

Chief, Division of Land Development 2/24/12 DATE
Chief, Development Engineering Division 7/25/12 DATE

ENVIRONMENTAL CONCEPT PLAN
MASON PROPERTY

BUILDABLE LOTS 1 THRU 93 AND
OPEN SPACE LOTS 94 & 95

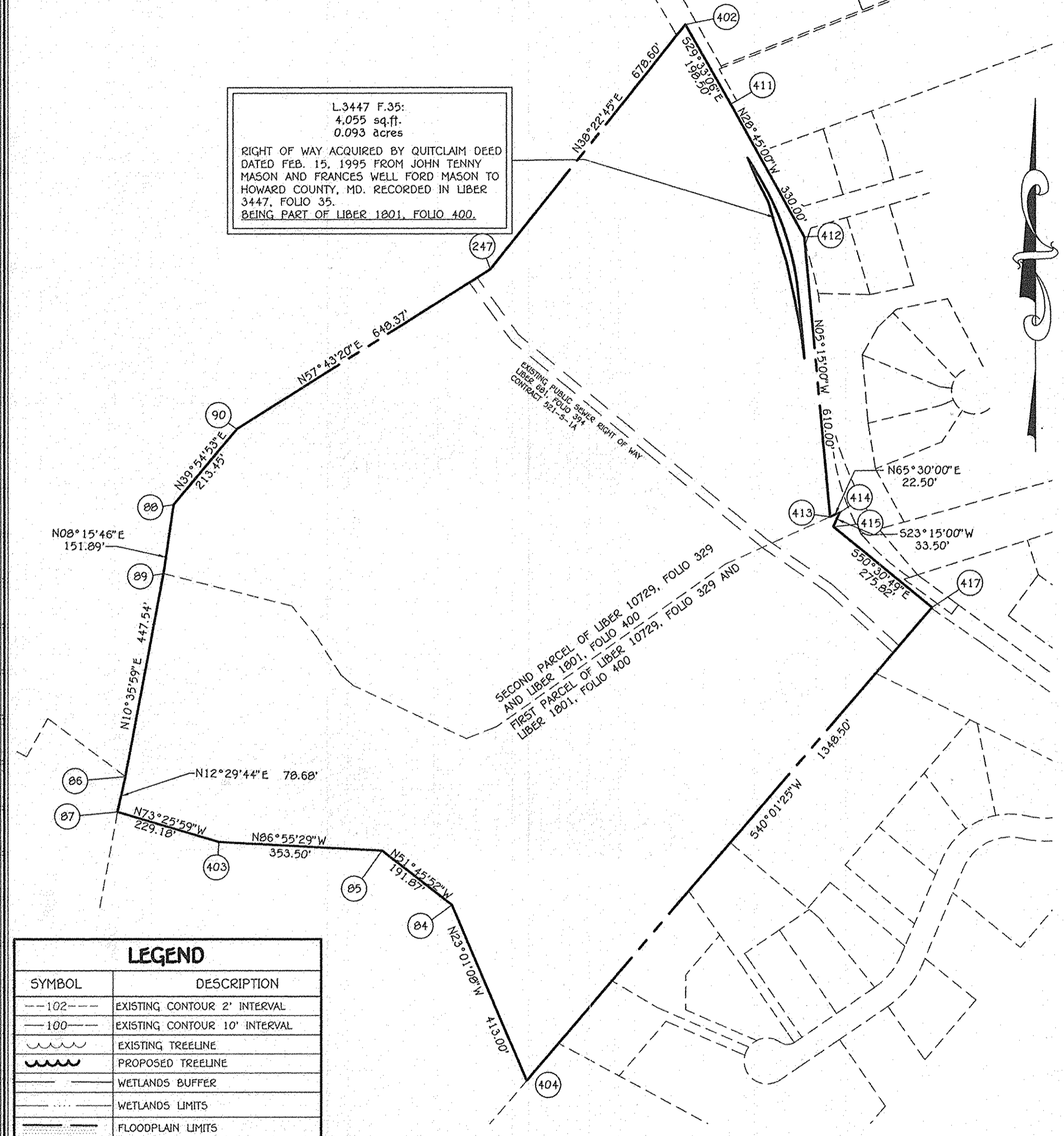
ZONING: R-20

TAX MAP No. 30, GRID No. 2
PARCEL No. 86

- GENERAL NOTES
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (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 BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
5. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2004 ZONING REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL NO. 75-2003 AND THE COMP LITE ZONING REGULATION AMENDMENTS EFFECTIVE 7/28/06. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
6. COORDINATES BASED ON NAVD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 24GE AND NO. 30BA
Station No. 24GE N 578,706.5244 E 1,352,699.6688 Elev. = 445.695
Station No. 30BA N 573,149.0939 E 1,357,083.1735 Elev. = 397.140
7. SUBJECT PROPERTY ZONED R-20, USING THE R-ED REGULATIONS. THIS PROPERTY IS SUBJECT TO COUNCIL BILL NO. 2, "SECTION 12B... OF THE ZONING REGULATIONS (CB-2-2012) WHICH ALLOWS SUNROOMS AND ROOM EXTENSIONS NOT MORE THAN 10 FEET INTO THE REAR SETBACK ALONG, NOT MORE THAN 60% OF THE REAR FACE OF THE DWELLING ON A LOT WHICH ADJOINS OPEN SPACE ALONG A MAJORITY OF THE REAR LOT LINE FOR R-ED LOTS RECORDED AFTER THE EFFECTIVE DATE OF CB-2-2012...
8. BACKGROUND INFORMATION:
a. SUBDIVISION NAME: MASON PROPERTY
b. TAX MAP NO.: 30
c. PARCEL NO.: 86
d. ZONING: R-20
e. ELECTION DISTRICT: SECOND
f. GROSS AREA OF TRACT = 46.487 ACRES
g. NUMBER OF BUILDABLE LOTS: 93
h. NET DENSITY = 42,508 x 2 UNITS/ACRE = 85, TRANSFER INTO PROPERTY @ 10% = 8, MAX. DENSITY ALLOWED = 93
i. NUMBER OF OPEN SPACE LOTS: 2
j. AREA OF BUILDABLE LOTS: 16,687 ACRES
k. AREA OF OPEN SPACE LOTS: 23,482 ACRES (23,287 Ac. credited)
l. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 6,318 ACRES
m. PREVIOUS FILE NUMBERS:
n. AREA OF FLOODPLAIN = 3,519 ACRES
o. AREA OF 25% OR GREATER SLOPES = 0.460 ACRES (outside floodplain)
p. NET AREA OF TRACT = 42,508 ACRES
9. OPEN SPACE REQUIREMENTS:
a. REQUIRED OPEN SPACE = (50% x 46,487 Ac. (GROSS AREA)) = 23,244 ACRES
b. PROVIDED OPEN SPACE = 23,482 ACRES (23,287 ACRES CREDITED & 0.195 ACRES NON-CREDITED)
10. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-160.
11. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
12. EXISTING WATER IS PUBLIC (CONTRACT NO. 801 W&S).
EXISTING SEWER IS PUBLIC (CONTRACT NOS. 801 W&S, 521-5-1A)
13. SOILS INFORMATION TAKEN FROM HOWARD COUNTY SOIL SURVEY ISSUED JULY 1968, MAP NO. 19.
14. EXISTING PAVING AND/OR STRUCTURES LOCATED ON SITE ARE TO BE RAZED AS SHOWN ON PLAN (SHEETS 2 THRU 4). THE EXISTING DWELLINGS ON PROPOSED LOTS 74 AND 80 ARE TO REMAIN.
15. BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. DATED JANUARY, 2012.
16. TOPOGRAPHIC CONTOURS BASED ON AERIAL SURVEY PERFORMED BY HARFORD AERIAL SURVEYS, INC. DATED DECEMBER, 2011 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY PREPARED BY FISHER, COLLINS AND CARTER, INC. DATED MARCH, 2012.
17. THERE ARE AREAS OF STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.B., (0.46 Ac. outside of floodplain).
18. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2010 MDE, CHAPTER 5 REGULATIONS AND THE LATEST HOWARD COUNTY DESIGN MANUAL, VOL. I, CHAPTER 5 ADOPTED ON OR AROUND MAY 4, 2010. GROUNDWATER RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF STONE RESERVOIRS LOCATED BENEATH THE VARIOUS ESD FACILITIES. THE REQUIRED ESD VOLUMES WILL BE PROVIDED BY BIO-RETENTION, MICRO BIO-RETENTION, DRYWELLS, RAINGARDENS AND INFILTRATION BERMS. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. THE STORMWATER MANAGEMENT FACILITIES (BIO-RETENTION, MICRO BIO-RETENTION AND INFILTRATION BERMS) WILL BE PRIVATELY OWNED BY THE H.O.A. AND JOINTLY MAINTAINED BY THE H.O.A. AND HOWARD COUNTY. THE STORMWATER MANAGEMENT FACILITIES (DRYWELLS & RAINGARDENS) WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNER.
19. SEVERAL SPECIMEN TREES ARE LOCATED ON-SITE AND HAVE BEEN SHOWN ON THESE PLANS.
20. FLOODPLAIN STUDY SHOWN HEREON WAS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED MARCH, 2012.
21. TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP, INC. DATED JANUARY, 2012.
22. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY MCCARTHY & ASSOCIATES, INC. DATED MARCH, 2012.
23. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
24. NO CEMETERIES EXIST WITHIN THIS SUBDIVISION. ONE HISTORIC STRUCTURE EXISTS ON-SITE, HO 401, SQUIRREL HILL (NOT INVENTORIED) LOCATED ON PROPOSED LOT 80.
25. APPROVAL OF THIS ECP DOES NOT CONSTITUTE APPROVAL OF ANY SUBSEQUENT OR ASSOCIATED SUBDIVISION OR SITE DEVELOPMENT PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION AND SITE PLAN STAGES. THEREFORE, THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS, INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN, AS THE PROJECT PROGRESSES.
26. THE DISTURBANCE OF ENVIRONMENTAL FEATURES IS CONSIDERED ESSENTIAL FOR THE CONSTRUCTION OF ROAD 'A' AND THE PROPOSED SEWER MAIN.

