP-02-64 WAS APPROVED ON 2-28-02 BY THE PLANNING DIRECTOR. WP-02-64 WAS A REQUEST TO WAIVE THE FOLLOWING:
 - SECTION 16.116(c) - WHICH REQUIRES THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, PAVING AND NEW STRUCTURES SHALL NOT BE PERMITTED WITHIN 25 FEET OF A WETLAND, 50 FEET OF AN INTERMITTENT STREAM OR 75 FEET OF A PERMANENT STREAM BANK TO ALLOW A BUFFER FOR PROPOSED CASTLEBRIDGE ROAD (FORMERLY ROAD 'A') IN THE VICINITY OF WHITHORN WAY (FORMERLY ROAD 'B').
 - SECTION 16.132(d)(1)(i) - WHICH REQUIRES THE DEVELOPER TO CONSTRUCT OR PROVIDE FOR CONSTRUCTION OF ROADS FOR REQUIRED CONNECTIONS TO ADJACENT PROPERTIES (THIS APPLIES TO THE CONNECTIONS FOR ADJACENT PARCELS 117 AND 291).
 - SECTION 16.120(c)(2)(ii) - WHICH REQUIRES THAT NON-PIPESTEM LOTS (FUTURE PHASE 2 BULK PARCEL FF) (BULK PARCEL F UNDER S-02-09) WHICH HAVE SUBDIVISION POTENTIAL UNDER CURRENT ZONING TO HAVE SUFFICIENT PUBLIC ROAD FRONTAGE TO MEET THE PUBLIC ROAD RIGHT-OF-WAY REQUIREMENTS IN THE DESIGN MANUAL.
 - SECTION 16.120(c)(2)(iii) - WHICH REQUIRES THAT 20 FEET OF PUBLIC ROAD FRONTAGE BE PROVIDED FOR PRESERVATION PARCELS (BUILDABLE PRESERVATION PARCEL N) (PRES. PARCEL G UNDER S-02-09).

THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENFORCEMENT INTO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT PLAT SHALL NOT BE NECESSARY.

THE FLOODPLAIN LIMIT SHOWN ON THIS PLAN WAS DETERMINED FROM A FLOODPLAIN STUDY PREPARED BY BENCHMARK ENGINEERING, INC. IN OCTOBER 2002. THE FLOODPLAIN LIMIT FOR THE MIDDLE PATUXENT RIVER IS BASED ON THE HOWARD COUNTY MIDDLE PATUXENT FLOODPLAIN STUDY, MAP 829-38.

THE PURPOSE OF THE PRESERVATION PARCELS AND THE JUSTIFICATION FOR THE DESIGN OF THE CLUSTER SUBDIVISION IS AS FOLLOWS:

PRESERVATION PARCELS 'A' THRU 'F' ARE PROPOSED AS NON-BUILDABLE PARCELS TO PROTECT STEEP SLOPES AND STREAM BUFFER AREAS WHICH ARE CONSIDERED PRIORITY AREAS. THEY WILL BE DEDICATED TO THE HOWARD COUNTY RECREATION AND PARKS.

PRESERVATION PARCELS 'G' THRU 'M' ARE PROPOSED AS NON-BUILDABLE PARCELS FOR STORMWATER MANAGEMENT FACILITIES AS A REQUIREMENT TO CONTROL STORMWATER RUNOFF AND PROVIDE WATER QUALITY AND GROUND WATER RECHARGE.

PRESERVATION PARCEL 'N' IS PROPOSED AS A BUILDABLE PARCEL INTENDED TO BE PLACED IN THE AGRICULTURAL LAND PRESERVATION PROGRAM. THIS PARCEL WILL BE AN EXTENSION OF THE ADJACENT AGRICULTURAL PRESERVATION EASEMENT AND PROTECTS THE MIDDLE PATUXENT RIVER AND ITS STEEP SLOPES ONE (1) POTENTIAL BUILDING UNIT TO BE BUILT ON THIS PARCEL.

BULK PARCELS 'AA' THRU 'HH' ARE PROPOSED AS BULK PARCELS FOR A FUTURE RESUBDIVISION AS PHASE 2. THERE IS POTENTIAL FOR 54 ADDITIONAL CLUSTER LOTS (47 AS PHASE 2). THE REMAINDER AFTER CLUSTER LOTS ARE ESTABLISHED WILL BE A COMBINATION OF OPEN SPACE AND NON-BUILDABLE PRESERVATION PARCELS SOME OF WHICH WILL BE IN THE AGRICULTURAL LAND PRESERVATION PROGRAM.

BULK PARCEL 'I' IS PROPOSED AS A NON-BUILDABLE BULK PARCEL FOR A POSSIBLE FUTURE RIGHT-OF-WAY TO ADJACENT PARCEL 117.

THE TOTAL FOREST CONSERVATION OBLIGATION AMOUNT OF 69.7 ACRES HAS BEEN MET THROUGH THE RETENTION OF 62.0 ACRES OF NET TRACT AREA FOREST WITHIN THE LIMITS OF A FOREST CONSERVATION EASEMENT AND THROUGH THE RETENTION OF 7.7 ACRES WITHIN THE LIMITS OF A FOREST CONSERVATION EASEMENT.

THE LOCATION OF THE OUTFALL FOR SHW#1 WITHIN THE 100-YEAR FLOODPLAIN HAS BEEN DEEMED NECESSARY AND APPROVED BY SCS AND DED.

E 1,342,500

N 578,000

GRID NORTH

E 1,337,500

N 579,000

CENTER LINE CURVE DATA						
STREET NAME	STATION	RADIUS	LENGTH	TANGENT	DELTA	CHORD
CASTLEBRIDGE ROAD	1+97.18 TO 4+86.28	300.00'	289.09'	156.88'	55°12'47"	S12°32'40"W 278.04'
	4+86.28 TO 7+83.27	300.00'	296.99'	161.94'	56°43'16"	N13°17'55"E 285.01'
	11+37.80 TO 15+13.12	325.00'	375.33'	211.74'	66°10'06"	N08°34'30"E 354.82'
	16+56.58 TO 18+92.49	300.00'	235.91'	124.43'	45°03'17"	S01°58'55"E 229.88'
	23+26.35 TO 25+09.03	325.00'	182.68'	93.82'	32°12'20"	S20°21'21"E 93.74'
	31+82.37 TO 32+76.47	310.00'	94.10'	47.41'	17°23'29"	S20°21'21"E 93.74'
HUNTERS VIEW ROAD	37+06.54 TO 38+81.47	1000.00'	174.93'	87.69'	10°01'21"	N08°14'57"W 174.70'
	8+08.79 TO 8+61.15	100.00'	52.36'	26.79'	30°00'00"	N82°18'32"E 51.78'
	9+07.56 TO 9+59.92	100.00'	52.36'	26.79'	30°00'00"	S82°18'32"W 51.78'
	12+62.06 TO 14+66.82	325.00'	206.77'	107.02'	36°27'06"	N64°27'55"W 203.30'
KINSALE COURT	15+47.58 TO 18+61.95	325.00'	314.36'	170.70'	55°25'14"	N7°35'59"W 302.25'
	0+91.06 TO 2+05.91	310.00'	114.85'	58.09'	21°13'35"	N80°04'04"W 114.19'
	2+42.66 TO 6+96.43	310.00'	453.77'	278.48'	83°52'04"	S47°23'07"W 414.33'
OPEN RUN ROAD	8+45.50 TO 10+32.35	500.00'	186.85'	99.53'	21°24'43"	S16°09'26"W 185.77'
	10+90.31 TO 11+46.60	80.00'	56.29'	29.37'	40°18'57"	S06°42'19"W 55.14'
	8+19.07 TO 9+61.19	100.00'	142.12'	86.06'	81°25'48"	N76°53'44"W 130.46'
CASTLEBRIDGE ROAD	9+61.19 TO 13+71.50	325.00'	410.30'	237.58'	72°20'03"	N27°20'51"W 383.59'
	18+35.19 TO 19+57.27	400.00'	122.08'	61.52'	17°29'11"	S80°13'43"W 121.61'
	22+13.42 TO 23+20.16	500.00'	106.75'	53.58'	12°13'56"	S82°51'21"W 106.54'

MINIMUM LOT SIZE CHART			
LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
2	48,266	2,651	45,615
5	43,542	1,241	42,301
6	52,191	2,548	49,643
7	43,228	1,677	41,551
8	49,782	1,694	48,088
11	50,408	1,725	48,683
12	42,427	1,538	40,889
25	54,168	4,169	49,999
27	52,037	4,278	47,759
31	47,554	2,697	44,857
38	48,224	2,133	46,091
32	43,689	911	42,778
39	52,954	5,738	47,216
40	54,036	4,716	49,320

PLAN VIEW
SCALE: 1" = 300'

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	PRELIMINARY PLAN AND SOILS MAP
3	PRELIMINARY PLAN AND SOILS MAP
4	PRELIMINARY PLAN AND SOILS MAP
5	PRELIMINARY PLAN AND SOILS MAP
6	GRADING, SEDIMENT AND EROSION CONTROL PLAN
7	GRADING, SEDIMENT AND EROSION CONTROL PLAN
8	GRADING, SEDIMENT AND EROSION CONTROL PLAN
9	LANDSCAPE PLAN
10	LANDSCAPE PLAN
11	FOREST CONSERVATION PLAN
12	FOREST CONSERVATION PLAN
13	FOREST CONSERVATION PLAN
14	FOREST CONSERVATION PLAN
15	FOREST CONSERVATION PLAN
16	PERCOLATION CERTIFICATION PLAN
17	PERCOLATION CERTIFICATION PLAN
18	PERCOLATION CERTIFICATION PLAN
19	PERCOLATION CERTIFICATION PLAN

COORDINATE CHART (NAD '83)

BOUNDARY COORDINATES		BOUNDARY COORDINATES	
NO.	NORTH	NO.	EAST
100	576893.87	126	575374.84
101	574267.46	127	575260.53
102	573543.17	128	575211.94
103	573558.53	129	574975.42
104	573543.17	130	575318.23
105	572358.33	131	575346.80
106	572338.17	132	575983.02
107	573046.00	133	57461.99
108	573370.42	134	57674.53
109	573394.19	135	57714.45
110	573511.57	136	57736.96
111	573572.98	137	57790.78
112	573655.72	138	57820.14
113	573792.14	139	578356.02
114	573877.16	140	578573.07
115	57410.49	141	57904.34
116	574279.43	142	57944.91
117	574410.48	143	57952.66
118	574590.15	144	57969.34
119	574790.84	145	57984.36
120	574905.23	146	57991.73
121	575094.85	147	57982.73
122	575453.12	148	57970.43
123	575456.72	149	57981.24
124	575637.93	150	57857.95
125	575480.20	151	576358.49

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
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email: Benchmark@bcis.com

Donald Mason

1/6/03

OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C.
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

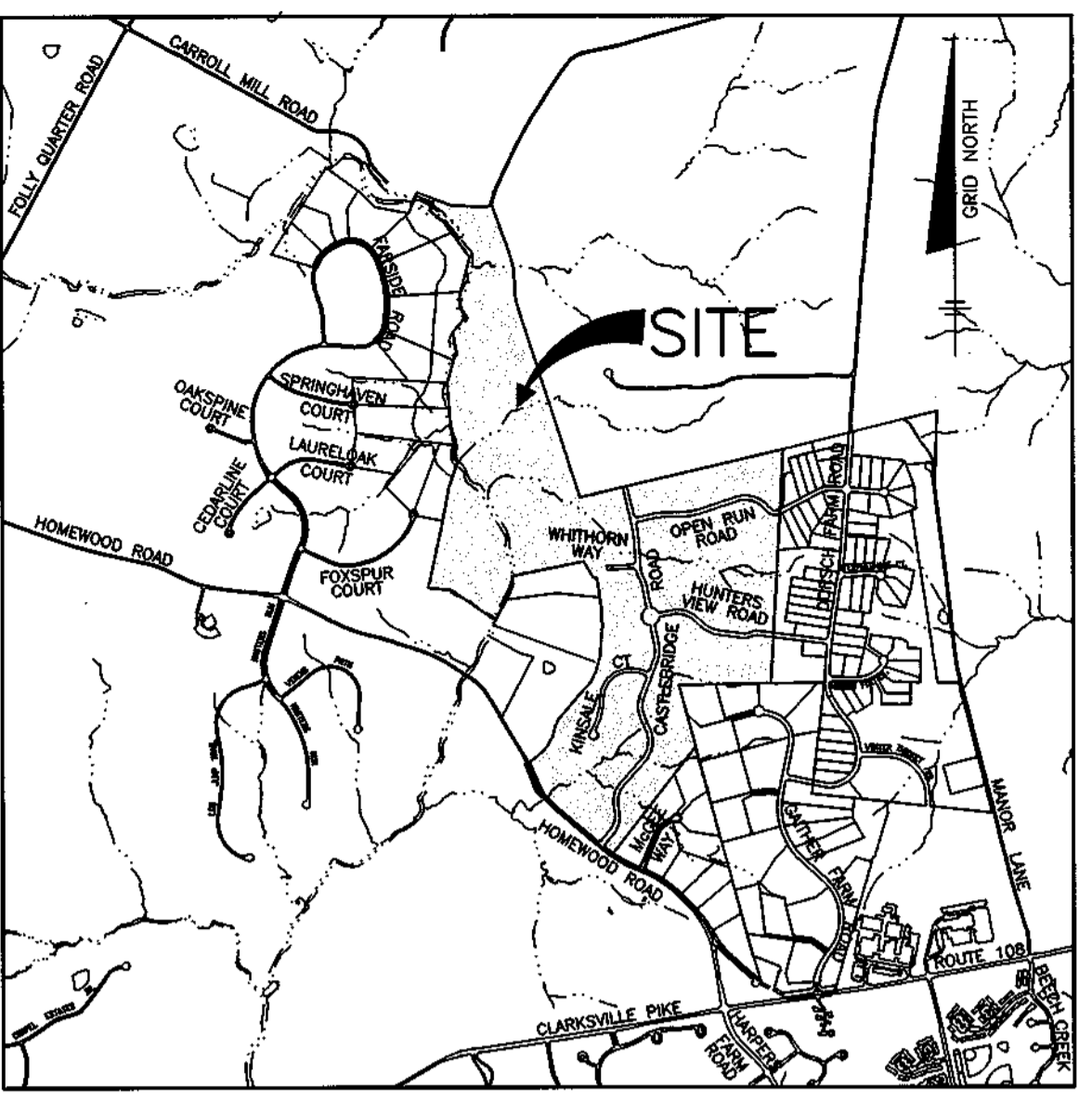
PROJECT: RIVERWOOD - PHASE 1
LOTS 1 - 42; OPEN SPACE LOTS 43 - 48;
NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M';
BUILDABLE PRESERVATION PARCEL 'N';
NON-BUILDABLE BULK PARCELS 'AA' THRU 'H'

LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3,4,9&10
PARCELS: 87 PARCELS: 20 & 86
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: PRELIMINARY PLAN

DATE: JULY, 2003 PROJECT NO. 1132
SCALE: AS SHOWN SHEET 1 OF 19

DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM



VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS DATA CHART

GENERAL SITE DATA

- 1) PRESENT ZONING: RC-DEO
- 2) APPLICABLE DPZ FILE REFERENCES: WP-02-64 S-02-009 RESIDENTIAL (SFD)
- 3) PROPOSED USE OF SITE: RESIDENTIAL (SFD)
- 4) PROPOSED WATER AND SEWER SYSTEMS: PRIVATE

AREA TABULATION

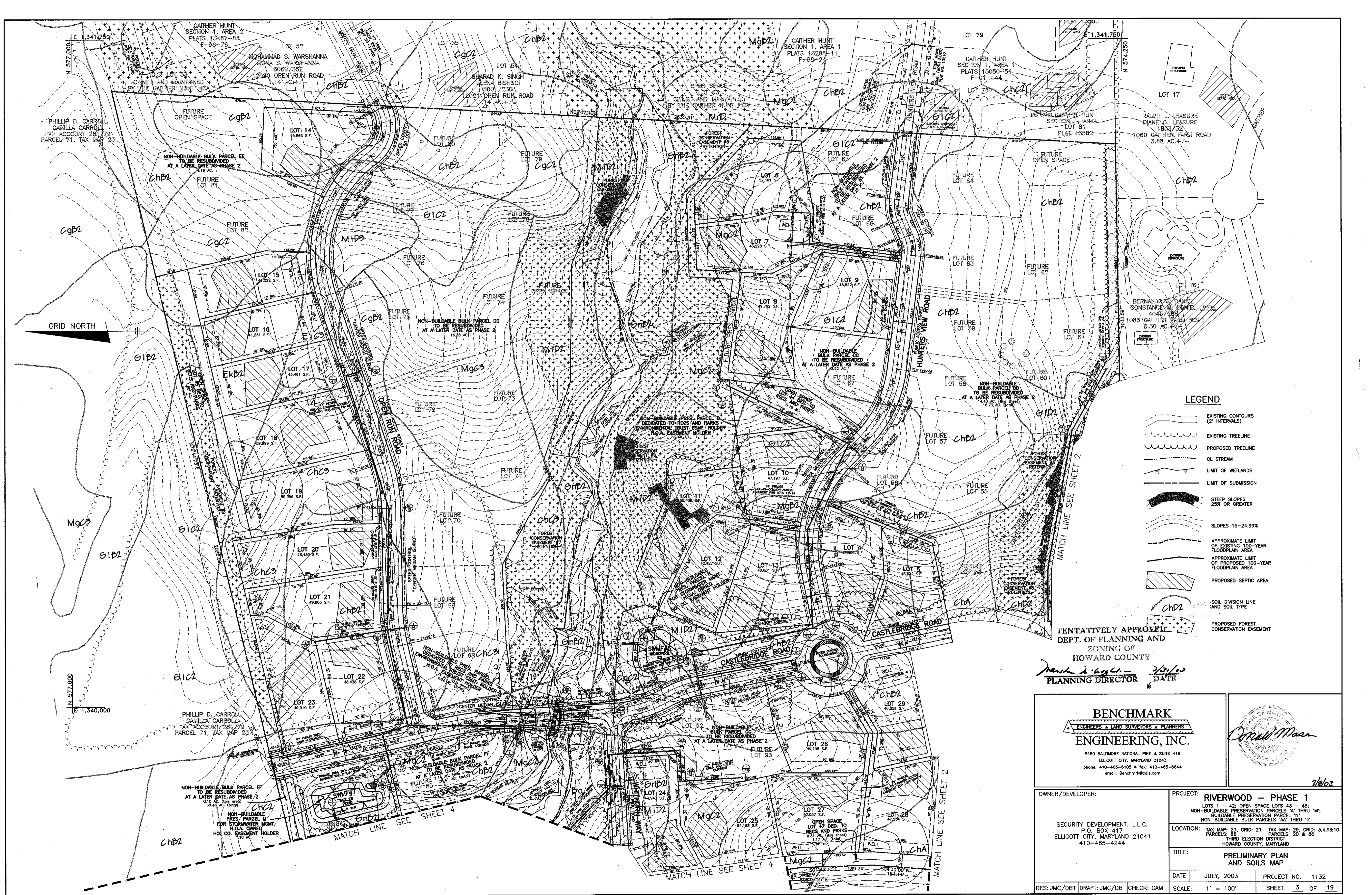
- 1) GROSS TRACT AREA: 269.88 AC±
- 2) AREA WITHIN 100-YEAR FLOODPLAIN: 46.35 AC±
- 3) TOTAL AREA OF 25% OR GREATER STEEP SLOPES: 6.00 AC±
AREA NOT IN FLOODPLAIN (FOR NTA CALC): 4.83 AC±
- 4) NET TRACT AREA: 218.70 AC±
- 5) TOTAL NUMBER OF LOTS ALLOWED PER ZONING: 63
1 UNIT PER 4.25 GROSS ACRES
1 UNIT PER 2 NET ACRES (MAX): 109
- 6) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION (POTENTIAL 47 ADDITIONAL LOTS IN PHASE 2): 43
- 7) AREA OF CLUSTER LOTS: 46.32 AC±
- 8) AREA OF NON-BUILDABLE PRESERVATION PARCELS (PARCELS A - M): 73.48 AC±
- 9) AREA OF BUILDABLE PRESERVATION PARCELS (PARCEL N): 87.34 AC±
- 10) AREA OF BUILDABLE BULK PARCELS (PARCELS AA - H): 87.34 AC±
- 11) AREA OF BUILDABLE BULK PARCELS: N/A
- 12) AREA OF ROAD RIGHT-OF-WAY: 11.74 AC±
- 13) OPEN SPACE ON-TOTAL SITE: 7.06 AC±
PERCENTAGE OF GROSS AREA: 2.62%
- 14) AREA OF RECREATIONAL OPEN SPACE REQUIRED: N/A

* 5% OF GROSS REQUIRED (13.49 AC±) OR NONE IF THE PRES. PARCEL IS DEDICATED TO THE HOA OR HOWARD COUNTY.
REMAINING 6.43 AC TO BE ESTABLISHED UNDER PHASE 2
** NON-BUILDABLE BULK PARCEL 'I' (0.21 ACRES) INCLUDED IN PHASE 1 AREA CALCULATIONS.

PHASING TABULATION		
ALLOCATION YEAR	NO. OF RESIDENTIAL LOTS	PHASE
2005	43	1
2006	48	2

OVERALL DENSITY EXCHANGE CHART	
GROSS AREA	269.88 AC±
NET TRACT AREA	218.70 AC±
DWELLING UNITS ALLOWED (as matter of right)	269.88 AC± @ 1 DU per 4.25 GROSS ACRES = 63
MAXIMUM DWELLING UNITS ALLOWED W/ CEO'S	218.70 AC± @ 1 DU per 2.00 NET ACRES = 109
PROPOSED DWELLING UNITS	98*
NUMBER OF CEO UNITS TO BE RECEIVED	98 - 63 (base density) = 35
SENDING PARCEL INFORMATION (TO SHALL BE PROVIDED UNDER PHASE 2, AS PHASE 1 WILL NOT RECEIVE DENSITY)	
SUBDIVISION NAME	TAX MAP _____ GRID _____
PARCEL	PARCEL _____

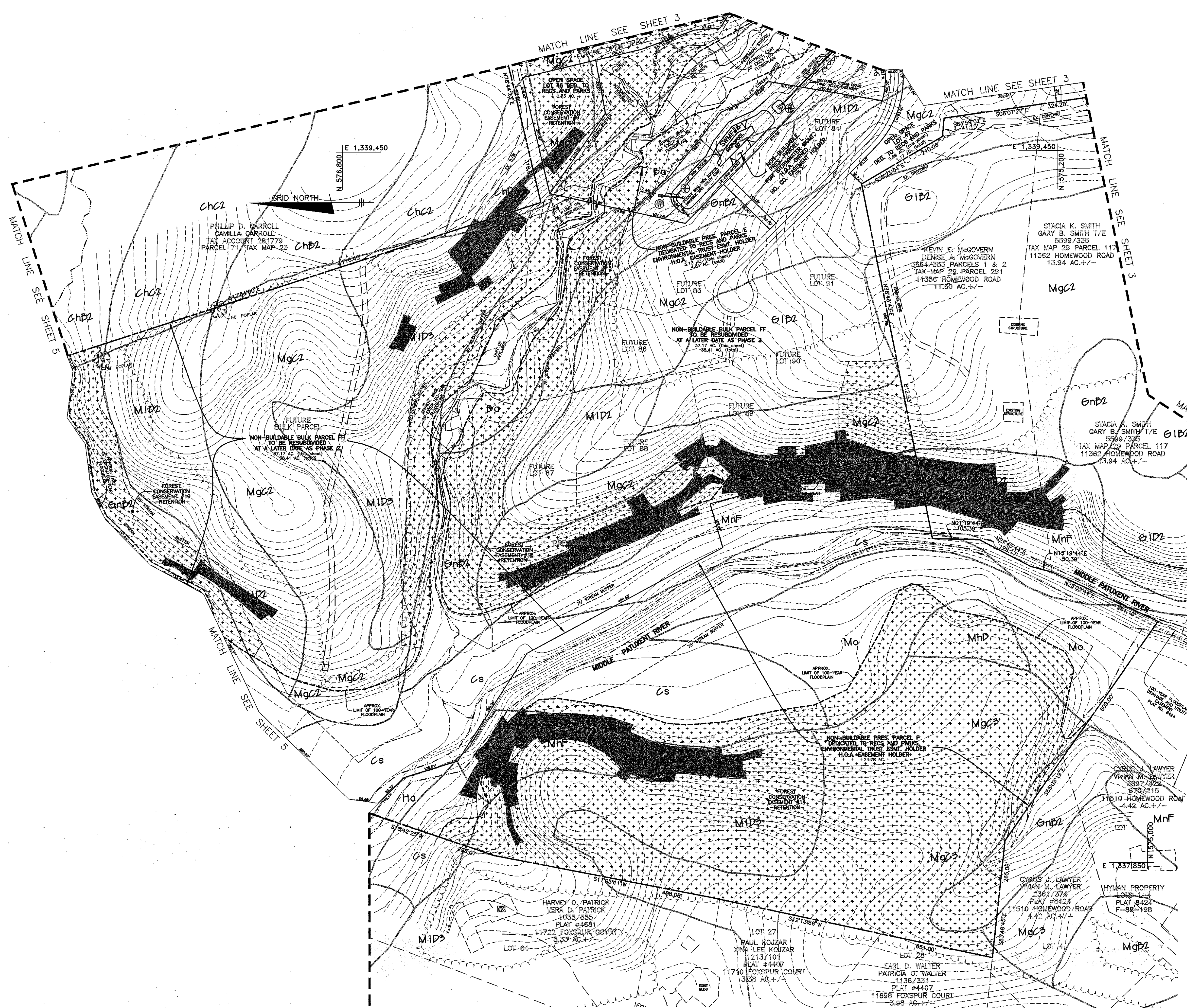
* 43 PHASE 1, 48 PHASE 2 AND 7 POTENTIAL FUTURE LOTS ON THE FUTURE BULK PARCEL IN NON-BUILDABLE BULK PARCEL 'FF'



