

BENCHMARK INFORMATION

HOWARD COUNTY CONTROL STATION #08AA - HORIZONTAL - (NAD '83)
 N 609,215.0191
 E 1,299,547.5412
 ELEVATION = 608.586 - VERTICAL - (NAVD '86)

HOWARD COUNTY CONTROL STATION #08BA - HORIZONTAL - (NAD '83)
 N 609,098.5466
 E 1,301,409.1044
 ELEVATION = 630.728 - VERTICAL - (NAVD '86)

ENVIRONMENTAL CONCEPT PLAN

SCHULTE PROPERTY

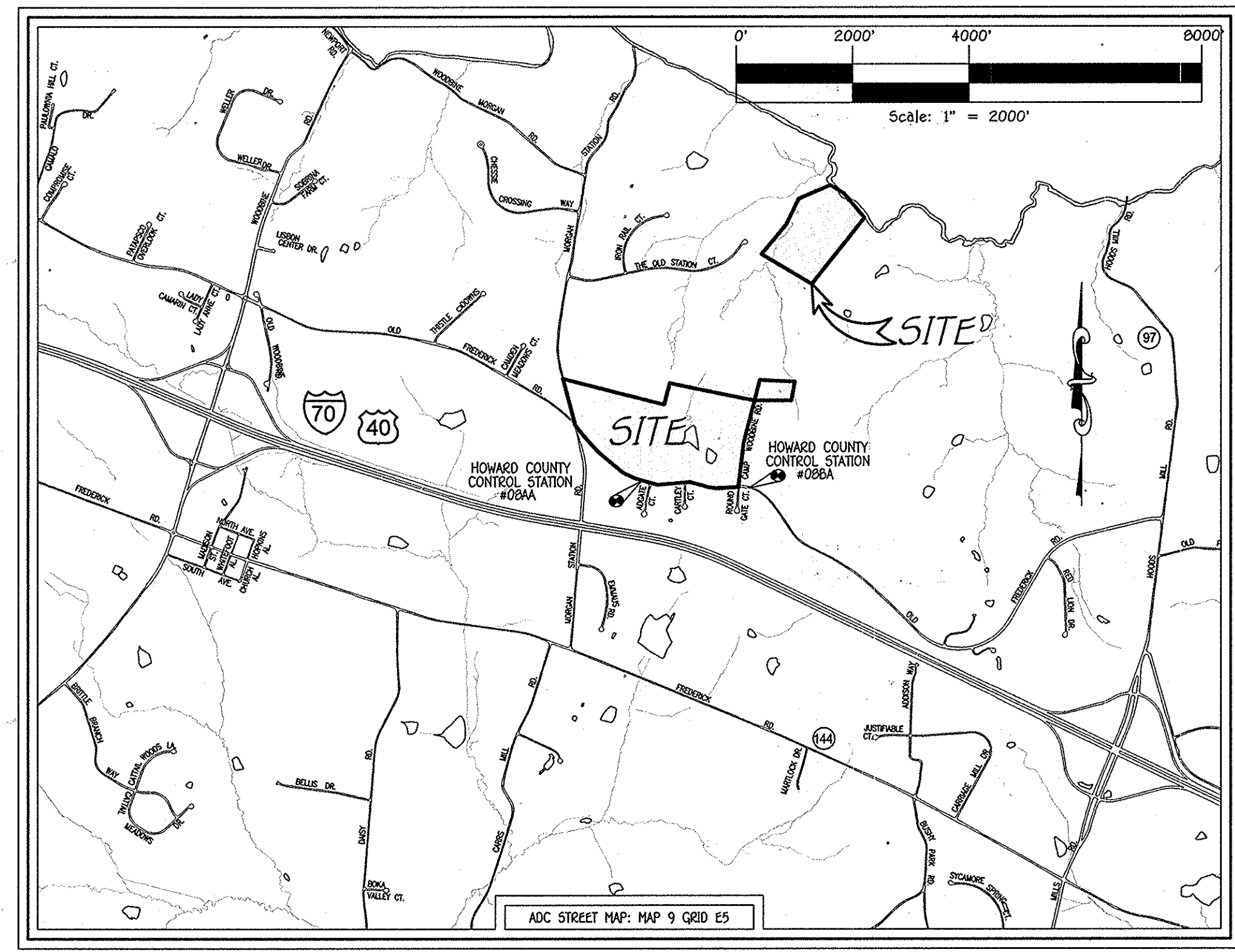
SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE MAP
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8	DETAILS

ZONED: RC-DEO

TAX MAP No. 3 GRID No. 21 PARCEL No. 17
 TAX MAP No. 8 GRIDS No. 2 & 3 PARCELS No. 8 & 17
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- SUBJECT PROPERTY ZONED RC-DEO PER 10/06/2013 COMPREHENSIVE ZONING PLAN
- COORDINATES BASED ON NAD '83, HORIZONTAL COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS.
- CONTROL STATION NO. 08AA NORTH 609,215.0191 FEET ELEV. 608.586
 EAST 1,299,547.5412 FEET
 CONTROL STATION NO. 08BA NORTH 609,098.5466 FEET ELEV. 630.728
 EAST 1,301,409.1044 FEET
- BOUNDARY INFORMATION IS BASED ON A SURVEY PERFORMED ON OR ABOUT APRIL 4, 2013 BY FISHER, COLLINS & CARTER, INC.
- TOPOGRAPHY INFORMATION SHOWN IS TAKEN FROM HARFORD AERIAL CONTOUR MAPPING PLOWN ON JANUARY, 2006 AND SUPPLEMENTED WITH A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED ON OR ABOUT JULY 26, 2013 BY FISHER, COLLINS & CARTER, INC.
- EXISTING USE: RESIDENTIAL
- PROPOSED USE: RESIDENTIAL
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL VOLUMES 1 & II, REVISED 2009. WE ARE PROVIDING STORM WATER MANAGEMENT BY THE USE OF 6 AREAS OF (N-1) ROOFTOP DISCONNECTION CREDIT, 35 AREAS OF (N-2) NON-ROOFTOP DISCONNECTION CREDIT, 8 AREAS OF (M-5) DRYWELLS, 14 (M-6) MICRO-BIORETENTION FACILITIES, 8 (M-8) GRASS SWALES, AND 7 (F-6) BIO-RETENTION FACILITIES TO MEET AND EXCEED THE REQUIRED 850 VOLUME.
- THIS PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT. PRIVATE WELL AND SEPTIC WILL BE UTILIZED FOR THIS PROJECT.
- LANDSCAPING WILL BE PROVIDED AT THE PRELIMINARY EQUIVALENT SKETCH PLAN AND FINAL PLAN STAGE OF THIS PROJECT.
- FOREST CONSERVATION WILL BE ADDRESSED AT THE PRELIMINARY EQUIVALENT SKETCH PLAN AND FINAL PLAN STAGE OF THIS PROJECT THROUGH THE USE OF ON-SITE RETENTION AND AFFORESTATION. ADDITIONAL OFF-SITE RETENTION OR FORESTATION WILL ALSO BE PROVIDED TO HELP MEET THE FULL OBLIGATION.
- REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE PRELIMINARY EQUIVALENT SKETCH PLAN AND FINAL PLAN STAGE. THEREFORE, THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES.
- REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE PRELIMINARY EQUIVALENT SKETCH PLAN AND FINAL PLAN STAGES. THEREFORE, THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES.
- SOIL BORING INFORMATION WILL BE PROVIDED AT THE PRELIMINARY EQUIVALENT SKETCH PLAN AND FINAL PLAN STAGES OF THIS PROJECT.
- DEVELOPMENT PLANS OR RED-LINE REVISIONS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN, SITE DEVELOPMENT PLAN, OR RED-LINE REVISION PROCESSES. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THE PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE APPROVAL OF SUBSEQUENT OR ASSOCIATED SUBDIVISION OR SITE.
- THE 100 YEAR FLOODPLAIN SHOWN ON THIS PLAN HAS BEEN TAKEN FROM THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 24004400036.
- AN ENVIRONMENTAL STUDY DETAILING THE STREAMS, WETLANDS AND OTHER ENVIRONMENTAL FEATURES WAS CONDUCTED BY ECO-SCIENCE PROFESSIONALS, INC. AND DATED OCTOBER 2013, AND HAS BEEN PROVIDED AS PART OF THIS SUBMISSION.
- A FORMAL REQUEST TO MAINTAIN SECTION 16.1205(A)(7) FOR THE REMOVAL OF THE SEVEN(7) "STATE CHAMPION TREES, 75% OF THE DIAMETER OF STATE CHAMPION TREES AND TREES 30" IN DIAMETER AND LARGER" IDENTIFIED ON THIS PLAN SHALL BE SUBMITTED AT THE TIME OF SUBMISSION OF THE PRELIMINARY EQUIVALENT SKETCH PLAN.



DESIGN NARRATIVE

Introduction:
 This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volumes I and II (effective October 2000, revised May 2009) will be satisfied on this project. The goal of creating hydrology similar to that of "Woods in Good Condition" will be accomplished through the use of the practices contained within Chapter 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.