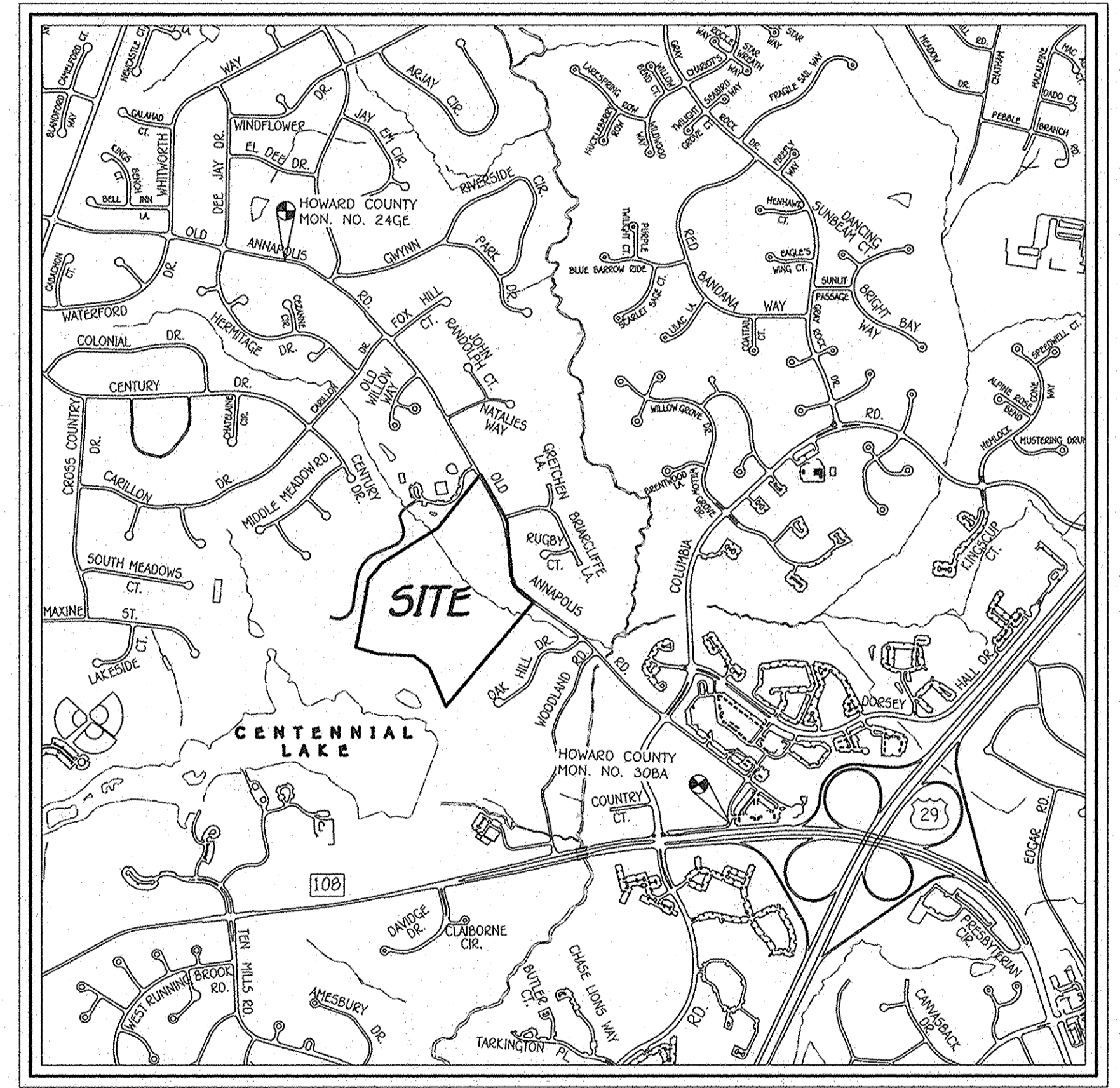
SHEET INDEX table with columns SHEET NO. and DESCRIPTION. Rows include TITLE SHEET, ENVIRONMENTAL CONCEPT PLAN, SCHEMATIC GRADING & SEDIMENT CONTROL PLAN, STORMWATER MANAGEMENT DETAILS, DRAINAGE AREA MAP.

ROADWAY INFORMATION CHART table with columns ROAD NAME, CLASSIFICATION, DESIGN SPEED, POSTED SPEED LIMIT, R/W WIDTH. Rows include ROAD 'A', ROAD 'B', ROAD 'C', ROAD 'D'.



LEGEND table with columns SYMBOL and DESCRIPTION. Includes symbols for existing contours, treelines, wetlands, floodplains, sidewalks, storm drains, bio-retention facilities, drywells, infiltration berms, specimen trees, and various fences.

METES AND BOUNDS
SCALE: 1" = 200'



VICINITY MAP
SCALE: 1" = 1200'

SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

CONCEPT DESIGN SUMMARY INFORMATION table with columns and rows for GROSS AREA, DEVELOPABLE AREA, PROPOSED % IMPERVIOUS AREA, FOREST AREA, FLOODPLAIN AREA, GREEN OPEN SPACE AREA, WETLAND/WETLAND BUFFER AREA, ERODIBLE SOIL AREA, TARGET Pe, and TARGET ESDVOL REQUIREMENT.

1. SINCE THE ENVIRONMENTAL CONCEPT PLAN DOES NOT REQUIRE BORINGS OR GEOTECHNICAL ANALYSIS, THE GROUNDWATER TABLE DEPTH AND ANY ROCK FORMATIONS HAVE NOT BEEN VERIFIED. A FULL GEOTECHNICAL ANALYSIS WILL ACCOMPANY THE PRELIMINARY PLAN AT WHICH TIME THE PLAN CAN BE REVISED AS NECESSARY.

ESD NARRATIVE:
1. THE EXISTING NATURAL RESOURCES ON-SITE CONSIST OF WETLANDS, STREAMS AND THEIR ASSOCIATED BUFFERS IN ADDITION TO AREAS OF EXISTING FOREST. THESE RESOURCES ARE BEING PROTECTED BY UTILIZING THE REQUIRED WETLAND BUFFERS AND STREAM BUFFERS FOR THESE FEATURES. THE EXISTING FOREST IS BEING PROTECTED IN ACCORDANCE WITH THE FOREST CONSERVATION MANUAL.
2. THE SITE IMPROVEMENTS AND DEVELOPED AREA WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS AS CLOSE AS POSSIBLE. NO STREAM IMPACTS ARE PROPOSED THAT WOULD ALTER ANY NATURAL FLOW PATTERNS.
3. THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES WILL BE IN ACCORDANCE WITH THE LATEST MDE STANDARDS AND SPECIFICATIONS UTILIZING SEVERAL SEDIMENT BASINS AND TRAPS AS WELL AS PERMETER EARTH DIKES AND SILT FENCE.
4. THE REDUCTION OF IMPERVIOUS AREA TYPICALLY EXPERIENCED IN R-20 ZONING WILL BE ACHIEVED THRU A CLUSTER DEVELOPMENT DESIGN USING AN R-ED ZONING OVERLAY WHICH PROVIDES 50% OPEN SPACE. R-20 ZONING REQUIRES CURB AND GUTTER ALONG PUBLIC ROADWAYS. THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS WILL NOT ALLOW PERMEABLE PAVEMENT FOR PUBLIC ROADS AT THIS TIME. HOWEVER, THE USE OF FLOW THRU INLETS DRAINING INTO MICRO BIO-RETENTION FACILITIES (M-6) WITH BYPASS INLETS TO TREAT ROADWAY RUNOFF ARE BEING PROPOSED. THERE ARE ALSO DRYWELLS (M-5), BIO-RETENTION FACILITIES (F-6) AND INFILTRATION BERMS (M-4) BEING PROPOSED WITH THIS PROJECT.
5. THE PROPOSED ESD MEASURES SHOWN ON THIS PLAN HAVE ATTEMPTED TO MEET THE REQUIRED Pe OF 1.8-INCHES FOR THIS PROJECT TO THE MAXIMUM EXTENT PRACTICABLE. NO ADDITIONAL CHAPTER 3 DEVICES ARE PROPOSED AS ALTERNATIVES TO THE CHAPTER 5 ESD MEASURES AT THIS TIME.

OWNER: J. MASON FAMILY LLC & F.W. MASON FAMILY, LLC
DEVELOPER: LAND DESIGN AND DEVELOPMENT, INC.
MASON PROPERTY BUILDABLE LOTS 1 THRU 93 AND OPEN SPACE LOTS 94 & 95
TAX MAP No. 30 GRID No. 2 PARCEL No. 86
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 20, 2012
SHEET 1 OF 11

LEGEND

SYMBOL	DESCRIPTION
---102---	EXISTING CONTOUR 2' INTERVAL
---100---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	WETLANDS BUFFER
---	WETLANDS LIMITS
---	FLOODPLAIN LIMITS
---	PROPOSED 4' SIDEWALK
---	STORM DRAIN
---	BIO-RETENTION FACILITY
---	DRYWELL
---	INFILTRATION BERM
---	PERMEABLE PAVING
---	15% TO 24.99% SLOPES
---	25% OR GREATER SLOPES
---	NON-CREDIT OPEN SPACE

	EXISTING SPECIMEN TREE TO REMAIN
	EXISTING SPECIMEN TREE TO BE REMOVED

MASON PROPERTY ESD SUMMARY TABLE No.1
 Date: 05-15-12

Facility	Area (Sq. Ft.)	Imp. Area (Sq. Ft.)	Lawn Area (Sq. Ft.)	% of Total Area	ESD Practice	Untreated Imp. Area (Sq. Ft.)	Filter Area (Sq. Ft.)	ESD Vol (CF)	Adj. ESD Vol (CF)	ESD Vol (CF)	Rev (CF)	% Imp
1	8582	6527	1755	0.57	Macro Bio-Ret.	0	225	544	708	730	90	79%
2	8582	6527	1755	0.57	Macro Bio-Ret.	0	225	544	708	730	90	79%
3	7420	6663	657	0.51	Macro Bio-Ret.	0	375	947	1111	1330	150	89%
4	7910	6663	657	0.51	Macro Bio-Ret.	0	375	947	1111	1330	150	89%
5	8427	2903	1553	0.42	Macro Bio-Ret.	0	300	518	363	600	1300	80%
6	4806	20270	24130	3.45	Bio-Retention	0	2216	3039	2050	4419	688	62%
7	7914	6663	657	0.51	Macro Bio-Ret.	0	375	947	1111	1330	150	89%
8	7904	6742	2162	0.55	Macro Bio-Ret.	0	500	833	605	1025	109	72%
9	11565	4487	7108	0.59	Bio-Retention	0	4768	7115	5325	2800	1514	68%
10	131810	20538	10814	0.59	Bio-Retention	0	1285	2024	2204	2007	638	68%
11	46187	12556	30937	3.23	Macro Bio-Ret.	0	930	2268	1714	1718	372	27%
12	53182	16502	36272	3.12	Macro Bio-Ret.	0	1750	2912	2164	2865	600	30%
13	16657	6750	13307	1.38	Macro Bio-Ret.	0	450	1078	809	860	180	34%
14	47839	13369	38869	2.93	Macro Bio-Ret.	0	900	2139	1604	1718	360	28%
15	42542	14760	27262	2.97	Macro Bio-Ret.	0	1000	2561	1771	1910	400	35%
16	74261	17580	36761	3.20	Bio-Retention	0	1400	3510	2678	2674	560	30%
17	18167	7663	11104	1.31	Macro Bio-Ret.	0	760	1163	896	2953	304	61%
18	46634	14650	32764	3.27	Macro Bio-Ret.	0	1346	2548	1686	4688	538	30%
19	151248	56109	67113	10.36	Bio-Retention	0	3600	10202	6977	6876	1440	37%
20	51882	24750	27152	3.63	Macro Bio-Ret.	0	1600	3892	2919	3056	640	50%
21	13418	7319	6037	0.83	Macro Bio-Ret.	0	480	1050	800	916	160	54%
22	34485	10248	24159	2.41	Macro Bio-Ret.	0	674	1656	1242	2405	270	28%
23	106663	88663	136660	13.60	Bio-Retention	0	4600	10644	8208	8995	1600	35%
Totals (119655)	424848	270907	88,000	N/A	N/A	N/A	33917	69669	51585	68640	12946	N/A

