



Howard County
Health Department

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 J. Rossman, M.D., Health Officer

RECEIPT DATE: 11/10/15

ONSITE SEWAGE DISPOSAL SYSTEM

P 557454

APPROVAL DATE: 2-4-16

PERMIT: CONSTRUCTION

A

PROPERTY ADDRESS: 12002 Catherine Close Road, Clarksville, MD 21029

SUBDIVISION: Greenberry

LOT: 13

TAX ID: _____

CONTRACTOR: South Carol

EMAIL: _____

CONTRACTOR ADDRESS: _____

PHONE: _____

CONTRACTOR CERTIFIED FOR BAT INSTALLATION:



MDE



MANUFACTURER:

PROPERTY OWNER: NRV, Inc.

EMAIL: _____

OWNER ADDRESS: _____

PHONE: _____

BAT UNIT MODEL: Hoot 600 BNR

PUMP SIZE: 0.4 HP

PUMP TANK CAPACITY: 750 gal

OPERATION & MAINTENANCE AGREEMENT

DATE SIGNED: 9/1/2015

DATE RECORDED: 9/1/2015

DISTRIBUTION SYSTEM: ☒ GRAVITY

☐ PRESSURE DOSED

BEDROOMS: 5

APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>130' 125'</u>	INLET DEPTH: <u>4</u>
	TRENCH WIDTH: <u>3' 2'</u>	MAXIMUM BOTTOM DEPTH: <u>6.5' 8'</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4.5</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	<u>2' x 63' trenches</u>	

ISSUED BY: Robert Bricker

ISSUE DATE: 11/10/2015

EXPIRATION DATE: 11/10/2016

NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION

NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING

NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.

NOTE: WATERTIGHT SEPTIC TANKS REQUIRED

NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADE FROM ANY WATER WELL

NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM



ELECTRICAL PERMIT ISSUED

E

15005729

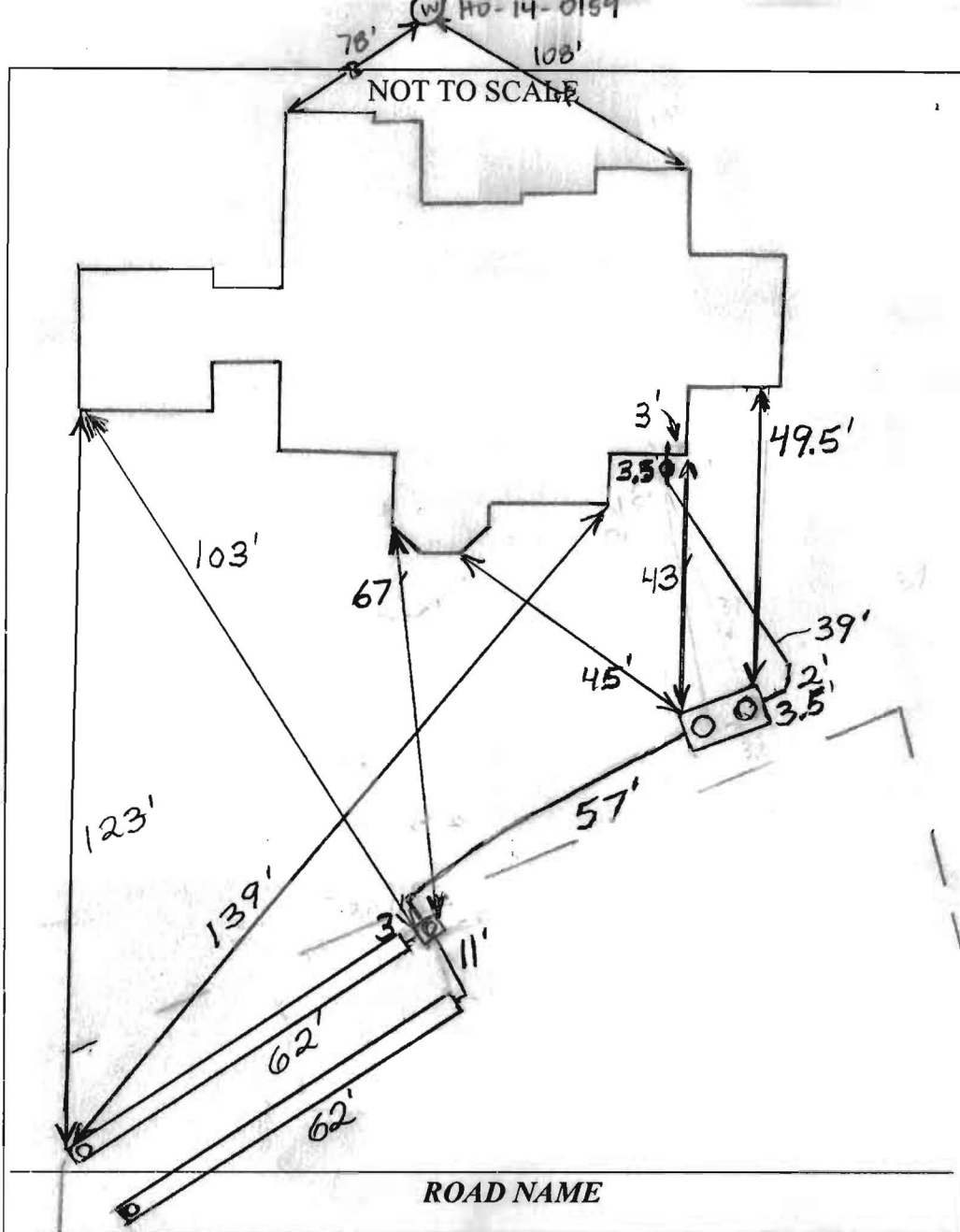
NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.

NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.

PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.

CALL 410-313-1771 TO SCHEDULE INSPECTIONS.



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
2'	4'	8'
NUMBER OF TRENCHES <u>2</u>		
TOTAL LENGTH <u>~124'</u>		
ABSORPTION AREA <u>434±</u>		
DISTRIBUTION BOX LEVEL <u>Yes</u>		
DISTRIBUTION BOX BAFFLE <u>Elbow</u>		
DISTRIBUTION BOX PORT <u>Yes</u>		

SEPTIC TANK DATA

SEPTIC TANK I LEVEL	<u>Yes</u>
MANUFACTURER	<u>Hoot/Mayer Bros.</u>
CAPACITY	<u>~2,000 GAL</u>
SEAM LOC	<u>Top</u>
TANK LID DEPTH	<u>1.5'</u>
BAFFLES	<u>Yes</u>
BAFFLE FILTER	<u>N/A</u>
MANHOLE LOC	<u>Front+Rear</u>
6" PORT LOC	<u>None</u>
WATERTIGHT TEST	<u>No</u>
SLOTTED	<u>N/A</u>
DATE ON LID	<u>Dry</u>

PUMP/SEPTIC TANK LEVEL N/A

MANUFACTURER	
CAPACITY	<u> </u> GAL
SEAM LOC	<u> </u>
TANK LID DEPTH	<u> </u>
BAFFLES	<u> </u>
BAFFLE FILTER	<u> </u>
MANHOLE LOC	<u> </u>
6" PORT LOC	<u> </u>
WATERTIGHT TEST	<u> </u>
SLOTTED	<u> </u>
DATE ON LID	<u> </u>

PRE-CONSTRUCTION:

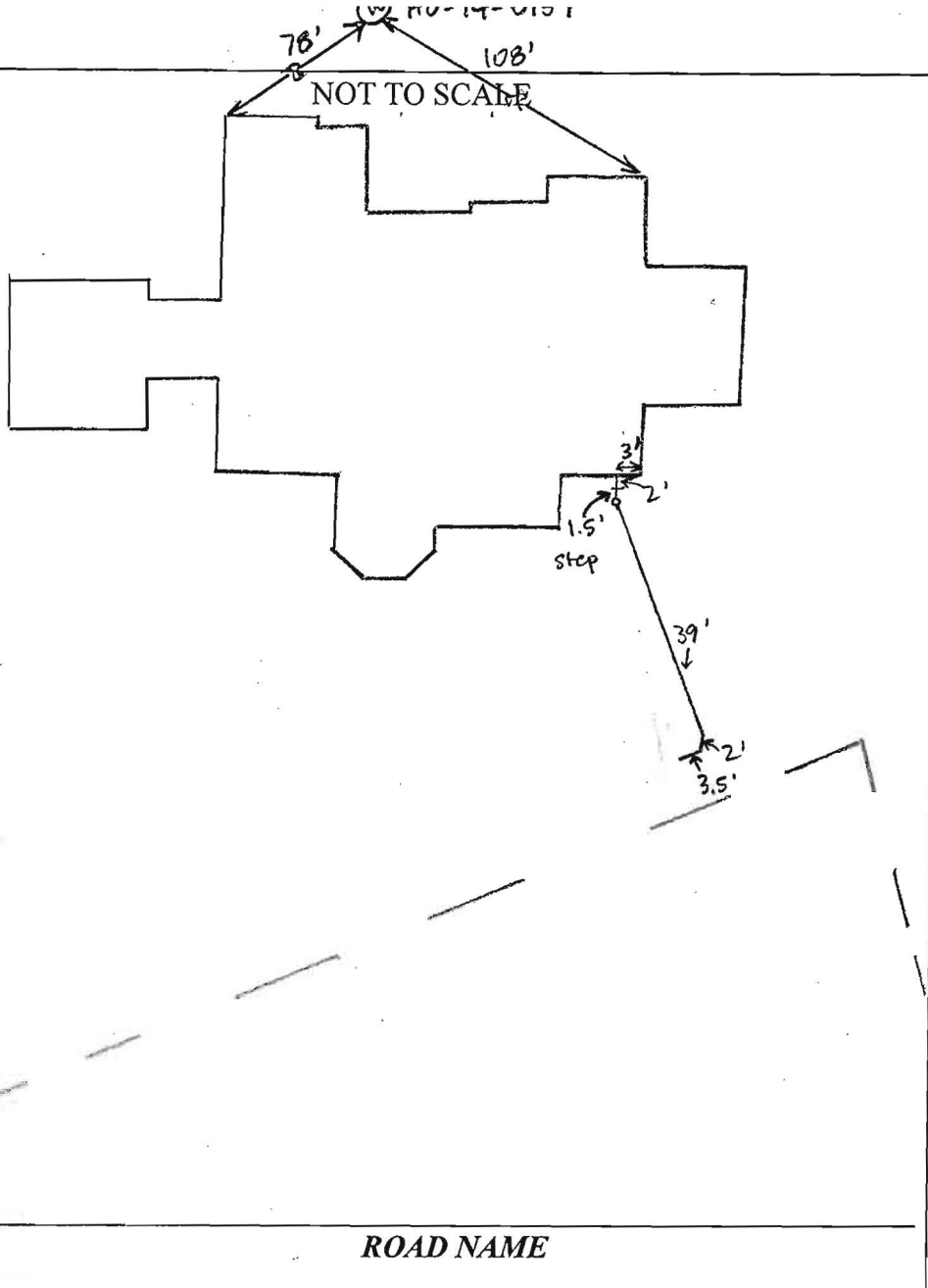
1/6/16 Met South Carroll on site for layout. Laid out two trenches on contour - all SDA stakes and BAT tank stake present. (SC)