General Site Conditions:
 This Property is zoned RC-DEO and consist of Parcels 8 & 17 located on both Tax Map 3 & Tax Map 8 of the Howard County, Maryland Tax Map Database System. Parcel 8 which is 68.6 acres in size borders Morgan Station Road and Old Frederick Road. Parcel 17 consist of three separate portions of land. One portion which is 28.0 acres in size is adjacent to the aforementioned Parcel 8 and also borders Old Frederick Road. Located to the northeast of this portion is another area of Parcel 17 that is 4.83 in size. The final piece is 36.1 acres and borders the South Branch of the Patuxent River. These three portions of Parcel 17 total 69.4 acres in size. Parcel 8 and the portion of Parcel 17 that border Old Frederick Road create the developable area where improvements have been proposed. The other portions of Parcel 17 (totaling 41.5) along with a proposed contiguous parcel that meanders through the developable area created by Parcels 8 & 17 (totaling 40.50) are planned to be in preservation by the design of this project. The total area of preservation that is currently proposed by this development is approximately 82 acres. The developable area mostly contains 'B' soils with some 'C' soils located in the area of the wetland, where no disturbance is proposed. Several existing water travel from the south to the north and develop into two streams, which discharge into the South Branch of the Patuxent River.

Natural Resource Protection:
 To ensure the protection of natural resources located on this site, all buffers will be honored by locating improvements away from environmentally sensitive areas. Also as outlined in the General Site Conditions, more than half of the overall area of this project is expected to be placed in preservation.

Maintenance of Natural Flow Patterns:
 This proposed development's roads and residential lots are designed to run along the ridge lines in an effort to avoid the existing swales wetlands and streams and maintain the natural flow patterns of the project area.

Reduction of Impervious Areas through better site design, alternative surfaces and Nonstructural Practices
 The design will make use of non-structural devices such as N-1 Rooftop disconnection credits, N-2 Non Rooftop disconnection credits, M-5 Drywells, M-6 Micro-Bio-retention as well as F-6 Bio-retention.

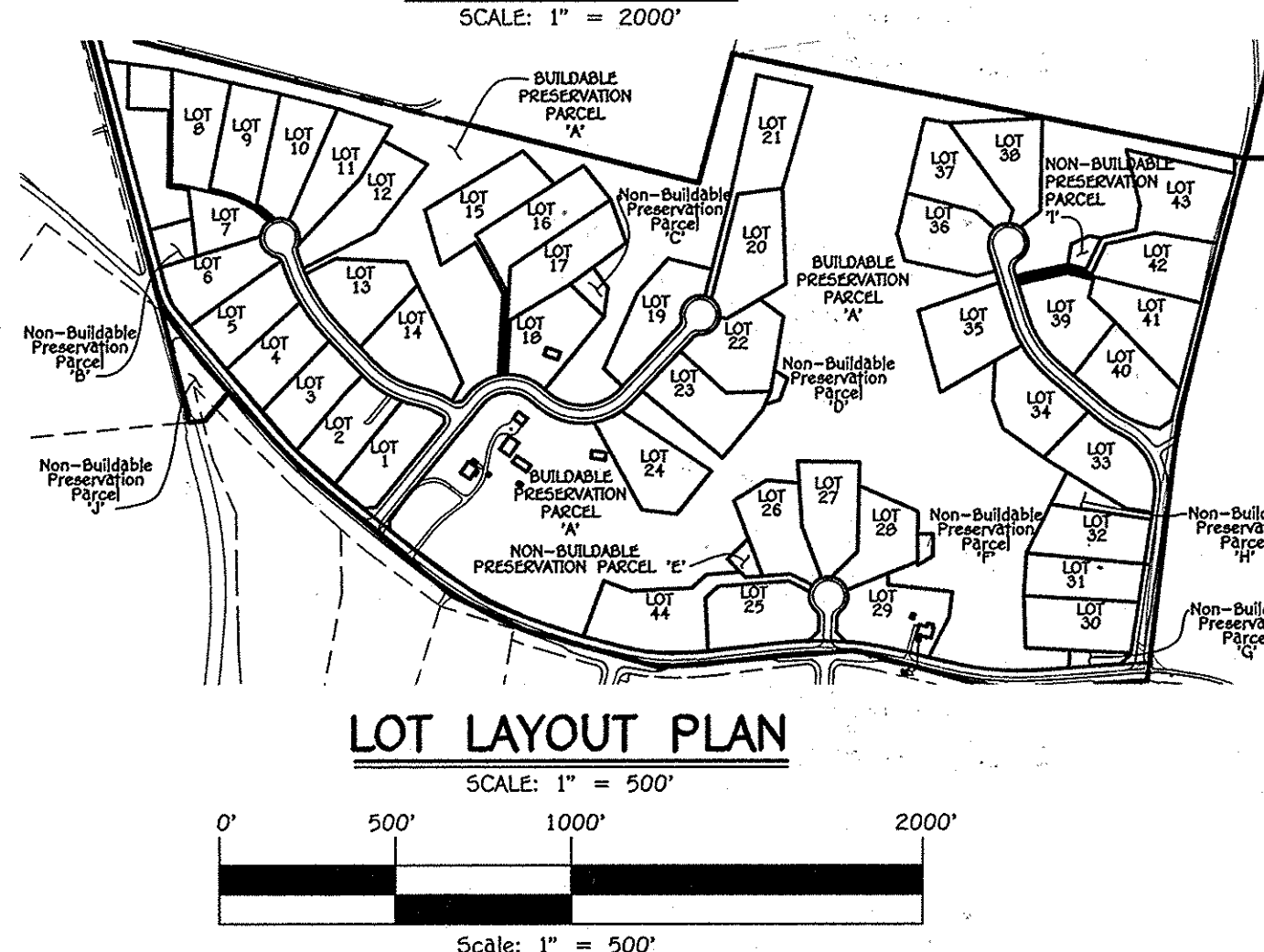
Integration of Erosion and Sediment Controls into Stormwater Strategy:
 Sediment Control devices have been placed to work in concert with the proposed drainage divides that were created when planning the Stormwater Strategy, in conditions where the drainage area exceeds 2 acres in size the location of the proposed bio-retention facilities will be used as sediment traps until final grading, stabilization.

Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)
 Several M-6 Micro Bio-retention, F-6 Bio-retention M-5 Drywell, and areas of N-1 Rooftop Disconnection Credit and N-2 Non-Rooftop Disconnection Credit have been used to treat all proposed impervious areas. The character of this type of residential development will on occasion create challenges when attempting to maintain drainage areas less than a 1/2 acre in size. Where these scenarios are encountered, F-6 Bio-retention facilities have been provided. In all cases the full required ESD volume is being provided.

Request for Design Manual Waiver:
 No waivers are expected to be requested on this project relating to SWM requirements.

SITE ANALYSIS DATA CHART

A.	TOTAL AREA OF THIS SUBMISSION = 138.610 ac.*
B.	LIMIT OF DISTURBED AREA = 1,748,280 SQ.FT. OF 40.1 Ac.*
C.	PRESENT ZONING DESIGNATION = RC-DEO (PER 10/06/13 COMPREHENSIVE ZONING PLAN).
D.	PROPOSED USE: RESIDENTIAL SUBDIVISION (SINGLE FAMILY DETACHED)
E.	OPEN SPACE ON SITE: N/A
F.	RECREATIONAL AREA PROVIDED: N/A
G.	BUILDING COVERAGE OF SITE: 107,162 SQ.FT. OR 2.46 Ac.*
H.	PREVIOUS HOWARD COUNTY FILES: ECP-14-003
I.	TOTAL AREA OF FLOODPLAIN LOCATED ON SITE: 2.21 Ac.
J.	TOTAL AREA OF SLOPES IN EXCESS OF 25% = 3.11 Ac.
K.	NET TRACT AREA = 133,290 Ac.*
L.	TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA)
M.	TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 2.88 Ac.*
N.	TOTAL AREA OF FOREST = 43.4 Ac.*
O.	TOTAL IMPERVIOUS AREA = 7.73 Ac.*
P.	AREA OF ERODIBLE SOILS = 1.3 Ac.* (WITHIN AREA OF DEVELOPMENT)



LEGEND	
SYMBOL	DESCRIPTION
-----	EXISTING STORM DRAIN LINE
x x x	EXISTING FENCE
-----	BOUNDARY/RIGHT OF WAY LINE
B.R.L.	BUILDING RESTRICTION LINE
-----	PROPOSED CURB TRANSITION
-----	PROPOSED STORM DRAIN PIPE
-----	PROPOSED PERFORATED PIPE
-----	PROPOSED CONCRETE
-----	PROPOSED PAVING
-----	PROPOSED LIGHT
-----	EXISTING SOILS 5% AND GREATER W/ Kw > 0.35 SEE SHEET 5
-----	EXISTING SLOPES 15% TO 24.9%
-----	PROPOSED EROSION CONTROL MATTING
-----	PROPOSED L.O.D.
-----	EXISTING SLOPES 25% AND GREATER

