

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	OVERALL SIMPLIFIED ENVIRONMENTAL CONCEPT PLAN
2	SIMPLIFIED ENVIRONMENTAL CONCEPT PLAN

STORMWATER MANAGEMENT PRACTICES				
LOT	DYWELLS (M-5) Y/N, NUMBER	ROOFTOP DISCONNECTION (N-2) Y/N, NUMBER	NON-ROOFTOP DISCONNECTION (N-2) Y/N, NUMBER	MICRO BID (N-2) Y/N, NUMBER
1	Y, 3	N	Y, 3	N

Soils Legend			
SOIL	NAME	CLASS	K. FACTOR
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GmB	Glenville silt loam, 3 to 8 percent slopes	C	0.37
McC	Mānor-channery loam, 8 to 15 percent slopes	B	

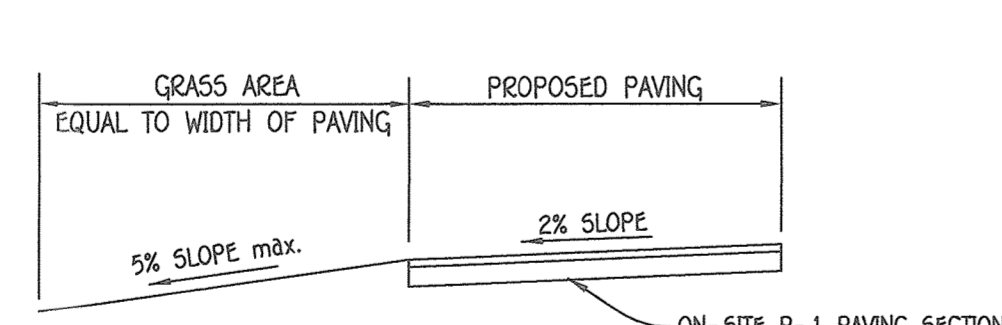
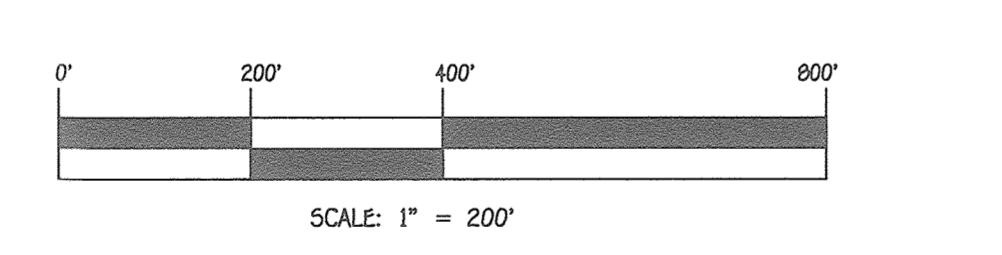
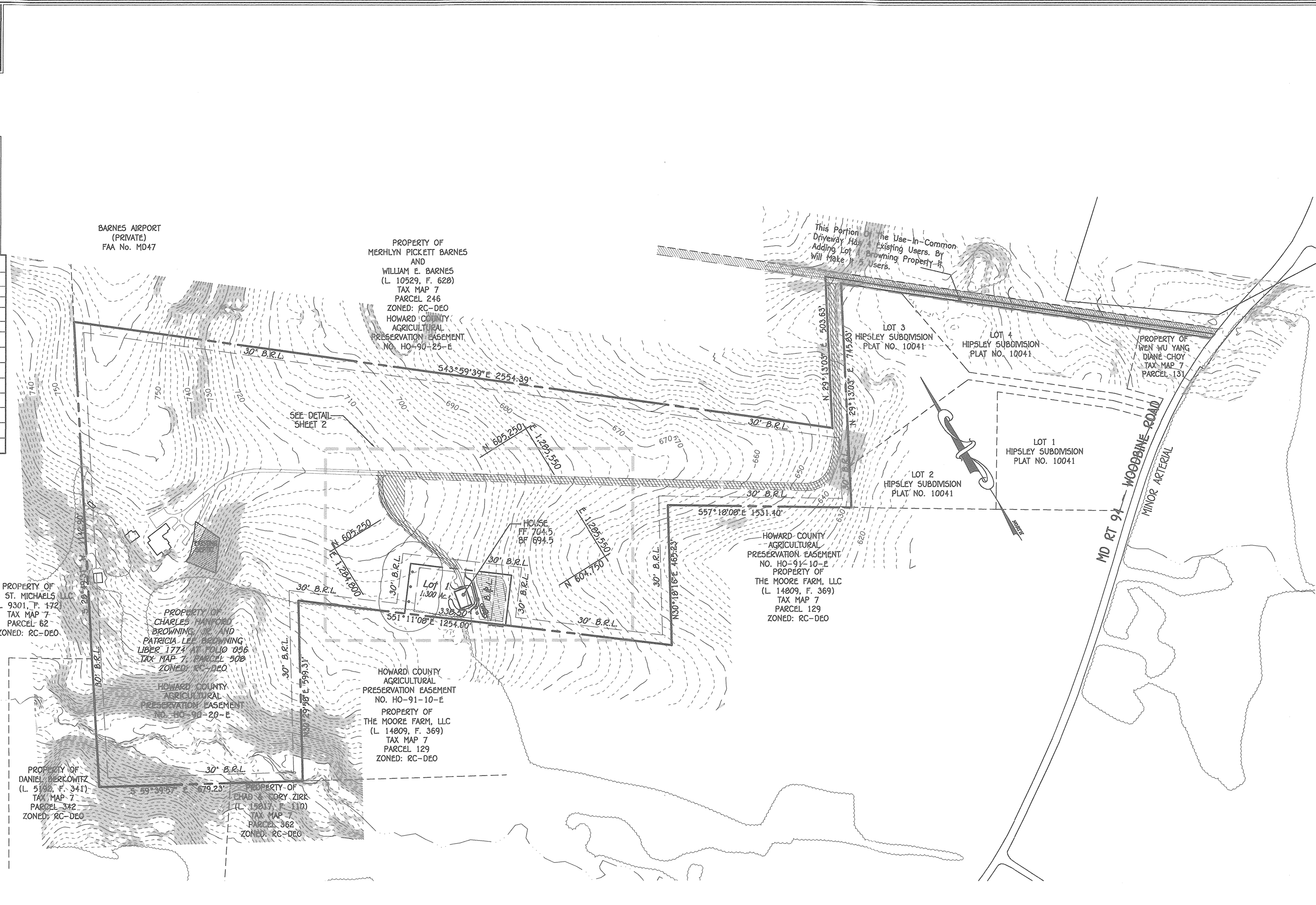
LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---	EXISTING 2' CONTOURS	---	PROPOSED CONTOUR
---	EXISTING 10' CONTOURS	---	SPOT ELEVATION
---	SOILS LINES AND TYPE	---	LIMITS OF DISTURBANCE
---	EXISTING TREELINE	---	PROPOSED TREELINE
---	15% TO 24.9% STEEP SLOPES	---	EXISTING & PROPOSED PAVING
---	25% AND GREATER STEEP SLOPES	---	SILT FENCE
---	100 YEAR PUBLIC FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT	---	EROSION CONTROL MATTING
---	WETLAND AREA	---	SUPER SILT FENCE
---	25' WETLAND BUFFER	---	STABILIZES CONSTRUCTION ENTRANCE
---	STREAM BANK BUFFER	---	SPECIMEN TREE
---	100 YEAR FLOODPLAIN LINE	---	TREE PROTECTION
---	PRIVATE USE-IN-COMMON ACCESS AND STORMWATER MANAGEMENT DRIVEWAY EASEMENT		

