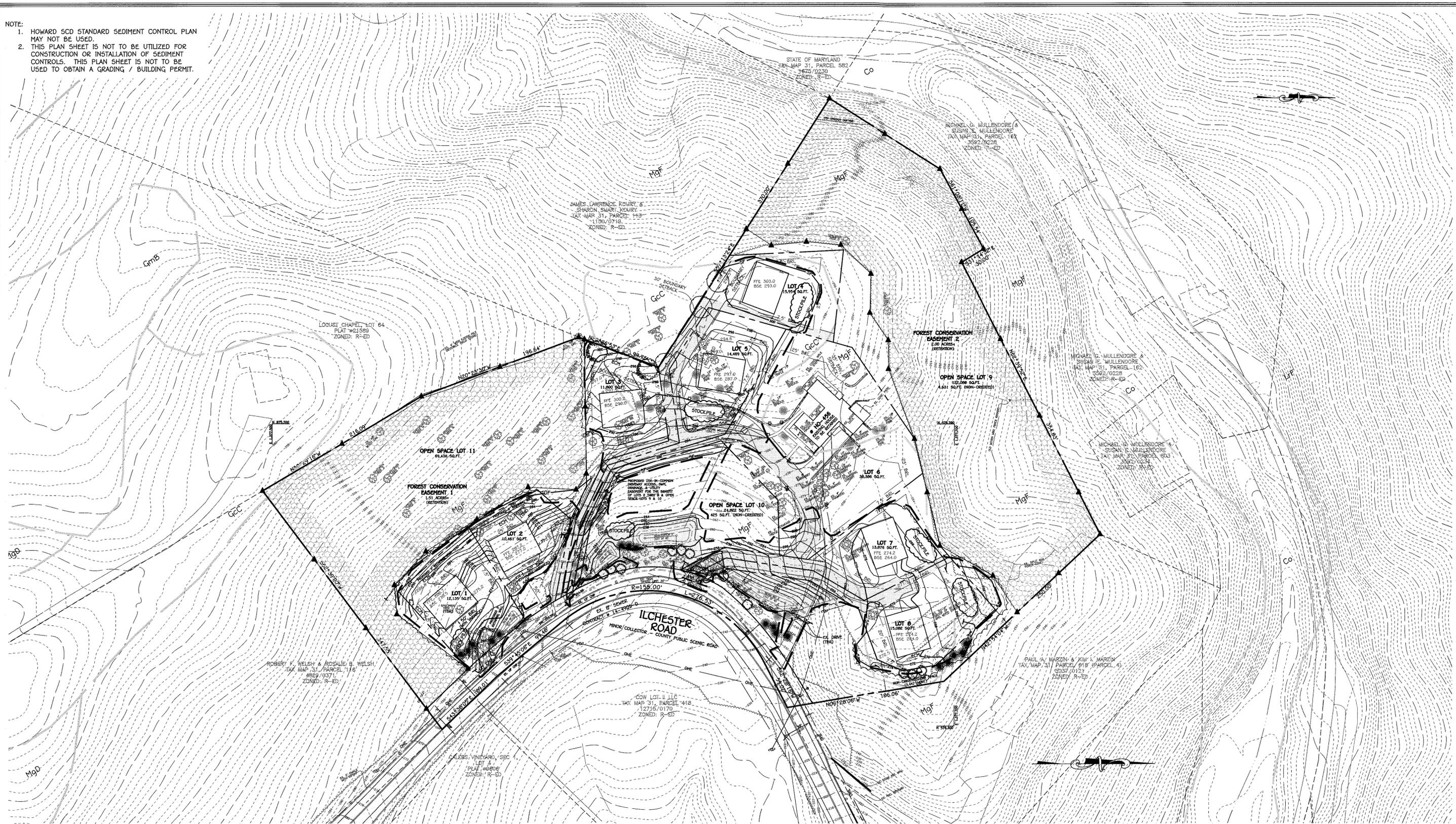


- NOTE:
 1. HOWARD SCD STANDARD SEDIMENT CONTROL PLAN MAY NOT BE USED.
 2. THIS PLAN SHEET IS NOT TO BE UTILIZED FOR CONSTRUCTION OR INSTALLATION OF SEDIMENT CONTROLS. THIS PLAN SHEET IS NOT TO BE USED TO OBTAIN A GRADING / BUILDING PERMIT.



