

RE: WEBB PATTIE OVERBY
 DB. 9252 PG. 507
 ACC#293599

NOTES:

TITLE BINDER NOT PROVIDED.

THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DESIGNATED BY THE SECRETARY OF HOUSING & URBAN DEVELOPMENT, (PREMISES LOCATED IN ZONE X, MAP ID# 240270080D, EFFECTIVE DATE: 11/06/2013)

I HEREBY CERTIFY THAT THIS SURVEY WAS CONDUCTED UNDER MY RESPONSIBLE CHARGE AND THE PREPARATION OF THIS PLAT AND THE SURVEY IS IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN REGULATION 12 CHAPTER 09.13.06 OF THE CODE OF MARYLAND ANNOTATED REGULATIONS. NO TITLE REPORT WAS FURNISHED.

CONSUMER INFORMATION NOTES:

THIS PLAN IS A BENEFIT TO A CONSUMER INsofar AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENT IN CONNECTION WITH CONTEMPLATED TRANSFER, FINANCING OR RE-FINANCING.

THIS PLAN IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATION OF FENCE, GARAGE, BUILDING, OR OTHER EXISTING OR FUTURE IMPROVEMENT.

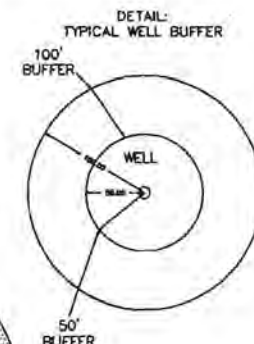
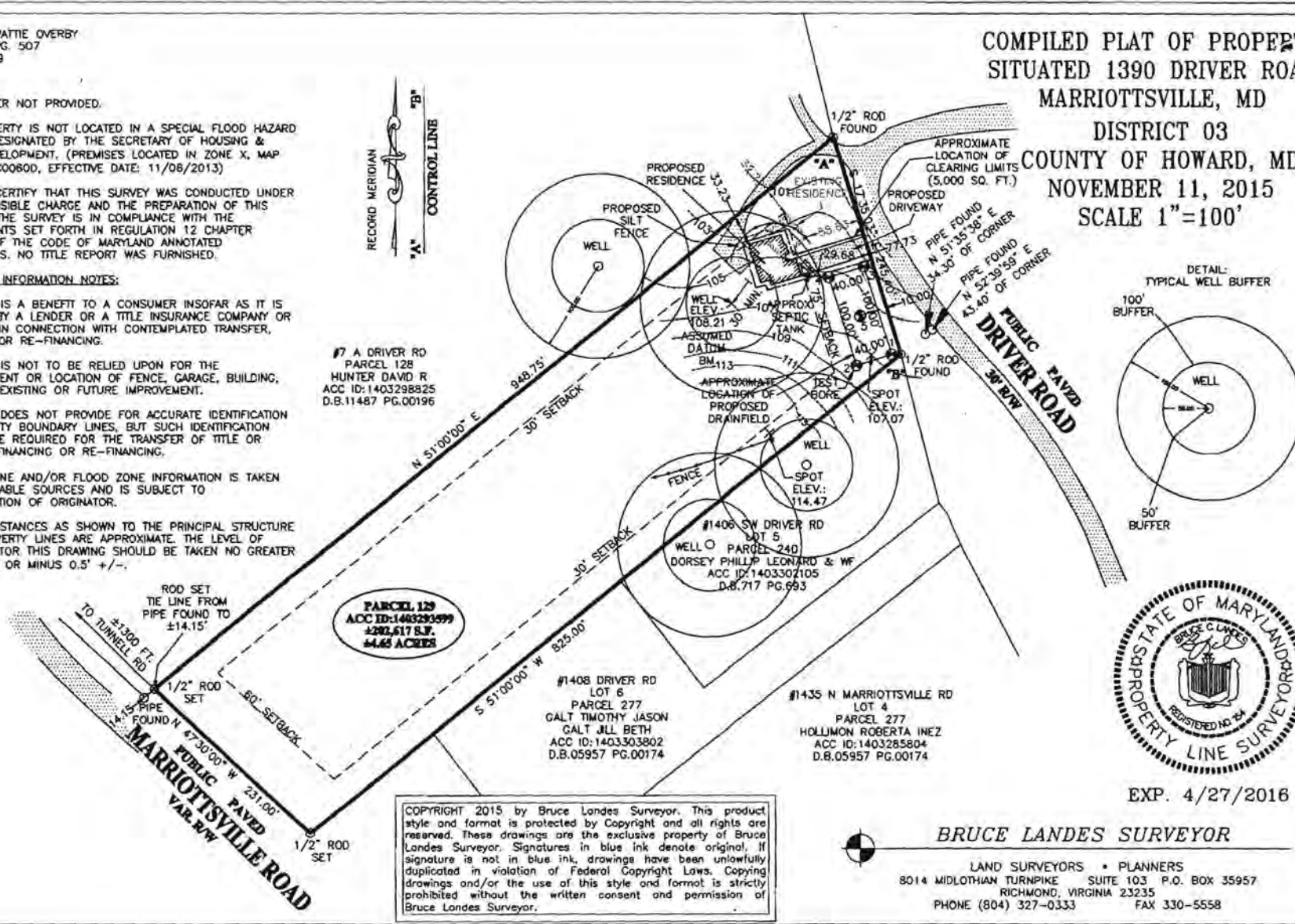
THIS PLAN DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING OR RE-FINANCING.

BUILDING LINE AND/OR FLOOD ZONE INFORMATION IS TAKEN FROM AVAILABLE SOURCES AND IS SUBJECT TO INTERPRETATION OF ORIGINATOR.

SETBACK DISTANCES AS SHOWN TO THE PRINCIPAL STRUCTURE FROM PROPERTY LINES ARE APPROXIMATE. THE LEVEL OF ACCURACY FOR THIS DRAWING SHOULD BE TAKEN NO GREATER THAN PLUS OR MINUS 0.5' +/-.



**COMPILED PLAT OF PROPERTY
 SITUATED 1390 DRIVER ROAD
 MARRIOTTVILLE, MD
 DISTRICT 03
 COUNTY OF HOWARD, MD
 NOVEMBER 11, 2015
 SCALE 1"=100'**



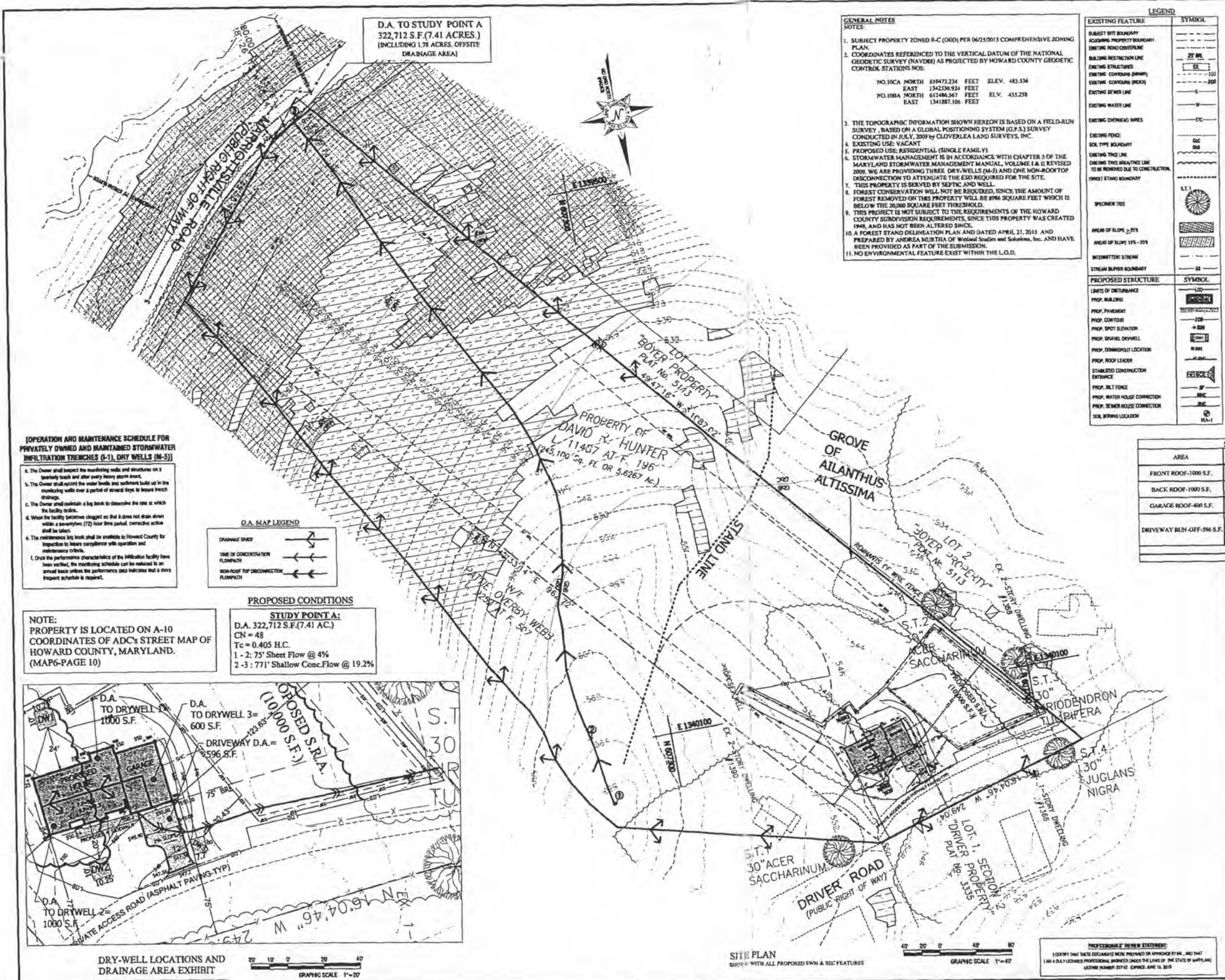
EXP. 4/27/2016

BRUCE LANDES SURVEYOR

LAND SURVEYORS • PLANNERS
 8014 MIDLOTHIAN TURNPIKE SUITE 103 P.O. BOX 35957
 RICHMOND, VIRGINIA 23235
 PHONE (804) 327-0333 FAX 330-5558

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FILE HOWARD COUNTY, MD



D.A. TO STUDY POINT A
322,712 S.F. (7.41 ACRES.)
(INCLUDING 1.78 ACRES OFFSITE
DRAINAGE AREA)

- GENERAL NOTES:**
- SUBJECT PROPERTY ZONED R-C (DEO) PER 06/25/2015 COMPREHENSIVE ZONING PLAN.
 - COORDINATES REFERENCED TO THE VERTICAL DATUM OF THE NATIONAL GEODETIC SURVEY (NAVDS8) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS.
 - NO. 10CA NORTH 819473.234 FEET ELEV. 483.534
 - EAST 1342530.924 FEET
 - NO. 10BA NORTH 662486.567 FEET ELEV. 435.258
 - EAST 1341887.106 FEET
 - THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD-BLUN SURVEY, BASED ON A GLOBAL POSITIONING SYSTEM (GPS) SURVEY CONDUCTED IN JULY, 2009 BY CLOVERLEAF LAND SURVEYS, INC.
 - EXISTING USE: VACANT
 - PROPOSED USE: RESIDENTIAL (SINGLE FAMILY)
 - STORMWATER MANAGEMENT IS IN ACCORDANCE WITH CHAPTER 5 OF THE MARYLAND STORMWATER MANAGEMENT MANUAL, VOLUME 1 & 2 REVISED 2009. WE ARE PROVIDING THREE DRY-WELLS (M-3) AND ONE NON-ROOF TOP DISCONNECTION TO ATTENUATE THE ESD REQUIRED FOR THE SITE.
 - THIS PROPERTY IS SERVED BY SEPTIC AND WELL.
 - FOREST CONSERVATION WILL NOT BE REQUIRED, SINCE THE AMOUNT OF FOREST REMOVED ON THIS PROPERTY WILL BE 994 SQUARE FEET WHICH IS BELOW THE 20,000 SQUARE FEET THRESHOLD.
 - THIS PROJECT IS NOT SUBJECT TO THE REQUIREMENTS OF THE HOWARD COUNTY SERVICEDOM REQUIREMENTS, SINCE THIS PROPERTY WAS CREATED 1949, AND HAS NOT BEEN ALTERED SINCE.
 - A FOREST STAND DELINEATION PLAN AND DATED APRIL 21, 2014 AND PREPARED BY ANDREA MURTHA OF Wetland Studies and Solutions, Inc. AND HAVE BEEN PROVIDED AS PART OF THE SUBMISSION.
 - NO ENVIRONMENTAL FEATURE EXIST WITHIN THE L.O.D.

LEGEND

EXISTING FEATURE	SYMBOL
SUBJECT SITE BOUNDARY	---
EXISTING PROPERTY BOUNDARY	---
EXISTING ROAD CENTERLINE	---
BUILDING RESTRICTION LINE	---
EXISTING STRUCTURES	---
EXISTING CONTOUR (5' INTERVAL)	---
EXISTING CONTOUR (10' INTERVAL)	---
EXISTING DRAINAGE LINE	---
EXISTING WATER LINE	---
EXISTING OVERHEAD WIRES	---
EXISTING FENCE	---
SOIL TYPE BOUNDARY	---
EXISTING TREE	---
EXISTING TREE IMPACT LINE TO BE REMOVED DUE TO CONSTRUCTION	---
FOREST STAND BOUNDARY	---
PROPOSED STRUCTURE	---
LIMITS OF DISTURBANCE	---
PROP. PAVEMENT	---
PROP. CONTOUR	---
PROP. SPOT ELEVATION	---
PROP. GRAVEL DRYWELL	---
PROP. CONDUIT LOCATION	---
PROP. ROOF LEADER	---
STABILIZED CONSTRUCTION ENTRANCE	---
PROP. MULCH FENCE	---
PROP. WATER HOUSE CONNECTION	---
PROP. SEWER HOUSE CONNECTION	---
SOIL BORING LOCATION	---



SITE ANALYSIS DATA SHEET

SITE AREA	5.63 ACRES
WETLAND AREA	0.00 ACRES
FLOODPLAIN AREA	0.00 ACRES
FOREST AREA	4.73 ACRES
STEEP SLOPES IN EXCESS OF 15%	2.32 ACRES
ERODIBLE SOILS AREA	0.00 ACRES
LIMIT OF DISTURBANCE (L.O.D.)	0.55 ACRES
FOREST AREA WITHIN L.O.D.	0.21 ACRES
AREA OF STEEP SLOPE DISTURBANCE	0.00 ACRES
GREEN OPEN AREA	0.83 ACRES
PROPOSED IMPERVIOUS AREA	0.076 ACRES

MAPPED SOILS TABLE

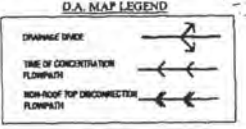
Symbol	Map Unit Name	Area	Imperv	ESD	Drainage Class
U4a	Quaternary loam, 3 to 8 percent slopes	0.78	0	2	well drained
U4c	Quaternary loam, 8 to 15 percent slopes	0.29	0	2	well drained
U4d	Quaternary loam, 15 to 25 percent slopes	0.20	0	2	well drained
U4f	Quaternary loam, 25 to 35 percent slopes	0.20	0	2	well drained

STORMWATER MANAGEMENT REQUIREMENTS

AREA	PROPOSED PRACTICE (Length X Width X Height)	SURFACE AREA PROVIDED (S.F.)	VOLUME PROVIDED (C.F.)
FRONT ROOF-1000 S.F.	DRY-WELL (10.25'x10'x5')	102.5 S.F.	205 C.F.
BACK ROOF-1000 S.F.	DRY-WELL (10.25'x10'x5')	102.5 S.F.	205 C.F.
GARAGE ROOF-600 S.F.	DRY-WELL (8'x7'x5')	61.6 S.F.	123.2 C.F.
DRIVEWAY RUN-OFF-596 S.F.	NON ROOF TOP DISCONNECTION (Contributing Impervious Area Flow Length=27' Disconnection Flow Length=147')	—	47.18 C.F.
TOTAL VOLUME PROVIDED:		390.38 C.F.	347.34 C.F.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1), DRY WELLS (M-3)

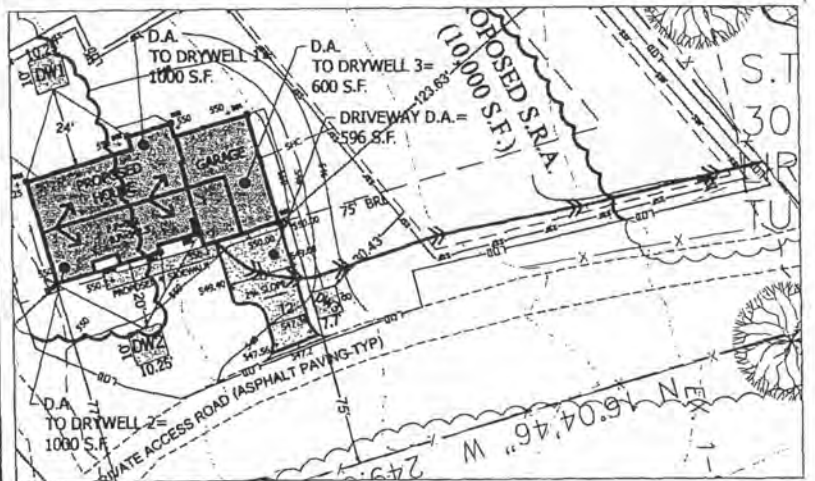
- The Owner shall inspect the monitoring wells and structures on a quarterly basis and after every heavy storm event.
- The Owner shall record the water levels and sediment build up in the monitoring wells over a period of several days to insure correct drainage.
- The Owner shall maintain a log book to document the date at which the facility is inspected.
- When the facility becomes clogged so that it does not drain within a seven-day (7) hour time period, corrective action shall be taken.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- 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.