PROPOSED ALIGNMENT CURVE TABLE

CURVE #	ROAD NAME	STATION	RADIUS	LENGTH	DELTA	TANGENT	CHORD
C17	CL ROAD D	STA 0+92.93 TO STA 2+56.29	500.00'	163.36'	011°27'33"	162.63'	S9°41'06.63"E
C9	CL ROAD A	STA 1+09.40 TO STA 4+73.80	350.00'	364.41'	016°22'13"	348.17'	S32°29'14.62"W
C10	CL ROAD A	STA 4+73.80 TO STA 12+33.84	350.00'	760.04'	016°22'13"	619.26'	S64°52'12.29"W
C11	CL ROAD A	STA 12+33.84 TO STA 14+42.87	350.00'	209.03'	016°22'13"	205.94'	N70°01'47.43"W
C12	CL ROAD A	STA 15+14.55 TO STA 18+96.68	225.00'	382.13'	025°27'53"	337.83'	N38°29'07.40"W
C13	CL ROAD A	STA 20+81.88 TO STA 22+88.26	250.00'	206.38'	022°55'06"	200.57'	N33°49'04.85"E
C14	CL ROAD A	STA 23+92.56 TO STA 30+43.94	230.00'	651.37'	024°54'40"	454.50'	S41°24'00.07"E
C15	CL ROAD A	STA 31+77.14 TO STA 32+81.28	210.00'	104.15'	027°17'01"	103.08'	S25°31'29.87"W
C16	CL ROAD C	STA 0+19.91 TO STA 1+14.71	300.00'	94.80'	019°05'55"	94.40'	N28°05'49.80"W

PLAN
 SCALE: 1" = 50'



Ret Slawick
CHIEF, DIVISION OF LAND DEVELOPMENT

7/24/12
DATE

Valerie Williams
CHIEF, DEVELOPMENT ENGINEERING DIVISION

7/25/12
DATE



MATCH LINE SEE THIS SHEET

MATCH LINE SEE SHEET 2

MATCH LINE SEE SHEET 4

HOWARD COUNTY, MARYLAND
DEPARTMENT OF RECREATION AND PARKS
LIBER 545, FOLIO 687A,
TAX MAP 30, PART OF PARCEL 10
ZONED: R-20

OPEN SPACE
LOT 94
21.009 ac.±

CHI MING WEI
WEI KUANG WEI
LIBER 5417, FOLIO 456
TAX MAP 30, PART OF PARCEL 368
LOT 8
OAK HILL ESTATES, LOTS 1 THRU 10
PLAT NO. 4279

BOARD OF COMMISSIONERS OF HOWARD COUNTY, MARYLAND
DEPARTMENT OF RECREATION AND PARKS
LIBER 471, FOLIO 756
TAX MAP 30, PARCEL 249
ZONED: R-20

PLAN
SCALE: 1" = 50'

OPEN SPACE
LOT 94
21.009 ac.±

MATCH LINE SEE THIS SHEET

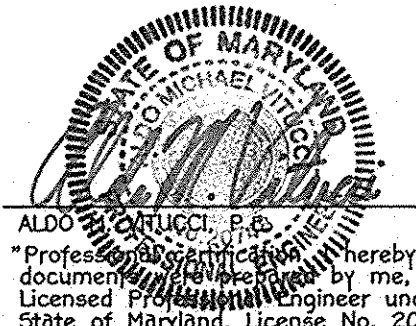
LEGEND	
SYMBOL	DESCRIPTION
--- 102 ---	EXISTING CONTOUR 2' INTERVAL
--- 100 ---	EXISTING CONTOUR 10' INTERVAL
~~~~~	EXISTING TREELINE
~~~~~	PROPOSED TREELINE
~~~~~	WETLANDS BUFFER
~~~~~	WETLANDS LIMITS
~~~~~	FLOODPLAIN LIMITS
~~~~~	PROPOSED 4' SIDEWALK
---	STORM DRAIN
---	BIO-RETENTION FACILITY
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	EXISTING SPECIMEN TREE TO REMAIN
	EXISTING SPECIMEN TREE TO BE REMOVED

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2000

TAX MAP 30, PART OF PARCEL 11
LOT 2
"LAWRENCE PARCEL"
(PART OF OAK HILL ESTATES)
PLAT NO. 9401
OWNER

DEVELOPER
LAND DESIGN AND DEVELOPMENT, INC.
c/o MR. DON REIJWER
5300 DORSEY HALL DRIVE, SUITE 102
ELICOTT CITY, MARYLAND 21042
(443-367-0422)



7/19/12
DATE

ENVIRONMENTAL CONCEPT PLAN
MASON PROPERTY
BUILDABLE LOTS 1 THRU 93 AND
OPEN SPACE LOTS 94 & 95

ZONING: R-20
TAX MAP No. 30 GRID No. 2 PARCEL No. 86
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 20, 2012
SHEET 3 OF 11

7/24/12 DATE

7/25/12 DATE

SPECIMEN TREE LIST

Table with 5 columns: Number, Common Name, Species Name, DBH (inches), Condition. Lists 39 specimen trees with details like 'sugar maple', 'white oak', etc.

EXISTING SPECIMEN TREE TO REMAIN

EXISTING SPECIMEN TREE TO BE REMOVED

MASON PROPERTY

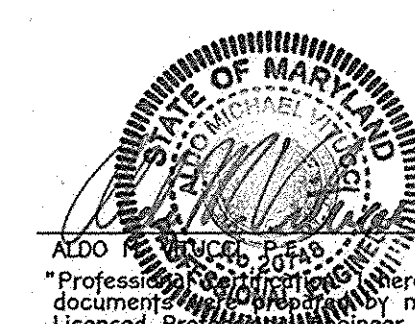
ESD SUMMARY TABLE No. 1

Large summary table for Mason Property ESD, including columns for Facility, Area, Imp. Area, ESD Practice, and various ESD values.

ENVIRONMENTAL CONCEPT PLAN MASON PROPERTY

BUILDABLE LOTS 1 THRU 93 AND OPEN SPACE LOTS 94 & 95

ZONING: R-20, TAX MAP No. 30, GRID No. 2, PARCEL No. 86, DATE: JULY 20, 2012



OWNER

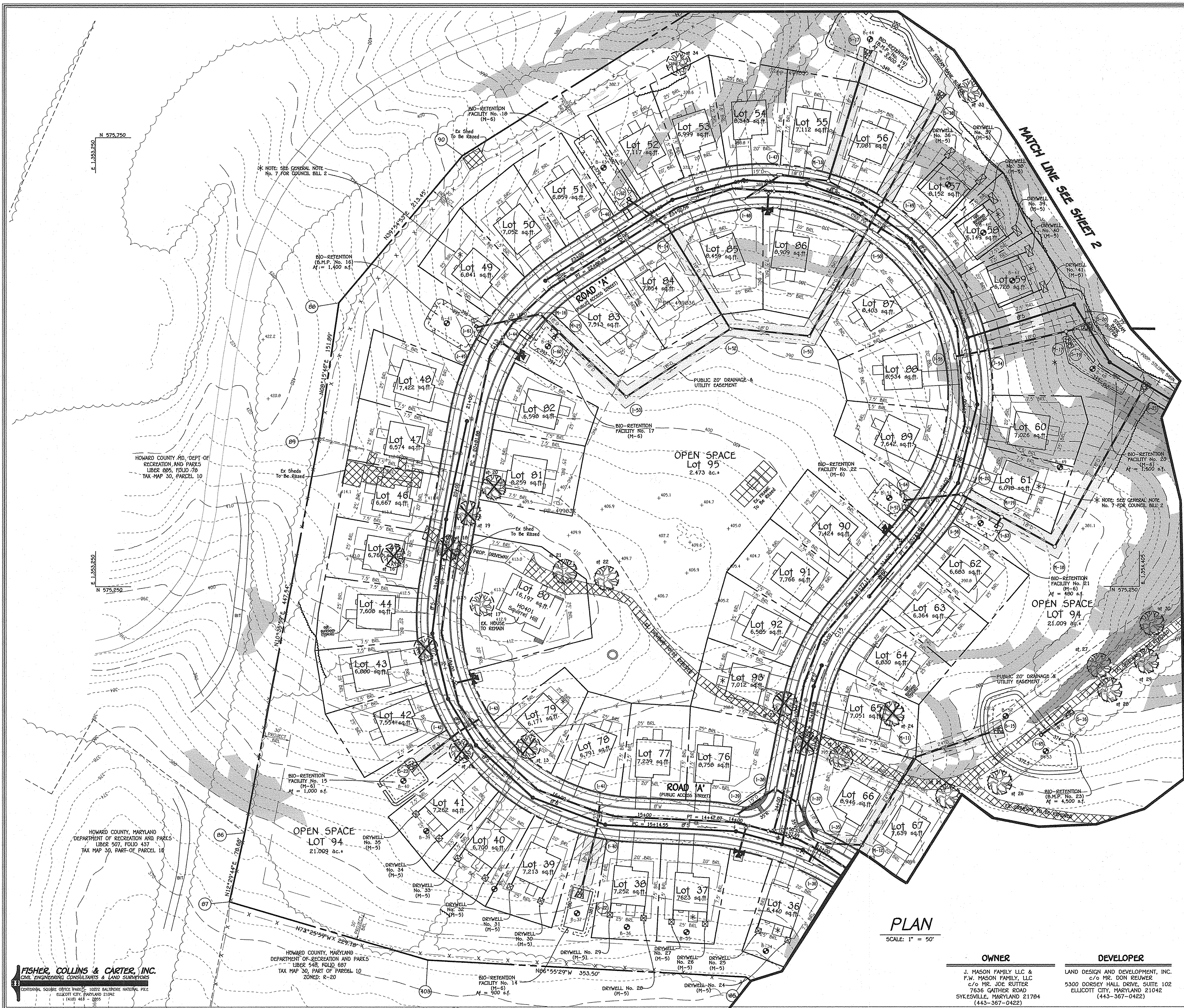
J. MASON FAMILY LLC & F.W. MASON FAMILY, LLC c/o MR. JOE CUTLER

DEVELOPER

LAND DESIGN AND DEVELOPMENT, INC. c/o MR. DON REUMER

PLAN

SCALE: 1" = 50'