SITE ANALYSIS DATA CHART	
A.	TOTAL AREA OF PROPERTY = 2,204,286.4 SQ.FT. OR 52.44 AC. (TOTAL AREA OF AGRICULTURAL LOT 1 = 56,628 SQ.FT. OR 1.300 AC.)
B.	LIMIT OF DISTURBED AREA (SITE) = 42,696.92 SQ.FT. OR 0.98 AC.
C.	PRESENT ZONING DESIGNATION = RC-DEO
D.	PROPOSED USE: RESIDENTIAL
E.	PREVIOUS HOWARD COUNTY FILES: HO-90-20-E
F.	TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC
G.	TOTAL AREA OF SLOPES IN EXCESS OF 15% ON LOT 1 = 0.00 AC
H.	TOTAL AREA OF WETLANDS (INCLUDING BUFFER) ON LOT 1 = 0.00 AC
I.	TOTAL AREA OF STREAM (INCLUDING BUFFER) ON LOT 1 = 0.00 AC
J.	TOTAL AREA OF EXISTING FOREST ON LOT 1 = 0.00 AC
K.	TOTAL GREEN OPEN AREA ON LOT 1 = 52,949.6 SQ.FT. OR 1.22 AC
L.	TOTAL PROPOSED IMPERVIOUS AREA = 9,438 SQ.FT. OR 0.22 AC
M.	TOTAL PROPOSED IMPERVIOUS PAVING AREA = 7,038 SQ.FT. OR 0.16 AC
N.	TOTAL PROPOSED IMPERVIOUS ROOF AREA = 2,400 SQ.FT. 0.06 AC
O.	TOTAL AREA OF ERODIBLE SOILS = 0. AC

NARRATIVE
Introduction
This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volume 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 Chapters 3 and 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.

General Site Conditions
The Browning Property is zoned RC-DEO and located on Tax Map 07, Parcel No. 508 of the Howard County, Maryland Tax Map Database System. This property consists of 52.44 acres all of which are encumbered with a Preservation Easement dedicated to Howard County Maryland Agricultural Land Preservation Program HO-90-20-E. The Browning Property project located to the north Maryland Route 94 (Woodbine Road). The eastern, southern and western boundary lines are bordered by The Moore Farm, LLC that is in the Howard County Agricultural Preservation Easement No. HO-91-10-E. The northern boundary line is adjacent to Merilyn and William Barnes, which is also in the Howard County Agricultural Preservation Easement No. HO-90-25-E and Barnes Airport FAA No. MD47. The required Pe for this project will be 1', creating a required E50v of 723 CuFt. This required E50v is being satisfied by the use of N-2 Non-Rooftop Disconnection Credits and N-5 Drywells, which provide a total E50v of 759 CuFt equating to a Pe of 1.077. After SMP treatment has been provided drainage from the area of the proposed impervious areas consisting of a single family Detached Home with lead walk and driveway will flow to southeast, traveling in excess of 600' prior to leaving the overall Browning Property. Per the Howard County Web Soils Survey dated March 2018, soils on-site consist of "GgC" Glenelg loam, 8 to 15 percent slopes, a type B soil and "GgB" Glenelg loam, 3 to 8 percent slopes, a type B soil.

- Natural Resource Protection**
Although some Natural Resources exist on the Overall Browning property, none exist on Lot 1 or within 400' of the proposed improvements.
- Maintenance of Natural Flow Patterns**
This project's design discharges runoff similar to the characteristics and direction of this site prior to any of the proposed improvements.
- Reduction of Impervious Areas through better site design, alternative surfaces and Nonstructural Practices**
To reduce the need for unnecessary impervious, a portion of the existing driveway will be utilized as a use-in-common.
- Integration of Erosion and Sediment Controls into Stormwater Strategy**
The placement of the sediment controls was dictated by the same drainage areas utilized for the placement of the proposed Stormwater Management devices.
- Implementation of E50 Planning Techniques and Practices to the Maximum Extent Practicable (E52)**
Implementation of Stormwater Strategy was based on providing the full required E50 volume and maintaining a design suitable for the rural area.
- Request for Design Manual Waiver**
No waivers are expected to be required on this project.