PROPOSED CONDITIONS

STUDY POINT A:
D.A. 322,712 S.F. (7.41 AC.)
CN = 48
Tc = 0.405 H.C.
1 - 2: 75' Sheet Flow @ 4%
2 - 3: 771' Shallow Conc. Flow @ 19.2%

NOTE: PROPERTY IS LOCATED ON A-10 COORDINATES OF ADC'S STREET MAP OF HOWARD COUNTY, MARYLAND. (MAP6-PAGE 10)



DESIGN NARRATIVE

Natural Resource Protection and Enhancement:
This site is entirely wooded, with relatively steep slopes in 40% of the site. The approach to achieving the goals of this project is to disturb a minimum amount of the existing wooded areas. As shown on this plan, approximately 90% of the site will remain undisturbed, therefore maintaining the existing characteristics of the site. The placement of the house and proposed driveway, such as the driveway, have been proposed to place that are least sensitive to the character of the site. The house itself has been placed in the flatter part of the site, which would result in the least amount of grading, and therefore fewer disturbances. The driveway is shown to cut through an area that is fairly clear, and mostly populated with brush and smaller trees, and would not require too much clearing.

Maintenance of Natural Flow Patterns:
The project has been designed to maintain the natural drainage patterns of the site. The proposed house will be situated very close to the ridge of the site, and the associated grading shows that there will be few changes in flow patterns. Furthermore, the placement of the proposed stormwater management practices have been planned to maintain these natural flow patterns. Runoff from impervious areas are carefully directed to the proposed practices.

Reduction of Impervious Areas Through Better Site Design, Alternative Surfaces, Non-Structural Practices:
Since the site is mostly wooded any new development will create new impervious areas. However, we have used a site design that will allow a vast majority of the site to be maintained in its natural state. This has been achieved by strategically placing the house, so that there is minimal disturbance. Furthermore, we have explored the opportunity to meet ESD requirements by using narrower management curbs. However, due to site restrictions, such as steep slopes, it is difficult to satisfy the requirements through credits. Therefore, stormwater management practices have been proposed to meet stormwater management requirements for most impervious surfaces.

Integration of Erosion and Sediment Controls into SWM Strategy:
The stormwater management strategy of the site is to use micro practices, and to naturally direct impervious runoff to these practices. The existing topography of the site and the approach to site design requires minimal erosion and sediment control measures, and therefore fewer disturbances. The use of silt fence will adequately handle runoff from disturbed areas. Implementation of ESD Planning Techniques and Practices To The MEP The site has been designed to limit the amount of disturbance to the site. The proposed design has an impervious area of 0.076 acres, approximately 1.35%. The actual disturbance is approximately 15%. The proposed driveway is strategically placed to limit the disturbance to the site. It should be noted that the placement of the driveway was actually sited in the field and then implemented in the proposed plan. All of the existing slope greater than 25% will remain in its existing state without disturbance. Impervious areas from garage roof is directed to proposed Drywell 3 and impervious areas from the front roof is directed to proposed Drywell 2. Also, located in the front, impervious areas from the back portion of the roof are directed to Drywell 1. Also the driveway drainage has been attenuated by Non-roof top disconnection. These facilities are sited in accordance with Chapter 5 of the Maryland Stormwater Management Manual. In order to preserve the nature of the site, and to limit the amount of disturbance to the site especially in areas of steep slopes, no practice is proposed in those areas. The Total volume provided at proposed practices is 390.38 C.F., which is greater than the required target volume of 347.34 C.F. Therefore, the required ESD's to MEP has been satisfied.

PROFESSIONAL REVIEW STATEMENT:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER: 22742. EXPIRES: JUNE 18, 2015.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division _____ DATE _____
Chief, Division of Land Development _____ DATE _____

APPLICANT

DAVID R. HUNTER
1530 KEY BLVD. #1330
ARLINGTON, VA 22209
C/O PHONE (410)-977-1244

ENVIRONMENTAL CONCEPT PLAN

DAVID R. HUNTER
LIBER 1148 AT FOLIO 196
DRIVER ROAD, HOWARD CO., MD

3-TH DISTRICT
GRID: 10, PARCEL: 128

ZONE: R-C (DEO)
TAX MAP: 10

RAZTEC ASSOCIATES, INC.
civil engineers & land planners

3280 Urbana Pike
Jamestown, Maryland 21754

Tel (301) 775-4394
Fax (301) 831-8978
email: raztecengr@comcast.net



SCALE
1" = 40'

CHECKED BY: MR

DRAWN BY: MP

DATE
MAY 2015

SHEET NUMBER
1 of 1

NOTES:

1. TAX MAP REFERENCE: MAP 10, GRID 10, PARCEL 128

OWNER: DAVID R. HUNTER
1530 KEY BLVD. #1330
ARLINGTON, VA 22209

2. ZONING CLASSIFICATION: R-C (DEO)
RURAL CONSERVATION (DEVELOPMENT EXCHANGE OVERLAY)

MINIMUM BUILDING SETBACKS: MINIMUM LOT SIZE:
R (RURAL): FRONT: 75' 3.0 ACRES
SIDES: 30'
REAR: 60'

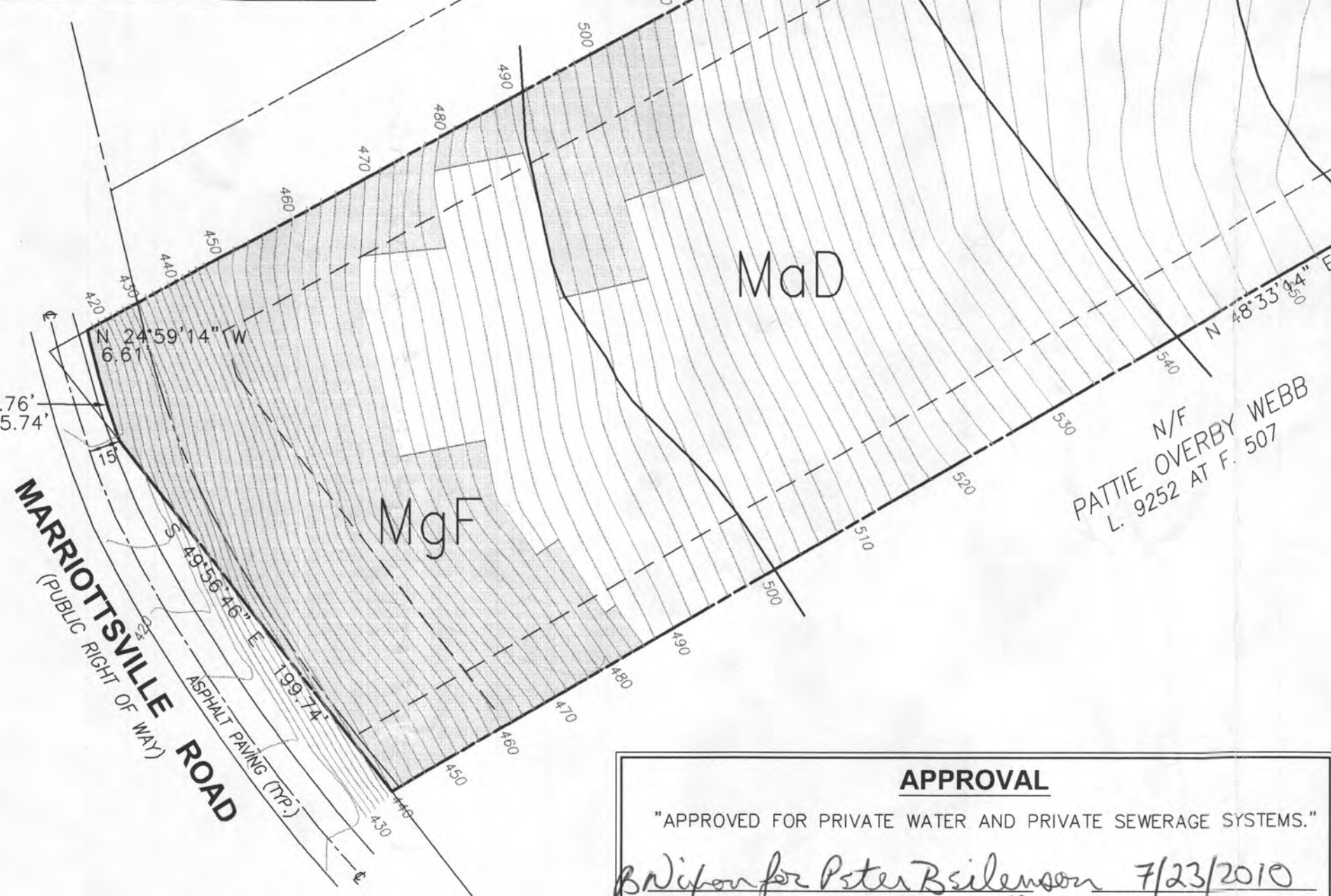
- ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATE PLAN.
- THE POTABLE WATER WELL MUST BE DRILLED AND APPROVED BY THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT APPROVAL.
- THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD-RUN SURVEY REFERENCED TO THE VERTICAL DATUM OF THE NATIONAL GEODETIC SURVEY (NAVD88), BASED ON A GLOBAL POSITIONING SYSTEM (G.P.S.) SURVEY CONDUCTED IN JULY, 2009.
- ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN-GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- UNDERGROUND WELL AND SEWERAGE COMPONENTS SHOWN HEREON ARE BASED ON AVAILABLE PUBLIC RECORDS AND VISIBLE SURFACE EVIDENCE. NO SUBSURFACE EXPLORATION HAS BEEN PERFORMED TO VERIFY THEIR LOCATION.
- THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. IT DOES NOT SHOW EVERY MATTER AFFECTING OWNERSHIP AND USE, NOR EVERY MATTER RESTRICTING THE OWNERSHIP OR USE OF THE PROPERTY.
- THE ASPHALT DRIVEWAY(S) SHOWN HEREON SERVE MULTIPLE LOTS BEYOND THE LIMITS OF THE SUBJECT PARCEL, INDICATING AN APPARENT PRESCRIPTIVE RIGHT OF WAY. THE DEED FOR THE SUBJECT PARCEL CONTAINS NO REFERENCE THERETO.
- THE SHADED AREA INDICATES SLOPES AVERAGING 25% OR GREATER.
- THE OWNER RESERVES THE RIGHT TO CONSTRUCT A DIFFERING HOUSE FOOTPRINT FROM THAT SHOWN HEREON, PROVIDED THE HOUSE IS PLACED IN THE SAME LOCATION, AND DOES NOT EXCEED COUNTY-APPROVED SQUARE FOOTAGE OR NUMBER OF BEDROOMS.

This area designates a private sewage disposal area of at least 10,000 square feet, as required by the Maryland Department of Environment for individual sewage disposal. Improvements of any nature in this area are restricted. This sewage disposal area shall become null and void upon connection to a public sewerage system. The County Health Officer shall have authority to grant adjustments to the private sewage disposal area.

LEGEND OF SYMBOLS	
	PERCOLATION TEST SITE (PASSED)
	EXISTING WATER WELL
	PROPOSED WATER WELL
	WELL RADIUS (AS NOTED)

R = 380.00' A = 45.76'
CHD: N28° 26' 15"W 45.74'

MARRIOTTVILLE ROAD
(PUBLIC RIGHT OF WAY)



SURVEYOR'S CERTIFICATE

I hereby certify that the plan shown hereon is correct, to the best of my knowledge and belief; that it is based on a field survey conducted under my direct supervision and information contained in the Land Records of Howard County, Maryland. No title report was provided or reviewed in the preparation of this plat. As such, there may be easements or encumbrances affecting the use of this land that are not shown hereon.