- LEGEND**
- EXISTING CONTOURS (2' INTERVALS)
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - CL STREAM
 - LIMIT OF WETLANDS
 - LIMIT OF SUBMISSION
 - STEEP SLOPES 25% OR GREATER
 - SLOPES 15-24.98%
 - APPROXIMATE LIMIT OF EXISTING 100-YEAR FLOODPLAIN AREA
 - APPROXIMATE LIMIT OF PROPOSED 100-YEAR FLOODPLAIN AREA
 - PROPOSED SEPTIC AREA
 - SOIL DIVISION LINE AND SOIL TYPE
 - PROPOSED FOREST CONSERVATION EASEMENT

TENTATIVELY APPROVED
 DEPT. OF PLANNING AND ZONING OF
 HOWARD COUNTY
Phillip D. Carroll 7/2/03
 PLANNING DIRECTOR DATE

BENCHMARK ENGINEERS • LAND SURVEYORS • PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE A SUITE 418 ELLICOTT CITY, MARYLAND 21143 phone: 410-465-6105 & fax: 410-465-6644 email: Benchmark@aol.com		
OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21141 410-465-4244	PROJECT: RIVERWOOD - PHASE 1 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48; NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M'; BUILDABLE PRESERVATION PARCEL 'N'; NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'	
LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3, 4, 9 & 10 PARCELS: 88 PARCELS: 20 & 86 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND		TITLE: PRELIMINARY PLAN AND SOILS MAP
DATE: JULY, 2003	PROJECT NO. 1132	
DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM	SCALE: 1" = 100'	SHEET 3 OF 19



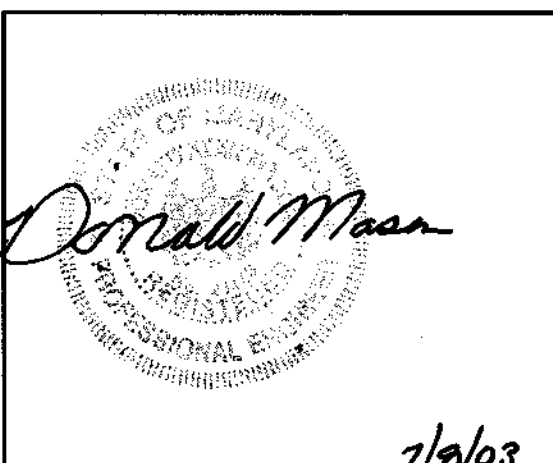
SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
Bs	D*	BALE SILT LOAM
CgB2	B	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
ChA	B	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES
ChB2	B	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
ChC2	B	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
ChD2	B	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
ChE2	B	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES
Cs	B	COMUS SILT LOAM
EK2	B	ELIOLAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
EK3	B	ELIOLAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
GI2	B	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
GI3	B	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
GI4	B	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED
GnB2	C*	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
Ho	D*	HATBORO SILT LOAM
MgB2	B	MANOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
MgC2	B	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
MgD2	B	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
MID2	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED
MID3	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
MfE	B	MANOR LOAM, 25 TO 45 PERCENT SLOPES
MfD	B	MANOR VERY STONY LOAM, 3 TO 25 PERCENT SLOPES
MfF	B	MANOR VERY STONY LOAM, 25 TO 60 PERCENT SLOPES
Mo	B*	MIXED ALLUVIAL LAND

* INDICATES HYDRIC SOILS
 TAKEN FROM SOIL SURVEY, HOWARD COUNTY, MARYLAND (ISSUED JULY 1965) MAP NO. 31

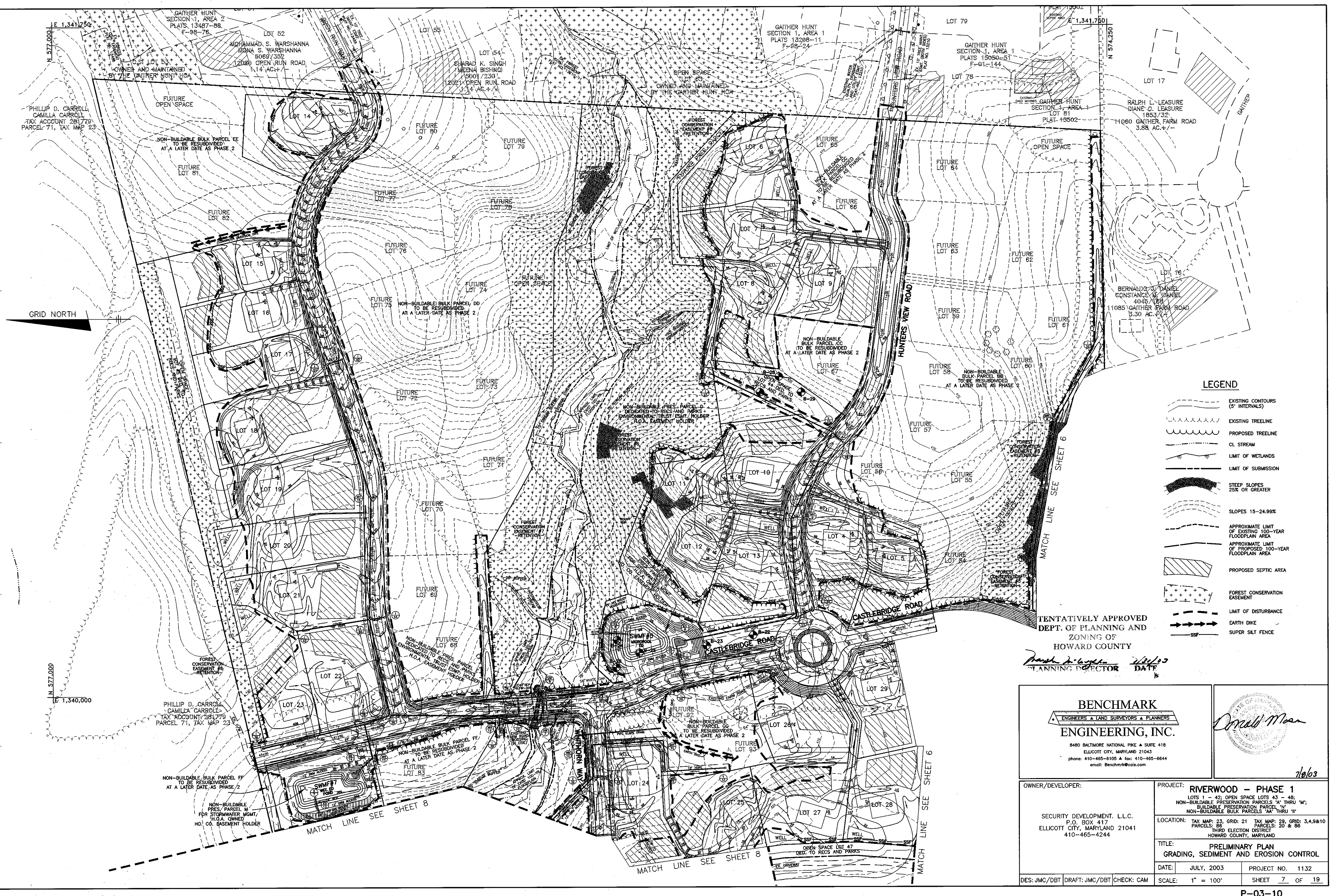
LEGEND	
	EXISTING CONTOURS (2' INTERVALS)
	EXISTING TREELINE
	PROPOSED TREELINE
	CL. STREAM
	LIMIT OF WETLANDS
	LIMIT OF SUBMISSION
	STEEP SLOPES 25% OR GREATER
	SLOPES 15-24.99%
	APPROXIMATE LIMIT OF EXISTING 100-YEAR FLOODPLAIN AREA
	APPROXIMATE LIMIT OF PROPOSED 100-YEAR FLOODPLAIN AREA
	PROPOSED SEPTIC AREA
	SOIL DMSION LINE AND SOIL TYPE
	PROPOSED FOREST CONSERVATION EASEMENT

TENTATIVELY APPROVED
 DEPT. OF PLANNING AND
 ZONING OF
 HOWARD COUNTY
Ronald A. Anglen 7/6/03
 PLANNING DIRECTOR DATE

BENCHMARK
 ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.
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 email: Benchmark@bca.com



OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	PROJECT: RIVERWOOD - PHASE 1 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48; NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M'; BUILDABLE PRESERVATION PARCEL 'N' NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'
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DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM	SCALE: 1" = 100' SHEET 4 OF 19

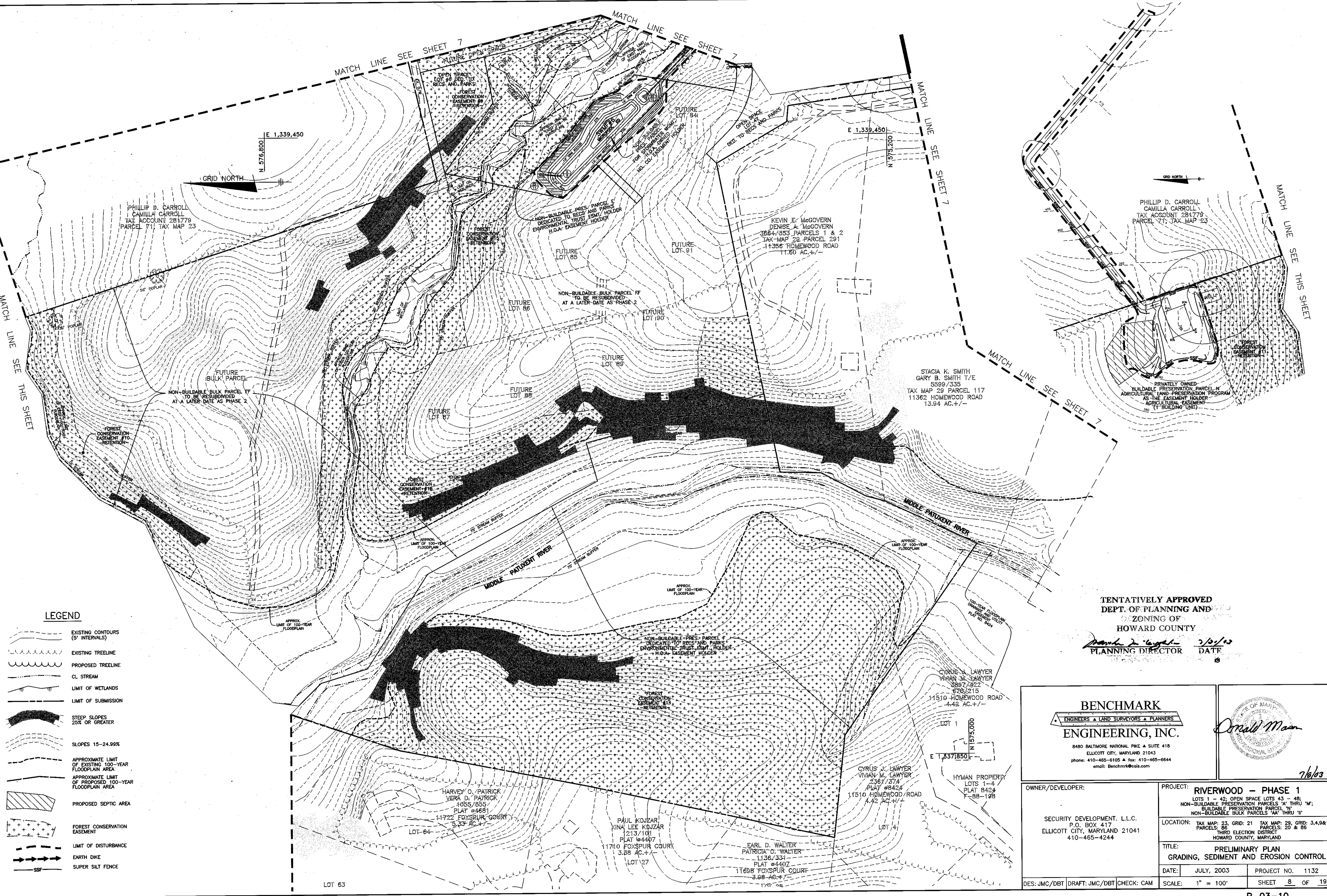


- LEGEND**
- - - - - EXISTING CONTOURS (5' INTERVALS)
 - ~~~~~ EXISTING TREELINE
 - ~~~~~ PROPOSED TREELINE
 - CL. STREAM
 - LIMIT OF WETLANDS
 - LIMIT OF SUBMISSION
 - STEEP SLOPES 25% OR GREATER
 - SLOPES 15-24.99%
 - APPROXIMATE LIMIT OF EXISTING 100-YEAR FLOODPLAIN AREA
 - APPROXIMATE LIMIT OF PROPOSED 100-YEAR FLOODPLAIN AREA
 - ▨ PROPOSED SEPTIC AREA
 - ▨ FOREST CONSERVATION EASEMENT
 - LIMIT OF DISTURBANCE
 - EARTH DIKE
 - SUPER SILT FENCE

TENTATIVELY APPROVED
 DEPT. OF PLANNING AND
 ZONING OF
 HOWARD COUNTY

David M. ... 7/10/03
 PLANNING DIRECTOR DATE

BENCHMARK ENGINEERS • LAND SURVEYORS • PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 phone: 410-465-6105 & fax: 410-465-6644 email: Benchmark@cois.com		
OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	PROJECT: RIVERWOOD - PHASE 1 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48; NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M'; BUILDABLE PRESERVATION PARCEL 'N'; NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'	
LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3, 4, 9 & 10 PARCELS: 86 ELECTION DISTRICT: 20 & 86 THIRD HOWARD COUNTY, MARYLAND		TITLE: PRELIMINARY PLAN GRADING, SEDIMENT AND EROSION CONTROL
DATE: JULY, 2003	PROJECT NO. 1132	
DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM	SCALE: 1" = 100'	SHEET 7 OF 19



- LEGEND**
- EXISTING CONTOURS (5' INTERVALS)
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - CL. STREAM
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 - PROPOSED SEPTIC AREA
 - FOREST CONSERVATION EASEMENT
 - LIMIT OF DISTURBANCE
 - EARTH DIKE
 - SUPER SILT FENCE

TENTATIVELY APPROVED
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 HOWARD COUNTY

Paul J. Vogel 7/3/03
 PLANNING DIRECTOR DATE

BENCHMARK
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ENGINEERING, INC.