NOT TO SCALE

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED, DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

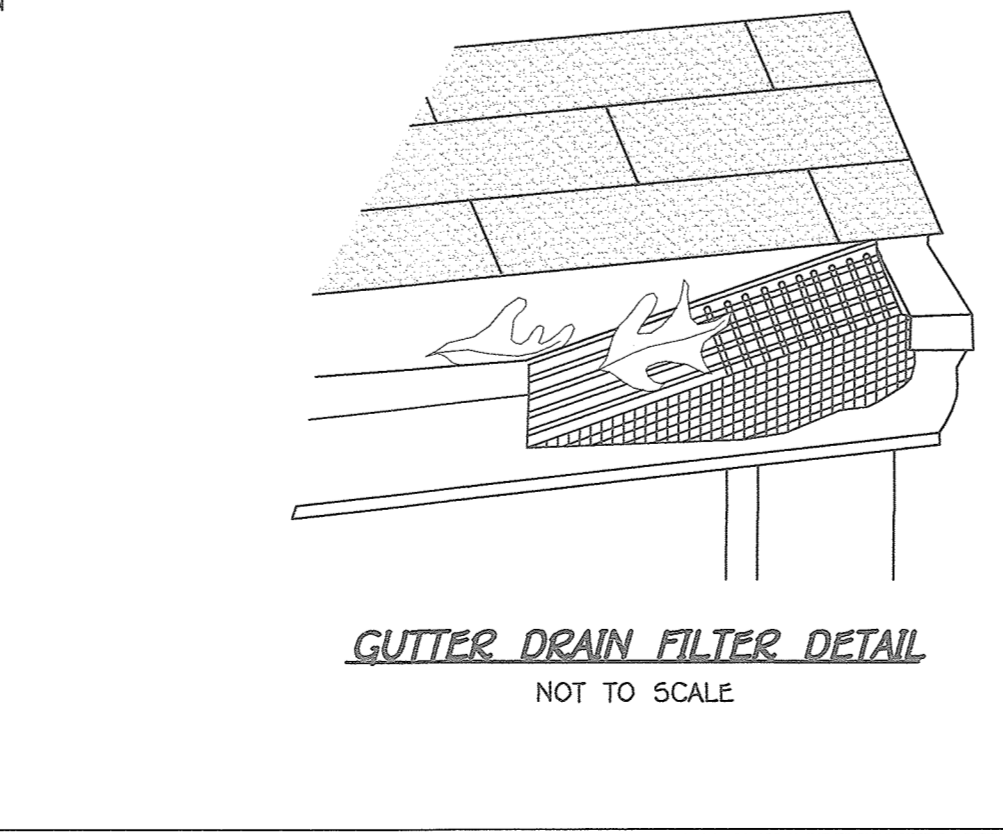
1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTON OR DEVELOPMENT OF IMPERVIOUS AREA IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