INSTALLATION: 1/14/2016 (AM) Trenches done and covered without inspection. Tank set. Inspection not called in properly. (BP)
 1/14/2016 (PM) Plumbing to dist. box installed. (BP)
 1/15/16 House connection made. Need Hoot startup. (SC) 2/2/16 On site for Hoot startup with Mike Sample. Pump pumps effluent to D-box, alarm sounds. Recirculation pressure good. (SC) 2/3/16 Hoot startup certification received. (SC)

FINAL INSPECTOR

DATE OF APPROVAL

2-4-16



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
2'	4'	8'
NUMBER OF TRENCHES 2		
TOTAL LENGTH ~124'		
ABSORPTION AREA 434±		
DISTRIBUTION BOX LEVEL Yes		
DISTRIBUTION BOX BAFFLE Elbow		
DISTRIBUTION BOX PORT Yes		

SEPTIC TANK DATA

SEPTIC TANK I LEVEL	Yes
MANUFACTURER	Hoot/Mayer/Eros
CAPACITY	GAL
SEAM LOC	Top
TANK LID DEPTH	1.5'
BAFFLES	
BAFFLE FILTER	N/A
MANHOLE LOC	Front + Rear
6" PORT LOC	None
WATERTIGHT TEST	No
SLOTTED	N/A
DATE ON LID	Dry

PUMP/SEPTIC TANK LEVEL N/A

MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

PRE-CONSTRUCTION:

1/6/16 Met South Carroll on site for layout. Laid out two trenches on contour - all SDA stakes and BAT tank stake present. (SC)

INSTALLATION: 1/14/2016 (AM) Trenches done and covered without inspection. Tank set. Inspection not called in properly (BB) 1/14/2016

1/15/16 House connection made. Need Hoot startup (SC) 2/2/16 On site for Hoot startup with Mike Sample. Pump pumps effluent to D-box, alarm sounds. Recirculation pressure good. (SC) 2/3/16 Hoot startup certification received. (SC)

FINAL INSPECTOR _____ DATE OF APPROVAL _____

Letter of Satisfaction

Hoot System Installation

Address of Property: 12002 Catherine Close Dr.
Clarksville, MD. 21029

Date of Final Inspection: 2/2/16

Installer: South Carroll Backhoe Service

Hoot Technician/Inspector: Mike Sample

I hereby certify that the Hoot system installed at the property listed above has been installed according to proper Hoot installation practices. I have also verified the startup of the system and it is in proper working order.

Sincerely,

H. Michael Sample
Name of Inspector
Mayer Bros., Inc.

PH: 410-796-1434

WBE

FX: 410-796-1438

www.mayerbrosprecast.com

Grease Interceptors, Grease Solutions, Aerobic Treatment Units, Septic Tanks, Holding Tanks, Storm Water Structures, Hydroceptors,
Bench Barrier, Water Meter Vaults, Sectional Valve Vaults, Top Slabs, Curb Heads, Curb Bumpers,
Custom Precast Products



Lot 13
Greenberry

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/hccohealth
Twitter: HowardCoHealthDep

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

**OPERATION AND MAINTENANCE AGREEMENT
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 28 day of June, among NVR, Inc., hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 12007 Catherine Close Rd., in the 1 Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber Folio PLAT # 23453

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013. The pre-treatment device being installed is HOOT 600 GPD BNR

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.
- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require