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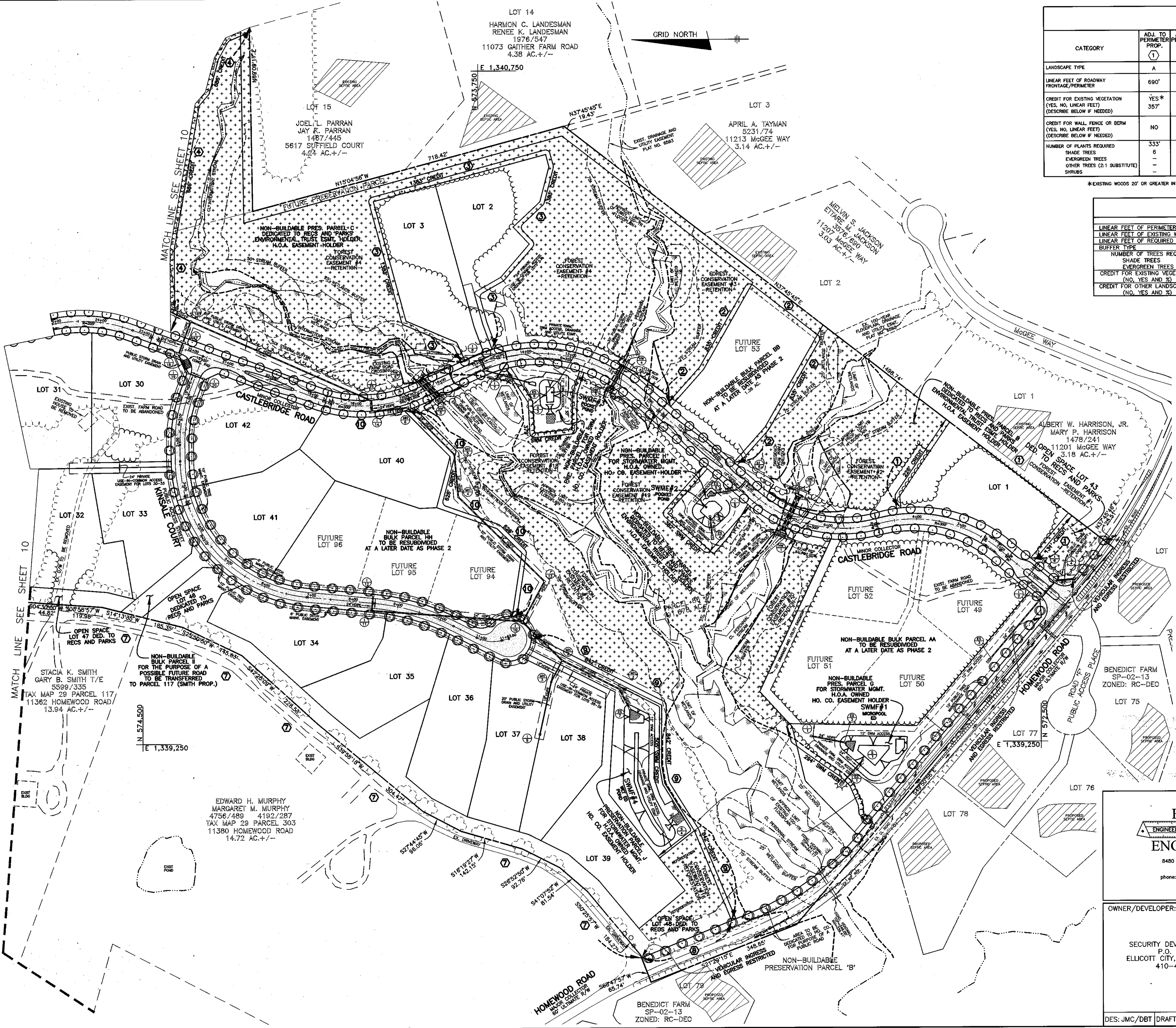
OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

PROJECT: RIVERWOOD - PHASE 1
 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48;
 NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M';
 BUILDABLE PRESERVATION PARCEL 'N';
 NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'

LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3,4,9&10
 PARCELS: 86 PARCELS: 20 & 86
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: PRELIMINARY PLAN
 GRADING, SEDIMENT AND EROSION CONTROL

DATE: JULY, 2003 **PROJECT NO.:** 1132
SCALE: 1" = 100' **SHEET:** 8 OF 19



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJ. TO PERIMETER PROP. (1)	ADJ. TO PERIMETER PROP. (2)	ADJ. TO PERIMETER PROP. (3)	ADJ. TO PERIMETER PROP. (4)	ADJ. TO PERIMETER PROP. (5)	ADJ. TO PERIMETER PROP. (6)	ADJ. TO PERIMETER PROP. (7)	ADJ. TO ROAD (8)	ADJ. TO PERIMETER PROP. (9)	ADJ. TO PERIMETER PROP. (10)
LANDSCAPE TYPE	A	A	A	A	A	A	A	B	A	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	690'	835'	1383'	737'	2464'	1303'	2567'	218'	842'	626'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES* 357'	YES* 835'	YES* 1383'	YES* 686'	YES* 2074'	YES* 1303'	NO	YES* 218'	YES* 842'	YES* 626'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	333'	0	0	51'	390'	0	2567'	0	0	0
SHADE TREES	6	0	0	1	7	0	45	0	0	0
EVERGREEN TREES	-	-	-	-	-	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-	-	-	-
SHRUBS	-	-	-	-	-	-	-	-	-	-

*EXISTING WOODS 20' OR GREATER IN WIDTH.

SCHEDULE D SWM AREA LANDSCAPING

	FACILITY 1	FACILITY 2	FACILITY 3	FACILITY 4	FACILITY 5	FACILITY 6	FACILITY 7
LINEAR FEET OF PERIMETER	261	499	535	935	501	1010	820
LINEAR FEET OF EXISTING WOODS LINE	294	382	379	505	501	429	585
LINEAR FEET OF REQUIRED PLANTING	567	117	156	430	400	581	235
BUFFER TYPE	"B"	"B"	"B"	"B"	"B"	"B"	"B"
NUMBER OF TREES REQUIRED	12	3	4	9	8	12	5
SHADE TREES	14	3	4	11	10	15	6
EVERGREEN TREES	-	-	-	-	-	-	-
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	YES, 34%	YES, 77%	YES, 71%	YES, 54%	YES, 56%	YES, 42%	YES, 71%
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO	NO	NO	NO	NO	NO

STREET TREE SCHEDULE

ROAD NAME	PERIMETER	TREES REQ.
HOMEWOOD ROAD	1307'	33
CASTLEBRIDGE ROAD	8129'	204
KINGSALE COURT	2305'	60
HUNTERS VIEW ROAD	2232'	69
WHITHORN WAY	600'	15
OPEN RUN ROAD	3388'	85

NOTE: LANDSCAPING FOR THIS SUBDIVISION IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.

LEGEND

- EXISTING TREELINE
- PROPOSED TREELINE
- CL. STREAM
- LIMIT OF WETLANDS
- LIMIT OF SUBMISSION
- PROPOSED FOREST CONSERVATION EASEMENT
- APPROXIMATE LIMIT OF EXISTING 100-YEAR FLOODPLAIN AREA
- APPROXIMATE LIMIT OF PROPOSED 100-YEAR FLOODPLAIN AREA
- LANDSCAPE PERIMETER DESIGNATION
- STREET TREES

TENTATIVELY APPROVED
DEPT. OF PLANNING AND ZONING OF
HOWARD COUNTY

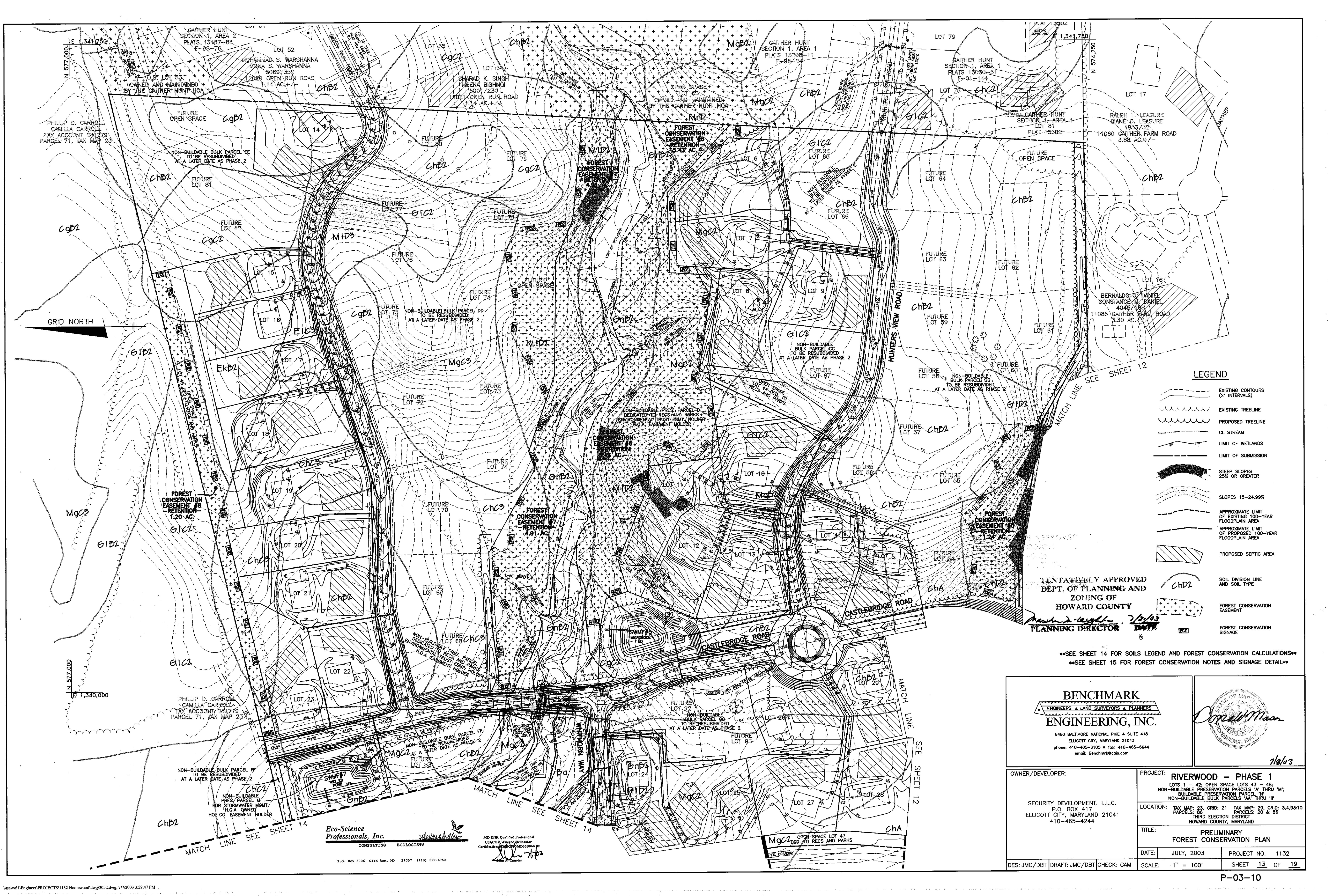
Martin A. Uggli 7/6/03
PLANNING DIRECTOR DATE

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
phone: 410-465-6105 • fax: 410-465-6644
email: Benchmark@ccis.com



OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	PROJECT: RIVERWOOD - PHASE 1 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48; NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M'; BUILDABLE PRESERVATION PARCEL 'N'; NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'
LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3, 4, 9 & 10 PARCELS: 88 PARCELS: 20 & 86 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: PRELIMINARY LANDSCAPE PLAN
DATE: JULY, 2003	PROJECT NO. 1132
DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM	SCALE: 1" = 100' SHEET 9 OF 19



LEGEND

- EXISTING CONTOURS (2' INTERVALS)
- EXISTING TREELINE
- PROPOSED TREELINE
- CL STREAM
- LIMIT OF WETLANDS
- LIMIT OF SUBMISSION
- STEEP SLOPES 25% OR GREATER
- SLOPES 15-24.99%
- APPROXIMATE LIMIT OF EXISTING 100-YEAR FLOODPLAIN AREA
- APPROXIMATE LIMIT OF PROPOSED 100-YEAR FLOODPLAIN AREA
- PROPOSED SEPTIC AREA
- SOIL DIVISION LINE AND SOIL TYPE
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION SIGNAGE

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ZONING OF
HOWARD COUNTY
PLANNING DIRECTOR

SEE SHEET 14 FOR SOILS LEGEND AND FOREST CONSERVATION CALCULATIONS
SEE SHEET 15 FOR FOREST CONSERVATION NOTES AND SIGNAGE DETAIL

<p align="center">BENCHMARK ENGINEERS • LAND SURVEYORS • PLANNERS ENGINEERING, INC.</p> <p align="center">8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLCOTT CITY, MARYLAND 21043 phone: 410-465-8105 • fax: 410-465-6644 email: Benchmark@ccis.com</p>		
<p align="right">7/6/03</p>		
OWNER/DEVELOPER:	PROJECT:	
SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 410-465-4244	RIVERWOOD - PHASE 1 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48; NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M'; BUILDABLE PRESERVATION PARCEL 'N'; NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'	
TITLE:	LOCATION:	
PRELIMINARY FOREST CONSERVATION PLAN	TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3, 4, 9 & 10 PARCELS: 88 PARCELS: 20 & 86 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
DATE:	PROJECT NO.:	TITLE:
JULY, 2003	1132	PRELIMINARY FOREST CONSERVATION PLAN
DES: JMC/DBT	DRAFT: JMC/DBT	CHECK: CAM
SCALE: 1" = 100'	SHEET 13 OF 19	

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752
MD DNR Qualified Professional USACE Wetland Practitioner
Certification No. 0000040473
11/10/02

LEGEND

- EXISTING CONTOURS (2' INTERVALS)
- EXISTING TREELINE
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- LIMIT OF WETLANDS
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- PROPOSED SEPTIC AREA
- SOIL DIVISION LINE AND SOIL TYPE
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION SIGNAGE

**APPENDIX G
FOREST CONSERVATION WORKSHEET**

I. BASIC SITE DATA

ACRES (1/10 acre)	
GROSS SITE AREA	269.9
AREA WITHIN 100 YEAR FLOODPLAIN	46.3
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	N/A
NET TRACT AREA	223.6
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C/1/0, I)	RC-DEO

II. INFORMATION FOR CALCULATIONS

A. NET TRACT AREA	223.6
B. REFORESTATION THRESHOLD (25% x A)	55.9
C. AFFORESTATION MINIMUM (20% x A)	44.7
D. EXISTING FOREST ON NET TRACT AREA	117.3
E. FOREST AREAS TO BE CLEARED	55.3
F. FOREST AREAS TO BE RETAINED	62.0

- III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION**
- Reforestation**
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and clearing of forest areas is proposed, reforestation requirements may apply.
GO TO SECTION IV
 - Afforestation**
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and no clearing of existing forest resources is proposed, no reforestation is required. No further calculations are needed.

IV. REFORESTATION CALCULATIONS

ACRES (1/10 acre)	
A. NET TRACT AREA	223.6
B. REFORESTATION THRESHOLD (25% x A)	55.9
C. EXISTING FOREST ON NET TRACT AREA	117.3
D. FOREST AREAS TO BE CLEARED	55.3
E. FOREST AREAS TO BE RETAINED	62.0
F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (D-F, if F equals or is greater than B, Alternate 1)	0
G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (D-F, if F is less than B, Alternate 2)	N/A
H. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (B-F, if applicable)	6.1
I. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (B-F, if applicable)	0

- SELECT THE ALTERNATE THAT APPLIES:**
- Clearing above the threshold only**
If forest areas to be retained equal or are greater than the reforestation threshold (if F equals or is greater than B), the following calculations apply:

REFORESTATION FOR CLEARING ABOVE THRESHOLD	13.8
CREDIT FOR FOREST AREAS RETAINED ABOVE THRESHOLD	6.1
TOTAL REFORESTATION REQUIRED	7.7
 - Clearing below the threshold**
If forest areas to be retained are less than the reforestation threshold (if F is less than B), the following calculations apply:

REFORESTATION FOR CLEARING ABOVE THRESHOLD	0
REFORESTATION FOR CLEARING BELOW THRESHOLD	0
TOTAL REFORESTATION REQUIRED	0

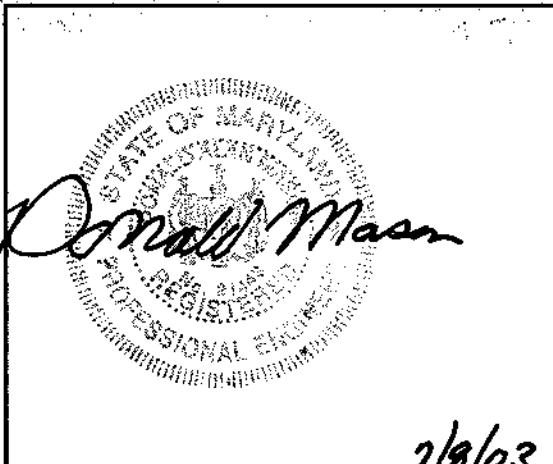
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P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

MD DNR Qualified Professional
USA COE Wetland Deliberator
Certification #000733060604021
2/6/03

SEE SHEET 15 FOR FOREST CONSERVATION NOTES AND SIGNAGE DETAIL

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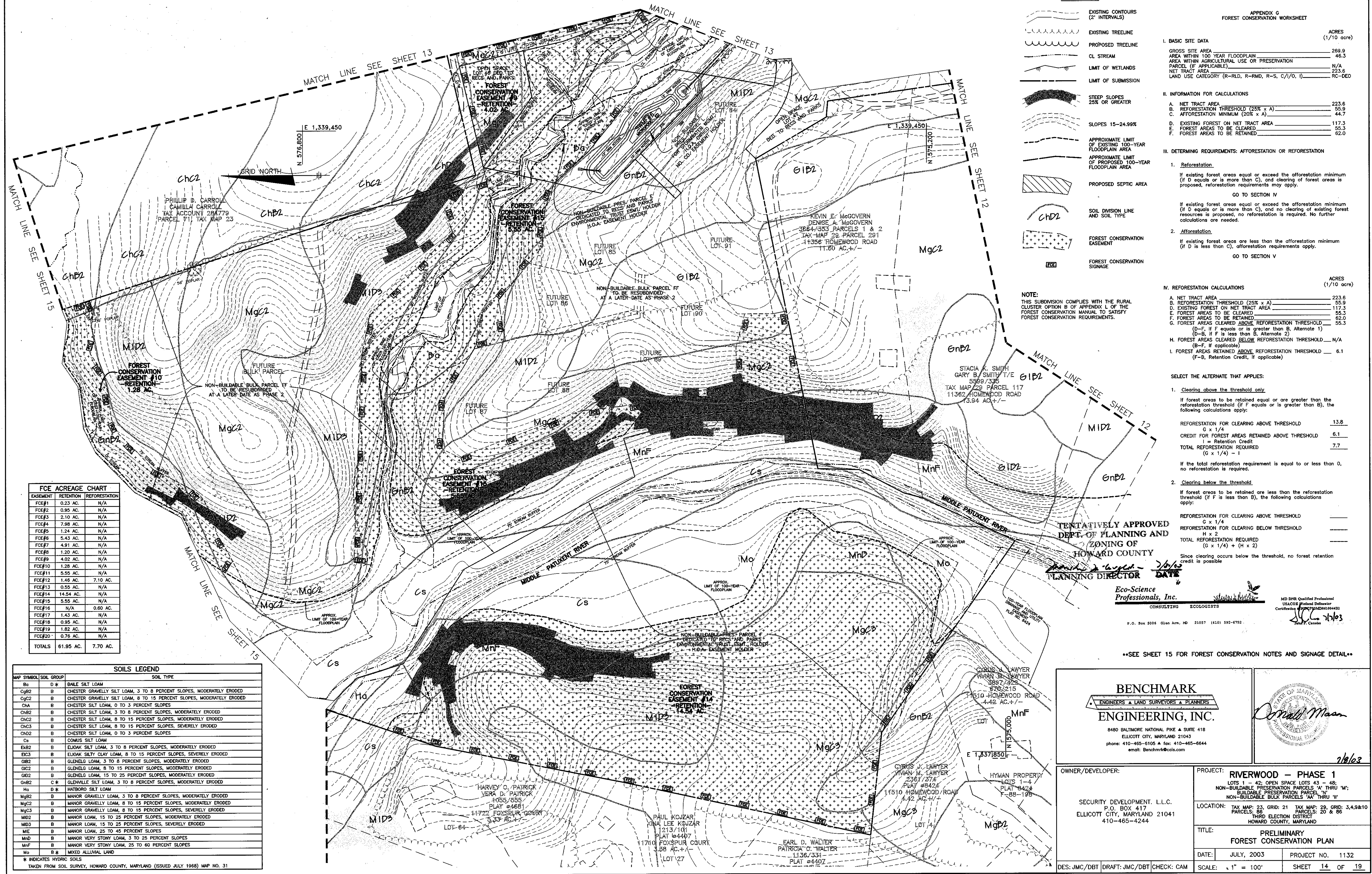
FCE ACREAGE CHART

EASEMENT	RETENTION	REFORESTATION
FCE#1	0.23 AC.	N/A
FCE#2	0.95 AC.	N/A
FCE#3	2.10 AC.	N/A
FCE#4	7.98 AC.	N/A
FCE#5	1.24 AC.	N/A
FCE#6	5.43 AC.	N/A
FCE#7	4.91 AC.	N/A
FCE#8	1.20 AC.	N/A
FCE#9	4.02 AC.	N/A
FCE#10	1.28 AC.	N/A
FCE#11	5.55 AC.	N/A
FCE#12	1.46 AC.	7.10 AC.
FCE#13	0.55 AC.	N/A
FCE#14	14.54 AC.	N/A
FCE#15	5.55 AC.	N/A
FCE#16	N/A	0.60 AC.
FCE#17	1.43 AC.	N/A
FCE#18	0.95 AC.	N/A
FCE#19	1.82 AC.	N/A
FCE#20	0.76 AC.	N/A
TOTALS	61.95 AC.	7.70 AC.

SOILS LEGEND

MAP SYMBOL	SOIL GROUP	SOIL TYPE
Bs	D #	BALF SILT LOAM
CgB2	B	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
ChA	B	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES
ChB2	B	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
ChC2	B	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
ChC3	B	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
ChD2	B	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES
Cs	B	COMUS SILT LOAM
EhB2	B	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
EC3	B	ELIOAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
GIB2	B	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
GIC2	B	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
GD2	B	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED
GhB2	C #	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
Hs	D #	HATBORO SILT LOAM
MgB2	B	MANOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
MgC2	B	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
MgC3	B	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
MID2	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED
MID3	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
MI2	B	MANOR LOAM, 25 TO 45 PERCENT SLOPES
MnD	B	MANOR VERY STONY LOAM, 3 TO 25 PERCENT SLOPES
MnF	B	MANOR VERY STONY LOAM, 25 TO 60 PERCENT SLOPES
Mo	B #	MIXED ALLUVIAL LAND

* INDICATES HYDRIC SOILS
TAKEN FROM SOIL SURVEY, HOWARD COUNTY, MARYLAND (ISSUED JULY 1968) MAP NO. 31



PLANTING SCHEDULE

Table with columns: QTY., SPECIES, SIZE, SPACING. Lists various tree species like Acer rubrum, Cornus florida, Fraxinus pennsylvanica, etc.

PLANTING SCHEDULE

Table with columns: QTY., SPECIES, SIZE, SPACING. Lists various tree species like Cornus florida, Fraxinus pennsylvanica, Juniperus virginiana, etc.