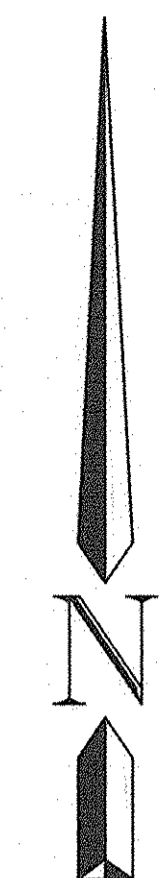
FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

HOWARD COUNTY, MARYLAND DEPARTMENT OF RECREATION AND PARKS

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Robert S. DeLoach 2/25/12
 CHIEF, DIVISION OF LAND DEVELOPMENT 88 DATE

William J. ... 7/25/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



LEGEND	
SYMBOL	DESCRIPTION
---102---	EXISTING CONTOUR 2' INTERVAL
---100---	EXISTING CONTOUR 10' INTERVAL
---102---	PROPOSED CONTOUR 2' INTERVAL
---100---	PROPOSED CONTOUR 10' INTERVAL
-sf-	SILT FENCE
-sf-sf-	SUPER-SILT FENCE
LOD	LIMIT OF DISTURBANCE
	RIP-RAP INFLOW PROTECTION
	WETLANDS BUFFER
	WETLANDS LIMITS
	FLOODPLAIN LIMITS
---	PROPOSED 4' SIDEWALK
---	STORM DRAIN
---	BIO-RETENTION FACILITY
⊗	DRYWELL
⊗	INFILTRATION BERM
---	NON-CREDIT OPEN SPACE
---	EXISTING TREELINE

DRAINAGE AREA TO SEDIMENT TRAP/BASIN		
FACILITY	EX. D.A.	PROP. D.A.
BASIN #1	4.54 ac.	3.60 ac.
BASIN #2	3.52 ac.	4.09 ac.
BASIN #3	7.24 ac.	7.34 ac.
BASIN #4	2.20 ac.	2.86 ac.
P.O.S.T. #1	2.50 ac.	2.76 ac.
P.O.S.T. #2	0.58 ac.	0.54 ac.
S.O.S.T. #1	1.95 ac.	2.60 ac.
S.O.S.T. #2	1.83 ac.	2.18 ac.
S.O.S.T. #3	0.35 ac.	0.75 ac.
S.O.S.T. #4	0.35 ac.	0.35 ac.
S.O.S.T. #5	1.23 ac.	1.45 ac.
S.O.S.T. #6	2.08 ac.	1.39 ac.
S.O.S.T. #7	0.71 ac.	1.06 ac.

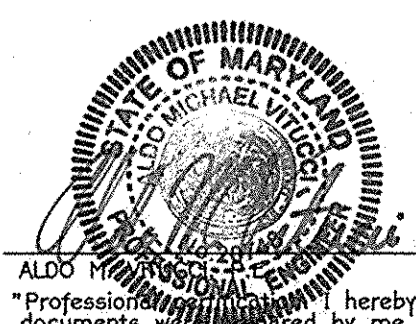


PLAN
 SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21142
 (410) 461-2999

OWNER
 J. MASON FAMILY LLC & F.W. MASON FAMILY, LLC
 c/o MR. JOE CUTLER
 7636 GATHER ROAD
 SYKESVILLE, MARYLAND 21784
 (443-367-0422)

DEVELOPER
 LAND DESIGN AND DEVELOPMENT, INC.
 c/o MR. DON REUWER
 5300 DORSEY HALL DRIVE, SUITE 102
 ELLICOTT CITY, MARYLAND 21142
 (443-367-0422)



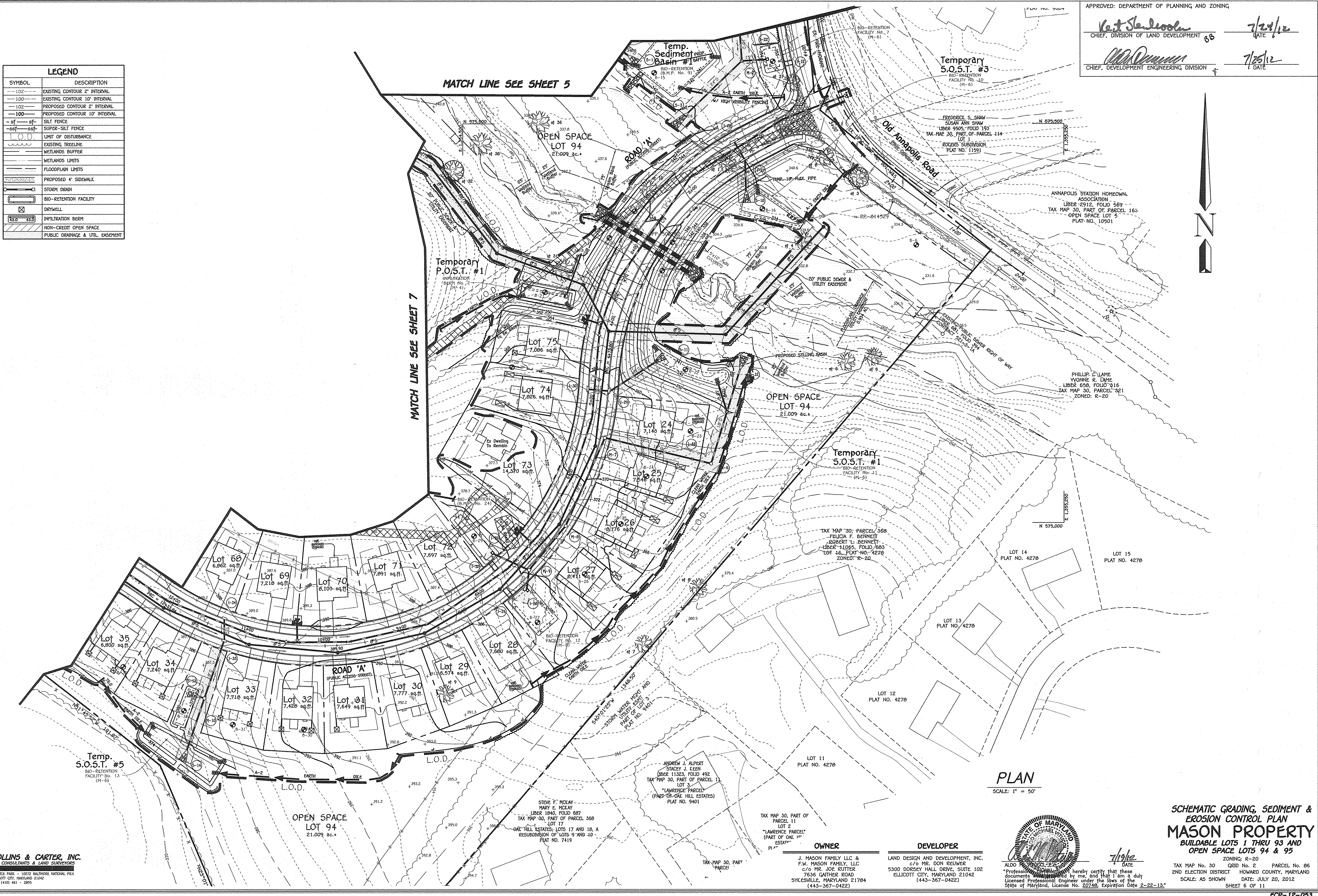
7/19/12
 DATE
 "I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13."

SCHEMATIC GRADING, SEDIMENT & EROSION CONTROL PLAN
MASON PROPERTY
 BUILDABLE LOTS 1 THRU 93 AND OPEN SPACE LOTS 94 & 95
 ZONING: R-20
 TAX MAP No. 30 GRID No. 2 PARCEL No. 86
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: JULY 20, 2012
 SHEET 5 OF 11

Keit Steinhilber
CHIEF, DIVISION OF LAND DEVELOPMENT 65
7/29/12
DATE

Alma Danner
CHIEF, DEVELOPMENT ENGINEERING DIVISION 4
7/25/12
DATE

LEGEND	
SYMBOL	DESCRIPTION
---102---	EXISTING CONTOUR 2' INTERVAL
---100---	EXISTING CONTOUR 10' INTERVAL
---102---	PROPOSED CONTOUR 2' INTERVAL
---100---	PROPOSED CONTOUR 10' INTERVAL
-sf-	SILT FENCE
-ssf-	SUPER-SILT FENCE
LOD	LIMIT OF DISTURBANCE
---	EXISTING TREE LINE
---	WETLANDS BUFFER
---	WETLANDS LIMITS
---	FLOODPLAIN LIMITS
---	PROPOSED 4' SIDEWALK
---	STORM DRAIN
---	BIO-RETENTION FACILITY
---	DRYWELL
---	INFILTRATION BERM
---	NON-CREDIT OPEN SPACE
---	PUBLIC DRAINAGE & UTIL. EASEMENT



PLAN
SCALE: 1" = 50'

SCHMATIC GRADING, SEDIMENT & EROSION CONTROL PLAN
MASON PROPERTY
BUILDABLE LOTS 1 THRU 93 AND
OPEN SPACE LOTS 94 & 95



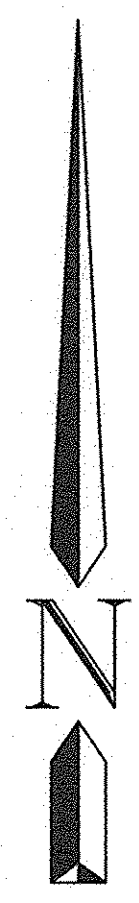
ZONING: R-20
TAX MAP No. 30 GRID No. 2 PARCEL No. 86
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 20, 2012
SHEET 6 OF 11

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE: P.O. BOX 10072, BALTIMORE, MARYLAND 21286
ELLICOTT CITY, MARYLAND 21042
(410) 461-2299