Schulte Specimen Tree List					
TAG #	COMMON NAME	SCIENTIFIC NAME	DBH*	VIGOR**	NOTES
#1805	BLACK CHERRY	<i>Prunus serotina</i>	32"	Fair	position ivy & oriental bittersweet
#1806	BLACK CHERRY	<i>Prunus serotina</i>	33"	Good	some oriental bittersweet
#1907	NORTHERN RED OAK	<i>Quercus rubra</i>	32"	Good	
#1908	BLACK OAK (HYBRID)	<i>Quercus velutina</i>	33"	Fair	some dead branches
#1909	WHITE OAK	<i>Quercus alba</i>	37"	Good	
#1910	NORTHERN RED OAK	<i>Quercus rubra</i>	31"	Fair	some dead branches
#1911	WHITE OAK	<i>Quercus alba</i>	31"	Good	double at 5'
#1912	CHESTNUT OAK	<i>Quercus prinus</i>	38.5"	Fair	some dead branches
#1913	WHITE OAK	<i>Quercus alba</i>	34.5"	Fair	dead branches
#1914	WHITE OAK	<i>Quercus alba</i>	31.5"	Good	
#1915	WHITE OAK	<i>Quercus alba</i>	35"	Fair	some dead branches
#1916	NORTHERN RED OAK	<i>Quercus rubra</i>	33"	Fair	some dead branches
#1917	RED MAPLE	<i>Acer rubrum</i>	41"	Fair	some dead branches
#1918	RED MAPLE	<i>Acer rubrum</i>	33"	Fair	some dead branches
#1919	TULIP POPLAR	<i>Liriodendron tulipifera</i>	39.5	Good	
#1920	WHITE OAK	<i>Quercus alba</i>	33"	Fair	some dead branches
#1921	CHESTNUT OAK	<i>Quercus prinus</i>	36.5"	Fair	some dead branches
#1922	NORTHERN RED OAK	<i>Quercus rubra</i>	39.5"	Fair	dead branches, position ivy
#1923	NORTHERN RED OAK	<i>Quercus rubra</i>	32"	Fair	some dead branches
#1924	NORTHERN RED OAK	<i>Quercus rubra</i>	37"	Bad	fungus, dead branches, <5 years to live
#1925	RED MAPLE	<i>Acer rubrum</i>	43.5"	Fair	some dead branches
#1926	WHITE OAK	<i>Quercus alba</i>	35"	Fair	some dead branches
#1927	RED MAPLE	<i>Acer rubrum</i>	38"	Good	
#1928	BLACK GUM	<i>Nyssa sylvatica</i>	34"	Fair	over spray
#1929	WHITE PINE	<i>Pinus strobus</i>	44"	Fair	
#1930	WHITE PINE	<i>Pinus strobus</i>	36"	Fair	
#1931	E RED CEDAR	<i>Juniperus virginiana</i>	31.5"	Good	
#1932	RED MAPLE	<i>Acer rubrum</i>	32.5"	Fair	dead branch
#1933	WHITE PINE	<i>Pinus strobus</i>	31.5"	Good	
#1934	WHITE PINE	<i>Pinus strobus</i>	30"	Poor	trunk rot
#1935	E RED CEDAR	<i>Juniperus virginiana</i>	31.5"	Fair	
#1936	SIBERIA ELM	<i>Ulmus pumila</i>	31.5"	Poor	deceased
#1937	WHITE PINE	<i>Pinus strobus</i>	31"	Poor	trunk rot
#1938	WHITE OAK	<i>Quercus alba</i>	31"	Good	
#1939	BLACK OAK	<i>Quercus velutina</i>	32"	Fair	trunk rot
#1940	NORTHERN RED OAK	<i>Quercus rubra</i>	31"	Good	
#1941	NORTHERN RED OAK	<i>Quercus rubra</i>	31"	Good	
#1942	NORTHERN RED OAK	<i>Quercus rubra</i>	35"	Good	
#1943	WHITE OAK	<i>Quercus alba</i>	33"	Good	
#1944	TULIP POPLAR	<i>Liriodendron tulipifera</i>	35"	Good	
#1945	SOUTHERN RED OAK	<i>Quercus falcata</i>	41"	Good	
#1973	BLACK CHERRY	<i>Prunus serotina</i>	32"	Good	double at 5'
#2401	TULIP POPLAR	<i>Liriodendron tulipifera</i>	34.5"	Fair	Dead Branch 1/3 Triple
#2402	TULIP POPLAR	<i>Liriodendron tulipifera</i>	30"	Fair	Dead Branches
#2403	TULIP POPLAR	<i>Liriodendron tulipifera</i>	36"	Good	Double at 2'
#2404	TULIP POPLAR	<i>Liriodendron tulipifera</i>	41.5"	Good	Vines
#2405	TULIP POPLAR	<i>Liriodendron tulipifera</i>	35"	Good	1/2 of Double
#2406	TULIP POPLAR	<i>Liriodendron tulipifera</i>	32"	Good	1/2 of Double
#2407	WHITE OAK	<i>Quercus alba</i>	36"	Fair	Vines, fence through tree, split at 6', dead branch
#2408	TULIP POPLAR	<i>Liriodendron tulipifera</i>	33"	Good	
#2409	WHITE OAK	<i>Quercus alba</i>	39.5"	Fair	Dead Branch, Fence through Tree
#2410	WHITE OAK	<i>Quercus alba</i>	38"	Fair	Dead Branch, Vines
#2411	TULIP POPLAR	<i>Liriodendron tulipifera</i>	39.5"	Good	
#2412	TULIP POPLAR	<i>Liriodendron tulipifera</i>	32"	Good	
#2413	WHITE OAK	<i>Quercus alba</i>	38"	Fair	Dead Branch
#2414	WHITE OAK	<i>Quercus alba</i>	36"	Good	
#2415	NORTHERN RED OAK	<i>Quercus rubra</i>	31.5	Good	Lean, Dead Branch
#2416	TULIP POPLAR	<i>Liriodendron tulipifera</i>	35"	Good	1/2 of Double
#2417	TULIP POPLAR	<i>Liriodendron tulipifera</i>	40"	Good	
#2418	TULIP POPLAR	<i>Liriodendron tulipifera</i>	44"	Good	Dead Branch
#2419	TULIP POPLAR	<i>Liriodendron tulipifera</i>	32"	Good	
#2420	SYCAMORE	<i>Platanus occidentalis</i>	32"	Good	Lean
#2421	TULIP POPLAR	<i>Liriodendron tulipifera</i>	39"	Good	Dead Branch
#2422	WHITE OAK	<i>Quercus alba</i>	39"	Good	Vines
#2423	TULIP POPLAR	<i>Liriodendron tulipifera</i>	36.5"	Good	Dead Branch
#2424	RED MAPLE	<i>Acer rubrum</i>	41.5"	Good	
#2425	NORTHERN RED OAK	<i>Quercus rubra</i>	40.5"	Good	Growth of Trunk
#2426	PIN OAK	<i>Quercus palustris</i>	36"	Good	Dead Branch
#2427	TULIP POPLAR	<i>Liriodendron tulipifera</i>	31.5"	Fair	Split at 15'
#2428	RED MAPLE	<i>Acer rubrum</i>	38"	Good	
#2429	NORTHERN RED OAK	<i>Quercus rubra</i>	40.5"	Good	
#2430	SHINGLE OAK	<i>Quercus imbricaria</i>	30"	Good	Dead Branch
#2431	RED MAPLE	<i>Acer rubrum</i>	33"	Good	Dead Branch
#2432	RED MAPLE	<i>Acer rubrum</i>	36.5	Fair	Dead Branch
#2433	RED MAPLE	<i>Acer rubrum</i>	30"	Good	Dead Branch
#2434	RED MAPLE	<i>Acer rubrum</i>	33"	Fair	Hole in Trunk
#2435	PIN OAK	<i>Quercus palustris</i>	36"	Good	Lean
#2436	NORTHERN RED OAK	<i>Quercus rubra</i>	34"	Fair	Dead Branch
#2437	WHITE OAK	<i>Quercus alba</i>	37"	Good	
#2438	WHITE OAK	<i>Quercus alba</i>	39"	Good	Split at 6'
#2439	WHITE OAK	<i>Quercus alba</i>	32"	Good	
#2440	NORTHERN RED OAK	<i>Quercus rubra</i>	31.5"	Good	
#2441	NORTHERN RED OAK	<i>Quercus rubra</i>	43"	Poor	Split, hollow growth on trunk
#2442	WHITE OAK	<i>Quercus alba</i>	30"	Good	Dead Branch
#2443	WHITE OAK	<i>Quercus alba</i>	36"	Good	
#2444	CHESTNUT OAK	<i>Quercus prinus</i>	35"	Good	Dead Branch
#2445	CHESTNUT OAK	<i>Quercus prinus</i>	31"	Good	
#2446	NORTHERN RED OAK	<i>Quercus rubra</i>	38"	Fair	Trunk Rot
#2447	NORTHERN RED OAK	<i>Quercus rubra</i>	37.5"	Fair	Dead Branch

NOTE: (*) DENOTES SEVEN(7) SPECIMEN TREES TO BE REMOVED. OTHERS TO REMAIN.