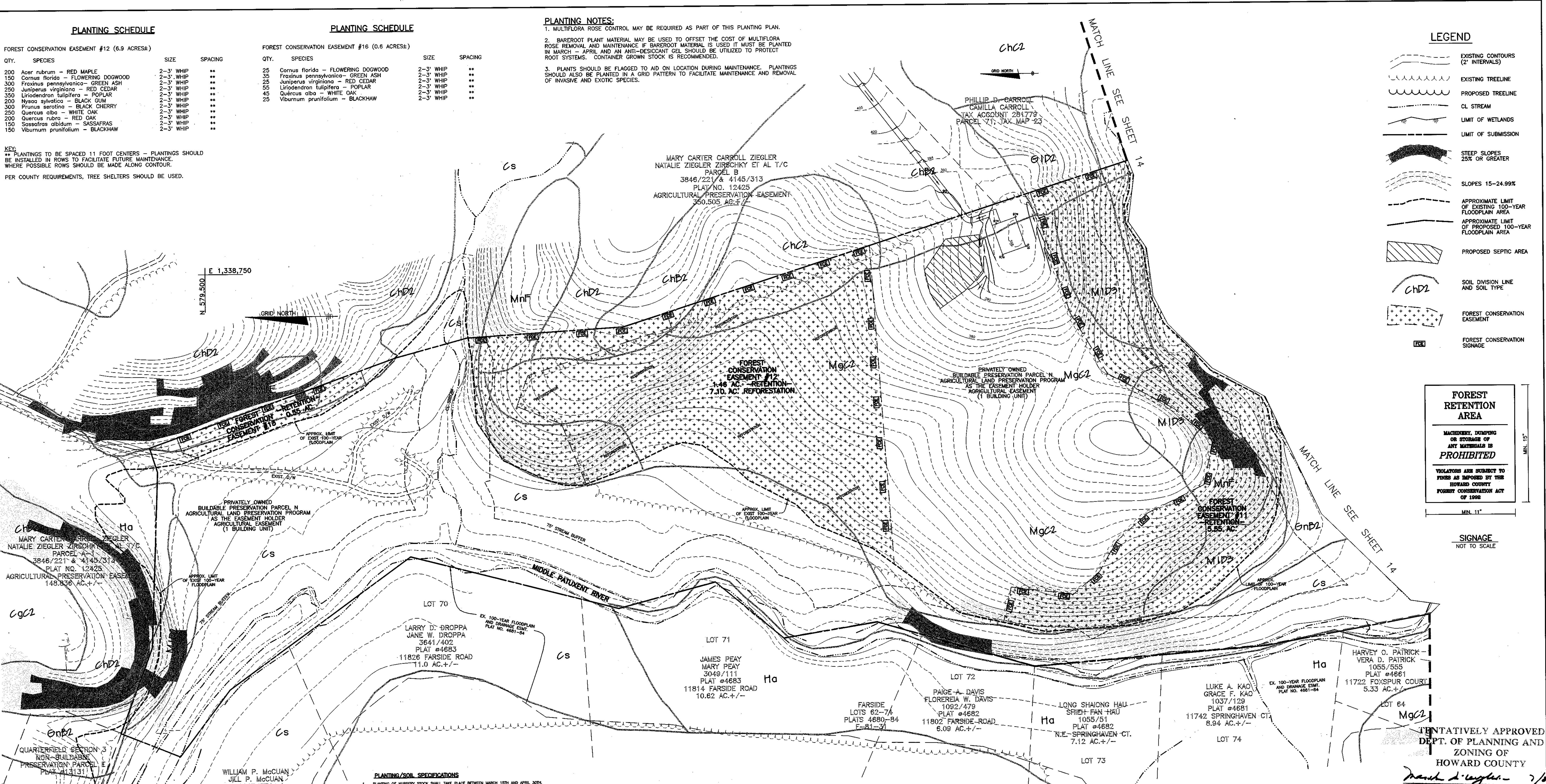
PLANTING NOTES:

- 1. MULTIFLORA ROSE CONTROL MAY BE REQUIRED AS PART OF THIS PLANTING PLAN.
2. BAREROOT PLANT MATERIAL MAY BE USED TO OFFSET THE COST OF MULTIFLORA ROSE REMOVAL AND MAINTENANCE...
3. PLANTS SHOULD BE FLAGGED TO AID ON LOCATION DURING MAINTENANCE...

LEGEND

- EXISTING CONTOURS (2' INTERVALS)
EXISTING TREELINE
PROPOSED TREELINE
CL STREAM
LIMIT OF WETLANDS
LIMIT OF SUBMISSION
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APPROXIMATE LIMIT OF EXISTING 100-YEAR FLOODPLAIN AREA
APPROXIMATE LIMIT OF PROPOSED 100-YEAR FLOODPLAIN AREA
PROPOSED SEPTIC AREA
SOIL DIVISION LINE AND SOIL TYPE
FOREST CONSERVATION EASEMENT
FOREST CONSERVATION SIGNAGE

KEY:
** PLANTINGS TO BE SPACED 11 FOOT CENTERS - PLANTINGS SHOULD BE INSTALLED IN ROWS TO FACILITATE FUTURE MAINTENANCE.
WHERE POSSIBLE ROWS SHOULD BE MADE ALONG CONTOUR.
PER COUNTY REQUIREMENTS, TREE SHELTERS SHOULD BE USED.



FOREST RETENTION AREA
MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED
VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1998

SIGNAGE
NOT TO SCALE

TENTATIVELY APPROVED
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- PLANTING/SOIL SPECIFICATIONS
1. PLANTING OF NURSERY STOCK SHALL TAKE PLACE BETWEEN MARCH 15TH AND APRIL 30TH...
2. CONTAINER STOCK MAY BE PLANTED BETWEEN SEPTEMBER 1ST AND OCTOBER 30TH...
3. A THREE (3) INCH LAYER OF TOPSOIL SHALL BE SPREAD OVER ALL REFORESTATION AREAS IMPACTED BY SITE GRADING...
4. ALL BAREROOT PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS GIPPED INTO AN ANTI-DESICCANT GEL...
5. PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE...
6. FERTILIZER SHALL BE APPLIED TO THE PLANTING SITE...
7. PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK...
8. ALL NON-ORGANIC RESIDUES ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE...
SEQUENCE OF CONSTRUCTION
1. PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT...
2. UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS PER THE FOREST RETENTION AREA PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN...
3. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.
MAINTENANCE OF PLANTINGS
1. MAINTENANCE OF ALL PLANTINGS SHALL LAST FOR A PERIOD OF 24 MONTHS...
2. ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON...
3. INVASIVE EXOTIC AND NOxious WEEDS WILL BE REMOVED FROM REFORESTATION AREAS...
4. PLANTS WILL BE EXAMINED A MINIMUM OF TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES...
5. APPROPRIATE ADJUSTMENTS TO PLANTINGS WILL BE MADE AS NECESSARY...
6. DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.
GUARANTEE REQUIREMENTS
1. AFTER ONE GROWING SEASON, PLANT MATERIAL SHALL BE MAINTAINED AT 80% SURVIVAL THRESHOLD...
2. THE CONTRACTOR WILL NOT BE LIABLE FOR PLANT LOSS DUE TO THEFT OR VANDALISM.
SURETY FOR REFORESTATION
1. THE DEVELOPER SHALL POST A SURETY (BOND, LETTER OF CREDIT) TO ENSURE THAT REFORESTATION SHALL BE COMPLETED...
2. THE SURETY SHALL BE RELEASED UPON ACCEPTANCE OF THE PLANTINGS BY THE COUNTY...

FP NOTES:

- 1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
2. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
4. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
5. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. FENCING SHALL BE INSTALLED ALONG LIMITS OF DISTURBANCE OCCURRING WITHIN 50 FEET OF THE PROPOSED FCE LIMITS. PERMANENT SIGNAGE WILL BE POSTED AT 50-100 FOOT INTERVALS ALONG ALL FCE LIMITS.
7. THE TOTAL FOREST CONSERVATION OBLIGATION AMOUNT OF 69.7 ACRES WILL BE MET THROUGH THE RETENTION OF 62.0 ACRES OF NET TRACT AREA FOREST WITHIN THE LIMITS OF A FOREST CONSERVATION EASEMENT AND THROUGH THE REFORESTATION OF 7.7 ACRES WITHIN THE LIMITS OF A FOREST CONSERVATION EASEMENT.

FLOODPLAIN NOTE:

PORTIONS OF THE SITE OCCURRING WITHIN THE 100-YEAR FLOODPLAIN ARE NOT INCLUDED AS PART OF THE NET TRACT AREA OF THE SITE. AREAS OF FLOODPLAIN FOREST OCCURRING WITHIN THE LIMITS OF A FOREST CONSERVATION EASEMENT WILL BE PROTECTED BY THE EASEMENT RESTRICTIONS BUT HAVE NOT BEEN CREDITED TOWARD THE PROJECTS FCA OBLIGATIONS.

Eco-Science Professionals, Inc. CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACE Wetland Delimitation Certification #DC0000049443
John P. Cooney

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
EMAIL: Benchmark@ccis.com

Professional Engineer Seal for Donald M. Man

Project information table including Owner/Developer (Security Development, L.L.C.), Project Name (Riverwood - Phase 1), Location, Title (Preliminary Forest Conservation Plan), Date (July 2003), and Scale (1" = 100').

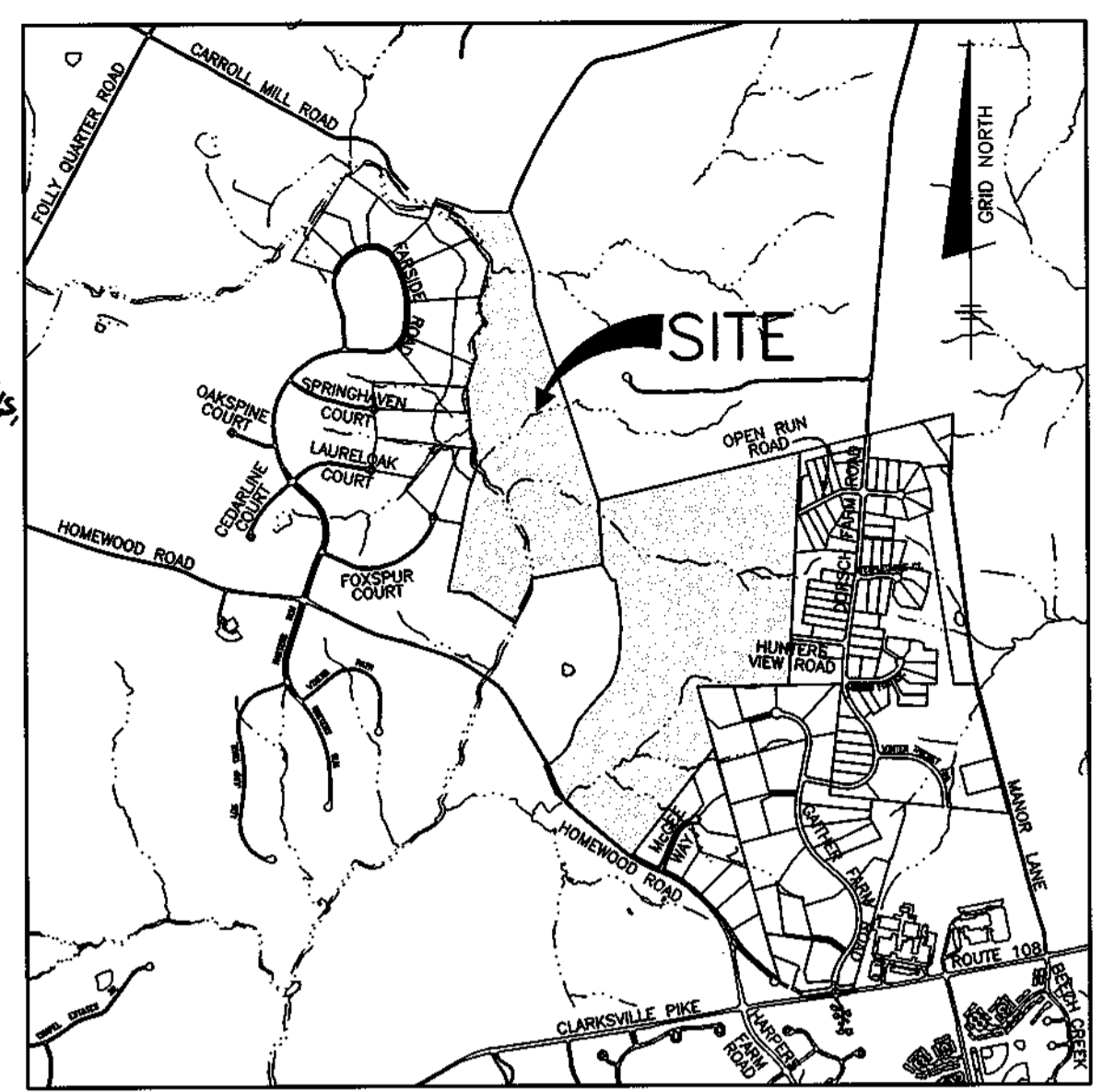
SEE SHEET 14 FOR SOILS LEGEND AND FOREST CONSERVATION CALCULATIONS

LEGEND

- EXISTING CONTOURS (2' INTERVALS)
- EXISTING TREELINE
- CL. STREAM
- PROPOSED SEWAGE DISPOSAL AREA
- WELL
- 1500 S.F. WELL AREA
- STEEP SLOPES 25% OR GREATER
- SLOPES 15-24.99%
- SOILS DELINEATION LINE
- FOREST CONSERVATION EASEMENT
- PERC FAILED LOCATION
- PERC PASSED LOCATION

GENERAL NOTES (CONTINUED)

12. The well for the existing house must be properly abandoned sealed by a licensed well driller. Documentation must be submitted to the Health Department to support this. Sewage disposal areas must be 25' from the sealed well.
13. The septic disposal system for the existing house must be properly abandoned and documentation must be submitted to support this. System shall be located and described prior to abandonment. Sewage disposal areas shall not be directly over or next to possible impacts like old septic tanks, dry wells and possibly trenches.
14. Well area on lot 42 may be in conflict with the septic easement. Adjustments may be necessary.
15. Sewage disposal areas on lots 19, 21, 22, 23, 25, 26, 28, 29 & 35 must be adjusted so that they are further away from the center of the septic area that they are located in so that they are exposed to the minimum amount of surface flow.