JULY 7, 2010
Date

R. Winfield Vinings, Jr.
CLOVERLEA LAND SURVEYS, INC.
R. WINFIELD VININGS, JR.
PROFESSIONAL LAND SURVEYOR
MD REG. No.: 10957

PERCOLATION CERTIFICATE PLAN
PROPERTY OF
DAVID R. HUNTER
AS DESCRIBED IN
LIBER 11487 AT FOLIO 196
THIRD (3rd) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
JULY 2010 - SCALE 1" = 60'

JOB No. CLOV09-418

APPROVAL
"APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS."
P. Peterson
Health Officer
Howard County Health Department
Date 7/23/2010
mgc



Cloverlea Land Surveys, Inc.
LAND SURVEYING - SITE PLANNING - CAD DRAFTSMEN
900 MAGO VISTA ROAD, ARNOLD, MD 21012
OFFICE (443) 994-3157 FAX (443) 458-0684



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: 8-31-15

Permit No.: B15003708

Building Address: 1370 Driver Road
 City: Woodstock State: MD Zip Code: 21143
 Suite/Apt. #: _____ SDP/WP/BA #: _____
 Census Tract: _____ Subdivision: _____
 Section: _____ Area: _____ Lot: 3
 Tax Map: 10 Parcel: 128 Grid: 10
 Zoning: R-C Map Coordinates: _____ Lot Size: 5.63 ac

Existing Use: Wooded lot
 Proposed Use: Resident Home
 Estimated Construction Cost: \$ 235,000
 Description of Work: Construction of a new single family 4br, 3 car garage attached, 2 story home w/ unfinished basement
 Occupant or Tenant: _____
 Was tenant space previously occupied? Yes No
 Contact Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Property Owner's Name: DAVID HUNTER
 Address: 1521 UPWARD DRIVE # 5310
 City: HOUSTON State: TX Zip Code: 77043
 Phone: 471 055 477 1029 Fax: _____
 Email: Dhunter2015@outlook.com

Applicant's Name & Mailing Address, (if other than stated herein)
 Applicant's Name: Powers Homes
 Address: 113 Westminster Pike Ste 200
 City: Alexandria State: MD Zip Code: 21136
 Phone: 410 925 0720 Fax: 410 333 0043
 Email: michael@powershomes.com

Contractor Company: Powers Homes
 Contact Person: Michael Dustin
 Address: 113 Westminster Pike Ste 200
 City: Alexandria State: MD Zip Code: 21136
 License No.: MHBA 6664
 Phone: 410 933 3700 Fax: 410 333 0043
 Email: michael@powershomes.com

Engineer/Architect Company: _____
 Responsible Design Prof.: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 st floor: <u>40'</u>	<u>43'</u>
	2 nd floor: <u>32'</u>	<u>43'</u>
Area of construction (sq. ft.):	Basement:	<u>40'</u>
	<input type="checkbox"/> Finished Basement	<u>43'</u>
Use group:	<input checked="" type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
Construction type:	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms:	<u>4</u>
<input type="checkbox"/> Structural Steel	Multi-family Dwelling	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
➤ Roadside Tree Project Permit	Footings:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof:	
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
Water Supply	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Sewage Disposal	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Gas:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Heating System	
<input type="checkbox"/> Electric	<input type="checkbox"/> Oil
<input type="checkbox"/> Natural Gas	<input checked="" type="checkbox"/> Propane Gas
<input type="checkbox"/> Other:	
Sprinkler System:	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Grading Permit Number: _____	
Building Shell Permit Number: _____	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: _____
 Email Address: michael@powershomes.com
 Title/Company: Project Manager / Powers Homes

Print Name: Michael Dustin
 Date: 8/31/15

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

PLEASE WRITE NEATLY & LEGIBLY

-FOR OFFICE USE ONLY-

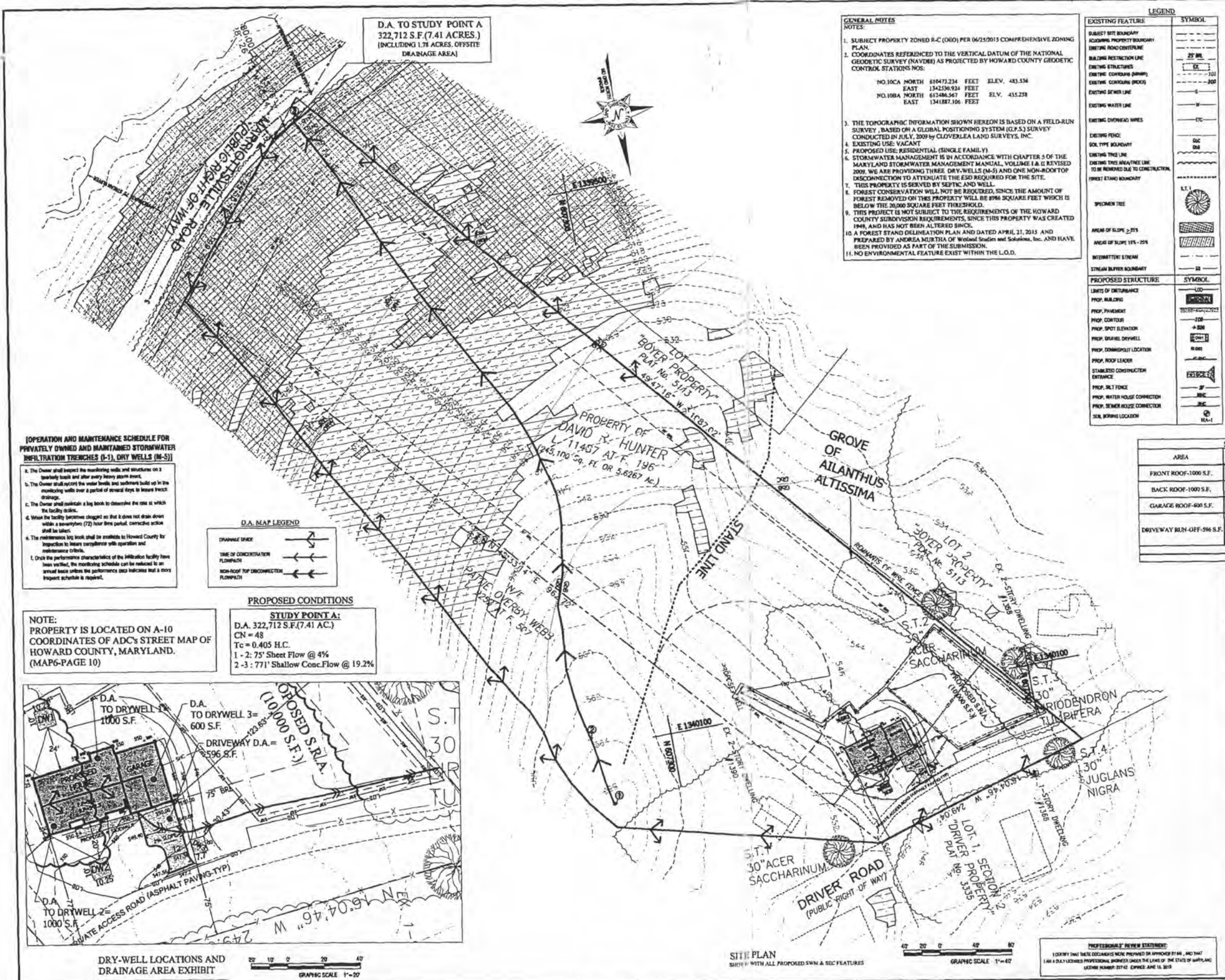
AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
Health		

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$ <u>100</u>
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$ <u>50</u>
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$
Check #	<u>1349</u>

Is Sediment Control approval required for issuance? Yes No
 CONTINGENCY CONSTRUCTION START

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



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(INCLUDING 1.78 ACRES OFFSITE
DRAINAGE AREA)

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EXISTING WATER LINE	---
EXISTING OVERHEAD WIRES	---
EXISTING FENCE	---
SOIL TYPE BOUNDARY	---
EXISTING TREE	---
EXISTING TREE TO BE REMOVED DUE TO CONSTRUCTION	---
FOREST STAND BOUNDARY	---
PROPOSED STRUCTURE	---
LIMITS OF DISTURBANCE	---
PROP. PAVEMENT	---
PROP. CONTOUR	---
PROP. SPOT ELEVATION	---
PROP. GRAVEL DRYWELL	---
PROP. CONDUIT LOCATION	---
PROP. ROOF LEADER	---
STABILIZED CONSTRUCTION ENTRANCE	---
PROP. MULCH FENCE	---
PROP. WATER HOUSE CONNECTION	---
PROP. SEWER HOUSE CONNECTION	---
SOIL BORING LOCATION	---



SITE ANALYSIS DATA SHEET

SITE AREA	5.63 ACRES
WETLAND AREA	0.00 ACRES
FLOODPLAIN AREA	0.00 ACRES
FOREST AREA	4.73 ACRES
STEEP SLOPES IN EXCESS OF 15%	2.32 ACRES
ERODIBLE SOILS AREA	0.00 ACRES
LIMIT OF DISTURBANCE (L.O.D.)	0.55 ACRES
FOREST AREA WITHIN L.O.D.	0.21 ACRES
AREA OF STEEP SLOPE DISTURBANCE	0.00 ACRES
GREEN OPEN AREA	0.83 ACRES
PROPOSED IMPERVIOUS AREA	0.076 ACRES

MAPPED SOILS TABLE

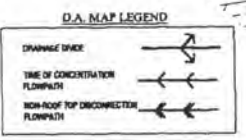
Symbol	Map Unit Name	Area	Imperv	ESD	Drainage Class
U4a	Quaternary loam, 3 to 8 percent slopes	0.78	0	2	Well drained
U4c	Quaternary loam, 8 to 15 percent slopes	0.29	0	A	Well drained
M4b	Minor loam, 12 to 20 percent slopes	0.20	0	3	Well drained
M4p	Minor loam, 20 to 30 percent slopes	0.20	0	3	Well drained

STORMWATER MANAGEMENT REQUIREMENTS

AREA	PROPOSED PRACTICE (Length X Width X Height)	SURFACE AREA PROVIDED (S.F.)	VOLUME PROVIDED (C.F.)
FRONT ROOF-1000 S.F.	DRY-WELL (10.25'x10'x5')	102.5 S.F.	205 C.F.
BACK ROOF-1000 S.F.	DRY-WELL (10.25'x10'x5')	102.5 S.F.	205 C.F.
GARAGE ROOF-600 S.F.	DRY-WELL (8'x7'x5')	61.6 S.F.	123.2 C.F.
DRIVEWAY RUN-OFF-596 S.F.	NON ROOF TOP DISCONNECTION (Coordinating Impervious Area Flow Length=27' Disconnection Flow Length=147')	—	47.18 C.F.
TOTAL VOLUME PROVIDED:		380.38 C.F.	347.34 C.F.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1), DRY WELLS (M-3)

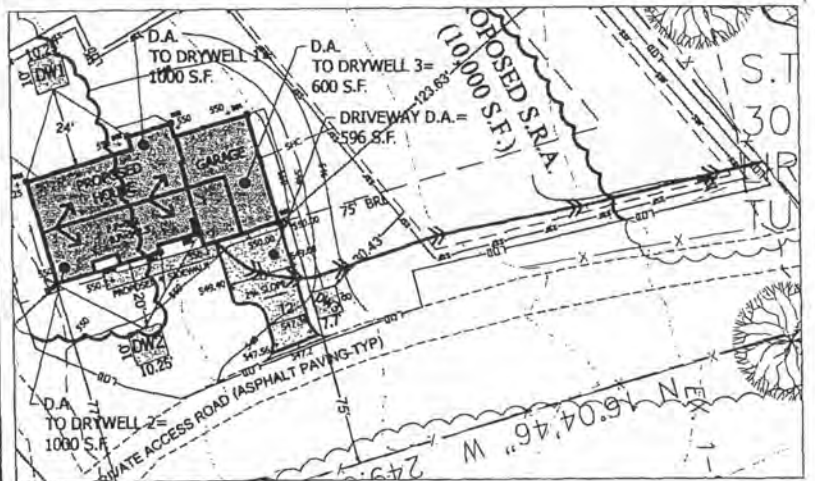
- The Owner shall inspect the monitoring wells and structures on a quarterly basis and after every heavy storm event.
- The Owner shall record the water levels and sediment build up in the monitoring wells over a period of several days to insure correct drainage.
- The Owner shall maintain a log book to document the date at which the facility is inspected.
- When the facility becomes clogged so that it does not drain within a seven-day (7) hour time period, corrective action shall be taken.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- 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.



PROPOSED CONDITIONS

STUDY POINT A:
D.A. 322,712 S.F. (7.41 AC.)
CN = 48
Tc = 0.405 H.C.
1 - 2: 75' Sheet Flow @ 4%
2 - 3: 771' Shallow Conc. Flow @ 19.2%

NOTE: PROPERTY IS LOCATED ON A-10 COORDINATES OF ADC'S STREET MAP OF HOWARD COUNTY, MARYLAND. (MAP6-PAGE 10)



DESIGN NARRATIVE

Natural Resource Protection and Enhancement:
This site is entirely wooded, with relatively steep slopes in 40% of the site. The approach to achieving the goals of this project is to disturb a minimum amount of the existing wooded areas. As shown on this plan, approximately 90% of the site will remain undisturbed, therefore maintaining the existing characteristics of the site. The placement of the house and proposed driveway, as well as the driveway, have been proposed to place that are least sensitive to the character of the site. The house itself has been placed in the flatter part of the site, which would result in the least amount of grading, and therefore fewer disturbances. The driveway is shown to cut through an area that is fairly clear, and mostly populated with brush and smaller trees, and would not require too much clearing.

Maintenance of Natural Flow Patterns:
The project has been designed to maintain the natural drainage patterns of the site. The proposed house will be situated very close to the ridge of the site, and the associated grading shows that there will be few changes in flow patterns. Furthermore, the placement of the proposed stormwater management practices have been planned to maintain these natural flow patterns. Runoff from impervious areas are carefully directed to the proposed practices.

Reduction of Impervious Areas Through Better Site Design, Alternative Surfaces, Non-Structural Practices:
Since the site is mostly wooded any new development will create new impervious areas. However, we have used a site design that will allow a vast majority of the site to be maintained in its natural state. This has been achieved by strategically placing the house, so that there is minimal disturbance. Furthermore, we have explored the opportunity to meet ESD requirements by using narrower management curbs. However, due to site restrictions, such as steep slopes, it is difficult to satisfy the requirements through credits. Therefore, stormwater management practices have been proposed to meet stormwater management requirements for most impervious surfaces.

Integration of Erosion and Sediment Controls into SWM Strategy:
The stormwater management strategy of the site is to use micro practices, and to naturally direct impervious runoff to these practices. The existing topography of the site and the approach to site design requires minimal erosion and sediment control measures, and therefore fewer disturbances. The use of silt fence will adequately handle runoff from disturbed areas. Implementation of ESD Planning Techniques and Practices To The MEP The site has been designed to limit the amount of disturbance to the site. The proposed design has an impervious area of 0.076 acres, approximately 1.35%. The actual disturbance is approximately 15%. The proposed driveway is strategically placed to limit the disturbance to the site. It should be noted that the placement of the driveway was actually sited in the field and then implemented in the proposed plan. All of the existing slope greater than 25% will remain in its existing state without disturbance. Impervious areas from garage roof is directed to proposed Drywell 3 and impervious areas from the front roof is directed to proposed Drywell 2. Also, located in the lower, impervious areas from the back portion of the roof are directed to Drywell 1. Also the driveway drainage has been attenuated by Non-roof top disconnection. These facilities are sited in accordance with Chapter 5 of the Maryland Stormwater Management Manual. In order to preserve the nature of the site, and to limit the amount of disturbance to the site especially in areas of steep slopes, no practice is proposed in those areas. The Total volume provided at proposed practices is 380.38 C.F., which is greater than the required target volume of 347.34 C.F. Therefore, the required ESDs to MEP has been satisfied.