OWNER
J. MASON FAMILY LLC & F.W. MASON FAMILY, LLC
c/o MR. JOE RUTTER
7636 GATHER ROAD
SYKESVILLE, MARYLAND 21784
(443-367-0422)

DEVELOPER
LAND DESIGN AND DEVELOPMENT, INC.
c/o MR. DON REUWER
5300 DORSEY HALL DRIVE, SUITE 102
ELLICOTT CITY, MARYLAND 21042
(443-367-0422)

1:201111052.dwg/Chw 34 Worksheet11042 Sheet 57 Ecp Sediment Plans.dwg, SHEET 6, 7/19/2012 2:05:49 PM, 1:1

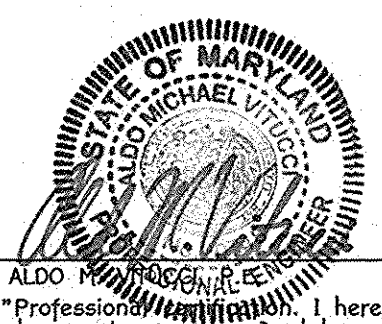


LEGEND	
SYMBOL	DESCRIPTION
---102---	EXISTING CONTOUR 2' INTERVAL
---100---	EXISTING CONTOUR 10' INTERVAL
---102---	PROPOSED CONTOUR 2' INTERVAL
---100---	PROPOSED CONTOUR 10' INTERVAL
-sf -sf-	SILT FENCE
-sdf -sdf-	SUPER-SILT FENCE
---	LIMIT OF DISTURBANCE
---	EXISTING TREELINE
---	WETLANDS BUFFER
---	WETLANDS LIMITS
---	FLOODPLAIN LIMITS
---	PROPOSED 4' SIDEWALK
---	STORM DRAIN
---	BIO-RETENTION FACILITY
---	DRYWELL
---	INFILTRATION BERM
---	NON-CREDIT OPEN SPACE
---	PUBLIC DRAINAGE & UTIL. EASEMENT

PLAN
 SCALE: 1" = 50'

OWNER
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 SYKESVILLE, MARYLAND 21784
 (443-367-0422)

DEVELOPER
 LAND DESIGN AND DEVELOPMENT, INC.
 c/o MR. DON REUWER
 5300 DORSEY HALL DRIVE, SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 (443-367-0422)



7/12/12
 DATE

SCHEMATIC GRADING, SEDIMENT & EROSION CONTROL PLAN
MASON PROPERTY
 BUILDABLE LOTS 1 THRU 93 AND
 OPEN SPACE LOTS 94 & 95

ZONING: R-20
 TAX MAP No. 30 GRID No. 2 PARCEL No. 86
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: JULY 20, 2012
 SHEET 7 OF 11

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK, 10295 BALDORNE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 441-2900
 (410) 441-2900

HOWARD COUNTY, MARYLAND
 DEPARTMENT OF RECREATION AND PARKS
 LIBER 507, FOLIO 437
 TAX MAP 30, PART-OF PARCEL 10
 ZONED: R-20

OPEN SPACE
 LOT 94
 21.009 ac.

Temp.
 5.0.5.1. #7
 BIO-RETENTION FACILITY No. 15
 (M-6)

Temp.
 5.0.5.1. #6
 BIO-RETENTION FACILITY No. 14
 (M-6)

Temp.
 Sediment Basin #2
 BIO-RETENTION FACILITY No. 23
 (M-6)

OPEN SPACE
 LOT 94
 21.009 ac.

Temp.
 Sediment Basin #4
 BIO-RETENTION FACILITY No. 22
 (M-6)

OPEN SPACE
 Temporary Stockpile
 2.473 ac.

HOWARD COUNTY, MD, DEPT OF
 RECREATION AND PARKS
 LIBER 895, FOLIO 78
 TAX MAP 30, PARCEL 10

N 575,250
 E 1,353,250

N 575,250
 E 1,353,250

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC, and Re v. In some instances where permeability is great, these facilities may be used for Op as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorus and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
- > Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
- > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
- > Test soil conditions to determine if soil amendments are necessary.
- > Plants shall be located so that access is possible for structure maintenance.
- > Stabilize heavy flow areas with erosion control mats or soil.
- > Temporarily divert flows from seeded areas until vegetation is established.
- > See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (which contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume (Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993). Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60 %

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

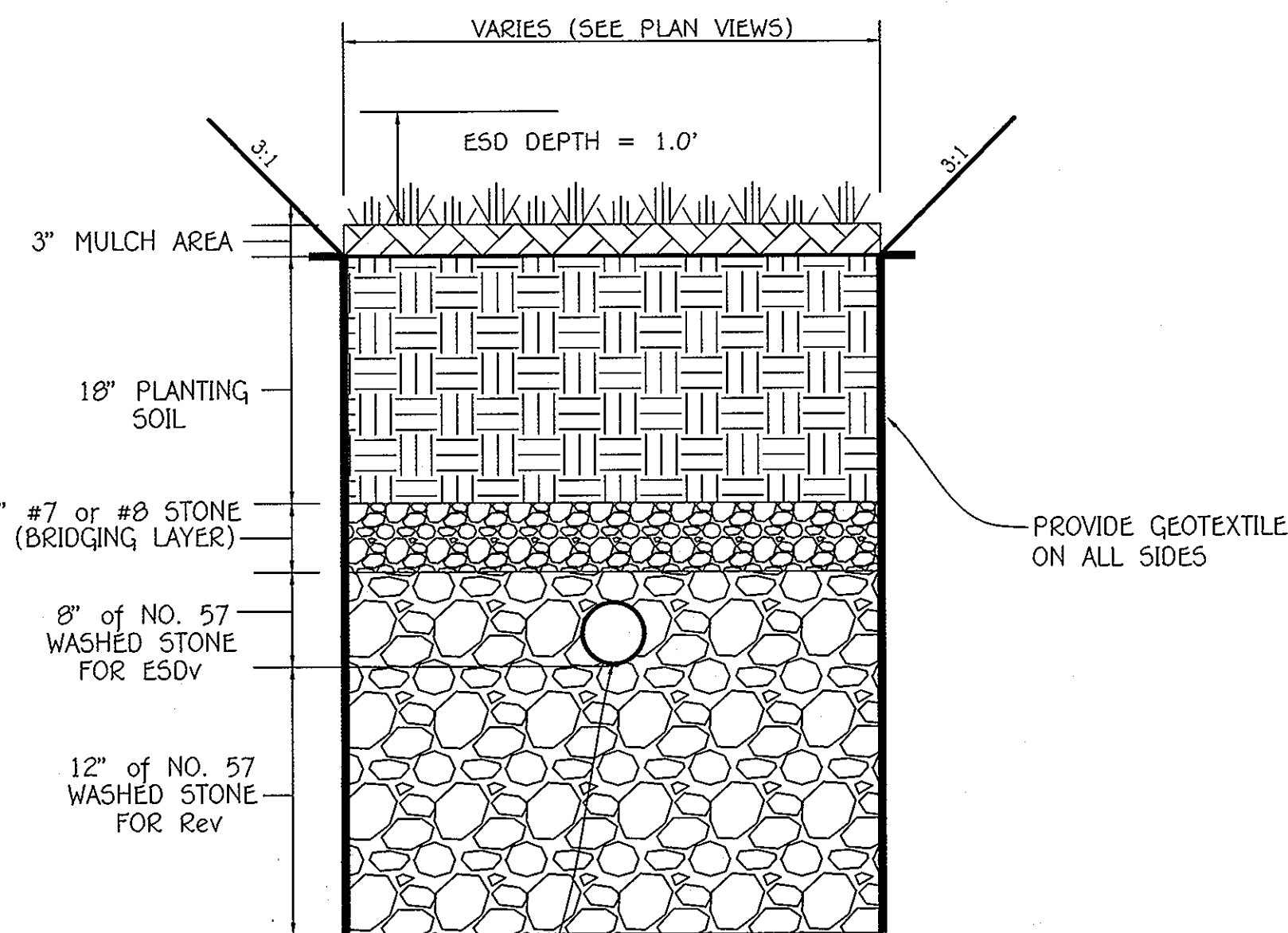
Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.

The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge

is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Clayton and Schueler, 1997.

Operation and Maintenance Schedule For Bio-Retention Areas (M-6)

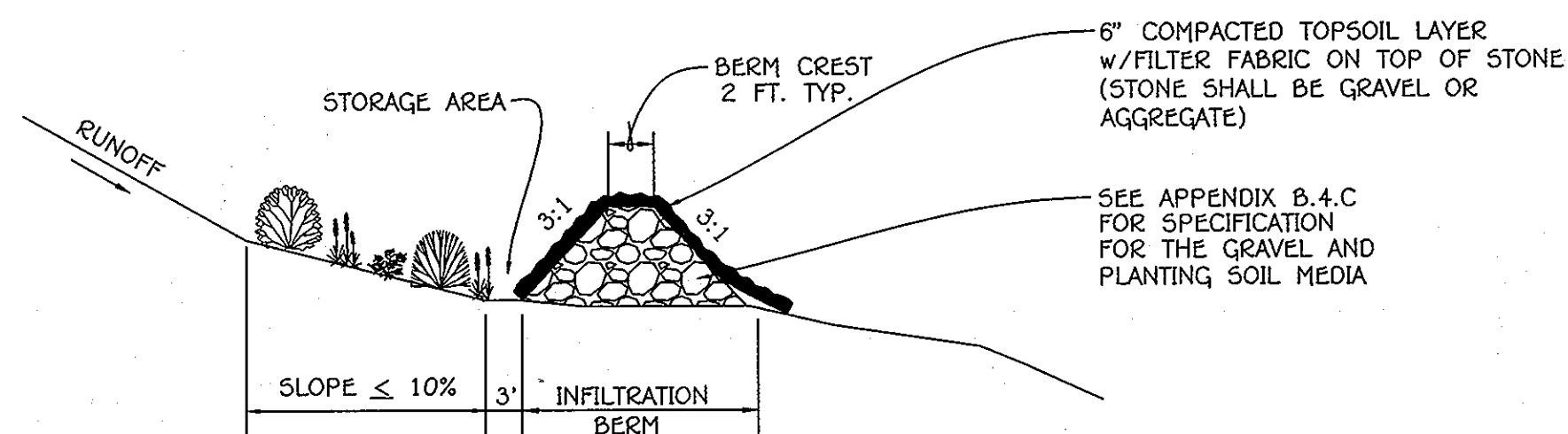
- The owner shall maintain the plant material, mulch layer and soil layer annually, maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material. Treat diseased trees and shrubs and replace all deficient stakes and wires.
- The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.