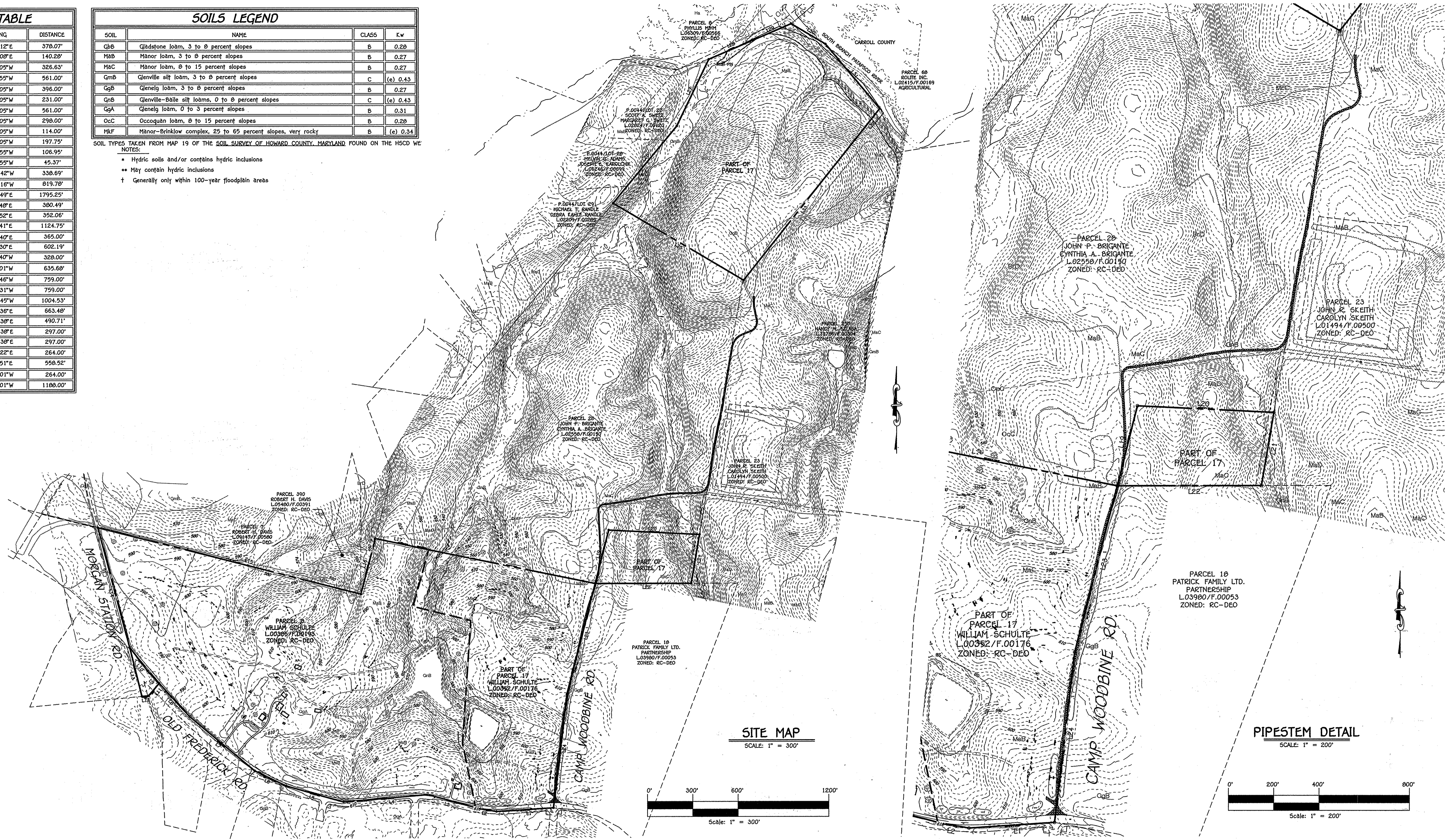
<p>FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 16272 BALTIMORE NATIONAL FPK ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2900</p>	<p>PROFESSIONAL CERTIFICATION</p> <p>I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.</p> <p><i>Frank J. Manalansan II</i> 7-7-14 FRANK J. MANALANSAN II DATE</p>	<p>OWNER</p> <p>ESTATE OF F.J. SCHULTE 2215 DUVALL ROAD WOODBINE, MD 21797 410-977-1327</p>	<p>DEVELOPER</p> <p>LAND DESIGN & DEVELOPMENT 5300 DORSEY HALL DRIVE SUITE 102 ELLICOTT CITY, MARYLAND 21042 (410)-977-0422</p>	<p>APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING</p> <p><i>Kestel</i> 7/15/14 Chief, Division of Land Development Date</p> <p><i>Chad</i> 7-16-14 Chief, Development Engineering Division Date</p>	<p>TITLE SHEET</p> <p>SCHULTE PROPERTY LOTS 1-44, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B'-'J'</p> <p>ZONED: RC-DEO</p> <p>TAX MAP NO.: 3 GRID NO.: 21 PARCEL NO.: 17 TAX MAP NO.: 8 GRID NOS.: 2 & 3 PARCEL NOS.: 8 & 17 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALAS SHOWN DATE: JULY 7, 2014 SHEET 1 OF 8 ECP-14-003</p>
				<p>PROJECT</p> <p>SCHULTE PROPERTY SECTION PARCEL NOS. 8 & 17</p> <p>DEEDS BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR.</p> <p>L352 F.176 2,3 & 21 RC-DEO 3 & 8 FOURTH 6040.01</p>	

LINE	BEARING	DISTANCE
L1	N86°17'12"E	378.07'
L2	S79°29'08"E	140.28'
L3	N74°37'05"W	326.63'
L4	S85°07'55"W	561.00'
L5	N74°22'05"W	396.00'
L6	N64°07'05"W	231.00'
L7	N50°07'05"W	561.00'
L8	N42°27'05"W	298.00'
L9	N42°27'05"W	114.00'
L10	N36°52'05"W	197.75'
L11	S40°07'55"W	106.95'
L12	S84°07'55"W	45.37'
L13	N13°55'42"W	338.69'
L14	N14°50'16"W	819.78'
L15	S75°45'49"E	1795.25'
L16	N14°41'48"E	380.49'
L17	S77°59'52"E	352.06'
L18	S78°29'41"E	1124.75'
L19	N14°08'40"E	365.00'
L20	S87°07'30"E	602.19'
L21	S09°38'40"W	328.00'
L22	S89°58'01"W	635.68'
L23	S14°17'46"W	759.00'
L24	S06°44'31"W	759.00'
L25	N59°13'45"W	1004.53'
L26	N39°37'36"E	863.48'
L27	N25°49'38"E	490.71'
L28	N66°49'38"E	297.00'
L29	N66°49'38"E	297.00'
L30	S59°10'22"E	264.00'
L31	S39°48'51"E	558.52'
L32	S38°31'01"W	264.00'
L33	S38°31'01"W	1188.00'

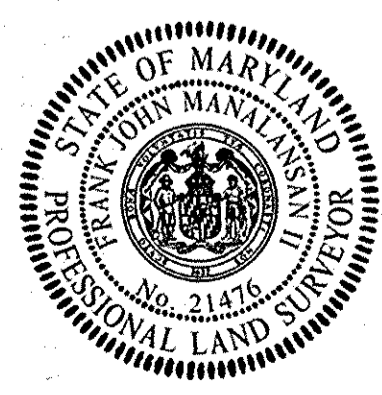
SOIL	NAME	CLASS	Kw
QbB	Gladstone loam, 3 to 8 percent slopes	B	0.28
MaB	Manor loam, 3 to 8 percent slopes	B	0.27
MaC	Manor loam, 8 to 15 percent slopes	B	0.27
GmB	Glenville silt loam, 3 to 8 percent slopes	C	(e) 0.43
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.27
GnB	Glenville-Balle silt loams, 0 to 8 percent slopes	C	(e) 0.43
GgA	Glenelg loam, 0 to 3 percent slopes	B	0.31
OcC	Occoquan loam, 8 to 15 percent slopes	B	0.28
MkF	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky	B	(e) 0.34

SOIL TYPES TAKEN FROM MAP 19 OF THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND FOUND ON THE HSCD WE NOTES:

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



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461 - 2925



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.
 Frank J. Manalansan II 7-7-14
 DATE

OWNER
 ESTATE OF F.J. SCHULTE
 2215 DUVAL ROAD
 WOODBINE, MD 21797
 410-977-1327

DEVELOPER
 LAND DESIGN & DEVELOPMENT
 5300 DORSEY HALL DRIVE
 SUITE 102
 ELICOTT CITY, MARYLAND 21042
 (410)-977-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