PROFESSIONAL REVIEW STATEMENT:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER: 22742. EXPIRES: JUNE 18, 2015.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division _____ DATE _____
Chief, Division of Land Development _____ DATE _____

APPLICANT

DAVID R. HUNTER
1530 KEY BLVD. #1330
ARLINGTON, VA 22209
C/O PHONE (410)-977-1244

ENVIRONMENTAL CONCEPT PLAN

DAVID R. HUNTER
LIBER 1148 AT FOLIO 196
DRIVER ROAD, HOWARD CO., MD

3-th DISTRICT
GRID: 10, PARCEL: 128

ZONE: R-C(DEO)
TAX MAP: 10

RAZTEC ASSOCIATES, INC.
civil engineers & land planners

3280 Urbana Pike
Jamestown, Maryland 21754

Tel (301) 775-4394
Fax (301) 831-8978
email: raztecengr@comcast.net



SCALE
1" = 40'

CHECKED BY: MR

DRAWN BY: MP

DATE
MAY 2015

SHEET NUMBER
1 of 1

NOTES:

1. TAX MAP REFERENCE: MAP 10, GRID 10, PARCEL 128

OWNER: DAVID R. HUNTER
1530 KEY BLVD. #1330
ARLINGTON, VA 22209

2. ZONING CLASSIFICATION: R-C (DEO)
RURAL CONSERVATION (DEVELOPMENT EXCHANGE OVERLAY)

MINIMUM BUILDING SETBACKS: MINIMUM LOT SIZE:
R (RURAL): FRONT: 75' 3.0 ACRES
SIDES: 30'
REAR: 60'

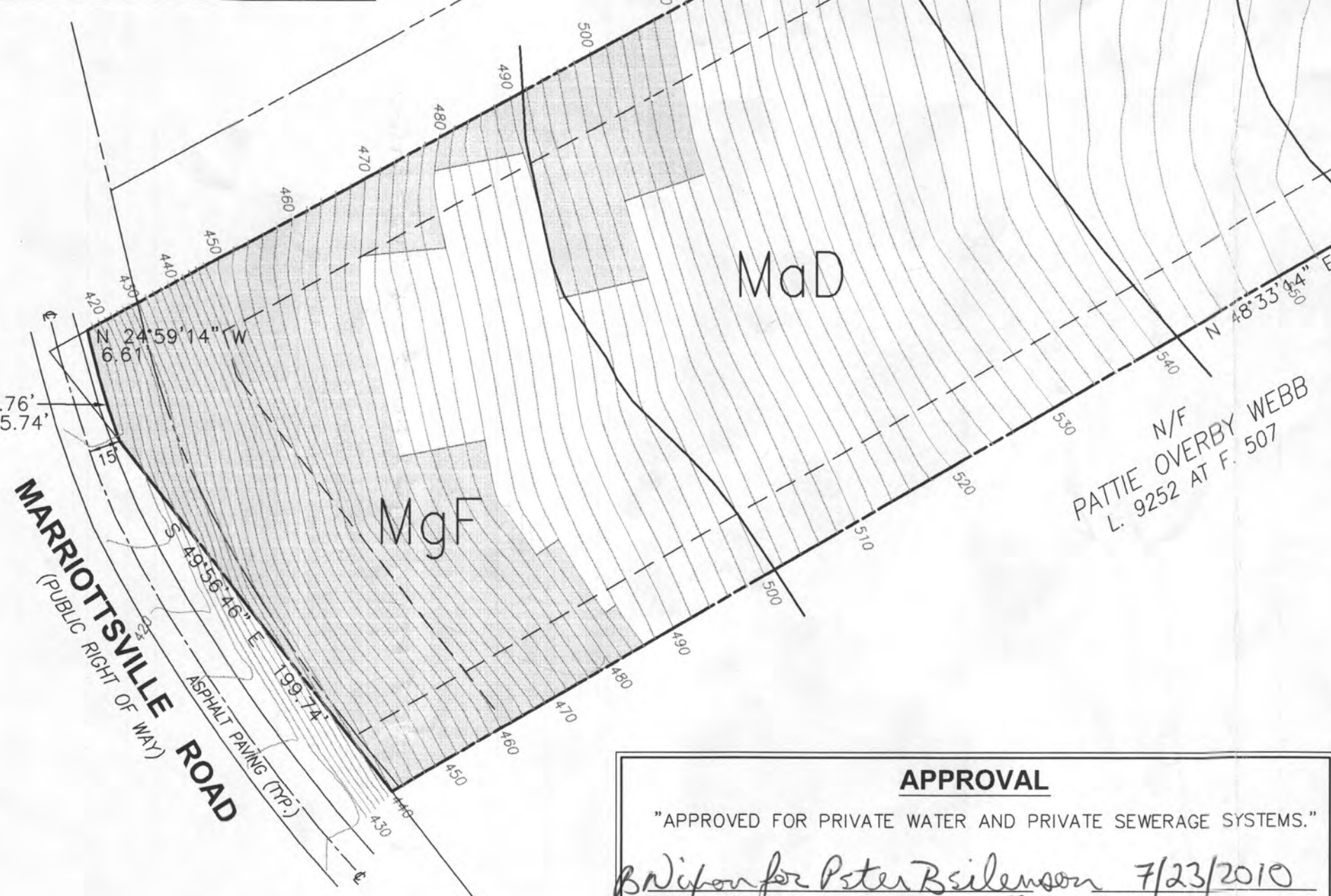
- ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATE PLAN.
- THE POTABLE WATER WELL MUST BE DRILLED AND APPROVED BY THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT APPROVAL.
- THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD-RUN SURVEY REFERENCED TO THE VERTICAL DATUM OF THE NATIONAL GEODETIC SURVEY (NAVD88), BASED ON A GLOBAL POSITIONING SYSTEM (G.P.S.) SURVEY CONDUCTED IN JULY, 2009.
- ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN-GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- UNDERGROUND WELL AND SEWERAGE COMPONENTS SHOWN HEREON ARE BASED ON AVAILABLE PUBLIC RECORDS AND VISIBLE SURFACE EVIDENCE. NO SUBSURFACE EXPLORATION HAS BEEN PERFORMED TO VERIFY THEIR LOCATION.
- THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. IT DOES NOT SHOW EVERY MATTER AFFECTING OWNERSHIP AND USE, NOR EVERY MATTER RESTRICTING THE OWNERSHIP OR USE OF THE PROPERTY.
- THE ASPHALT DRIVEWAY(S) SHOWN HEREON SERVE MULTIPLE LOTS BEYOND THE LIMITS OF THE SUBJECT PARCEL, INDICATING AN APPARENT PRESCRIPTIVE RIGHT OF WAY. THE DEED FOR THE SUBJECT PARCEL CONTAINS NO REFERENCE THERETO.
- THE SHADED AREA INDICATES SLOPES AVERAGING 25% OR GREATER.
- THE OWNER RESERVES THE RIGHT TO CONSTRUCT A DIFFERING HOUSE FOOTPRINT FROM THAT SHOWN HEREON, PROVIDED THE HOUSE IS PLACED IN THE SAME LOCATION, AND DOES NOT EXCEED COUNTY-APPROVED SQUARE FOOTAGE OR NUMBER OF BEDROOMS.

This area designates a private sewage disposal area of at least 10,000 square feet, as required by the Maryland Department of Environment for individual sewage disposal. Improvements of any nature in this area are restricted. This sewage disposal area shall become null and void upon connection to a public sewerage system. The County Health Officer shall have authority to grant adjustments to the private sewage disposal area.

LEGEND OF SYMBOLS	
	PERCOLATION TEST SITE (PASSED)
	EXISTING WATER WELL
	PROPOSED WATER WELL
	WELL RADIUS (AS NOTED)

R = 380.00' A = 45.76'
CHD: N28° 26' 15"W 45.74'

MARRIOTTVILLE ROAD
(PUBLIC RIGHT OF WAY)



APPROX. LOCATION OF EXISTING SEPTIC COMPONENTS (SEE NOTE #7)

EX. WELL
200' DOWN-GRADIENT WELL RADIUS

EX. 2-STORY DWELLING #1388

APPROX. LOCATION OF EXISTING SEPTIC COMPONENTS (SEE NOTE #7)

EX. 1-STORY DWELLING #1366

LOT 1, SECTION 2 "DRIVER PROPERTY" PLAT No. 3335

EX. WELL

GbB

PROPERTY OF DAVID R. HUNTER
L. 11487 AT F. 196
(245,100 Sq. Ft. OR 5.6267 Ac.)

PROPOSED "WELL BOX" (1500 S.F.)

PROPOSED 2-STORY DWELLING

200' DOWN-GRADIENT WELL RADIUS

EX. 2-STORY DWELLING #1390

EX. WELL 100' WELL RADIUS (TYP.)

APPROX. LOCATION OF EXISTING SEPTIC COMPONENTS (SEE NOTE #7)

DRIVER ROAD
(PUBLIC RIGHT OF WAY)

SURVEYOR'S CERTIFICATE

I hereby certify that the plan shown hereon is correct, to the best of my knowledge and belief; that it is based on a field survey conducted under my direct supervision and information contained in the Land Records of Howard County, Maryland. No title report was provided or reviewed in the preparation of this plat. As such, there may be easements or encumbrances affecting the use of this land that are not shown hereon.

JULY 7, 2010
Date

R. Winfield Vinings, Jr.
CLOVERLEA LAND SURVEYS, INC.
R. WINFIELD VININGS, JR.
PROFESSIONAL LAND SURVEYOR
MD REG. No.: 10957

PERCOLATION CERTIFICATE PLAN
PROPERTY OF
DAVID R. HUNTER
AS DESCRIBED IN
LIBER 11487 AT FOLIO 196
THIRD (3rd) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
JULY 2010 - SCALE 1" = 60'

JOB No. CLOV09-418

APPROVAL
"APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS."
P. Peterson
Health Officer
Howard County Health Department
Date 7/23/2010
mgc



Cloverlea Land Surveys, Inc.
LAND SURVEYING - SITE PLANNING - CAD DRAFTSMEN
900 MAGO VISTA ROAD, ARNOLD, MD 21012
OFFICE (443) 994-3157 FAX (443) 458-0684



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Maura Rossman, M.D., Health Officer

July 23, 2015

Mr. David Hunter
1530 Key Boulevard
Arlington, Virginia 22209

RE: Well Tag: HO - 15 - 0046
1390 Driver Road
Marriottsville, Maryland 21104

Dear Mr. Hunter:

A sample was collected following a 1 hour pumping of the well on June 30, 2015 and submitted to the Department of Health & Mental Hygiene Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which may exist in your area within the County.

Results from this screening revealed a **Gross Alpha** of 38.1 ± 4.7 picocuries/liter (pCi/L), while the **Gross Beta** level was 33.3 ± 3.1 pCi/L. The **Gross Alpha** result was above its **maximum contaminant level (MCL)** of **15 pCi/L**, while the **Gross Beta** level was higher than typically observed, but below its targeted value of **50 pCi/L** (roughly equivalent to the **annual dose rate** of **4 millirems / year**).

At the time of testing and with respect to these parameters, the well water supply **does not meet** EPA regulatory standards. Given the elevated readings for **Gross Alpha**, and higher than normal **Gross Beta**, additional testing **for these parameters** will be recommended to help secure the future Use & Occupancy. The installation of a water softener system and / or a reverse osmosis system will be necessary. If treatment is installed, **pre and post short and long term Gross Alpha and Beta, plus a post Radium 226 / 228** will be needed to properly evaluate the effectiveness of the installed treatment(s). **Please note** that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

A copy of the test results is enclosed for your information. Please call this office at **410-313-1773** if you have any further questions or to schedule follow-up testing.

Sincerely,

A handwritten signature in black ink that reads 'Bert Nixon'.

Bert Nixon, Director

Bureau of Environmental Health

Enclosure
cc: Property file



Bureau of Environmental Health

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Facebook: www.facebook.com/hocohealth

Maura Rossman, M.D., Health Officer

August 17, 2015

Mr. David Hunter
1390 Driver road
Marriottsville, Maryland 21104

RE: Well Tag: HO - 15 - 0046
1390 Driver Road
Marriottsville, Maryland 21104

Resend of results

Dear Mr. Hunter:

A sample was collected following a 1 hour pumping of the well on June 30, 2015 and submitted to the Department of Health & Mental Hygiene Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which may exist in your area within the County.

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Bert Nixon, Director

Bureau of Environmental Health

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July 23, 2015

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Sincerely,

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Property file

SEND REPORT TO: Bert Nixon

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration

201 W. Preston St., Baltimore, MD 21201

Robert A. Myers, Ph.D., Director

1770 Ashland Ave., Baltimore, MD 21205
RADIATION ANALYSIS REQUEST FORM

03 293599

Lab No.

0008 4-15

Plant/Site Name: 1390 Driver Rd Marriottville

County: Howard

Sample Source: HO-15-0046

Location: well

(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A _____

Radon-222 Field Blank

Bottle A _____

Bottle B _____

Bottle B _____

County 13

Plant No.

--	--	--	--	--	--	--	--	--	--

CHECK (one per Box)

Type	
Drinking Water	<input checked="" type="checkbox"/>
Landfill	<input type="checkbox"/>
Stream	<input type="checkbox"/>
Other	<input type="checkbox"/>

Service	
Community	<input type="checkbox"/>
Non-Community	<input type="checkbox"/>
Private	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

Point of Collection	
Source (Raw)	<input checked="" type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

Testing	
Emergency	<input type="checkbox"/>
Routine	<input checked="" type="checkbox"/>
Recheck	<input type="checkbox"/>
Special	<input type="checkbox"/>

Submitters Code:

--	--

Federal Project: 5

Collector: S Collins

Telephone No.: 410-313-6787

Date Collected: 6/30/15

Time Collected: _____ a.m. _____ p.m.

Field pH: _____

Field Chlorine: _____

Nitric Acid Preserved: Yes No

Iced: Yes No

Remarks: Sample taken after 1 hr. pumping of well

<input checked="" type="checkbox"/>	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/>	Gross Alpha	4000	008	EPA 900.0	38.1 ± 4.7	7/3/15	WT	7/6/15
<input checked="" type="checkbox"/>	Gross Beta	4100	008	EPA 900.0	32.3 ± 3.1	7/3/15	WT	7/6/15
<input type="checkbox"/>	Radium-226	4020						
<input type="checkbox"/>	Radium-228	4030						
<input type="checkbox"/>	Total Uranium	4006						
<input type="checkbox"/>	Radon-222 (Bottle A)	4004						
<input type="checkbox"/>	Radon-222 (Bottle B)	4004						
<input type="checkbox"/>	Radon Field Blank A	4004						
<input type="checkbox"/>	Radon Field Blank B	4004						
<input type="checkbox"/>	Tritium							
<input checked="" type="checkbox"/>	Gross Alpha - Conf		008	EPA 900.0	36.8 ± 4.7	7/3/15	WT	7/6/15
<input checked="" type="checkbox"/>	Gross Beta - Conf		008	EPA 900.0	30.0 ± 3.0	7/3/15	WT	7/6/15

Date Received: 7/1/15

Received By: Kathy Jones

Data Release Signature: Nehemiah Miller

Date: 7/6/15

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	<input checked="" type="checkbox"/>		
Sample pH < 2.0?	<input checked="" type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>		

•Tel. No.: (410) 767-5537 •Fax No.: (410) 333-5373

C1 17410 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL" OK 7/29/155C HO-15-0046

OWNER Hunter David WELL SITE ADDRESS 74 Drivers Rd TOWN Marriottsville SUBDIVISION SECTION LOT

WELL LOG Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Orange Shisty clay, Brown Schist, Gray Schist, Black/Dark Gray Schist.

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED YES NO

CIRCLE APPROPRIATE LETTER A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION"

DRILLERS LIC. NO. 1 MW D 552 DRILLERS SIGNATURE

LIC. NO. MFD

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) YES NO

TYPE OF GROUTING MATERIAL (Circle one) CEMENT BENTONITE CLAY

NO. OF BAGS 91 NO. OF POUNDS 550

GALLONS OF WATER 275

DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 30 ft.

CASING RECORD

cases types insert appropriate code below ST STEEL CO CONCRETE PL PLASTIC OT OTHER

MAIN CASING TYPE PL Nominal diameter top (main) casing (nearest inch) 6 Total depth of main casing (nearest foot) 80

OTHER CASING (if used) diameter inch depth (feet) from to

SCREEN RECORD

screen type or open hole insert appropriate code below ST STEEL BR BRASS HO OPEN HOLE PL PLASTIC OT OTHER

DEPTH (nearest ft.)

Table with columns: E A C H S C R E E N, rows 1-3, columns 8-17, 23-32, 38-47, 53-62.

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q

TELESCOPE CASING LOG INDICATOR OTHER DATA

PUMPING TEST

HOURS PUMPED (nearest hour) 6

PUMPING RATE (gal. per min.) 2.4

METHOD USED TO MEASURE PUMPING RATE watch bucket

WATER LEVEL (distance from land surface)

BEFORE PUMPING 36 ft.

WHEN PUMPING 380 ft.