FISHER, COLLINS & CARTER, INC.
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 CONTONAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2995

NO.	REVISION	DATE

0' 50' 100' 200'
 Scale: 1" = 50'

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 36306, EXPIRATION DATE: 1/12/18.

Stephanie J. Tate 9/11/16
 Stephanie J. Tate, Signature Of Professional Engineer DATE

DATE	DESCRIPTION

DEVELOPER/OWNER
 EVA J. NELSON
 4472 ILCHESTER ROAD
 ELICOTT CITY, MARYLAND 21043-6836
 443-293-7935

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Rachel... 9-06-16
 Chief, Division of Land Development Date

... 9-7-16
 Chief, Development Engineering Division Date

DEED	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
13557/275	4	R-ED	31	FIRST	6011.01

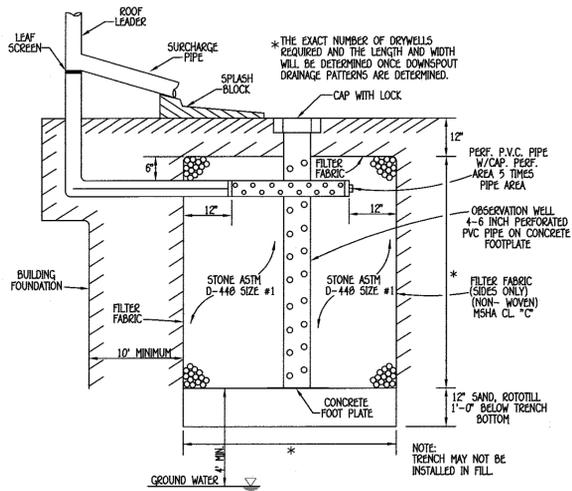
PRELIMINARY SEDIMENT AND EROSION CONTROL PLAN

OAK HILL
 LOTS 1 thru 8 & OPEN SPACE LOTS 9 thru 11
 4472 ILCHESTER ROAD
 ZONED: R-ED

TAX MAP NO.: 31 GRID NO.: 04 PARCEL NO.: 618
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: AUGUST, 2016
 SHEET 3 OF 4

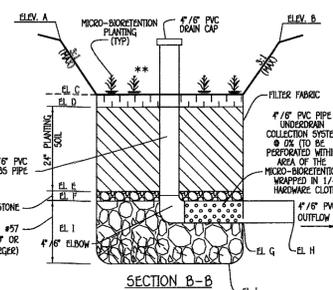
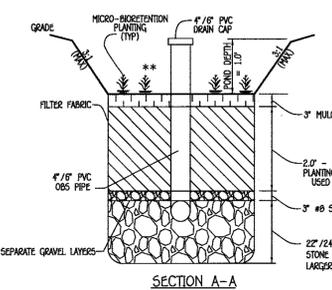
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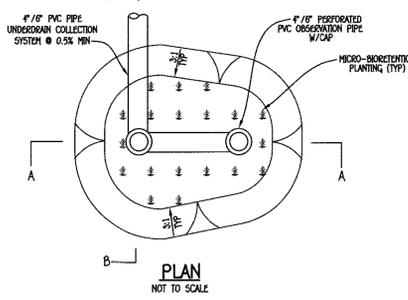
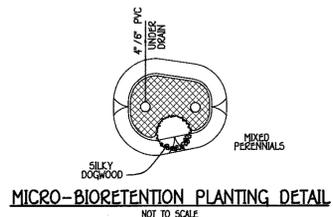


STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
4. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.