NOTE: PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW.

Micro Bio-Retention (M-6) Section

NO SCALE

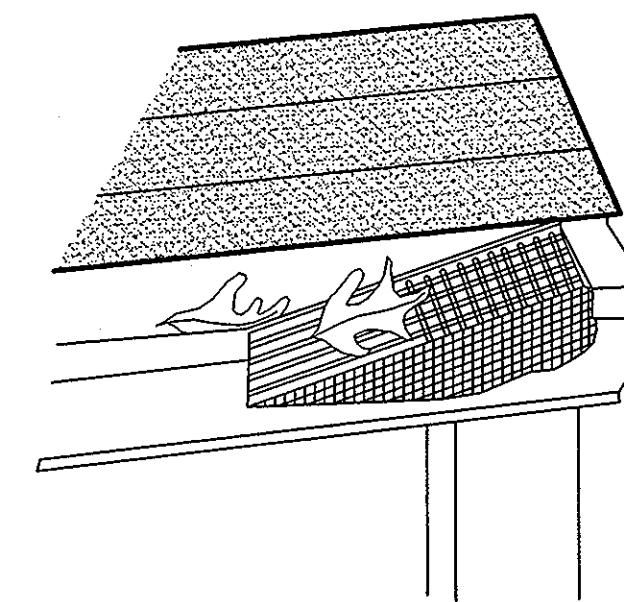


Typical Section - Infiltration Berm (M-4)

NO SCALE

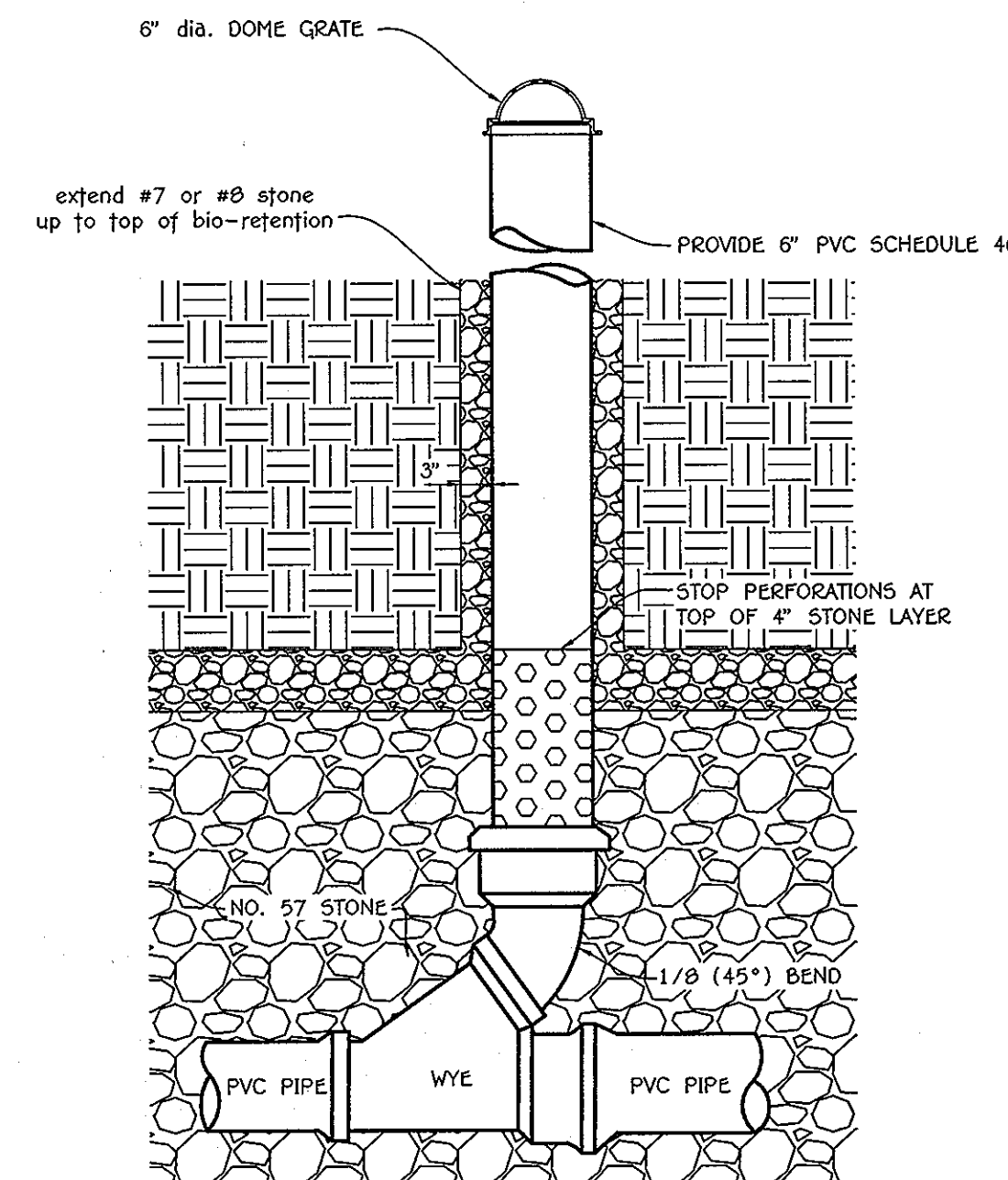
Operation And Maintenance Schedule For Infiltration Berms (M-4)

- BERM SHOULD BE INSPECTED REGULARLY TO ENSURE THAT PONDING WATER DOES NOT CREATE NUISANCE CONDITIONS.
- SIGNS OF CONCENTRATED FLOW AND OTHER SURFACE EROSION SHOULD BE REPAIRED TO PROMOTE SHEET FLOW.
- A DENSE MAT OF VEGETATION SHOULD BE PRESENT AT ALL TIMES. VEGETATION SHOULD BE REPLACED AS NEEDED.
- WHEN INFILTRATION BERMS ARE INCORPORATED IN A SYSTEM USING OTHER PRACTICES, THE MAINTENANCE CRITERIA FOR THAT PRACTICE SHALL ALSO BE CONSIDERED.