TYPE OF PUMP USED (for test)

A air P piston T turbine C centrifugal R rotary O other (describe below) J jet S submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP YES NO (CIRCLE) (YES OR NO)

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29

CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35

PUMP HORSE POWER 37 41

PUMP COLUMN LENGTH (nearest ft.) 43 47

CASING HEIGHT (circle appropriate box and enter casing height) + above LAND SURFACE - below (nearest foot)

LATITUDE 39.485276 LONGITUDE 76.902501 (DEFAULT COORD. WGS 84)

NOTES:

Storage: 470' - 36' = 434' * 1.5 gal/ft = 651 gal

B 1 1 2 3 6 20742	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type	STATE PERMIT NUMBER HO -15 - 0046 70 fill in this form completely 79
-------------------------	--------------------------------	---	--

OWNER INFORMATION

8 MM DD YY 13
 15 Last Name 34 First Name
 Hunter David
 36 Street or RFD 55
 57 Town 70 State 72 Zip 76
 1530 Key Blvd
 Arlington VA 22209

LOCATION OF WELL

B 3
 8 COUNTY 21
 Howard
 23 SUBDIVISION 42
 SECTION 44 46 LOT 48 50
 52 NEAREST TOWN 71
 Marriottsville

DRILLER INFORMATION

Driller's Name 76 License No. 81
 Kevin P Weigle MW D552
 Firm Name
 Fichelberger's Inc
 Address
 107 Texaco Rd. Mechanicsburg Pa 17050
 Signature Date
 Kevin P Weigle

SOURCES OF DRILLING WATER

1. well
 2.
 3.

11 STREET ADDRESS 30
 1390
 7A Driver Road
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NORTH N
 WEST W EAST E
 SOUTH S
 34 300 37
 DISTANCE FROM ROAD FT
 ENTER FT OR MI 38 39
 TAX MAP: 10 BLK: 10 PARCEL 128

WELL INFORMATION

1 2
 APPROX. PUMPING RATE (GAL. PER MIN.) 8 12
 10
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20
 500

USE FOR WATER (CIRCLE APPROPRIATE BOX)

DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 INDUSTRIAL, COMMERCIAL, DEWATERING
 PUBLIC WATER SUPPLY WELL
 TEST, OBSERVATION, MONITORING
 OPEN LOOP GEOTHERMAL
 CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME 43 MM DD YY 48
 Howard A531919
 COUNTY NO. 13
 STATE SIGNATURE INSERT S → 41
 DATE ISSUED 04/21/15
 CO SIGNATURE EXP. DATE 4/21/16

APPROXIMATE DEPTH OF WELL 24 28
 250 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH
 NEAREST INCH

METHOD OF DRILLING (circle one)

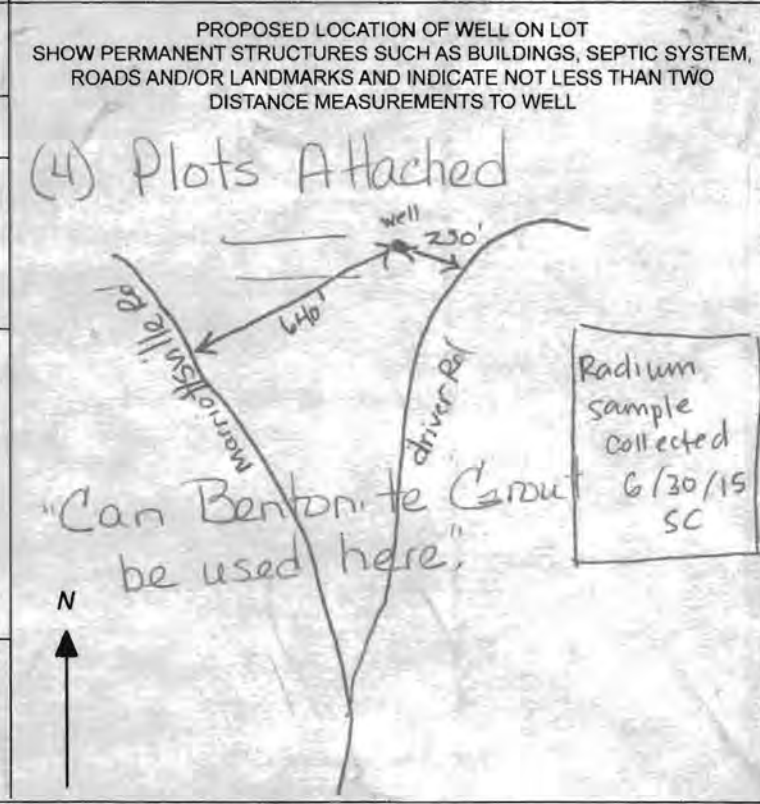
BORED (or Augered) JETTED Jetted & DRIVEN
 30 AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary)
 37 CABLE REVerse-ROTary DRive-POINT
 other

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

THIS WELL WILL NOT REPLACE AN EXISTING WELL
 THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
 THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
 THIS WELL WILL DEEPEM AN EXISTING WELL
 PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 52

Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROP. PERMIT NUMBER G
 PERMIT No. HO-15-0046
 70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS
 NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.
 Radium Sample required @ yield test.

Water Well Yield Test Report

(To Be Completed By Well Driller, Pump Installer or Master Plumber)

Date Test Performed: 5-26-15 Well Driller/ Tester: Eichelber's Inc.
 Well Permit No HO-15-0046 MK15002
 Address: 7A Drivers Rd Mariottsville Election District: _____
 Subdivision: _____ Lot: _____
 Owner Name: David Hunter
 Depth of Well: 480' Static Water Level Before Pumping: 36

Pump Test Data - Observation to be Recorded Every 15 Minutes

Time	Water Level (ft below surface)	PSI (existing pump)	Pumping Rate (time to fill 1 gal bucket)	Additional Data	Calculated Flow (gal/minute)
10:30	380'		28 sec		2.1
10:45	380'		28 "		2.1
11:00	380'		28 "		2.1
11:15	380'		28 "		2.1
11:30	380'		28 "		2.1
11:45	380'		28 "		2.1
12:00	380'		28 "		2.1
12:15	380'		28 "		2.1
12:30	380'		28 "		2.1
12:45	380'		28 "		2.1
1:00	380'		28 "		2.1
1:15	380'		28 "		2.1
1:30	380'		28 "		2.1
1:45	380'		28 "		2.1
2:00	380'		28 "		2.1
2:15	380'		28 "		2.1
2:30	380'		28 "		2.1
2:45	380'		28 "		2.1
3:00	380'		28 "		2.1
3:15	380'		28 "		2.1
3:30	380'		28 "		2.1
3:45	380'		28 "		2.1
4:00	380'		28 "		2.1
4:15	380'		28 "		2.1
4:30	380'		28 "		2.1

SUBMIT THIS REPORT TO:



BENSEAL®

Sealing and Plugging Agent

Description

BENSEAL® granular (8-mesh), natural Wyoming sodium bentonite is used in the sealing and grouting of well casings and earthen structures. BENSEAL is not recommended for use as a drilling mud.

Applications/ Functions

BENSEAL sealing and plugging agent assists or promotes the following:

- Seal or grout plastic or steel casings in monitor and water well construction
- Seal or plug abandoned boreholes
- Seal leaking ponds, ditches and dams
- Soil stabilization
- Prepare BENSEAL and EZ-MUD® grouting system
- Aid in controlling loss of circulation

Advantages

- High swelling capacity
- Uniform particle size
- No heat of hydration
- Prevents commingling of aquifers and contamination from surface
- Forms a flexible seal to protect casing from corrosive contaminants
- Allows for hole re-entry
- NSF/ANSI Standard 60 certified

Typical Properties

• Appearance	Bluish to gray granules
• Dry screen analysis	85% as 8 mesh
• Volume, ft ³ /sack	0.7 (as packaged)
• Specific gravity	2.6
• Permeability	less than 1×10^{-8} cm/sec (in fresh water)

Recommended Treatment

As a casing drill and drive operation:

1. Dig a cone-shaped depression around casing. Depression should be 6 - 8 inches (152-203 mm) larger than the outside diameter of the casing and 2 - 3 feet (60-75 cm) deep.
2. Keep cone-shaped depression filled with dry BENSEAL while driving the casing.

25 gal water + 1 50-lb bag

RECEIVED

APR 22 2015

HOWARD COUNTY HEALTH DEPT.

WATER QUALITY HYGIENE PROGRAM



Bureau of Environmental Health
8920 Stanford Boulevard, Columbia, MD 21045 Phone: 410-313-2640 | Fax: 410-313-2548 TDD: 410-313-2923 | Toll Free: 1-866-813-6300 www.hchealth.org

Facebook: www.facebook.com/hchealth

Twitter: HowardCoHealthDep

Dr. Maura J. Rossman, M.D., Health Officer

TO ALL INTERESTED PARTIES

When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

Well Site Location:

DAVID R. HUNTER PROPERTY DRIVER RD, MARRIOTSVILLE
Subdivision/Property Name Lot# Road Name

The well site has been staked by CLOVERLEA LAND SURVEYS, INC *
(professional land surveyor or company employing professional land surveyors)
on APRIL 13, 2015 (date) and does not require a site inspection.

* Cloverlea Land Surveys, Inc
900 Mago Vista Rd. Arnold, MD 21012
Ph. 443-994-3157

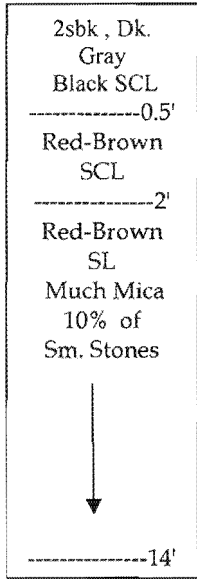
The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

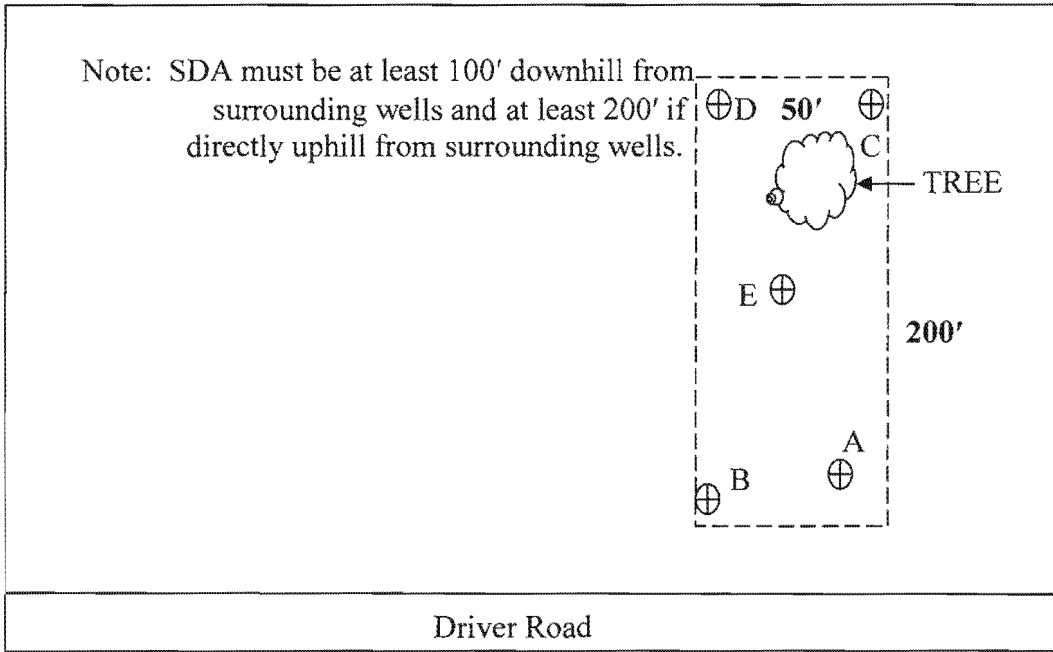
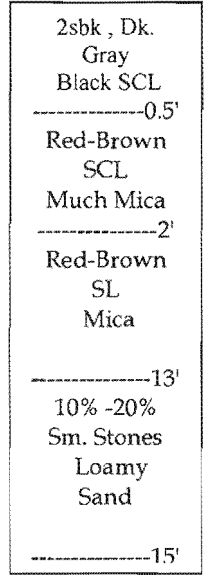
A/P # A531919 Percolation Information- Driver Road

NOT TO SCALE

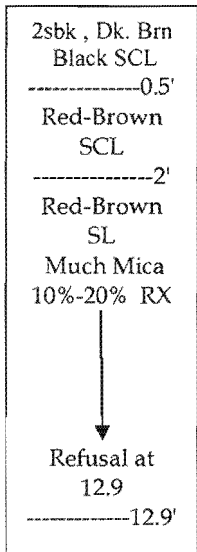
B



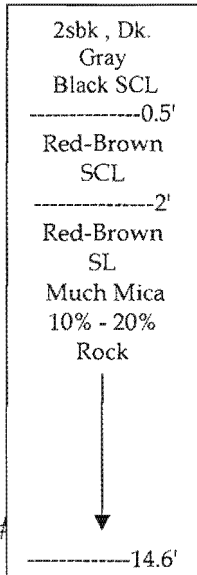
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A

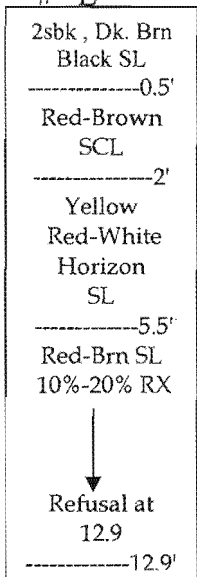


#D



Date	Test	Depth	Start	Break 1" Drop	Break 2" Drop	Time of 2 nd Inch	P/F/H
10-8-09	A	12.9 / 4	11:41	11:43	11:46	3 min.	Pass
10-8-09	B	14 / 4	11:09	11:16	11:26	10 min.	Pass
10-8-09	C	15 / 4	12:28	12:38	12:49	11 min.	Pass
10-8-09	D	14.6 / 4.8	12:22	12:36	12:50	15 min.	Pass
10-8-09	E	12.9 / 4	11:57	11:59	12:01	2 min.	Pass

E



Remarks: Undeveloped Property. Perc holes must be surveyed on Percolation Certification Plan.