VICINITY MAP
SCALE: 1" = 2000'

GENERAL NOTES

- 1) THE LOTS SHOWN HEREIN COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- 2) THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF 10,000 S.F. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWER SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDED OF A MODIFIED SEWAGE EASEMENT PLAT SHALL NOT BE REQUIRED.
- 3) EXACT LENGTH OF SEPTIC TRENCHES IS TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF TRENCH LAYOUT AND INSPECTION.
- 4) TOPOGRAPHY SHOWN IS BASED ON A FIELD SURVEY BY J.A. RICE INC. IN SEPTEMBER, 2002 AND SUPPLEMENTED WITH DIGITAL GIS TOPOGRAPHY PURCHASED FROM HOWARD COUNTY.
- 5) WELLS TO BE DRILLED PRIOR TO RECORD PLAT SUBMITTAL FOR SIGNATURE. IT IS THE DEVELOPER'S RESPONSIBILITY TO DRILL THE WELLS. IT WILL NOT BE CONSIDERED TO BE GOVERNMENTAL DELAY IF THE WELLS ARE NOT COMPLETED PRIOR TO THE SUBMISSION'S MILESTONE DATE. THE DEVELOPER MAY BE ELIGIBLE FOR RELIEF FROM THIS REQUIREMENT IF ADEQUATE WELL SUCCESS RATE ARE ACHIEVED AT VARIOUS LOCATIONS IN THE SUBDIVISION.
- 6) THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROPERTY'S BOUNDARIES EXCEPT AS NOTED.
- 7) The Health Department may require that wells in well site areas that are in close proximity to each other be yield tested simultaneously.
 - a) Required setbacks for well site areas and/or sewage disposal areas that are not met at this time must be corrected before lots can be subdivided.
 - b) Required construction grading is to be limited within 25 feet of sewage disposal areas.
 - c) A suitable conventional trench type septic disposal system must be installed on Lot 11 before building permit approval.

John M. Carney
JOHN M. CARNEY
PLAN PREPARER

11. Groundwater of record plat for signature.
Appropriation permit shall be obtained prior to submittal.
APPROVED FOR PRIVATE WATER AND SEWAGE SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT

Ronny Brewster, M.D. 7/10/03
HOWARD COUNTY HEALTH OFFICER DATE

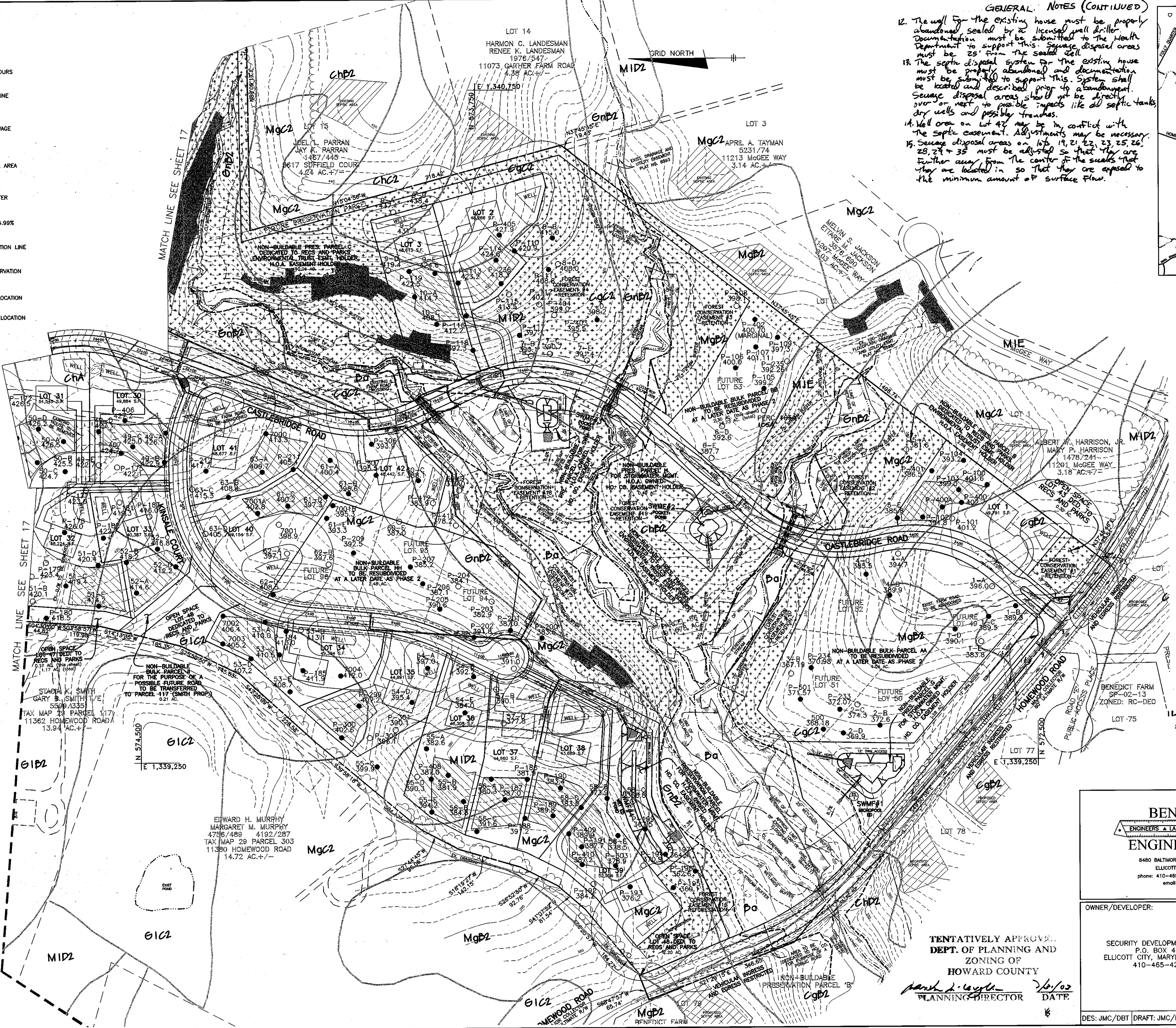
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ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

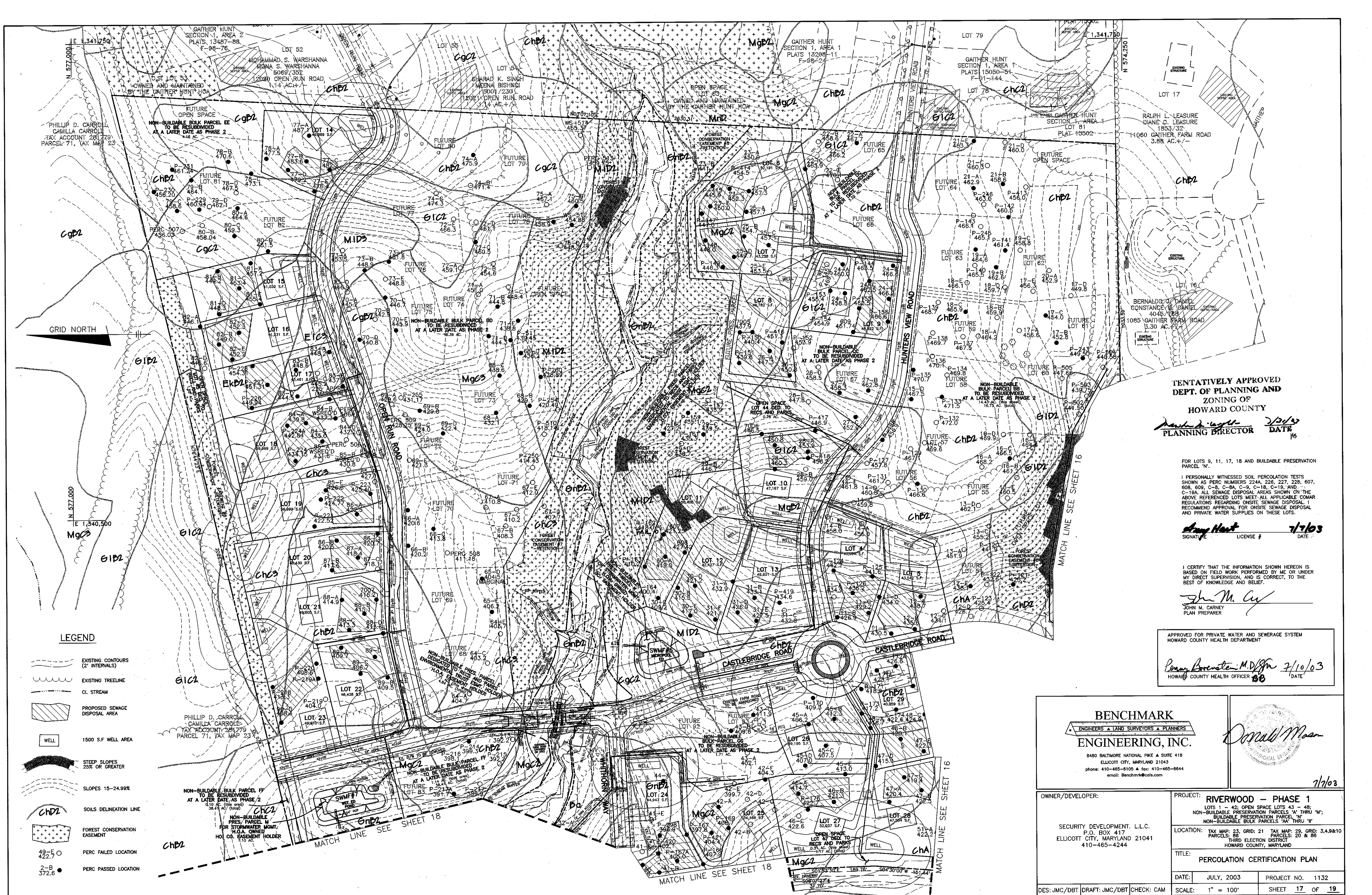
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
phone: 410-485-6105 • fax: 410-485-6644
email: Benchmark@ccils.com

Donald Mason
7/7/03

OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-485-4244	PROJECT: RIVERWOOD - PHASE 1 LOTS 1-42, OPEN SPACE LOTS 43-48; NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M'; BUILDABLE PRESERVATION PARCEL 'N'; NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'
TITLE: PERCOLATION CERTIFICATION PLAN	LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3, 4, 9 & 10 PARCELS: 86 PARCELS: 20 & 86 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JULY, 2003	PROJECT NO. 1132
DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM	SCALE: 1" = 100' SHEET 16 OF 19

TENTATIVELY APPROVED
DEPT. OF PLANNING AND ZONING OF HOWARD COUNTY
Janet L. Taylor 7/6/03
PLANNING DIRECTOR DATE





GRID NORTH

- LEGEND**
- EXISTING CONTOURS (2' INTERVALS)
 - EXISTING TREELINE
 - CL. STREAM
 - PROPOSED SEWAGE DISPOSAL AREA
 - 1500 S.F. WELL AREA
 - STEEP SLOPES 25% OR GREATER
 - SLOPES 15-24.99%
 - SOILS DELINEATION LINE
 - FOREST CONSERVATION EASEMENT
 - PERC FAILED LOCATION
 - PERC PASSED LOCATION

TENTATIVELY APPROVED
DEPT. OF PLANNING AND
ZONING OF
HOWARD COUNTY

Mark J. Wright
PLANNING DIRECTOR 7/10/03
DATE

FOR LOTS 9, 11, 17, 18 AND BUILDABLE PRESERVATION PARCEL 'N'.
I PERSONALLY WITNESSED SOIL PERCOLATION TESTS SHOWN AS PERC NUMBERS 224A, 226, 227, 228, 607, 608, 609, C-8, C-8A, C-9, C-18, C-19, AND C-19A. ALL SEWAGE DISPOSAL AREAS SHOWN ON THE ABOVE REFERENCED LOTS MEET ALL APPLICABLE COMAR REGULATIONS REGARDING ONSITE SEWAGE DISPOSAL AND PRIVATE WATER SUPPLIES ON THESE LOTS.

Steve Hunt 7/10/03
SIGNATURE LICENSE # DATE

I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF KNOWLEDGE AND BELIEF.