<i>Kestelund</i> Chief, Division of Land Development	7/15/14 Date
<i>Ch/Ehler</i> Chief, Development Engineering Division	7-16-14 Date
PROJECT SCHULTE PROPERTY	SECTION -
DEEDS L.352 F.176 L.385 F.193	PARCEL NOS. 8 & 17
BLOCK NO. 2,3 & 21	ZONE RC-DEO
TAX/ZONE 3 & 8	ELEC. DIST. FOURTH
CENSUS TR. 6040.01	

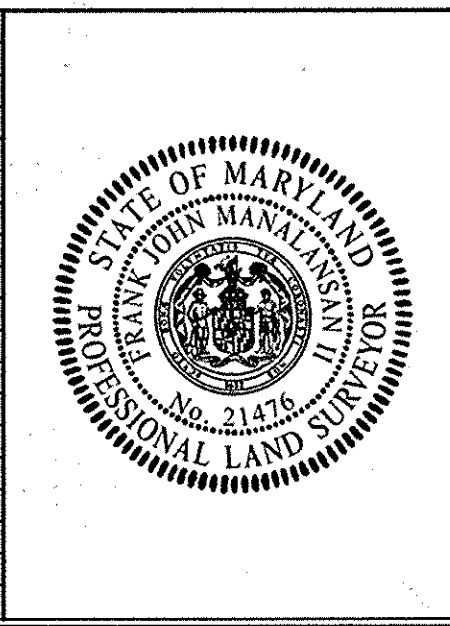
SITE MAP
 (EXISTING CONDITIONS)
SCHULTE PROPERTY
 LOTS 1-44,
 BUILDABLE PRESERVATION PARCEL 'A' AND
 NON-BUILDABLE PRESERVATION PARCELS 'B'-'J'
 ZONED: RC-DEO

TAX MAP NO.: 3 GRID NO.: 21 PARCEL NO.: 17
 TAX MAP NO.: 8 GRID NOS.: 2 & 3 PARCEL NOS.: 8 & 17
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 300' DATE: JULY 7, 2014
 SHEET 2 OF 8 ECP-14-003



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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NO.	REVISION	DATE



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 FRANK J. MANALANSAN II DATE

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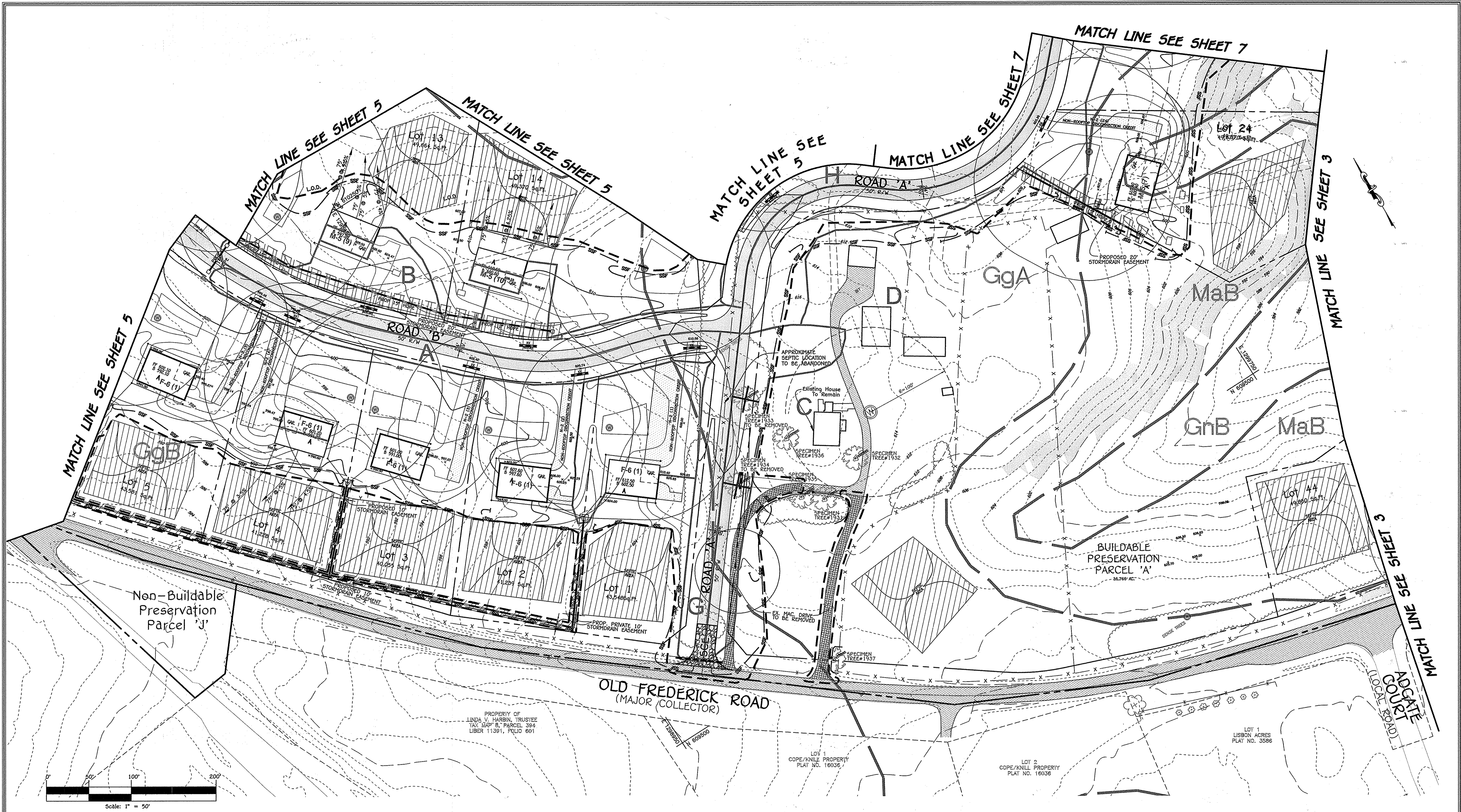
W. J. ... 7/15/14
 Chief, Division of Land Development Date

Oliver ... 7-16-14
 Chief, Development Engineering Division Date

PROJECT	SECTION	PARCEL NOS.
SCHULTE PROPERTY	-	8 & 17

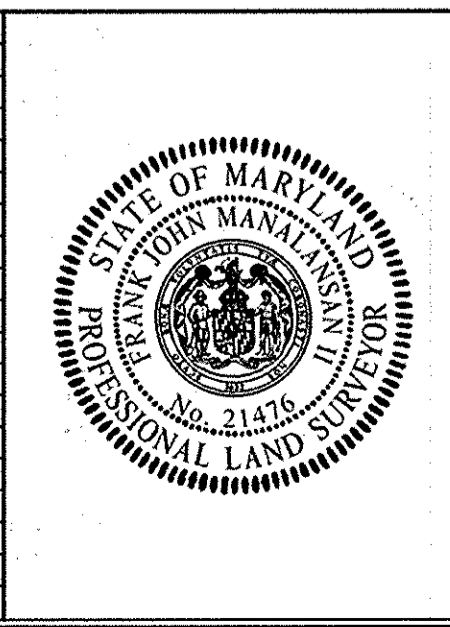
DEEDS	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
L-352 F.176 L-385 F.193	2,3 & 21	RC-DEO	3 & 8	FOURTH	6040.01

ENVIRONMENTAL CONCEPT PLAN AND PRELIMINARY SEDIMENT & EROSION CONTROL PLAN
SCHULTE PROPERTY
 LOTS 1-44
BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B'-'J'
 ZONED: RC-DEO
 TAX MAP NO.: 3 GRID NO.: 21 PARCEL NO.: 17
 TAX MAP NO.: 8 GRID NOS.: 2 & 3 PARCEL NOS.: 8 & 17
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: JULY 7, 2014
 SHEET 3 OF 8 ECP-14-003



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10672 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2995

NO.	REVISION	DATE



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Frank J. Manalansan II 7-7-14
 FRANK J. MANALANSAN II DATE

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 ESTATE OF F.J. SCHULTE
 2215 DUVAL ROAD
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 410-977-1327

DEVELOPER
 LAND DESIGN & DEVELOPMENT
 5300 DORSEY HALL DRIVE
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 ELICOTT CITY, MARYLAND 21042
 (410)-977-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