Sanitarian D. Bernard Backhoe Home Owner Others _____

Test Holes Used in 5 in SDA Avg. Perc Time 8min. SQ.FT/BR 150

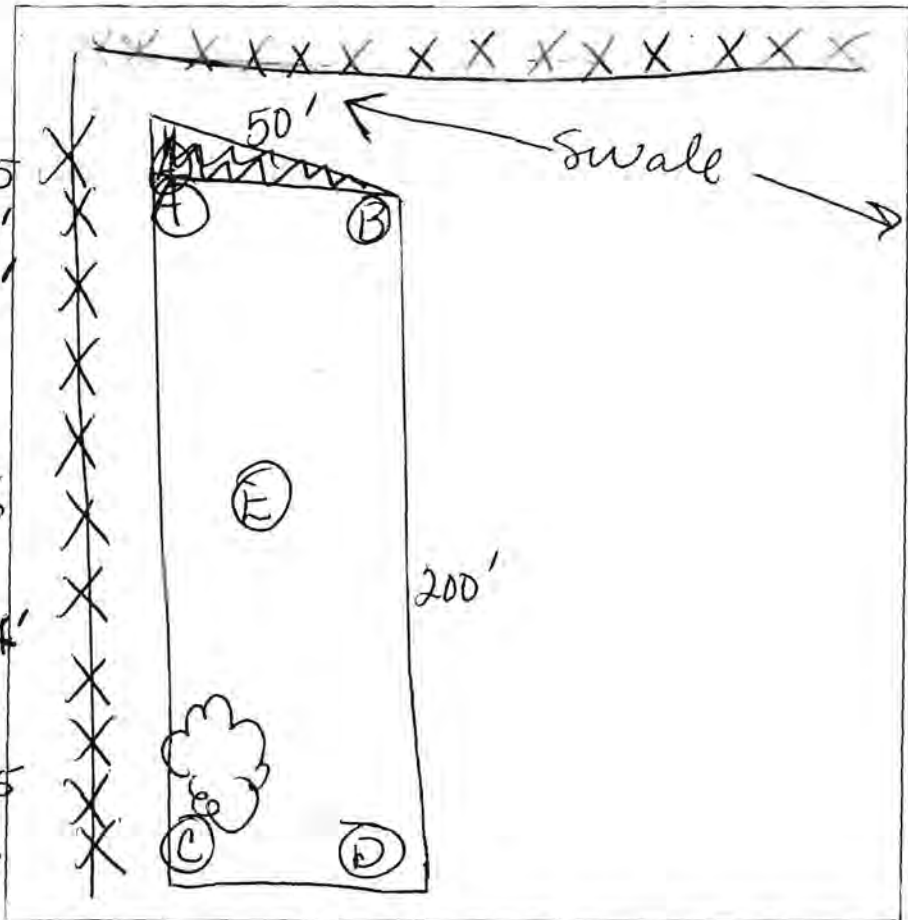
Trench Width 2' Inlet Depth 3' Max Bot.Depth 5' Effective S/W 2

A/P

B
 Bk Brm 2SBK 0.5'
 Rd Brn Sch 2'
 Rd Br SL Much mica Small Stones 10% Shl
 Rd Brn Much mica

A
 Bk Brm 2SBK 0.5'
 Red Br Sch 2'
 Rd Brn 10-20% Rock
 Refusal @ 12.9'

E
 Bk Brm 2SBK 0.5'
 Rd Brn Sch 2'
 Yellow Red white clay 5%
 Rock 10-20%
 Rd Brn SL
 Refusal @ 12.9'



C
 Bk Brm 2SBK 0.5'
 Red Brn Sch Much mica 2'
 Rd Brn Sh mica
 10-20% Rock Loamy Sand 13'
 15'

D
 Bk Brm 2SBK 0.5'
 Red Brn Sch 2'
 Red Br Sh Much mica 10-20% Rock
 14.6'

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/H
10-8	A	4	11:09	11:16	11:26	10min	P
10-8	A	4	11:41	11:43	11:46	3m	P
Solid Bottom							
10-8	E	4	11:57	11:59	12:01	2m	P
10-8	C	4	12:28	12:38	12:49	11m	P
10-8	D	4	12:36	12:50		15min	P
			12:28				

REMARKS _____
 SANITARIAN _____ BACKHOE _____ OTHERS _____
 TEST HOLES USED IN SDA _____ AVG. PERC TIME _____ SQ. FT/BR _____
 TRENCH WIDTH 2 INLET DEPTH 3 MAX. BOT DEPTH 5 EFFECTIVE SW 2



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045
Main: 410-313-2640 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org

Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

Address: Driver Rd

Subdivision: Hunter Prop Lot:

Initial system: Application rate: 0.8 Effective area beginning depth: 2.5' Bottom maximum depth: 8'
1st Replacement: Application rate: 0.8 Effective area beginning depth: 2.5' Bottom maximum depth: 8'
2nd Replacement: Application rate: 0.8 Effective area beginning depth: 2.5' Bottom maximum depth: 8'

Design Flow = 150 gallons per day per bedroom

Design flow + application rate = square footage of drainfield required

Linear length of trench required = drainfield square footage x sidewall reduction percentage + trench width

Sidewall reduction credit formula:

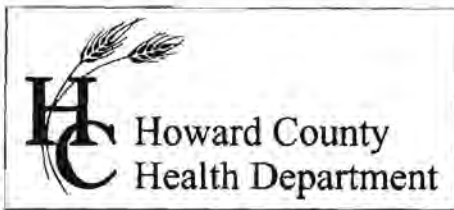
(W + 2) / (W + 1 + 2D) x 100 = Percent of length of standard trench where W=trench width and D= depth between effective area beginning depth and trench bottom.

Standard design requirements:

- All trenches must be equal length unless low pressure dosed
All trenches must be on contour
Minimum trench spacing: 10' for all trenches utilizing sidewall reduction credit. Additional spacing may be necessary for any trench using over 3.5' of effective sidewall. In those cases, the spacing formula is 2D +W up to a maximum spacing of 18'.
Minimum trench spacing for trenches with no sidewall credit (bottom area only) is 6' for a 2' wide trench and 9' for a 3' wide trench (spacing is measured edge to edge)
Maximum trench length is 100'
Maximum pipe depth is 4'

Additional requirements:

Approved: [Signature] Date: 2/19/15



7178 Columbia Gateway Drive, Columbia MD 21046
Phone (410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
Website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

DATE: July 14, 2010

RE: Variance Request
Perc Certification Plan for David Hunter Property
Tax Map 10, Grid, 10 Parcel 128
Located on Driver Road, Marriotsville, Howard County

TO: R. Winfield Vining
Cloverlea Land Surveys, Inc.
900 Mago Vista Road
Arnold, Maryland 21012

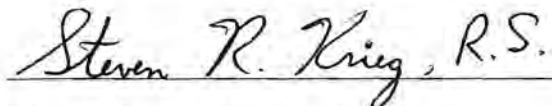
Dear Mr. Vining,

The Health Department has received your variance request for the above referenced property. Maryland Department of the Environment has accepted our recommendation to approve the following variance request under the *Code of Maryland Regulations 26.04.02.05(C)* to allow: the location of the sewage disposal area to be located up gradient from the private water supply on the Boyer Property. Due to the landscape positions of the sewage disposal area on the Hunter property in relation to the well location, the request was approved.

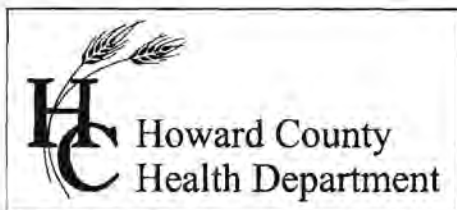
If you have any questions regarding this matter, please contact me at the above address or by calling (410) 313-4261.

Sincerely,

Dana Bernard, Environmental Sanitarian
Bureau of Environmental Health
Well and Septic Program
Phone (410) 313-2775
E-mail: DBernard@howardcountymd.gov



Maryland Department of the Environment



7178 Columbia Gateway Drive, Columbia MD 21046
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
Website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

MEMORANDUM

TO: R. Winfield Vining, PLS
Cloverlea Land Surveys, Inc.

FROM: Dana Bernard
Well and Septic Program
Development Coordination Section

RE: Job Number: CLOV09-418
Title: David Hunter Property
Percolation Certification Plan

DATE: June 3, 2010

The following comments apply to the plan prepared Cloverlea Land Surveys, Inc. Applicant is advised to revise and resubmit prior to signature.

- Well must be 200 feet down gradient from the septic easement.

If you have any questions or correspondence, I can be reached at the above address or by telephone at (410) 313-2775.

Sincerely,

Dana Bernard, Environmental Sanitarian
Bureau of Environmental Health,
Well and Septic Program
Phone (410) 313-2775
Fax (410) 313-2648
E-mail: DBernard@howardcountymd.gov



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

MEMO

Date: February 12, 2010

To: Cloverlea Land Surveys, Inc.

From: Robert Bricker, RS
Environmental Sanitarian, Well and Septic Program

RE: Percolation Certification Plan, David R. Hunter, Tax Map 10, Parcel 128

The following additions and/or corrections are required in the submitted Percolation Certification Plan (your JOB No. CLOV09-418), received at the Health Department on February 5, 2010.

1. Three well locations must be proposed; one primary well location and 2 alternate (re: replacement) well locations. They must be at least 50 feet apart and all must meet setback requirements. As an alternative you may present a 1500 square-foot 'wellbox'.
2. Add this note: The potable water well must drilled and approved by the Health Department prior to building permit approval.
3. Insert this phrase in the note describing the septic disposal area: of at least 10,000 square feet. Therefore the note begins as follows: This area designates a private sewage area of at least 10,000 square feet as required by.....

If you have questions concerning these requirements, you may contact me at 410-313-2691. rb

Copy: file

NOTES

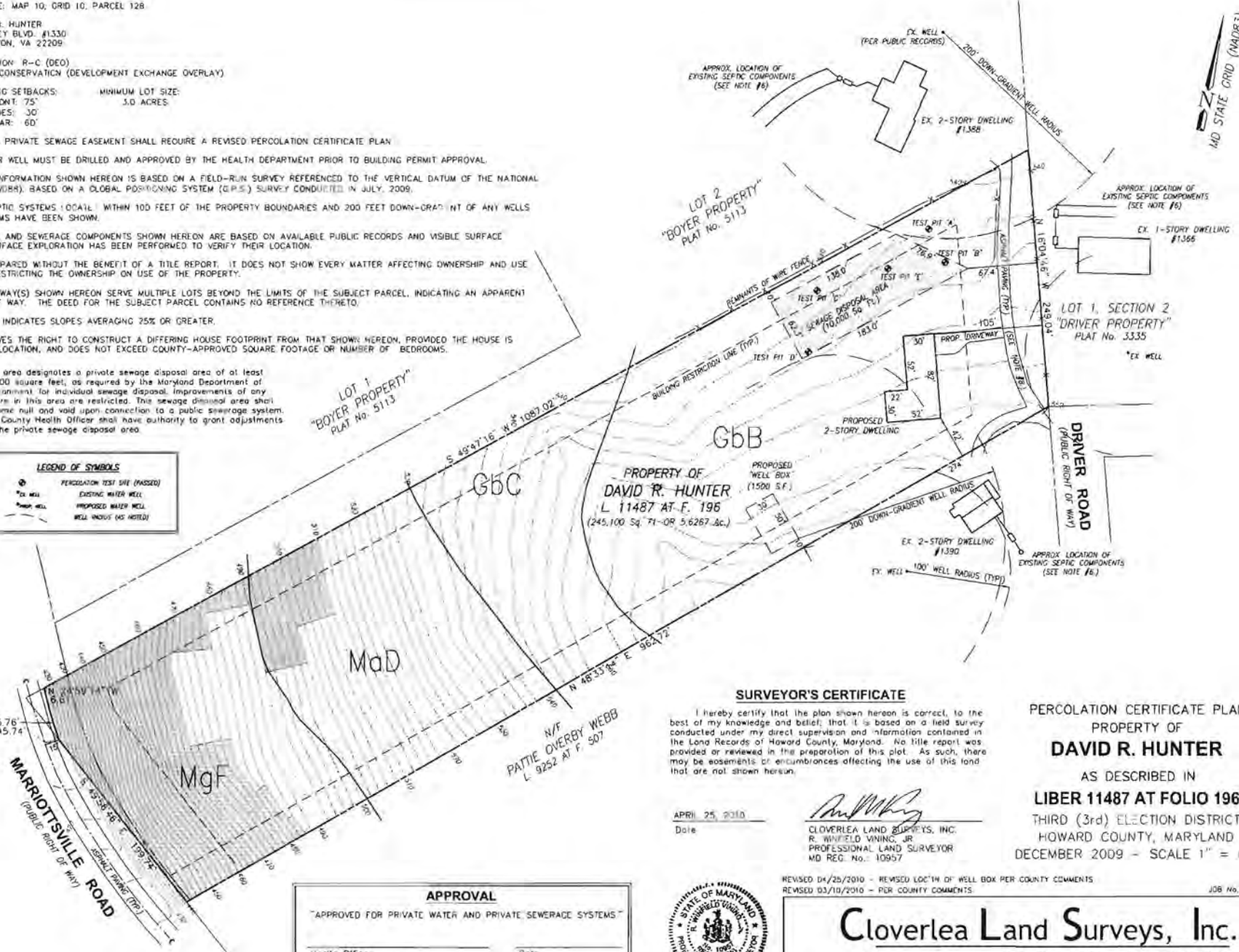
- TAX MAP REFERENCE: MAP 10, GRID 10, PARCEL 128.
- OWNER: DAVID R. HUNTER
1530 KEY BLVD. #1330
ARLINGTON, VA 22209
- ZONING CLASSIFICATION: R-C (DEO)
RURAL CONSERVATION (DEVELOPMENT EXCHANGE OVERLAY)
- MINIMUM BUILDING SETBACKS: MINIMUM LOT SIZE:
R (RURAL) FRONT: 75' S.D. ACRES
SIDES: 30'
REAR: 60'
- ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATE PLAN.
- THE POTABLE WATER WELL MUST BE DRILLED AND APPROVED BY THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT APPROVAL.
- THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD-RUN SURVEY REFERENCED TO THE VERTICAL DATUM OF THE NATIONAL GEODETIC SURVEY (NAVD83), BASED ON A GLOBAL POSITIONING SYSTEM (GPS) SURVEY CONDUCTED IN JULY, 2009.
- ALL WELLS AND SEPTIC SYSTEMS (DATE) WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN-DRAUGHT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- UNDERGROUND WELL AND SEWERAGE COMPONENTS SHOWN HEREON ARE BASED ON AVAILABLE PUBLIC RECORDS AND VISIBLE SURFACE EVIDENCE. NO SUBSURFACE EXPLORATION HAS BEEN PERFORMED TO VERIFY THEIR LOCATION.
- THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. IT DOES NOT SHOW EVERY MATTER AFFECTING OWNERSHIP AND USE NOR EVERY MATTER RESTRICTING THE OWNERSHIP OR USE OF THE PROPERTY.
- THE ASPHALT DRIVEWAY(S) SHOWN HEREON SERVE MULTIPLE LOTS BEYOND THE LIMITS OF THE SUBJECT PARCEL, INDICATING AN APPARENT PRESCRIPTIVE RIGHT OF WAY. THE DEED FOR THE SUBJECT PARCEL CONTAINS NO REFERENCE THERETO.
- THE SHADED AREA INDICATES SLOPES AVERAGING 25% OR GREATER.
- THE OWNER RESERVES THE RIGHT TO CONSTRUCT A DIFFERING HOUSE FOOTPRINT FROM THAT SHOWN HEREON, PROVIDED THE HOUSE IS PLACED IN THE SAME LOCATION, AND DOES NOT EXCEED COUNTY-APPROVED SQUARE FOOTAGE OR NUMBER OF BEDROOMS.

This area designates a private sewage disposal area of at least 10,000 square feet, as required by the Maryland Department of Environment for individual sewage disposal. Improvements of any nature in this area are restricted. This sewage disposal area shall become null and void upon connection to a public sewerage system. The County Health Officer shall have authority to grant adjustments to the private sewage disposal area.

LEGEND OF SYMBOLS	
	PERCOLATION TEST SITE (PASSED)
	EXISTING WATER WELL
	PROPOSED WATER WELL
	WELL RADIUS (AS NOTED)

R = 380.00' A = 45.76'
CHD: N28° 26' 15"W 45.74'

MARRIOTTSVILLE ROAD
(PUBLIC RIGHT OF WAY)



SURVEYOR'S CERTIFICATE

I hereby certify that the plan shown hereon is correct, to the best of my knowledge and belief; that it is based on a field survey conducted under my direct supervision and information contained in the Land Records of Howard County, Maryland. No title report was provided or reviewed in the preparation of this plat. As such, there may be easements or encumbrances affecting the use of this land that are not shown hereon.