PROFESSIONAL CERTIFICATION

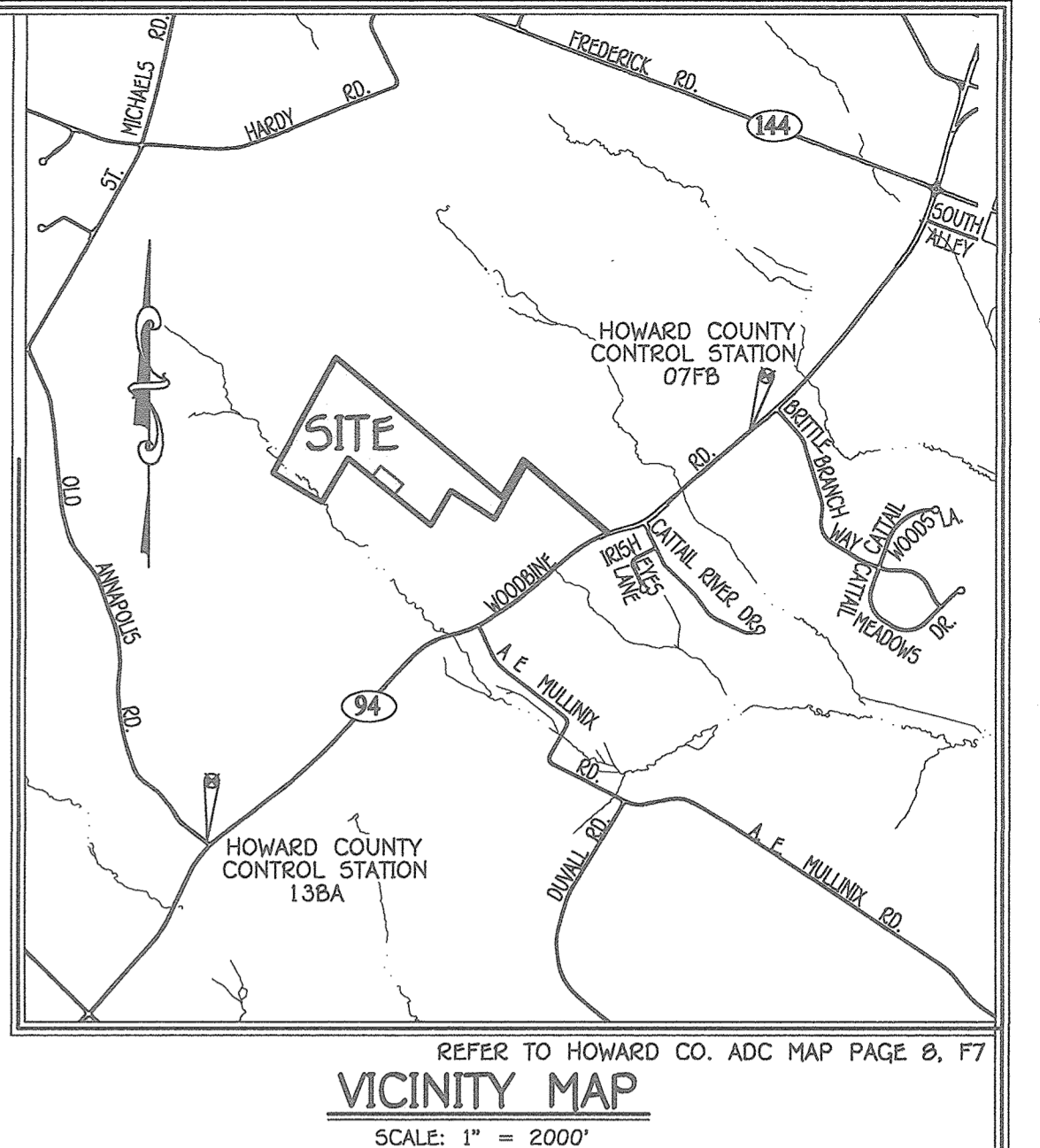
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

Charles Hanford Browning, Jr.
Signature of Professional Land Surveyor

7/19/18
DATE



Owner And Developer
Charles Hanford Browning, Jr.
And
Patricia Lee Browning
1874 Woodbine Road
Woodbine, Maryland 21797
Ph: 301-252-6864



REFER TO HOWARD CO. ADC MAP PAGE 8, F7

VICINITY MAP
SCALE: 1" = 2000'

GEODETIC CONTROL STATIONS

#138A 138A ELEV. 635.429 N. 600.685.367 E. 1,282,946.601	#07FB A. 07FB ELEV. 908.257 N. 583,153.978 E. 1,289,326.155
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- GENERAL NOTES:**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - TOPOGRAPHY SHOWN IN THE AREA OF THE LOT BEING DISTURBED IS BASED ON A TOPOGRAPHIC SURVEY BY FISHER, COLLINS & CARTER, INC. IN JULY, 2017.
 - BOUNDARY OF LOT BASED ON FIELD RUN BY FISHER, COLLINS & CARTER, INC. IN JULY, 2017.
 - THIS PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
 - STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. WE ARE PROVIDING STORM WATER MANAGEMENT BY THE USE OF 3 (M-5) DRY WELLS AND 3 AREAS OF (N-2) NON-ROOFTOP DISCONNECTION CREDITS TO BE MAINTAINED BY THE HOMEOWNER OF THE LOT 1.
 - THERE ARE NO FLOODPLAIN, WETLANDS, STREAMS AND/OR ITS BUFFERS ON LOT 1 OR WITHIN THE L.O.D.
 - SUBJECT PROPERTY ZONED: RC-DEO
 - FOREST CONSERVATION REQUIREMENTS WILL BE ADDRESSED AT THE FINAL PLAT STAGE.
 - LANDSCAPING REQUIREMENTS WILL BE ADDRESSED AT THE FINAL PLAT STAGE.
 - SOILS SHOWN HEREON ARE BASED ON NRCS WEB SOIL SURVEY.
 - 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 FINAL PLAT 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.
 - APPROVAL OF THIS ECP DOES NOT CONSTITUTE APPROVAL OF SUBSEQUENT OR ASSOCIATED SUBDIVISION OR SITE DEVELOPMENT PLANS.

OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE DATE AT WHICH THE FACILITY DRAINS.
D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
F. 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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Charles Hanford Browning, Jr.
Chief, Division of Land Development

9/19/18
Date

Charles Hanford Browning, Jr.
Chief, Development Engineering Division

10/10/18
Date

PROJECT	SECTION	PARCEL NO.			
The Browning Property	-	508			
PLAT	BLOCK/GRID	ZONE	TAX MAP	ELEC. DIST.	DENSUS TR.
N/A	15	RC-DEO	7	FOURTH	6040.01
HO.CO. FILE NO.S: HO-90-20-E					

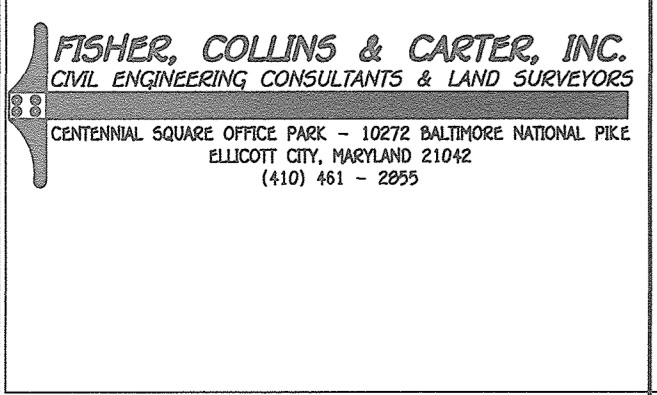
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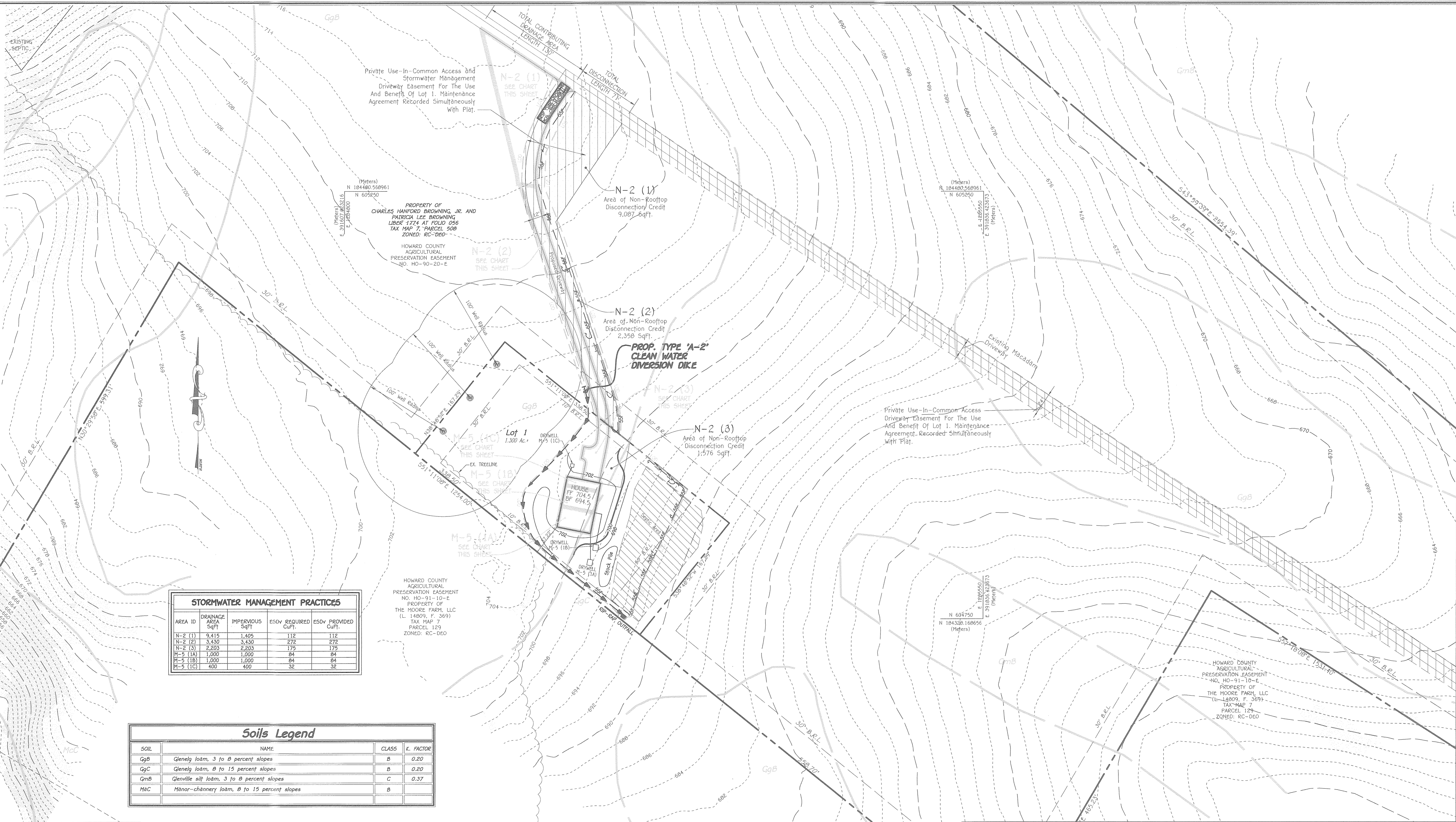
Environmental Concept Plan
The Browning Property