JW 8/8/2014

maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above,

Bert Nye 9/1/2015
Howard County Health Department

[Signature] 8/12/15
Owner #1 Signature NWA Date

Owner #2 Signature Date

Owner #1 Print Name

Owner #2 Print Name

[Signature] 6/28/15
Buyer #1 Signature Date

Buyer #2 Signature Date

GARNETT PERSON
Buyer #1 Print Name

Buyer #2 Print Name

JW 8-8-2014

Print Date: 6/28/2015

Clerk of the Circuit Court for
Howard County
Land Records/Licensing

The Thomas Dorsey Building
9250 Bendix Road
Columbia, MD 21045
410-313-5850

=====

LR - Agreement Recording Fee		
	1x 20.00	20.00

Grantor/Grantee Name: PATEL
Reference/Control #: 97

=====

LR - Agreement Surcharge		
	1x 40.00	40.00

=====

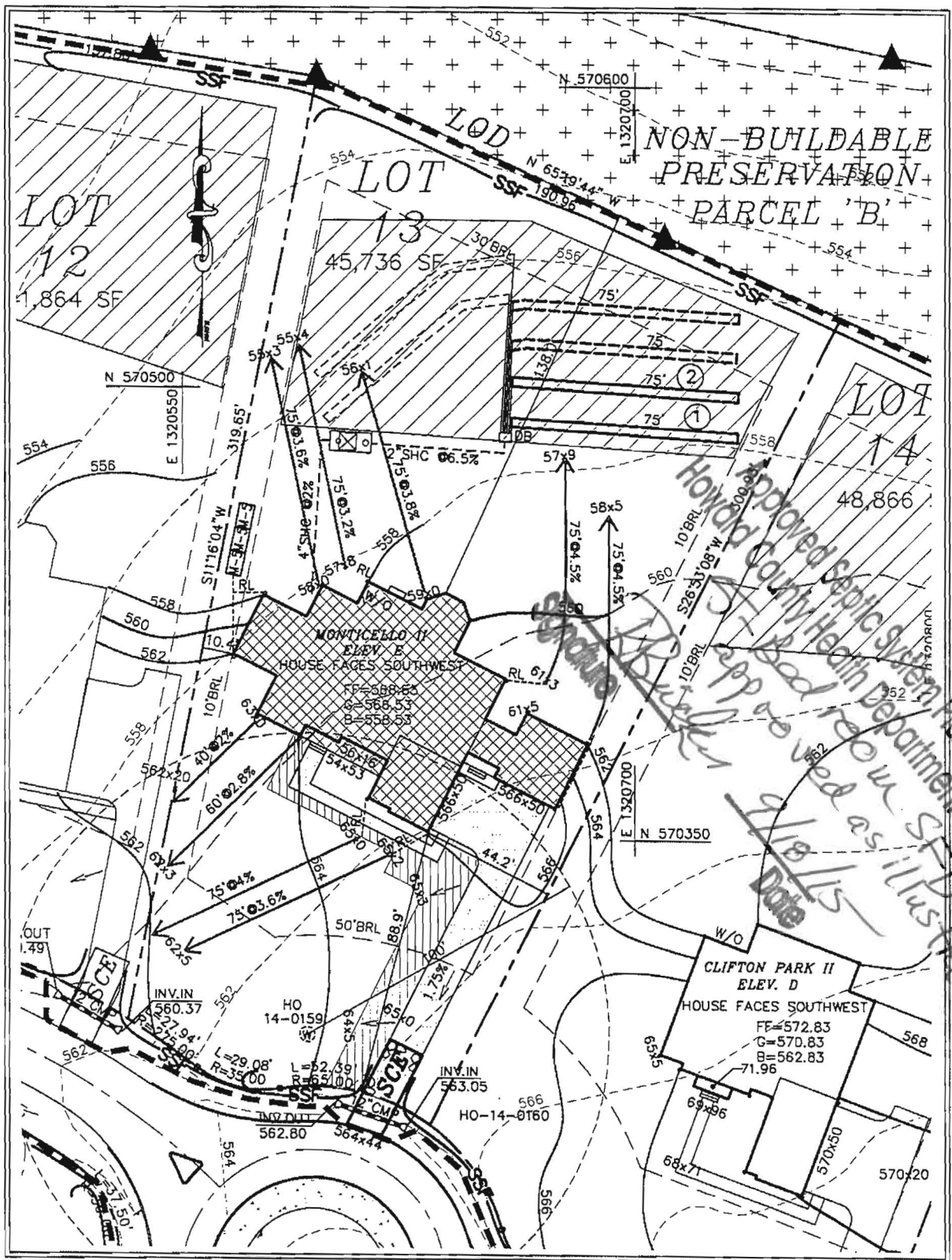
SubTotal:		60.00
Total:		60.00

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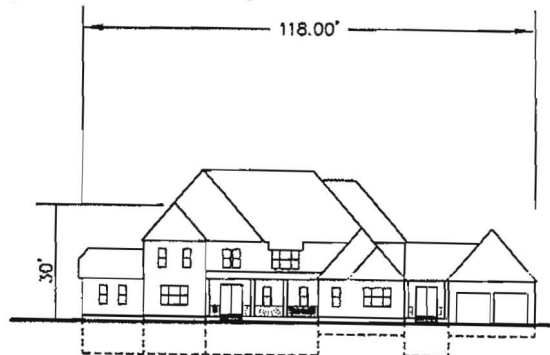
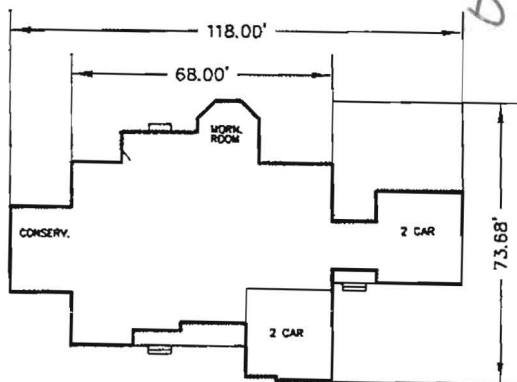
REV-Check-BOA		60.00
Number : 878013		