APRIL 25, 2010
Date

[Signature]
CLOVERLEA LAND SURVEYS, INC.
R. WIFFELD WINING, JR.
PROFESSIONAL LAND SURVEYOR
MD REG. No. 10957

PERCOLATION CERTIFICATE PLAN
PROPERTY OF
DAVID R. HUNTER
AS DESCRIBED IN
LIBER 11487 AT FOLIO 196
THIRD (3rd) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DECEMBER 2009 - SCALE 1" = 60'

REVISED 04/25/2010 - REVISED LOC'N OF WELL BOX PER COUNTY COMMENTS
REVISED 03/19/2010 - PDR COUNTY COMMENTS

JOB No. CLOV09-418

APPROVAL
"APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS"
Health Officer: _____ Date: _____
Howard County Health Department



Cloverlea Land Surveys, Inc.
LAND SURVEYING - SITE PLANNING - CAD DRAFTSMEN
900 MAGO VISTA ROAD, ARNOLD, MD 21012
PHONE (443) 994-3157 FAX (443) 458-0894

Cloverlea Land Surveys, Inc. • LAND SURVEYING • SITE PLANNING

900 MAGO VISTA ROAD, ARNOLD, MD 21012 • PHONE: (443) 994-3157 • FACSIMILE: (443) 458-0684

MAR. 18, 2010

HOWARD COUNTY HEALTH DEPT.
7188 COLUMBIA GATEWAY DR.
ATTN: DANA BERNARD

Re: HUNTER PROPERTY
TAX MAP 10, GRID 10, PARCEL 128
DRIVER RD., MARRIOTTSVILLE RD

HELLO,

REVISED PERC CERT PLAN (3 copies)
are attached.

Please mail signed copy to:

CLOVERLEA LAND SURVEYS, INC
900 MAGO VISTA RD.
ARNOLD MD. 21012

THANK YOU,

R. WINFIELD VINING, PLS.
PH. 443-994-3157

Cloverlea Land Surveys, Inc. • LAND SURVEYING • SITE PLANNING

900 MAGO VISTA ROAD, ARNOLD MD 21012 • PHONE: (443) 994-3157 • FACSIMILE: (443) 458-0684

LETTER OF TRANSMITTAL

To:
Howard County Health Department
7178 Gateway Drive
Columbia, MD 21046

May 28, 2010

Attn.: Dana Bernard, Environmental Sanitarian

Re: Perc Certification Plan for David Hunter Property
Tax Map 10, Grid 10, Parcel 128
Located on Driver Road, Marriotsville, Howard County
Job No.: CLOV09-418

Dear Dana:

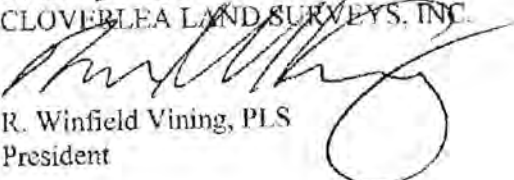
Please find attached:

6 copies Perc Certification Plans with signature/stamp for above-referenced project.

If you have any questions please call me on 443-994-3157.

Thank you for the opportunity to be of service!

Sincerely Yours,
CLOVERLEA LAND SURVEYS, INC.


R. Winfield Vining, PLS
President



APPLICATION

FOR PERCOLATION TESTING AND SITE EVALUATION

TEST DATE(S) _____ TEST TIME _____

AP 53919

AGENCY REVIEW: _____

DATE 9-16-09

DO NOT WRITE ABOVE THIS LINE

I HEREBY APPLY FOR THE NECESSARY TESTING/EVALUATION PRIOR TO ISSUANCE OF SEWAGE DISPOSAL SYSTEM PERMIT(S) TO:

CHECK AS NEEDED:

- CONSTRUCT NEW SEPTIC SYSTEM(S)
- REPAIR/ADD TO AN EXISTING SEPTIC SYSTEM
- REPLACE AN EXISTING SEPTIC SYSTEM

CHECK AS NEEDED:

- NEW STRUCTURE(S)
- ADDITION TO AN EXISTING STRUCTURE
- REPLACE AN EXISTING STRUCTURE

CHECK ONE:

- CREATE NEW LOT(S)
- BUILD ON AN EXISTING LOT IN A SUBDIVISION
- BUILD ON AN EXISTING PARCEL OF RECORD

IS THE PROPERTY WITHIN 2500' OF ANY RESERVOIR?

- YES
- NO

THE TYPE OF STRUCTURE IS:

- RESIDENTIAL WITH UNKNOWN PROPOSED BEDROOMS IN THE COMPLETED STRUCTURE (NOTE UNKNOWN IF APPROPRIATE)
- COMMERCIAL (PROVIDE DETAIL OF NUMBERS AND TYPES OF EMPLOYEES/ CUSTOMERS ON ACCOMPANYING PLAN)
- INSTITUTIONAL/GOVERNMENT (PROVIDE DETAIL OF NUMBERS AND TYPES OF EMPLOYEES/USERS ON ACCOMPANYING PLAN)

PROPERTY OWNER(S) DAVID A. HUNTER

DAYTIME PHONE 703-539-1218 CELL (713) 594-5909 FAX 703-349-5224

MAILING ADDRESS 1530 KEY BLVD #1303 ARLINGTON VA 22209
STREET CITY/TOWN STATE ZIP

APPLICANT N

DAYTIME PHONE _____ CELL A FAX _____

MAILING ADDRESS _____
STREET CITY/TOWN STATE ZIP

APPLICANT'S ROLE: DEVELOPER BUILDER BUYER RELATIVE/FRIEND REALTOR CONSULTANT

PROPERTY LOCATION

SUBDIVISION/PROPERTY NAME MARRIOTTVILLE MD LOT NO. N/A

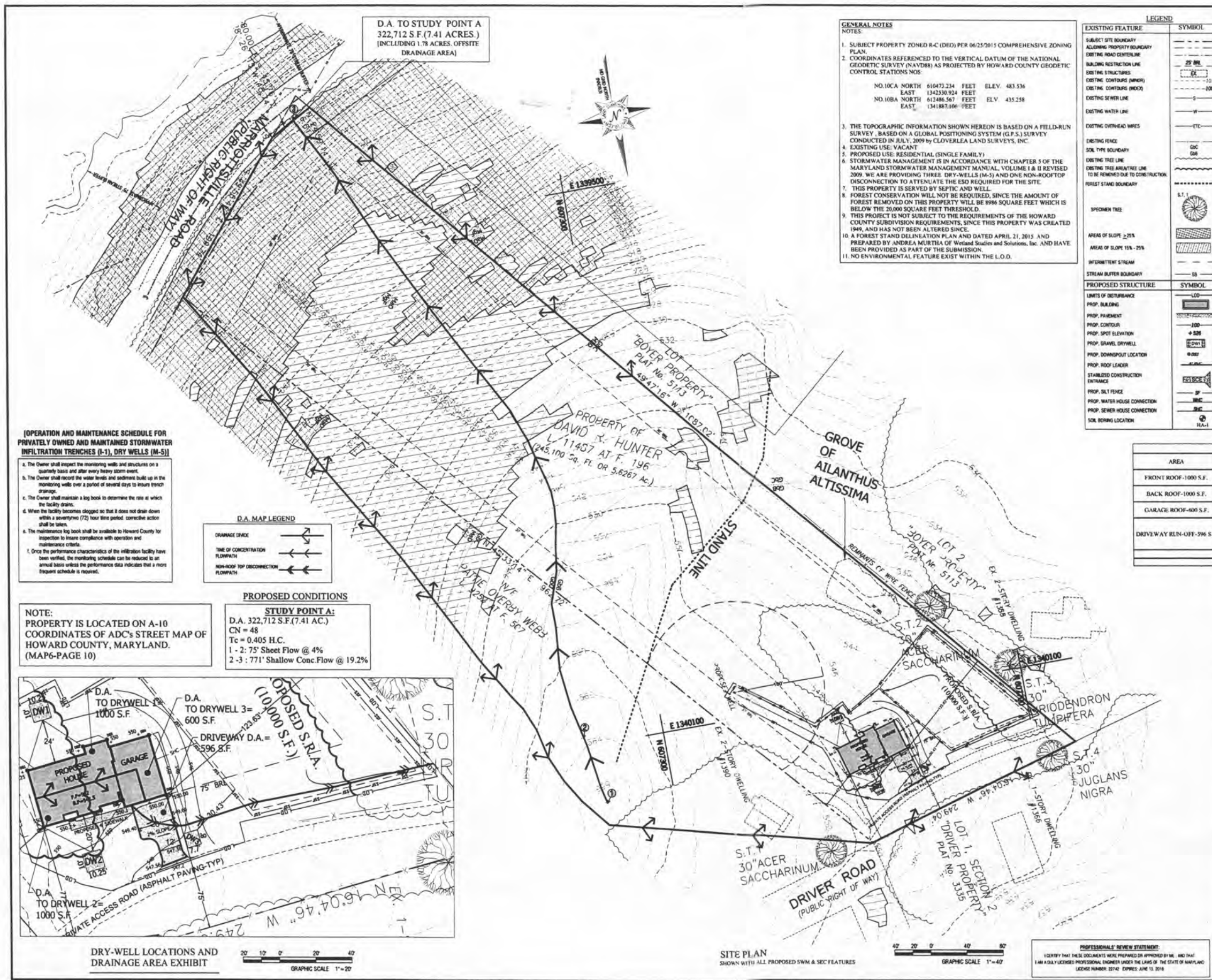
PROPERTY ADDRESS DRIVER ROAD MARRIOTTVILLE
STREET TOWN/POST OFFICE

TAX MAP PAGE(S) 10 GRID 10 PARCEL(S) 128 PROPOSED LOT SIZE 5.6 ACRES

AS APPLICANT, I UNDERSTAND THE FOLLOWING: THE SYSTEM INSTALLED SUBSEQUENT TO THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS APPLICATION IS COMPLETE WHEN ALL APPLICABLE FEES AND A SUITABLE SITE PLAN HAVE BEEN RECEIVED. I ACCEPT THE RESPONSIBILITY FOR COMPLIANCE WITH ALL M.O.S.H.A. AND "MISS UTILITY" REQUIREMENTS. APPROVAL IS BASED UPON SATISFACTORY REVIEW OF A PERC CERTIFICATION PLAN. TEST RESULTS WILL BE MAILED TO APPLICANT.

[Signature]
SIGNATURE OF APPLICANT

HOWARD COUNTY HEALTH DEPARTMENT, BUREAU OF ENVIRONMENTAL HEALTH, WELL AND SEPTIC PROGRAM
 1718 COLUMBIA GATEWAY DRIVE COLUMBIA, MARYLAND 21046 (410) 313-2640 FAX (410) 313-2648
 TDD (410) 313-2323 TOLL FREE 1-877-4MD-DHMH



D.A. TO STUDY POINT A
322,712 S.F. (7.41 ACRES)
(INCLUDING 1.78 ACRES OFFSITE
DRAINAGE AREA)

- GENERAL NOTES**
- SUBJECT PROPERTY ZONED R-C (DEO) PER 06/25/2015 COMPREHENSIVE ZONING PLAN.
 - COORDINATES REFERENCED TO THE VERTICAL DATUM OF THE NATIONAL GEODETIC SURVEY (NAVD83) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS:
NO.10CA NORTH 610473.234 FEET ELEV. 483.536
EAST 1342330.924 FEET
NO.10BA NORTH 612486.567 FEET ELEV. 435.258
EAST 1341887.096 FEET
 - THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD-RUN SURVEY BASED ON A GLOBAL POSITIONING SYSTEM (G.P.S.) SURVEY CONDUCTED IN JULY, 2009 BY CLOVERLEA LAND SURVEYS, INC.
 - EXISTING USE: VACANT
 - PROPOSED USE: RESIDENTIAL (SINGLE FAMILY)
 - STORMWATER MANAGEMENT IS IN ACCORDANCE WITH CHAPTER 5 OF THE MARYLAND STORMWATER MANAGEMENT MANUAL, VOLUME 1 & II REVISED 2009. WE ARE PROVIDING THREE DRY-WELLS (M-5) AND ONE NON-ROOFTOP DISCONNECTION TO ATTENUATE THE ESD REQUIRED FOR THE SITE.
 - THIS PROPERTY IS SERVED BY SEPTIC AND WELL.
 - FOREST CONSERVATION WILL NOT BE REQUIRED, SINCE THE AMOUNT OF FOREST REMOVED ON THIS PROPERTY WILL BE 8996 SQUARE FEET WHICH IS BELOW THE 20,000 SQUARE FEET THRESHOLD.
 - THIS PROJECT IS NOT SUBJECT TO THE REQUIREMENTS OF THE HOWARD COUNTY SUBDIVISION REQUIREMENTS, SINCE THIS PROPERTY WAS CREATED 1949, AND HAS NOT BEEN ALTERED SINCE.
 - A FOREST STAND DELINEATION PLAN AND DATED APRIL 21, 2015 AND PREPARED BY ANDREA MURTHA OF Wetland Studies and Solutions, Inc. AND BEEN PROVIDED AS PART OF THE SUBMISSION.
 - NO ENVIRONMENTAL FEATURE EXIST WITHIN THE L.O.D.

LEGEND

EXISTING FEATURE	SYMBOL
SUBJECT SITE BOUNDARY	---
ADJOINING PROPERTY BOUNDARY	---
EXISTING ROAD CENTERLINE	---
BUILDING RESTRICTION LINE	---
EXISTING STRUCTURES	---
EXISTING CONTOURS (MPOH)	---
EXISTING CONTOURS (MDC)	---
EXISTING SEWER LINE	---
EXISTING WATER LINE	---
EXISTING OVERHEAD WIRES	---
EXISTING FENCE	---
SOIL TYPE BOUNDARY	---
EXISTING TREE LINE	---
EXISTING TREE ANTI-CUT LINE TO BE REMOVED DUE TO CONSTRUCTION	---
FOREST STAND BOUNDARY	---
SPECIMEN TREE	---
AREA OF SLOPE ≥ 25%	---
AREA OF SLOPE 15% - 25%	---
INTERMITTENT STREAM	---
STREAM BUFFER BOUNDARY	---
PROPOSED STRUCTURE	---
LIMITS OF DISTURBANCE	---
PROP. BUILDING	---
PROP. PAVEMENT	---
PROP. CONTOUR	---
PROP. SPOT ELEVATION	---
PROP. GRAVEL DRYWELL	---
PROP. DOWNSPOUT LOCATION	---
PROP. ROOF LEADER	---
STABILIZED CONSTRUCTION ENTRANCE	---
PROP. SILT FENCE	---
PROP. WATER HOUSE CONNECTION	---
PROP. SEWER HOUSE CONNECTION	---
SOIL BORING LOCATION	---



SITE ANALYSIS DATA SHEET

Category	Value
SITE AREA	5.63 ACRES
WETLAND AREA	0.00 ACRES
FLOODPLAIN AREA	0.00 ACRES
FOREST AREA	4.73 ACRES
STEEP SLOPES IN EXCESS OF 15%	2.32 ACRES
ERODIBLE SOILS AREA	0.00 ACRES
LIMIT OF DISTURBANCE (L.O.D.)	0.55 ACRES
FOREST AREA WITHIN L.O.D.	0.21 ACRES
AREA OF STEEP SLOPE DISTURBANCE	0.00 ACRES
GREEN OPEN AREA	0.83 ACRES
PROPOSED IMPERVIOUS AREA	0.076 ACRES

MAPPED SOILS TABLE

Symbol	Map Unit Name	% Factor	Hydro. Group	Hydro. Sub-Group	Drainage Class
S1B	Glauconite loam, 1 to 2 percent slopes	0.25	D	A	Well drained
S1C	Glauconite loam, 8 to 12 percent slopes	0.25	D	A	Well drained
M2D	Morrow loam, 0 to 2 percent slopes	0.25	D	B	Well drained
M2F	Morrow loam, 2 to 25 percent slopes, 25 to 45 percent slopes, 10 to 25 percent slopes, 10 to 25 percent slopes	0.25	D	B	Well drained

STORMWATER MANAGEMENT REQUIREMENTS

AREA	PROPOSED PRACTICE (Length X Width X I (gph))	SURFACE AREA PROVIDED (S.F.)	VOLUME PROVIDED-ESDv (C.F.)
FRONT ROOF-1000 S.F.	DRY-WELL (10.25'x10'x5')	102.5 S.F.	205 C.F.
BACK ROOF-1000 S.F.	DRY-WELL (10.25'x10'x5')	102.5 S.F.	205 C.F.
GARAGE ROOF-400 S.F.	DRY-WELL (8'x7'x5')	61.6 S.F.	123.2 C.F.
DRIVEWAY RUN-OFF-596 S.F.	NON ROOF TOP DISCONNECTION Contributing Impervious Area Flow Length=27 Disconnection Flow Length=147	---	47.18 C.F.
TOTAL VOLUME PROVIDED:		580.28 C.F.	580.28 C.F.
TOTAL VOLUME NEEDED:		547.54 C.F.	547.54 C.F.