Lot 1

Zoned: RC-DEO
Tax Map: 7, Grid: 15, Parcel: 508
Fourth Election District - Howard County, Maryland
Date: May 30, 2018 Scale: 1" = 200'
Sheet 1 of 2

ECP-18-050





STORMWATER MANAGEMENT PRACTICES

AREA ID	DRAINAGE AREA SqFT	IMPERVIOUS SqFT	ESDV REQUIRED Cuft.	ESDV PROVIDED Cuft.
N-2 (1)	9,415	1,405	112	112
N-2 (2)	3,430	3,430	272	272
N-2 (3)	2,203	2,203	175	175
M-5 (1A)	1,000	1,000	84	84
M-5 (1B)	1,000	1,000	84	84
M-5 (1C)	400	400	32	32

Soils Legend

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McC	Manor-channery loam, 8 to 15 percent slopes	B	

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FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895

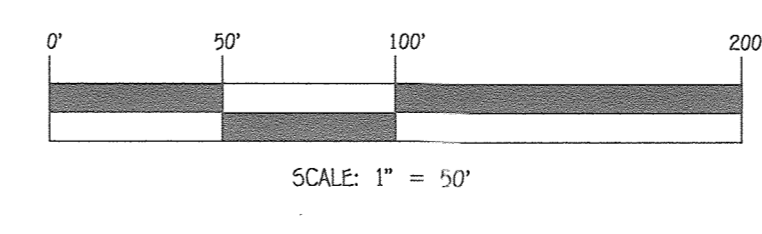
#21476

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. 21476, EXPIRATION DATE: 7/14/19.

Frank P. Marshall, Jr. 7/19/18
 Signature Of Professional Land Surveyor DATE

Owner And Developer
 Charles Hanford Browning, Jr.
 And
 Patricia Lee Browning
 1874 Woodbine Road
 Woodbine, Maryland 21797
 Ph: 301-252-6864



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jui Monica Jones for LKS 9/21/18
 Chief, Division of Land Development Date

Ed Chubb 10-18
 Chief, Development Engineering Division Date

PROJECT	BLOCK/GRID	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
The Browning Property	15	RC-DEO	7	FOURTH	6040.01

HO.CO. FILE NO.S:
 HO-90-20-E

Environmental Concept And Sediment Control Plan

The Browning Property

Lot 1

Zoned: RC-DEO
 Tax Map: 7, Grid: 15, Parcel: 50B
 Fourth Election District - Howard County, Maryland
 Date: August 13, 2018
 Scale: 1" = 50'
 Sheet 2 of 2

ECP-18-058