MICRO-BIORETENTION DETAIL (M-6)



- * MIXED PERENNIALS
- CUT-LEAF CONIFER (1.5' SP.)
- SEEDSAIL (1.5' SP.)
- JOE-PYE-WEED (3' SP.)
- SILKY DOGWOOD

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

1. 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.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF 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.
3. 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.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

MICRO-BIORETENTION PLANT MATERIAL					
MICRO-BIO 1 QUANTITY	MICRO-BIO 2 QUANTITY	BIO 3 QUANTITY	MICRO-BIO 4 QUANTITY	NAME	MAXIMUM SPACING (FT.)
10	14	65	50	MIXED PERENNIALS	1.5 TO 3.0 FT.
1	1	1	1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

MICRO-BIORETENTION / BIORETENTION									
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
1	265.00	265.00	264.00	263.75	261.75	261.50	261.17	259.50	259.67
2	258.00	258.00	257.00	256.75	254.75	254.50	254.17	252.50	252.67
3	257.00	257.00	256.00	255.75	253.75	253.50	253.17	251.50	251.67
4	251.00	251.00	250.00	249.75	247.75	247.50	247.17	245.50	245.67

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

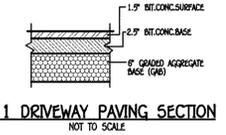
1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

DRY WELL CHART							
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L	W	D
LOT 1	1,000 SQ. FT.	80 C.F.	288 C.F.	100%*	12'	12'	5'
LOT 2	1,000 SQ. FT.	80 C.F.	288 C.F.	100%*	12'	12'	5'
LOT 3	1,000 SQ. FT.	80 C.F.	288 C.F.	100%*	12'	12'	5'
LOT 5	1,000 SQ. FT.	80 C.F.	288 C.F.	100%*	12'	12'	5'
LOT 7	1,000 SQ. FT.	80 C.F.	288 C.F.	100%*	12'	12'	5'
LOT 8	1,000 SQ. FT.	80 C.F.	200 C.F.	100%*	10'	10'	5'

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

Table B.4. Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix A: Table A.4	n/a	plantings are site-specific
Planting soil	loamy sand 60-65% compost 35-40% or sandy loam 50% coarse sand 30% compost 40%		USDA soil types loamy sand or sandy loam; clay content <5% (2' to 4' deep)
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum
Pea gravel/diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curbin drain	ornamental stone: washed cobbles	stone: 2" to 5"	PE Type 1 nonwoven
Geotextile		n/a	
Gravel (underdrains and infiltration berms)	ASHTO M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 756, Type PS 28 or ASHTO M-278	4" to 6" rigid schedule 40 PVC or 50835	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipe; not necessary underneath pipe. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3: 1 = 3500 psi at 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved site or local aggregates requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308.2.2.9; vertical loading H-10 or H-20; allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	ASHTO M-6 or ASTM-C-33	0.075" to 0.04"	Sand substitutions such as Diabase and Gneiss (ASHTO #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



P-1 DRIVEWAY PAVING SECTION NOT TO SCALE

FISHER, COLLINS & CARTER, INC.
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ELICOTT CITY, MARYLAND 21042
(410) 461 - 2895

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 1/12/18.
Stephanie J. Tule 9/1/16
Stephanie J. Tule, Signature Of Professional Engineer DATE



DEVELOPER/OWNER
EVA J. NELSON
4472 ILCHESTER ROAD
ELICOTT CITY, MARYLAND 21043-6836
443-253-7535

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kerthelund 9-01-16
Chief, Division of Land Development Date

W. Kelly 9-7-16
Chief, Development Engineering Division Date

PROJECT	SECTION	PARCEL NO.
OAK HILL	-	618
DEED	BLOCK NO.	ZONE
13557/275	4	R-ED
TAX/ZONE	ELEC. DIST.	CENSUS TR.
31	FIRST	6011.01

DETAILS

OAK HILL
LOTS 1 thru 8 & OPEN SPACE LOTS 9 thru 11
4472 ILCHESTER ROAD
ZONED: R-ED
TAX MAP NO.: 31 GRID NO.: 04 PARCEL NO.: 618
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2016
SHEET 4 OF 4

ECP-15-043