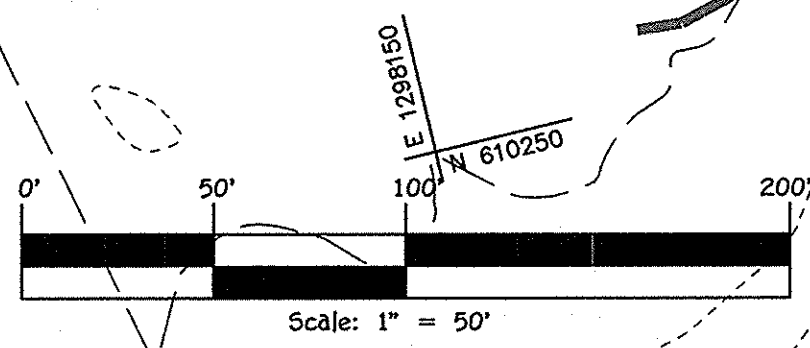
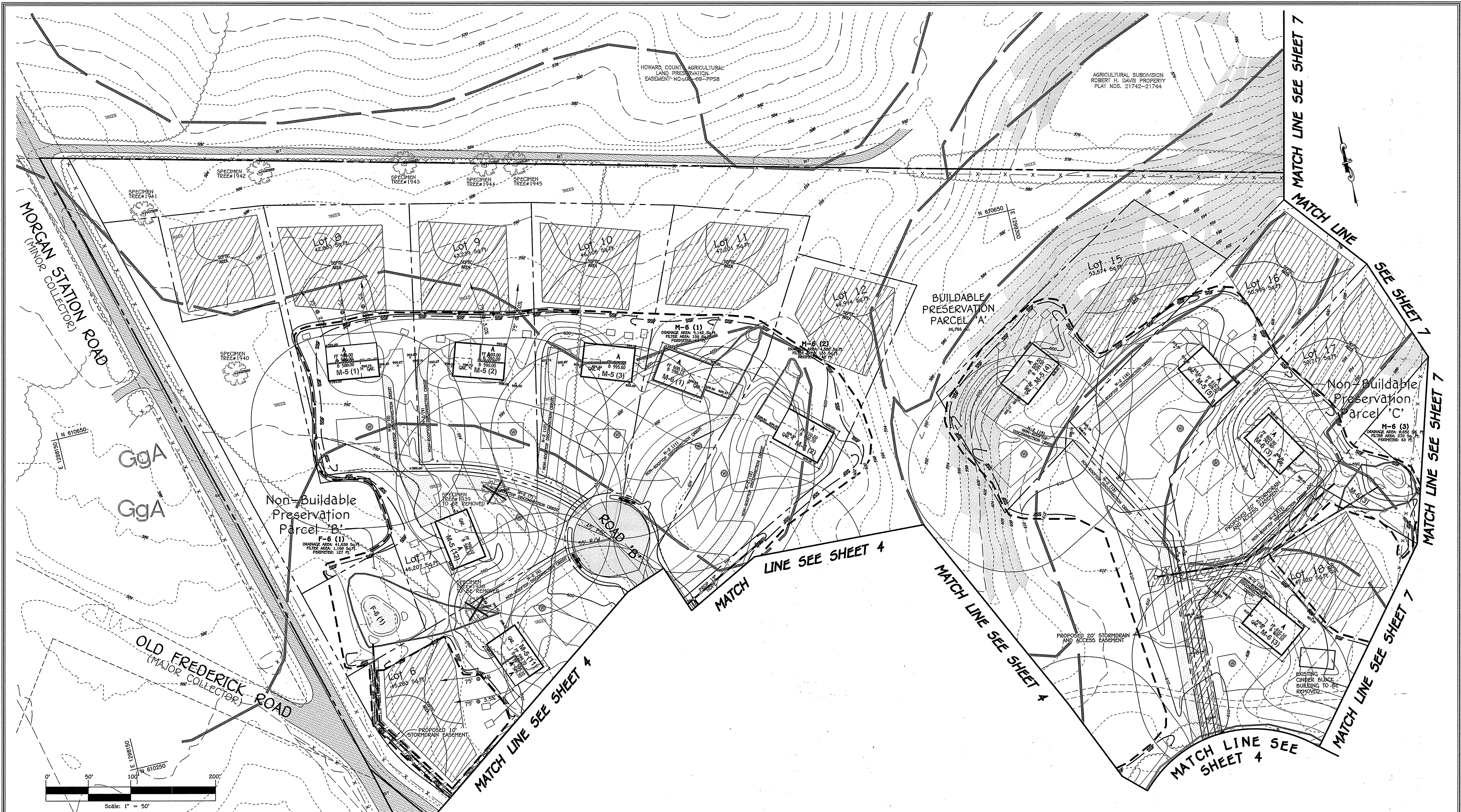
V. Stalman 7/15/14
 Chief, Division of Land Development Date

Chad Stuck 7-16-14
 Chief, Development Engineering Division Date

PROJECT: SCHULTE PROPERTY SECTION: 8 & 17 PARCEL NOS.: 8 & 17

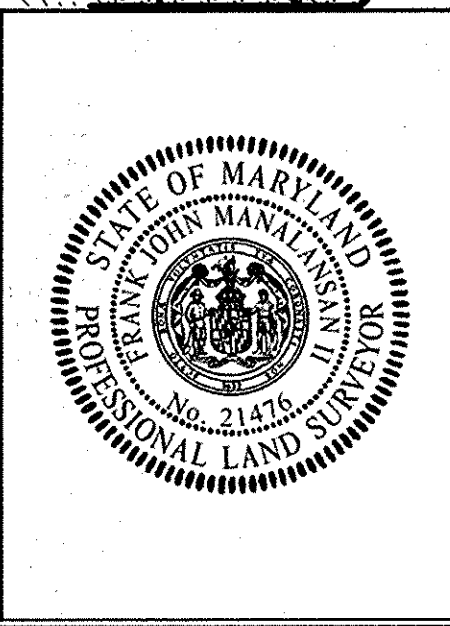
DEEDS	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
L-352 F.176 L-385 F.193	2,3 & 21	RC-DEO	3 & 8	FOURTH	6040.01

ENVIRONMENTAL CONCEPT PLAN AND PRELIMINARY SEDIMENT & EROSION CONTROL PLAN
SCHULTE PROPERTY
 LOTS 1-44
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 ZONED: RC-DEO
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 TAX MAP NO.: 8 GRID NOS.: 2 & 3 PARCEL NOS.: 8 & 17
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: JULY 7, 2014
 SHEET 4 OF 8 ECP-14-003



FISHER, COLLINS & CARTER, INC.
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NO.	REVISION	DATE



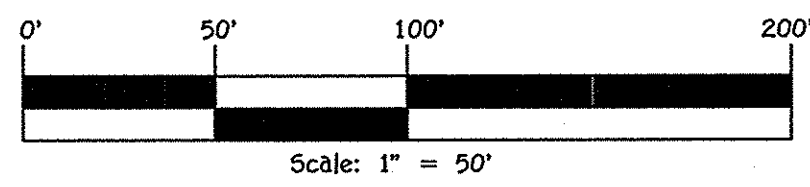
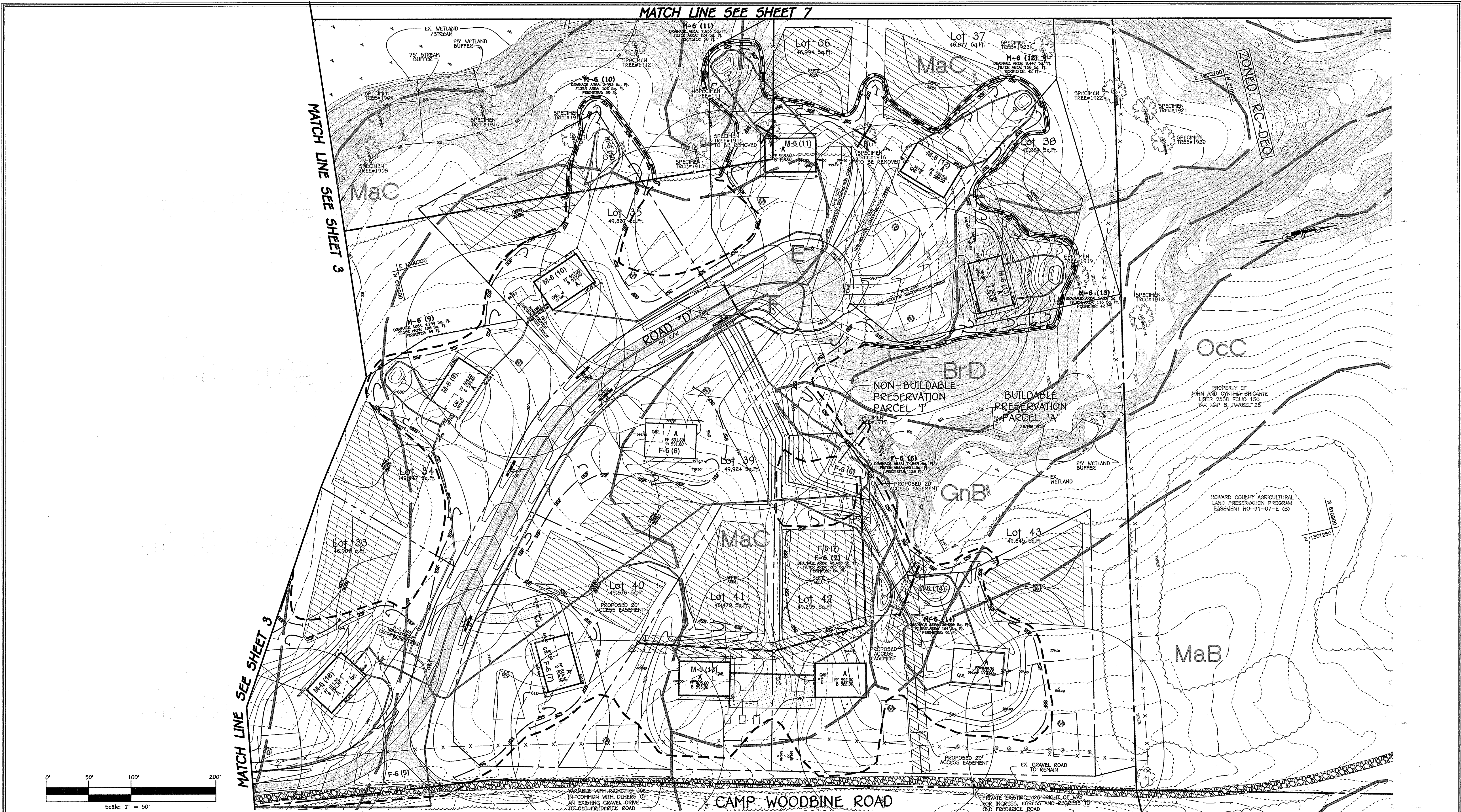
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Frank J. Mahalansky II 7-7-14
 FRANK J. MAHALANSKY II DATE