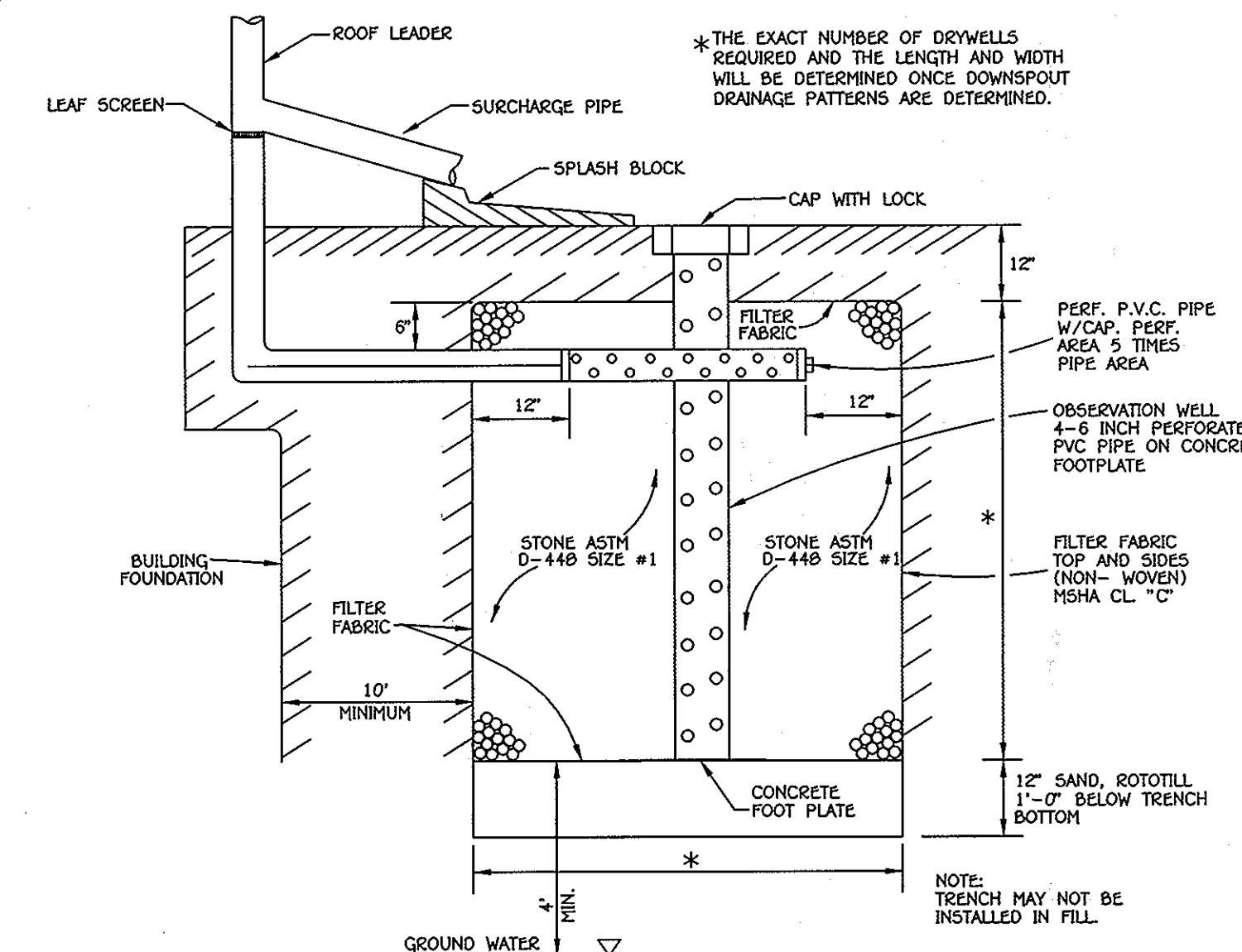
Gutter Drain Filter Detail

NOT TO SCALE



Typical Clean-Out/Observation Well Detail

NO SCALE

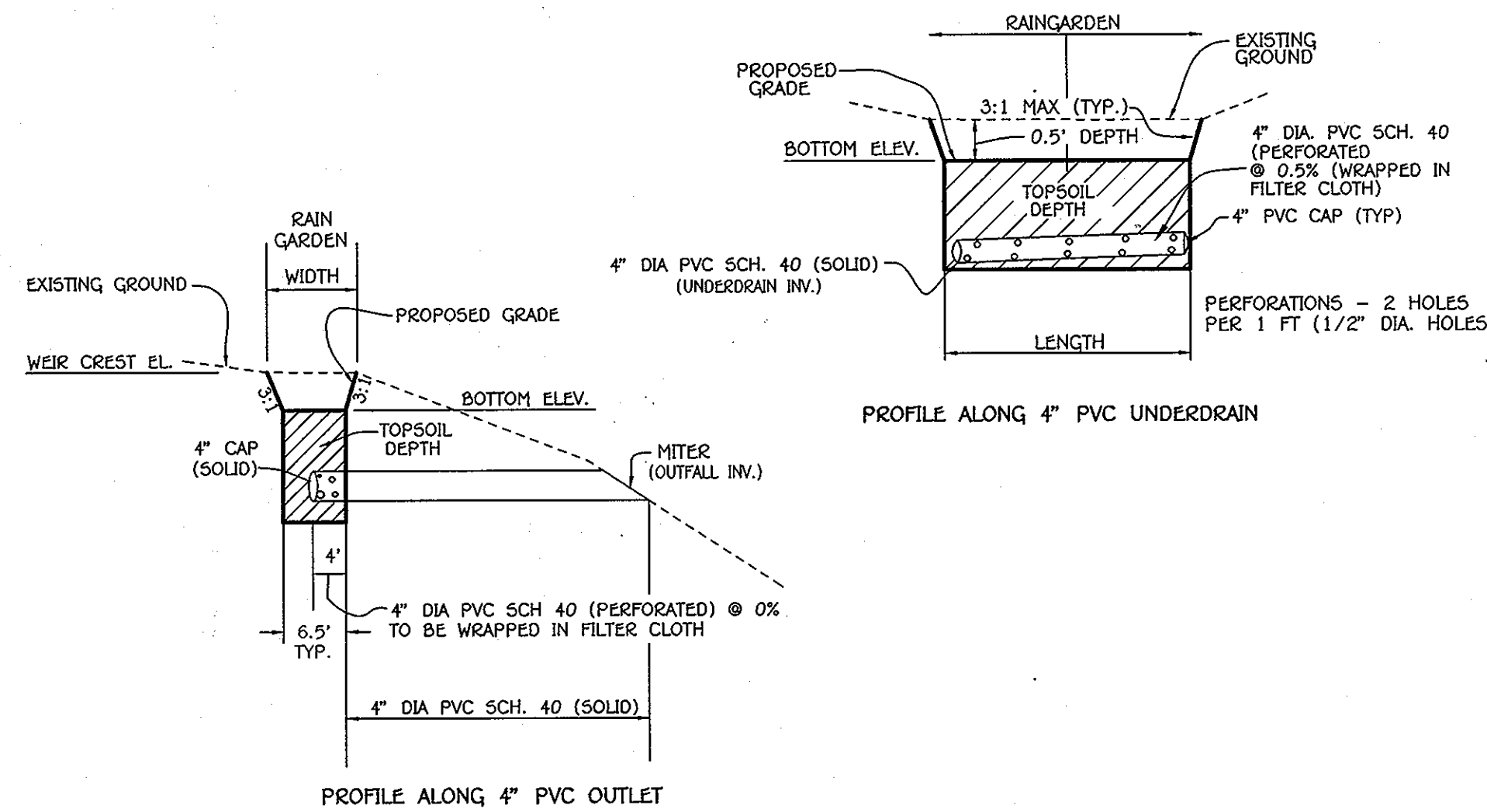


Dry Well (M-5) Detail

NOT TO SCALE

Operation And Maintenance Schedule For Raingarden Areas (M-7)

- The owner shall maintain the plant material, mulch layer and soil layer annually, maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material. Treat diseased trees and shrubs and replace all deficient stakes and wires.
- The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.



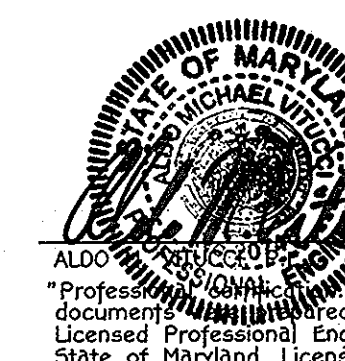
Raingarden (M-7) Detail

NO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2000

OWNER: J. MASON FAMILY LLC & F.W. MASON FAMILY, LLC
c/o MR. JOE RUTTER
7636 GAITHER ROAD
SYKESVILLE, MARYLAND 21784
(443-367-0422)

DEVELOPER: LAND DESIGN AND DEVELOPMENT, INC.
c/o MR. DON REUBER
5300 DORSEY HALL DRIVE, SUITE 102
ELLICOTT CITY, MARYLAND 21042
(443-367-0422)



Stormwater Management Details
MASON PROPERTY
BUILDABLE LOTS 1 THRU 93 AND
OPEN SPACE LOTS 94 & 95
ZONING: R-20
GRID No. 2
TAX MAP No. 30
2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DATE: JULY 20, 2012
SHEET 8 OF 11

7/28/12 DATE
7/25/12 DATE
K. J. SHANAHAN CHIEF, DIVISION OF LAND DEVELOPMENT
M. J. ... CHIEF, DEVELOPMENT ENGINEERING DIVISION

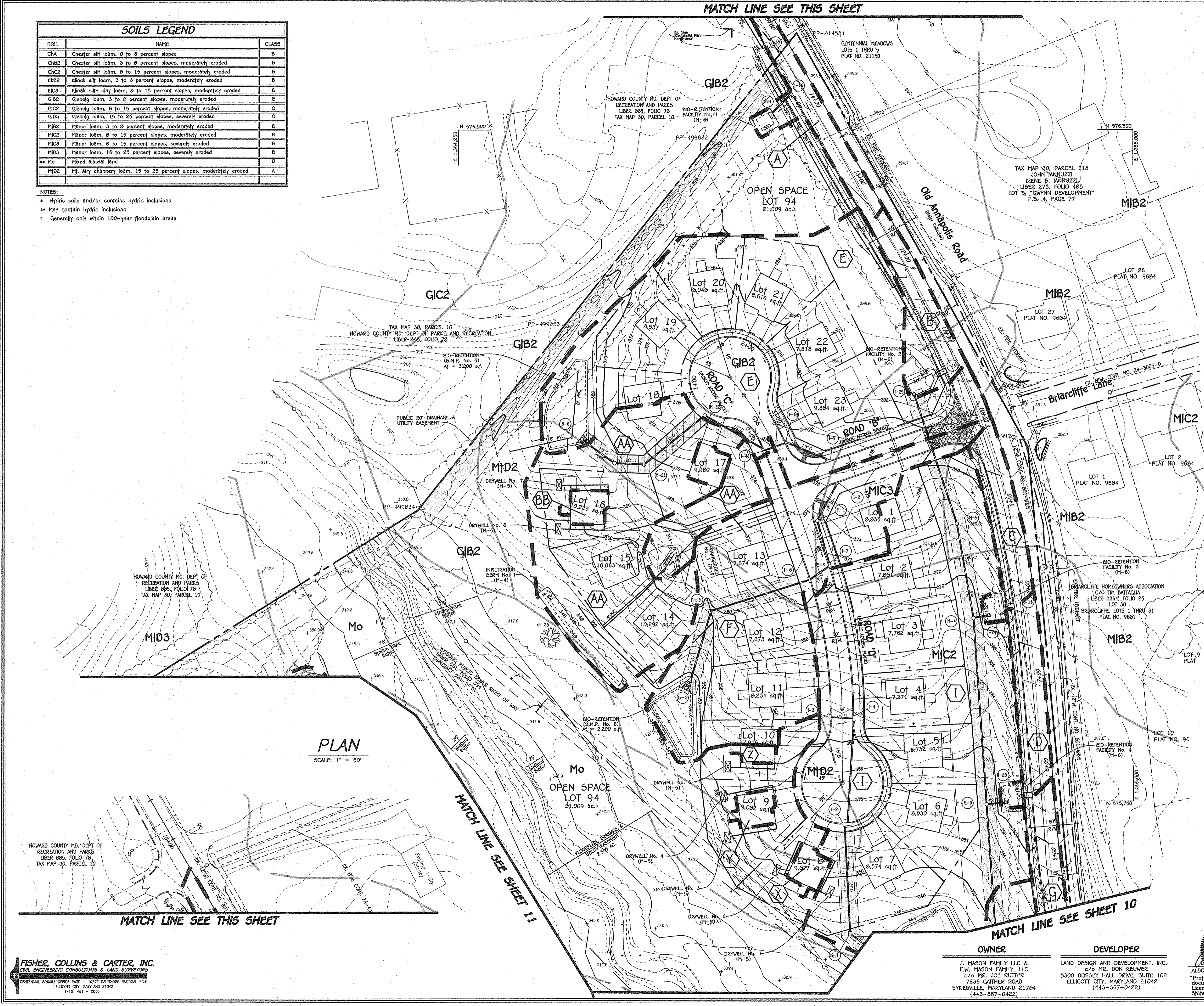
SOILS LEGEND table with columns SOIL, NAME, CLASS. Includes entries like CHA, CHB2, CHC2, etc.

NOTES: Hydric soils and/or contains hydric inclusions; May contain hydric inclusions; Generally only within 100-year floodplain areas

LEGEND table with columns SYMBOL, DESCRIPTION. Includes symbols for existing/propose contour intervals, drainage area lines, wetlands, etc.

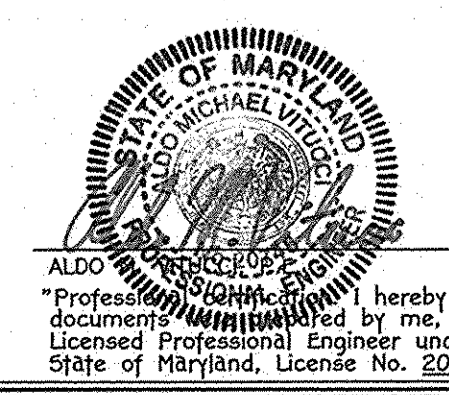
MASON PROPERTY ESD SUMMARY TABLE No. 1. Includes site area (46.49 Acres), pre-developed conditions, and target ESDvol.

Main ESD Summary Table with columns: Area, Facility, Area, Imp. Area, Lawn Area, % of Total Area, ESD Practice Utilized, ESD Practice Provided, etc.



FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

OWNER: J. MASON FAMILY LLC & F.W. MASON FAMILY, LLC
DEVELOPER: LAND DESIGN AND DEVELOPMENT, INC.