09/01/2015 10:47 CC13-ES
#4777675 /1247/109
***** DUPLICATE #001 *****

09/01/2015 10:48 CC13-ES
~ Thank you for visiting us today ~



12002 Catherine Close Road
B15003436



MONTICELLO II
ELEV. E

PLOT PLAN (SITE SPECIFIC)
GREENBERRY
LOT 13

FIFTH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE: 1" = 50'

DRAWN BY: MMM

DATE: JULY 2015

PN: 15-005



**MILDENBERG
BOENDER, & ASSOC., INC.**

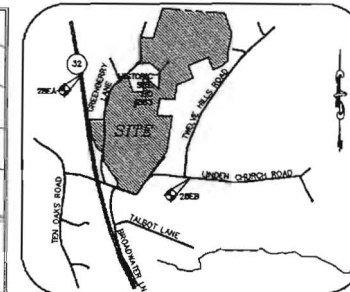
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Ball. (410) 997-0298 Fax.

SYMBOL	RATING	NAME	K FACTOR
GgB	(B)	GLENELG LOAM, 0-3% SLOPES.	.20
GgB	(B)	GLENELG LOAM, 3-8% SLOPES.	.20

DESCRIPTION	ELEVATION
BASEMENT ELEVATION	558.53
INVERT OUT OF THE HOUSE	556.03
FINISHED GRADE AT SEPTIC TANK	556.70
INVERT INTO TANK	554.63
INVERT OUT OF TANK	556.15
FINISHED GRADE AT DISTRIBUTION BOX	557.8
INVERT INTO DISTRIBUTION BOX	553.3



LOCATION PLAN
SCALE: 1"=600'



VICINITY MAP
SCALE : 1" = 2000'
ADC MAP 24 GRID F5

ESD REQUIRED.