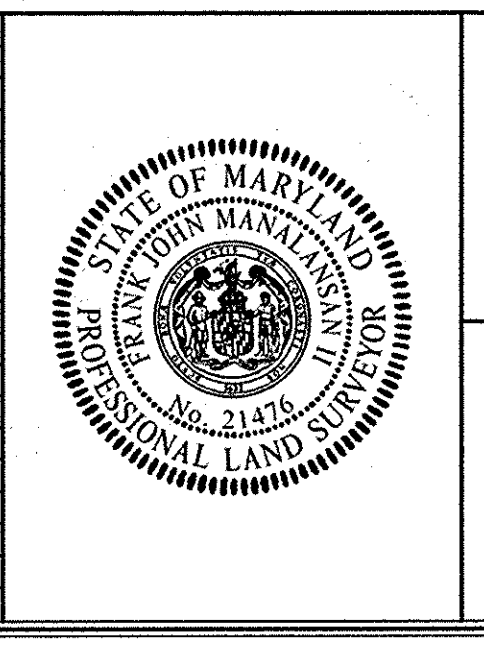
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Kate Schulte 7/15/14
 Chief, Division of Land Development Date
John Schulte 7-16-14
 Chief, Development Engineering Division Date
 PROJECT: SCHULTE PROPERTY SECTION: PARCEL NOS. 8 & 17
 DEEDS: BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR.
 L-352 F.176 2,3 & 21 RC-DEO 3 & 8 FOURTH 6040.01
 L-385 F.193

ENVIRONMENTAL CONCEPT PLAN AND PRELIMINARY SEDIMENT & EROSION CONTROL PLAN
SCHULTE PROPERTY
 LOTS 1-44,
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 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: JULY 7, 2014
 SHEET 5 OF 8 ECP-14-003





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Frank J. Manalansan II 7-7-14
 FRANK J. MANALANSAN II DATE

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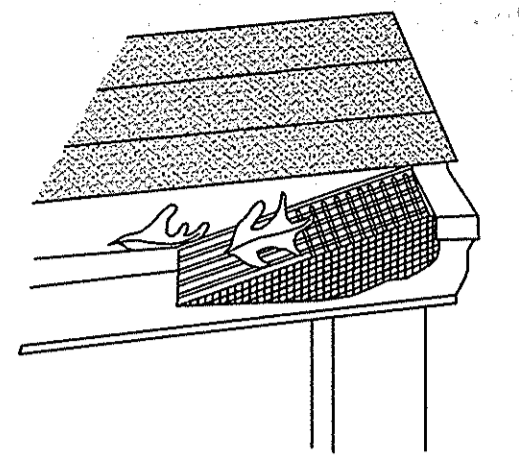
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

K. Schulte 7/15/14
 Chief, Division of Land Development Date

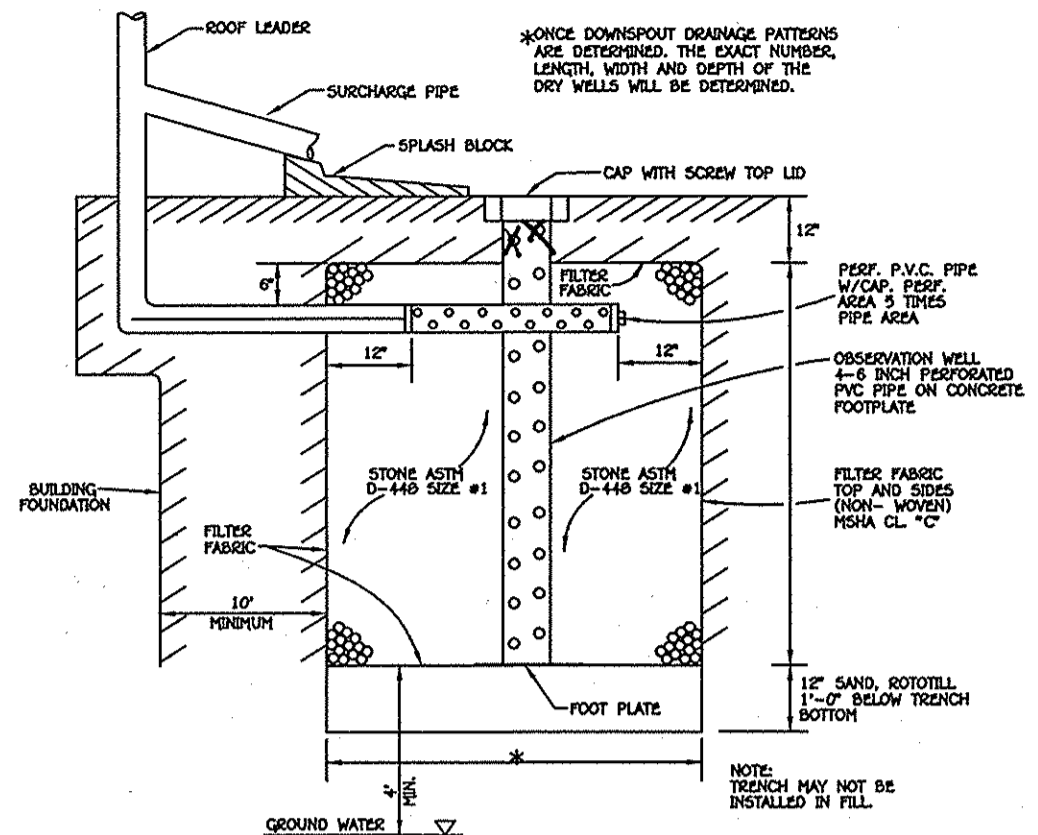
Frank Schulte 7-14-14
 Chief, Development Engineering Division Date

PROJECT	SECTION	PARCEL NOS.
SCHULTE PROPERTY	-	8 & 17
DEEDS	BLOCK NO.	ZONE
L-352 F.176	2,3 & 21	RC-DEO
L-385 F.193		
TAX/ZONE	ELEC. DIST.	CENSUS TR.
3 & 8	FOURTH	6040.01

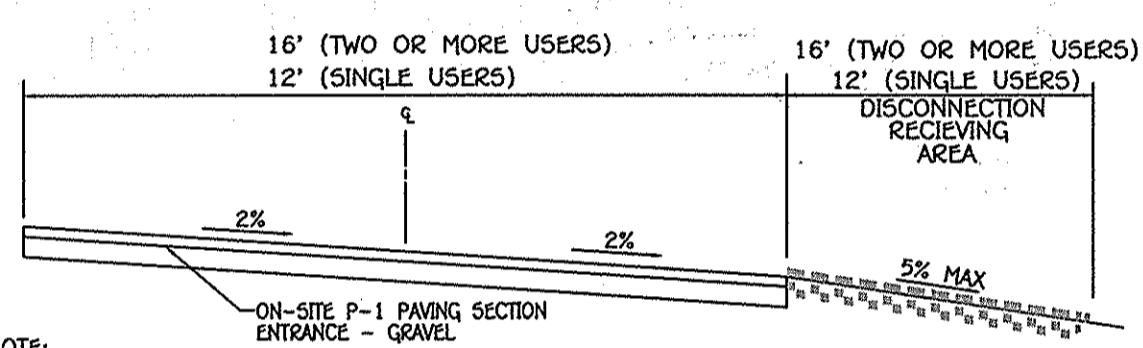
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 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: JULY 7, 2014
 SHEET 6 OF 8 ECP-14-003