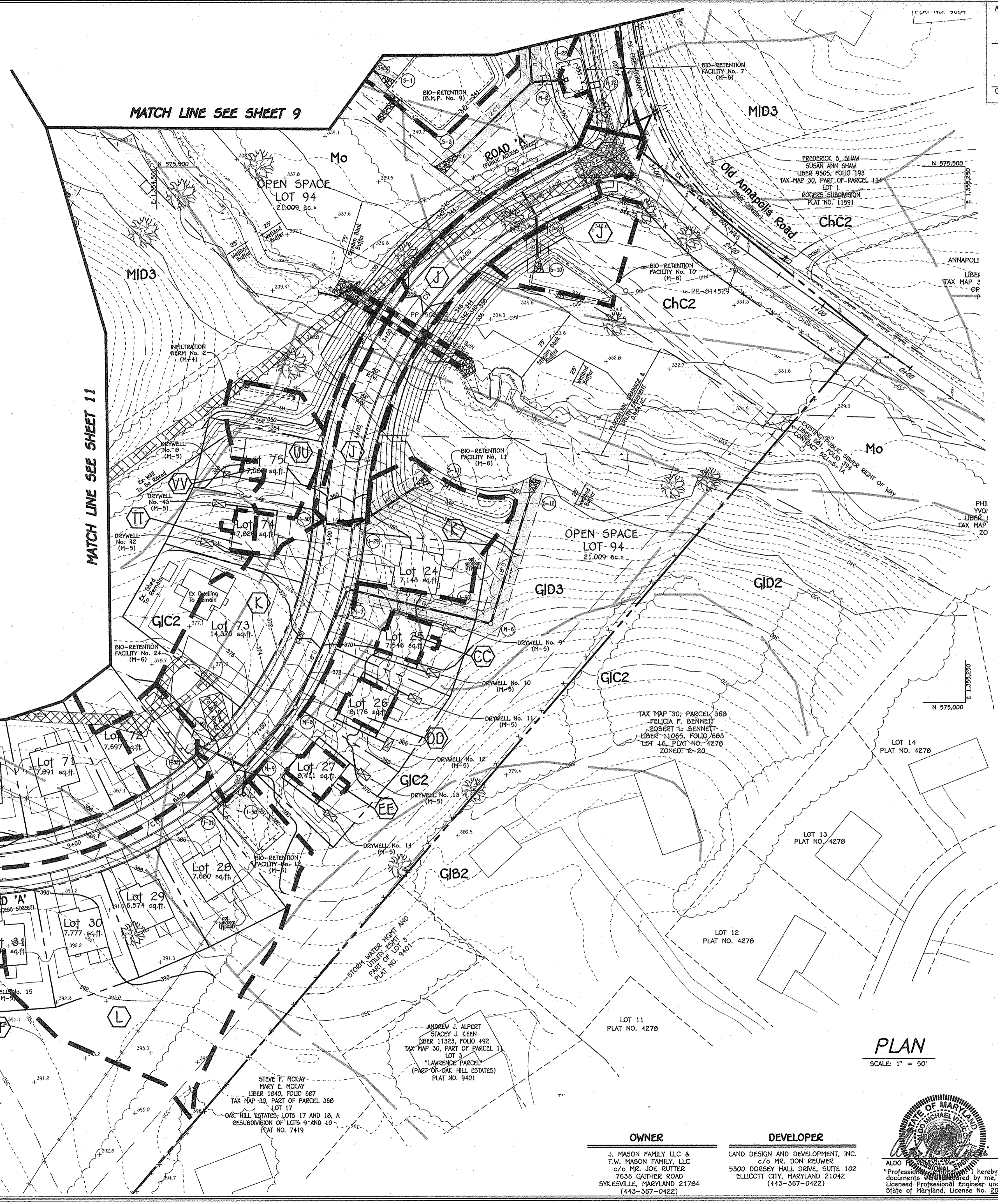


ENVIRONMENTAL CONCEPT PLAN DRAINAGE AREA MAP & SOILS MAP MASON PROPERTY BUILDABLE LOTS 1 THRU 93 AND OPEN SPACE LOTS 94 & 95

Kat Salomon 7/24/12
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
William 7/25/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SOILS LEGEND		
SOIL	NAME	CLASS
ChA	Chester silt loam, 0 to 3 percent slopes	B
ChB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
EkB2	Eloak silt loam, 3 to 8 percent slopes, moderately eroded	B
EkC3	Eloak silty clay loam, 8 to 15 percent slopes, moderately eroded	B
GIB2	Glencly loam, 3 to 8 percent slopes, moderately eroded	B
QIC2	Glencly loam, 8 to 15 percent slopes, moderately eroded	B
QID3	Glencly loam, 15 to 25 percent slopes, severely eroded	B
MIB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MIC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MIC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MID3	Manor loam, 15 to 25 percent slopes, severely eroded	B
** Mo	Mixed alluvial land	D
MID2	Mt. Airy channery loam, 15 to 25 percent slopes, moderately eroded	A

NOTES:
* Hydric soils and/or contains hydric inclusions
** May contain hydric inclusions
† Generally only within 100-year floodplain areas



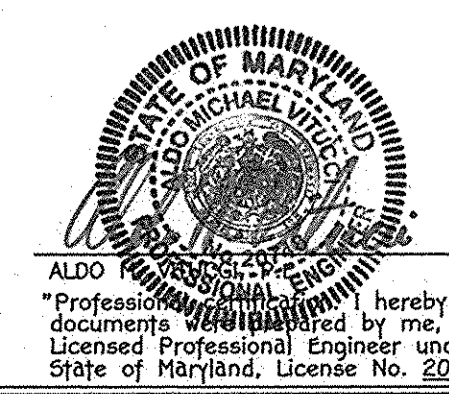
LEGEND	
SYMBOL	DESCRIPTION
---102---	EXISTING CONTOUR 2' INTERVAL
---100---	EXISTING CONTOUR 10' INTERVAL
- - -102 - - -	PROPOSED CONTOUR 2' INTERVAL
- - -100 - - -	PROPOSED CONTOUR 10' INTERVAL
st-1	SPECIMEN TREE
---	SOILS LINE
---	DRAINAGE AREA LINE
---	EXISTING TREELINE
---	WETLANDS BUFFER
---	WETLANDS LIMITS
---	FLOODPLAIN LIMITS
---	PROPOSED 4' SIDEWALK
---	STORM DRAIN
---	BIO-RETENTION FACILITY
---	DRYWELL
---	INFILTRATION BERM
---	NON-CREDIT OPEN SPACE



PLAN
SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2299

OWNER	DEVELOPER
J. MASON FAMILY LLC & F.W. MASON FAMILY, LLC c/o MR. JOE SUTTER 7636 GANTHER ROAD SYKESVILLE, MARYLAND 21784 (443-367-0422)	LAND DESIGN AND DEVELOPMENT, INC. c/o MR. DON REUWER 5300 DORSEY HALL DRIVE, SUITE 102 ELLICOTT CITY, MARYLAND 21042 (443-367-0422)



**ENVIRONMENTAL CONCEPT PLAN
DRAINAGE AREA MAP & SOILS MAP
MASON PROPERTY
BUILDABLE LOTS 1 THRU 93 AND
OPEN SPACE LOTS 94 & 95**

ZONING: R-20
GRID No. 2
TAX MAP No. 30
2ND ELECTION DISTRICT
SCALE: AS SHOWN
DATE: JULY 20, 2012
SHEET 10 OF 11

ALDO [Signature] 7/19/12
I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.

Karl Seidman 7/20/12
CHIEF, DIVISION OF LAND DEVELOPMENT 88 DATE
Michael J. ... 7/25/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION 4 DATE

SOILS LEGEND		
SOIL	NAME	CLASS
ChA	Chester silt loam, 0 to 3 percent slopes	B
ChB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
EkB2	Etioak silt loam, 3 to 8 percent slopes, moderately eroded	B
EtC3	Etioak silty clay loam, 8 to 15 percent slopes, moderately eroded	B
GIB2	Genesig loam, 3 to 8 percent slopes, moderately eroded	B
GIC2	Genesig loam, 8 to 15 percent slopes, moderately eroded	B
GID3	Genesig loam, 15 to 25 percent slopes, severely eroded	B
MB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MIC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MID3	Manor loam, 15 to 25 percent slopes, severely eroded	B
Mo	Mixed alluvial land	D
MD2	Mp. Airy channery loam, 15 to 25 percent slopes, moderately eroded	A

NOTES:
• Hydric soils and/or contains hydric inclusions
** May contain hydric inclusions
† Generally only within 100-year floodplain areas

LEGEND	
SYMBOL	DESCRIPTION
---102---	EXISTING CONTOUR 2' INTERVAL
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---102---	PROPOSED CONTOUR 2' INTERVAL
---100---	PROPOSED CONTOUR 10' INTERVAL
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---	STORM DRAIN
---	BIO-RETENTION FACILITY
---	DRYWELL
---	INFILTRATION BERM
---	NON-CREDIT OPEN SPACE



MATCH LINE SEE SHEET 10

MATCH LINE SEE SHEET 9

PLAN
SCALE: 1" = 50'

HOWARD COUNTY, MD, DEPT. OF RECREATION AND PARKS
LIBER. 895, FOLIO 78
TAX MAP 30, PARCEL 10

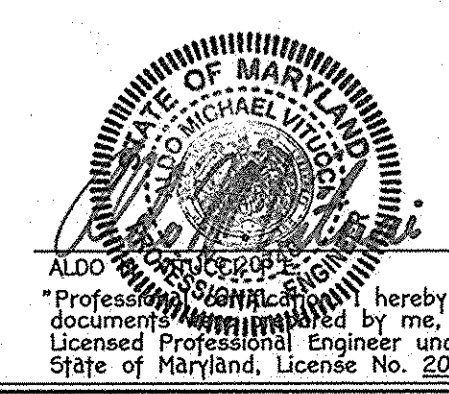
HOWARD COUNTY, MARYLAND
DEPARTMENT OF RECREATION AND PARKS
LIBER. 507, FOLIO 437
TAX MAP 30, PART OF PARCEL 16

HOWARD COUNTY, MARYLAND
DEPARTMENT OF RECREATION AND PARKS
LIBER. 548, FOLIO 697
TAX MAP 30, PART OF PARCEL 10
ZONED: R-20

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
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DEVELOPER
LAND DESIGN AND DEVELOPMENT, INC.
c/o MR. DON REUSER
5300 DORSEY HALL DRIVE, SUITE 102
ELICOTT CITY, MARYLAND 21042
(443-367-0422)



7/19/12
DATE
Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.

**ENVIRONMENTAL CONCEPT PLAN
DRAINAGE AREA MAP & SOILS MAP
MASON PROPERTY**
BUILDABLE LOTS 1 THRU 93 AND
OPEN SPACE LOTS 94 & 95
ZONING: R-20
TAX MAP No. 30 GRID No. 2 PARCEL No. 86
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 20, 2012
SHEET 11 OF 11