DESIGN NARRATIVE

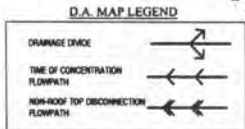
Natural Resource Protection and Enhancement:
This site is entirely wooded, with relatively steep slopes in 40% of the site. The approach is achieving the goals of this project to disturb a minimum amount of the existing wooded areas. As shown on this plan, approximately 90% of the site will remain undisturbed, therefore maintaining the existing characteristics of the site. The placement of the house and proposed driveways, such as the driveways, have been proposed in places that are least intrusive to the character of the site. The house itself has been placed in the flatter part of the site, which would result in the least amount of grading, and therefore fewer disturbances. The driveway is shown to cut through an area that is fairly clear, and mostly populated with brush and smaller trees, and would not require too much clearing.

Maintenance of Natural Flow Patterns:
The project has been designed to maintain the natural drainage patterns of the site. The proposed house will be situated very close to the ridge of the site, and the associated grading shows that there will be few changes in flow patterns. Furthermore, the placement of the proposed stormwater management practices have been placed to maintain these natural flow patterns. Runoff from impervious areas are naturally directed to the proposed practices.

Reduction of Impervious Areas Through Better Site Design, Alternative Surfaces, Non-Structural Practices:
Since the site is mostly wooded any new development will create new impervious areas. However, we have used a site design that will allow a vast majority of the site to be maintained in its natural state. This has been achieved by strategically placing the house, so that there is minimal disturbance. Furthermore, we have explored the opportunity to meet ESD requirements by using stormwater management credits. However, due to site restrictions, such as steep slopes, it is difficult to satisfy the requirements through credits. Therefore, stormwater management practices have been proposed to meet stormwater management requirements for most impervious surfaces.

Integration of Erosion and Sediment Controls into SWM Strategy:
The stormwater management strategy of the site is to use micro practices, and to naturally direct impervious runoff to these practices. The existing topography of the site and the approach to site design requires minimal erosion and sediment control measures, and therefore fewer disturbances. The use of site fence will adequately handle runoff from disturbed areas. Implementation of ESD Planning Techniques and Practices To The MEP The site has been designed to limit the amount of disturbance to the site. The proposed design has an impervious area of 0.076 acres, approximately 1.35%. The actual disturbance is approximately 15%. The proposed driveway is strategically placed to limit the disturbance to the site. It should be noted that the placement of the driveway was actually stated in the field and then implemented in the proposed plan. All of the existing slope greater than 25% will remain in its existing state without disturbance. Impervious areas from garage roof is directed to proposed Drywell 3 and impervious areas from the front rooftop is directed to proposed Drywell 2, both located in the front. Impervious areas from the back portion of the rooftop are directed to Drywell 1. Also the driveway drainage has been attenuated by Non-roof top disconnection. These facilities are sized in accordance with Chapter 5 of the Maryland Stormwater Management Manual. In order to preserve the nature of the site, and to limit the amount of disturbance to the site especially in areas of steep slopes, no practice is proposed in those areas. The Total volume provided in proposed systems is 580.28 C.F. which is greater than the required target volume of 547.54 C.F. Therefore, the required ESDv to MEP has been satisfied.

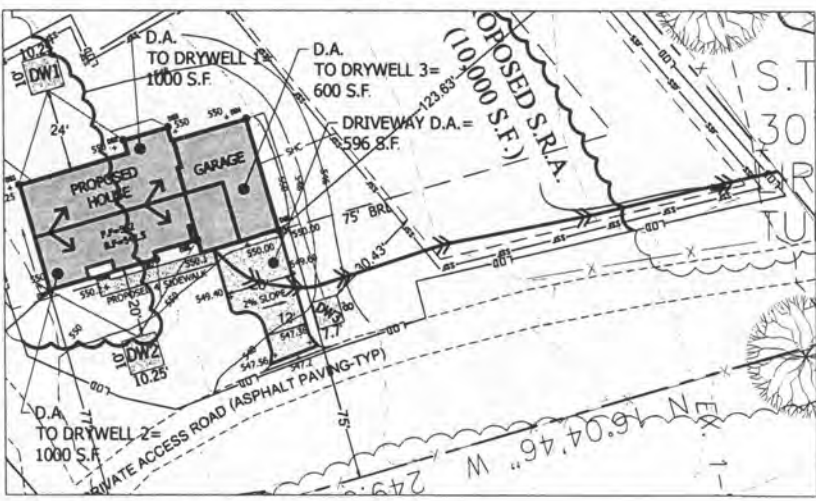
- (OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1), DRY WELLS (M-5))**
- The Owner shall inspect the monitoring wells and structures on a quarterly basis and after every heavy storm event.
 - The Owner shall record the water levels and sediments built up in the monitoring wells over a period of several days to insure trench drainage.
 - The Owner shall maintain a log book to determine the rate at which the facility drains.
 - When the facility becomes clogged so that it does not drain down within a seven(7) hour time period, corrective action shall be taken.
 - The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
 - 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.



PROPOSED CONDITIONS

STUDY POINT A:
D.A. 322,712 S.F. (7.41 AC.)
CN = 48
Tc = 0.405 H.C.
1 - 2: 75' Sheet Flow @ 4%
2 - 3: 771' Shallow Conc. Flow @ 19.2%

NOTE:
PROPERTY IS LOCATED ON A-10 COORDINATES OF ADC'S STREET MAP OF HOWARD COUNTY, MARYLAND. (MAP6-PAGE 10)



DRY-WELL LOCATIONS AND DRAINAGE AREA EXHIBIT



SITE PLAN SHOWN WITH ALL PROPOSED SWM & SEC FEATURES



PROFESSIONAL'S REVIEW STATEMENT:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER: 27142 EXPIRES JUNE 15, 2016

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division _____ DATE _____
Chief, Division of Land Development _____ DATE _____

APPLICANT

DAVID R. HUNTER
1530 KEY BLVD. #1330
ARLINGTON, VA 22209
C/O :PHONE (410)-977-1244

ENVIRONMENTAL CONCEPT PLAN

DAVID R. HUNTER
LIBER 11487 AT FOLIO 196
DRIVER ROAD, HOWARD CO., MD

3-dh DISTRICT
GRID:10, PARCEL:128

ZONE: R-C(DEO)
TAX MAP: 10

RAZTEC ASSOCIATES, INC.
civil engineers & land planners

3280 Urbana Pike
Jamasville, Maryland 21754

Tel (301) 775-4394
Fax (301) 831-8978
email:raztecengr@comcast.net



SCALE
1" = 40'

CHECKED BY: MR _____
DRAWN BY: MP _____

DATE
MAY 2015

SHEET NUMBER
1 of 1

NOTES:

1. TAX MAP REFERENCE: MAP 10, GRID 10, PARCEL 128

OWNER: DAVID R. HUNTER
1530 KEY BLVD. #1330
ARLINGTON, VA 22209

2. ZONING CLASSIFICATION: R-C (DEO)
RURAL CONSERVATION (DEVELOPMENT EXCHANGE OVERLAY)

MINIMUM BUILDING SETBACKS: MINIMUM LOT SIZE:
R (RURAL): FRONT: 75' 3.0 ACRES
SIDES: 30'
REAR: 60'

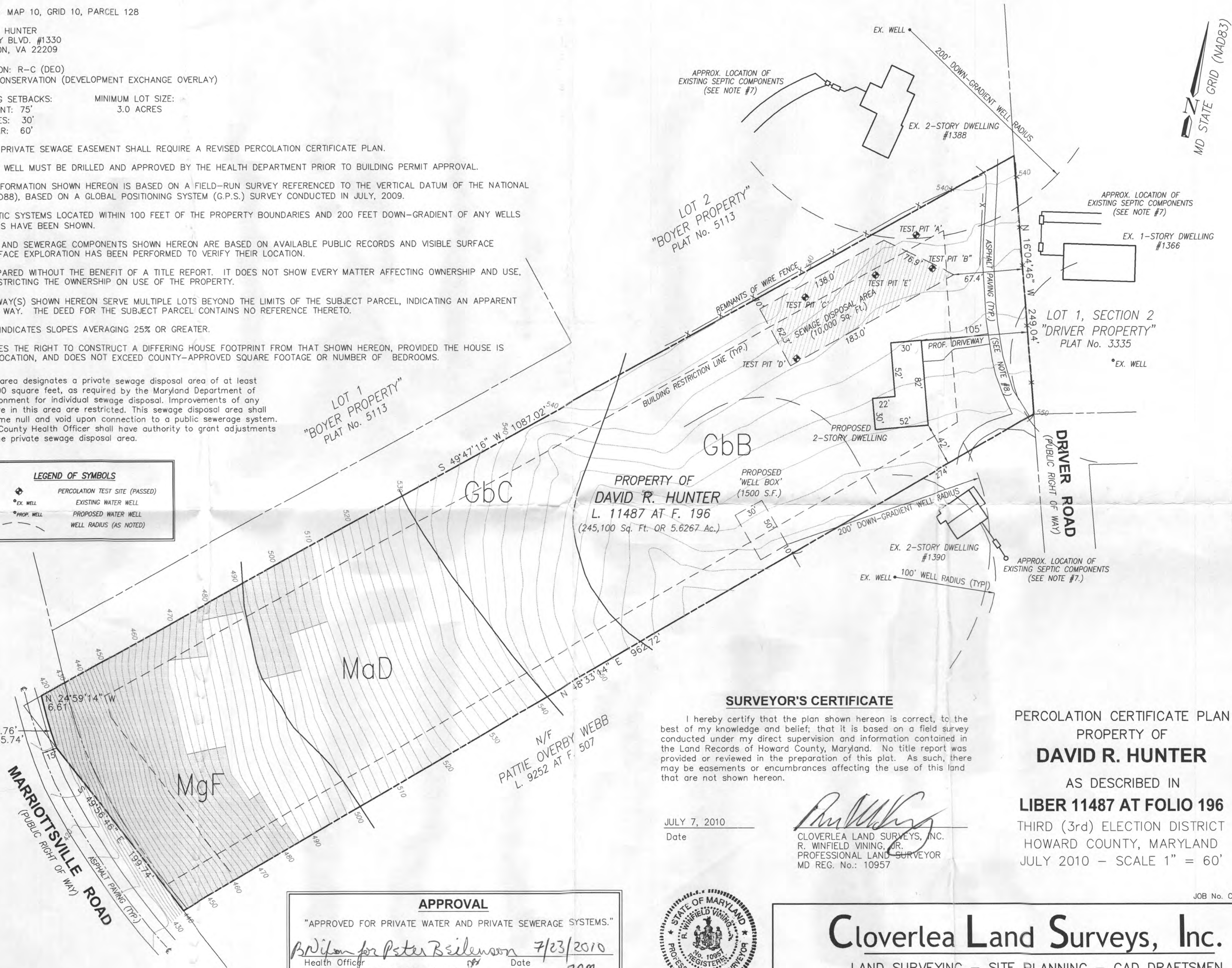
- ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATE PLAN.
- THE POTABLE WATER WELL MUST BE DRILLED AND APPROVED BY THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT APPROVAL.
- THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD-RUN SURVEY REFERENCED TO THE VERTICAL DATUM OF THE NATIONAL GEODETIC SURVEY (NAVD88), BASED ON A GLOBAL POSITIONING SYSTEM (G.P.S.) SURVEY CONDUCTED IN JULY, 2009.
- ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN-GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- UNDERGROUND WELL AND SEWERAGE COMPONENTS SHOWN HEREON ARE BASED ON AVAILABLE PUBLIC RECORDS AND VISIBLE SURFACE EVIDENCE. NO SUBSURFACE EXPLORATION HAS BEEN PERFORMED TO VERIFY THEIR LOCATION.
- THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. IT DOES NOT SHOW EVERY MATTER AFFECTING OWNERSHIP AND USE, NOR EVERY MATTER RESTRICTING THE OWNERSHIP OR USE OF THE PROPERTY.
- THE ASPHALT DRIVEWAY(S) SHOWN HEREON SERVE MULTIPLE LOTS BEYOND THE LIMITS OF THE SUBJECT PARCEL, INDICATING AN APPARENT PRESCRIPTIVE RIGHT OF WAY. THE DEED FOR THE SUBJECT PARCEL CONTAINS NO REFERENCE THERETO.
- THE SHADED AREA INDICATES SLOPES AVERAGING 25% OR GREATER.
- THE OWNER RESERVES THE RIGHT TO CONSTRUCT A DIFFERING HOUSE FOOTPRINT FROM THAT SHOWN HEREON, PROVIDED THE HOUSE IS PLACED IN THE SAME LOCATION, AND DOES NOT EXCEED COUNTY-APPROVED SQUARE FOOTAGE OR NUMBER OF BEDROOMS.

This area designates a private sewage disposal area of at least 10,000 square feet, as required by the Maryland Department of Environment for individual sewage disposal. Improvements of any nature in this area are restricted. This sewage disposal area shall become null and void upon connection to a public sewerage system. The County Health Officer shall have authority to grant adjustments to the private sewage disposal area.

LEGEND OF SYMBOLS	
	PERCOLATION TEST SITE (PASSED)
	EXISTING WATER WELL
	PROPOSED WATER WELL
	WELL RADIUS (AS NOTED)

R = 380.00', A = 45.76'
CHD: N28° 26' 15"W 45.74'

MARRIOTTSVILLE ROAD
(PUBLIC RIGHT OF WAY)



SURVEYOR'S CERTIFICATE

I hereby certify that the plan shown hereon is correct, to the best of my knowledge and belief; that it is based on a field survey conducted under my direct supervision and information contained in the Land Records of Howard County, Maryland. No title report was provided or reviewed in the preparation of this plat. As such, there may be easements or encumbrances affecting the use of this land that are not shown hereon.

JULY 7, 2010

Date

R. Winfield Vining, Jr.
CLOVERLEA LAND SURVEYS, INC.
R. WINFIELD VINING, JR.
PROFESSIONAL LAND SURVEYOR
MD REG. No.: 10957

PERCOLATION CERTIFICATE PLAN
PROPERTY OF
DAVID R. HUNTER
AS DESCRIBED IN
LIBER 11487 AT FOLIO 196
THIRD (3rd) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
JULY 2010 - SCALE 1" = 60'

JOB No. CLOV09-418

APPROVAL

"APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS."

P. Peterson for *P. Peterson* 7/23/2010
Health Officer Date
Howard County Health Department



Cloverlea Land Surveys, Inc.

LAND SURVEYING - SITE PLANNING - CAD DRAFTSMEN
900 MAGO VISTA ROAD, ARNOLD, MD 21012
OFFICE (443) 994-3157 FAX (443) 458-0684