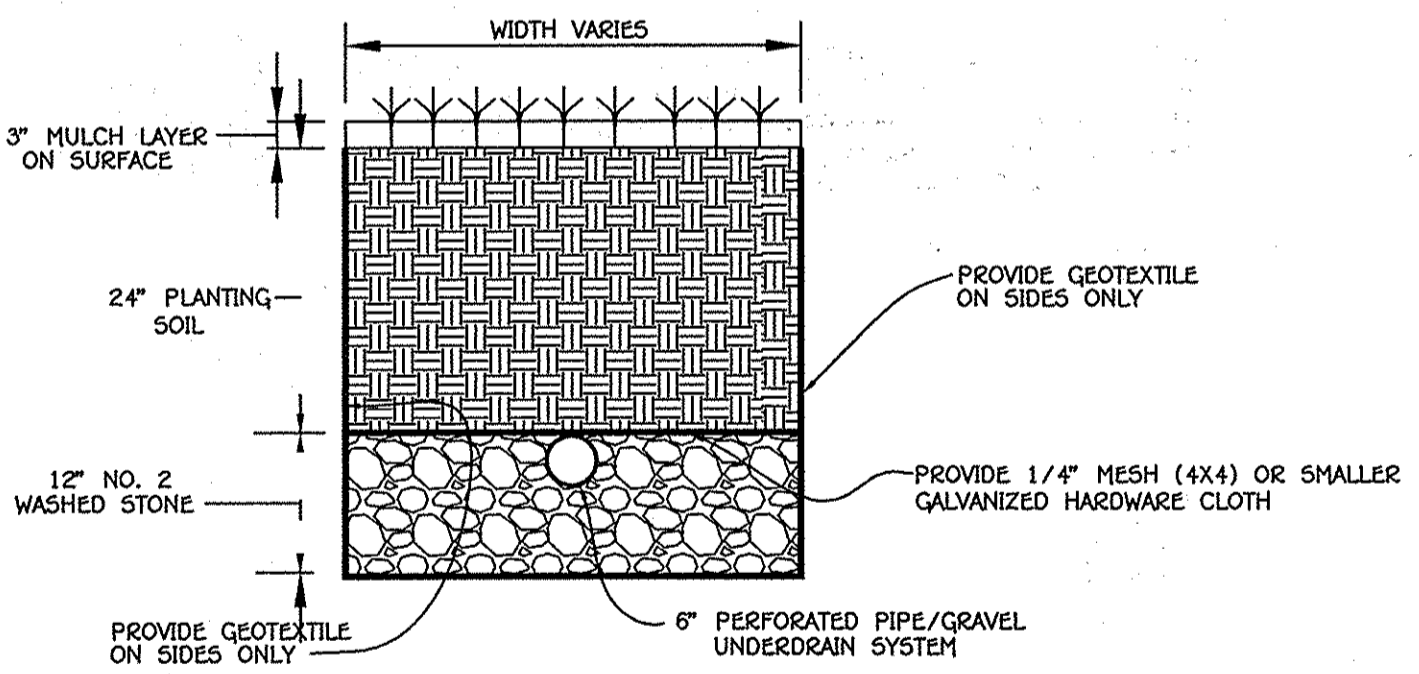
GUTTER DRAIN FILTER DETAIL
NOT TO SCALE



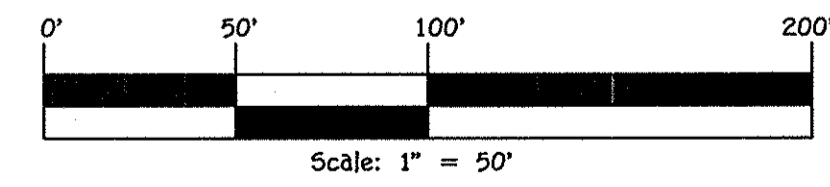
DRY WELL DETAIL
NOT TO SCALE



TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION
NOT TO SCALE



TYPICAL SECTION - BIO-RETENTION FACILITY (M-6)
NO SCALE



STORMWATER MANAGEMENT PRACTICES									
AREA ID	ESDV REQUIRED CUFT.	ESDV PROVIDED CUFT.	DISCONNECTION OF ROOFTOP RUNOFF N-1 (Y/N)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)	DRY WELLS M-5 (Y/N)	BIO-RETENTION M-6 (Y/N)	BIO-RETENTION F-6 (Y/N)	GRASS SWALE M-8 (NUMBER)	
A	616	641							
B	990	---							
C	513	---							
D	1,379	---							
E	334	994							
F	822	883							
G	414	417							
H	812	813							
LOT 4	95	95	Y						
LOT 6	48	48	Y						
LOT 8	95	95	Y						
LOT 9	48	48	Y						
LOT 13	95	95	Y						
LOT 14	95	95	Y						
N-2 (1)	206	206		Y					
N-2 (2)	179	179		Y					
N-2 (3)	173	173		Y					
N-2 (4)	175	175		Y					
N-2 (5)	168	168		Y					
N-2 (6)	168	168		Y					
N-2 (7)	96	96		Y					
N-2 (8)	187	187		Y					
N-2 (9)	198	198		Y					
N-2 (10)	200	200		Y					
N-2 (11)	224	224		Y					
N-2 (12)	275	275		Y					
N-2 (13)	559	559		Y					
N-2 (14)	101	101		Y					
N-2 (15)	122	122		Y					
N-2 (16)	177	177		Y					
N-2 (17)	206	206		Y					
N-2 (18)	105	105		Y					
N-2 (19)	124	124		Y					
N-2 (20)	108	108		Y					
N-2 (21)	447	447		Y					
N-2 (22)	119	119		Y					
N-2 (23)	176	176		Y					
N-2 (24)	176	176		Y					
N-2 (25)	62	62		Y					
N-2 (26)	36	36		Y					
N-2 (27)	142	142		Y					
N-2 (28)	213	213		Y					
N-2 (29)	150	150		Y					
N-2 (30)	121	121		Y					
N-2 (31)	21	21		Y					
N-2 (32)	192	192		Y					
N-2 (33)	187	187		Y					
N-2 (34)	209	209		Y					
N-2 (35)	64	64		Y					
M-5 (1)	96	162			Y				
M-5 (2)	144	240			Y				
M-5 (3)	192	315			Y				
M-5 (4)	192	315			Y				
M-5 (5)	192	315			Y				
M-5 (6)	192	315			Y				
M-5 (7)	192	315			Y				
M-5 (8)	240	315			Y				
M-5 (9)	96	360			Y				
M-5 (10)	96	360			Y				
M-5 (11)	144	240			Y				
M-5 (12)	192	360			Y				
M-5 (13)	192	360			Y				
M-6 (1)	196 (STORAGE)	202 (STORAGE)				Y			
M-6 (2)	172 (STORAGE)	209 (STORAGE)				Y			
M-6 (3)	297 (STORAGE)	369 (STORAGE)				Y			
M-6 (4)	147 (STORAGE)	225 (STORAGE)				Y			
M-6 (5)	151 (STORAGE)	201 (STORAGE)				Y			
M-6 (6)	298 (STORAGE)	407 (STORAGE)				Y			
M-6 (7)	190 (STORAGE)	228 (STORAGE)				Y			
M-6 (8)	438 (STORAGE)	498 (STORAGE)				Y			
M-6 (9)	150 (STORAGE)	167 (STORAGE)				Y			
M-6 (10)	147 (STORAGE)	199 (STORAGE)				Y			
M-6 (11)	199 (STORAGE)	199 (STORAGE)				Y			
M-6 (12)	161 (STORAGE)	219 (STORAGE)				Y			
M-6 (13)	151 (STORAGE)	176 (STORAGE)				Y			
M-6 (14)	386 (STORAGE)	409 (STORAGE)				Y			
M-6 (15)	151 (STORAGE)	386 (STORAGE)				Y			
F-6 (1)	1,120 (STORAGE)	1,359 (STORAGE)					Y		
F-6 (2)	421 (STORAGE)	723 (STORAGE)					Y		
F-6 (3)	1,113 (STORAGE)	1,186 (STORAGE)					Y		
F-6 (4)	367 (STORAGE)	437 (STORAGE)					Y		
F-6 (5)	1,114 (STORAGE)	1,141 (STORAGE)					Y		
F-6 (6)	987 (STORAGE)	1,023 (STORAGE)					Y		
F-6 (7)	372 (STORAGE)	391 (STORAGE)					Y		

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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Kevin D. Duro 7/15/14
Chief, Division of Land Development
Chad Clark 7-16-14
Chief, Development Engineering Division
PROJECT: SCHULTE PROPERTY SECTION: 8 & 17 PARCEL NOS.: 8 & 17
DEEDS: L-352 F.176, L-385 F.193 BLOCK NO.: 2,3 & 21 ZONE: RC-DEO TAX/ZONE: 3 & 8 ELEC. DIST.: FOURTH CENSUS TR.: 6040.01

DETAILS
SCHULTE PROPERTY
LOTS 1-44
BUILDABLE PRESERVATION PARCEL 'A' AND
NON-BUILDABLE PRESERVATION PARCELS 'B'-'J'
ZONED: RC-DEO
TAX MAP NO.: 3 GRID NO.: 21 PARCEL NO.: 17
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FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE(S) SHOWN DATE: JULY 7, 2014
SHEET 8 OF 8 ECP-14-003