John M. Carney
JOHN M. CARNEY
PLAN PREPARER

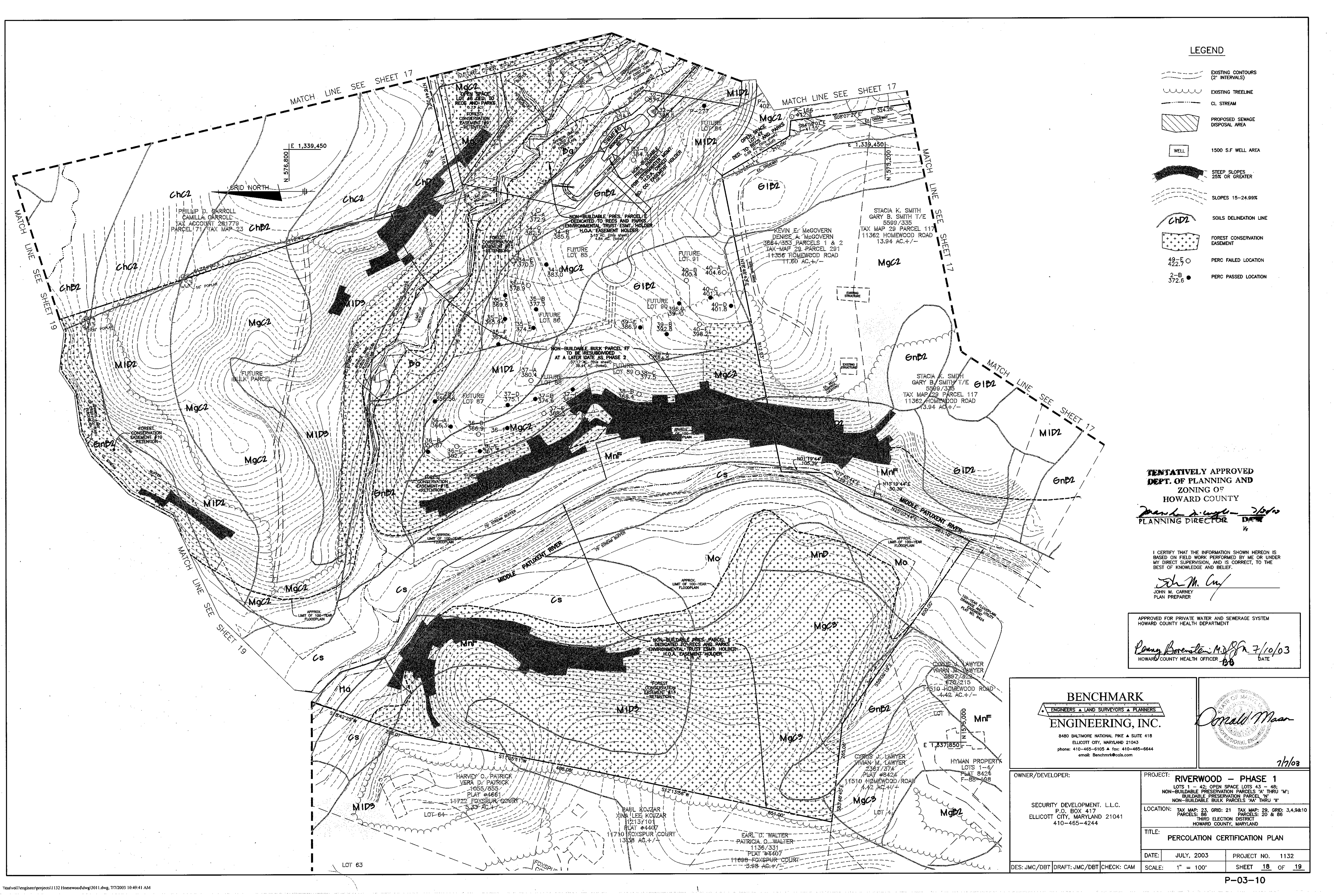
APPROVED FOR PRIVATE WATER AND SEWAGE SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT

Conroy A. Covatta, M.D./R.N. 7/10/03
HOWARD COUNTY HEALTH OFFICER DATE

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EMAIL: Benchmark@ccils.com

Donald Maan
REGISTERED PROFESSIONAL ENGINEER
7/10/03

OWNER/DEVELOPER:	PROJECT:
SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	RIVERWOOD - PHASE 18 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48; NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M'; BUILDABLE PRESERVATION PARCELS 'N' THRU 'P'; NON-BUILDABLE BULK PARCELS 'A' THRU 'H'
TITLE:	LOCATION:
PERCOLATION CERTIFICATION PLAN	TAX MAP: 23, GRID: 21 TAX MAP: 25, GRID: 3, 4, 9 & 10 PARCELS: 88 PARCELS: 20 & 56 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE:	PROJECT NO.:
JULY, 2003	1132
DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM	SCALE: 1" = 100' SHEET 17 OF 19



LEGEND

- EXISTING CONTOURS (2' INTERVALS)
- EXISTING TREELINE
- CL. STREAM
- PROPOSED SEWAGE DISPOSAL AREA
- WELL 1500 S.F. WELL AREA
- STEEP SLOPES 25% OR GREATER
- SLOPES 15-24.99%
- SOILS DELINEATION LINE
- FOREST CONSERVATION EASEMENT
- PERC FAILED LOCATION 422.7
- PERC PASSED LOCATION 372.6

**TENTATIVELY APPROVED
DEPT. OF PLANNING AND
ZONING OF
HOWARD COUNTY**

John M. Carney
PLANNING DIRECTOR

I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF KNOWLEDGE AND BELIEF.

John M. Carney
**JOHN M. CARNEY
PLAN PREPARER**

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT

Penny Borenstein M.D. 7/10/03
HOWARD COUNTY HEALTH OFFICER DATE

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phone: 410-465-6105 • fax: 410-465-6644
email: Benchmark@ecoln.com

Donald Maan
PROFESSIONAL ENGINEER
7/1/03

OWNER/DEVELOPER:
SECURITY DEVELOPMENT, L.L.C.
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
410-465-4244

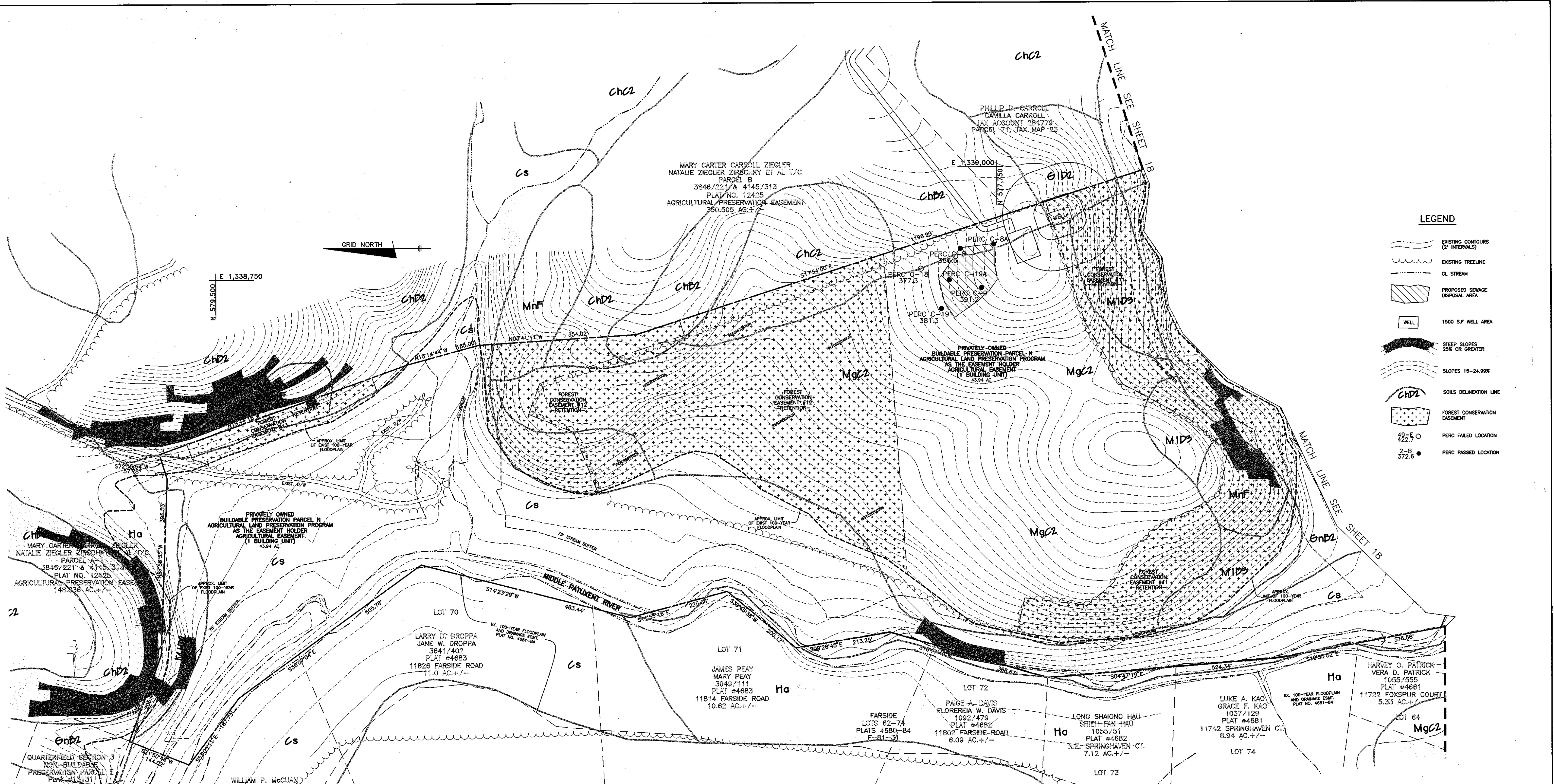
PROJECT: **RIVERWOOD - PHASE 1**
LOTS 1 - 42; OPEN SPACE LOTS 43 - 48;
NON-BUILDABLE PRESERVATION PARCELS 'M' THRU 'M';
BUILDABLE PRESERVATION PARCEL 'N';
NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'

LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3,4,9&10
PARCELS: 86 PARCELS: 20 & 86
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **PERCOLATION CERTIFICATION PLAN**

DATE: JULY, 2003 PROJECT NO. 1132

DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM SCALE: 1" = 100' SHEET 18 OF 19



LEGEND

	EXISTING CONTOURS (2' INTERVALS)
	EXISTING TREELINE
	CL. STREAM
	PROPOSED SEWAGE DISPOSAL AREA
	WELL
	1500 S.F. WELL AREA
	STEEP SLOPES 25% OR GREATER
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	SOILS DELINEATION LINE
	FOREST CONSERVATION EASEMENT
	PERC FAILED LOCATION
	PERC PASSED LOCATION

TENTATIVELY APPROVED
 DEPT. OF PLANNING AND ZONING OF
 HOWARD COUNTY

Mark D. Leger 7/10/03
 PLANNING DIRECTOR

I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF KNOWLEDGE AND BELIEF.

John M. Carney
 JOHN M. CARNEY
 PLAN PREPARER

FOR LOTS 9, 11, 17, 18 AND BUILDABLE PRESERVATION PARCEL 'N'.
 I PERSONALLY WITNESSED SOIL PERCOLATION TESTS SHOWN AS PERC NUMBERS 224A, 226, 227, 228, 607, 608, 609, C-8, C-8A, C-9, C-18, C-19, AND C-19A. ALL SEWAGE DISPOSAL AREAS SHOWN ON THE ABOVE REFERENCED LOTS MEET ALL APPLICABLE COMAR REGULATIONS REGARDING ONSITE SEWAGE DISPOSAL. I RECOMMEND APPROVAL FOR ONSITE SEWAGE DISPOSAL AND PRIVATE WATER SUPPLIES ON THESE LOTS.

Shay Hair 7-7-03
 SIGNATURE LICENSE # DATE

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEM
 HOWARD COUNTY HEALTH DEPARTMENT

Penny Bronte-McDonnell 7/10/03
 HOWARD COUNTY HEALTH OFFICER DATE

BENCHMARK ENGINEERING, INC.

ENGINEERS • LAND SURVEYORS • PLANNERS

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Donald Maan

7/10/03

OWNER/DEVELOPER: SECURITY DEVELOPMENT, L.L.C.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

PROJECT: RIVERWOOD - PHASE 1
 LOTS 1 - 42; OPEN SPACE LOTS 43 - 48;
 NON-BUILDABLE PRESERVATION PARCELS 'A' THRU 'M';
 BUILDABLE PRESERVATION PARCEL 'N';
 NON-BUILDABLE BULK PARCELS 'AA' THRU 'II'

LOCATION: TAX MAP: 23, GRID: 21 TAX MAP: 29, GRID: 3, 4, 9 & 10
 PARCELS: 86 PARCELS: 20 & 86
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: PERCOLATION CERTIFICATION PLAN

DATE: JULY, 2003 PROJECT NO. 1132
 SCALE: 1" = 100' SHEET 19 OF 19

DES: JMC/DBT DRAFT: JMC/DBT CHECK: CAM