LOT AREA = 45,736 SF
HOUSE AREA = 4,740 SF
DRIVEWAY AREA = 1,847 SF
WALK AREA = 316 SF
TOTAL IMPERVIOUS AREA = 6,903 SF [B+C+D]
IMPERVIOUS RATIO = 15.1%
SOIL TYPE: B (100%)
REQUIRED $P_e = 1.0'$ [TABLE 5.3]
 $R_v = 0.186$
REQUIRED $ESD_v = 709$

ESD PROVIDED

N-1 ROOFTOP DISCONNECTION

NUMBER OF 75' LONG DISCONNECTIONS: 7
NUMBER OF 60' LONG DISCONNECTIONS: 1
NUMBER OF 40' LONG DISCONNECTIONS: 1
ROOF AREA: 4,500 SF
R_v = 0.95

PROVIDED $ESD_v (N-1) \approx 337$ CF

N-2 NON-ROOFTOP DISCONNECTION

AREA OF N-2 NON-ROOFTOP DISCONNECTION = 2,163 SF
R₁ = 0.95

PROVIDED $ESD_v(N-2) = 171$ CF

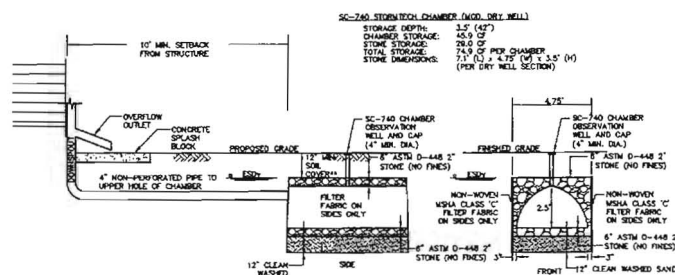
M-5 MODIFIED DRY WELLS.

NUMBER OF MODIFIED DRY

PROVIDED STORAGE PER DRY WELL = 74.9 CF

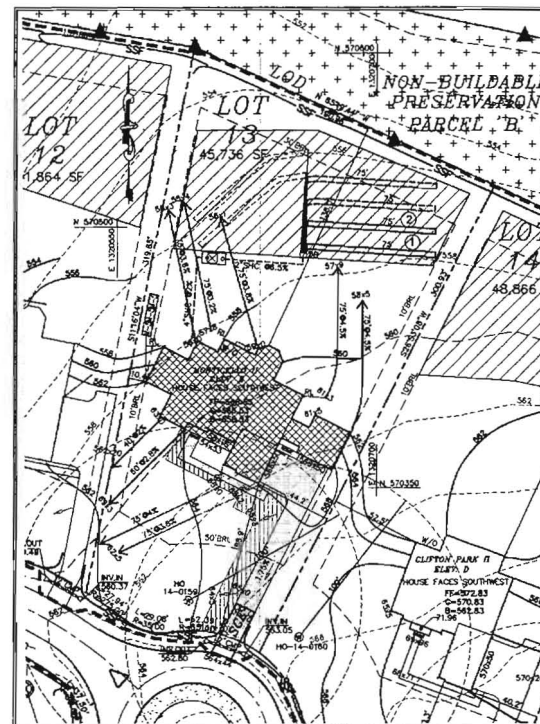
PROVIDED ESDv (M-5) = 225 CF
ESD PROVIDED (TOTAL) =

ESD PROVIDED (TOTAL) = 733 CF

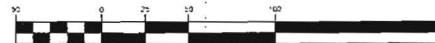


NOT TO SCALE

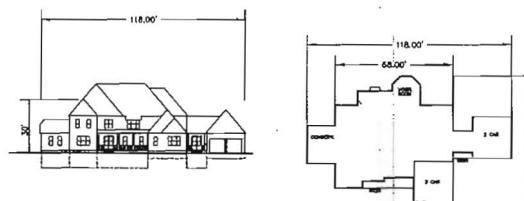
NOTE: ADJUST COVER OVER CHAMBER TO ENSURE THAT THE CLEAN WASHED SAND LAYER IS NOT PLACED IN FILL.



GRAPHIC SCALE




(IN FEET)
1 inch = 50 ft



MONTICELLO II
SLEY. 5

GENERAL NOTES:

1. THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
2. **PARCEL BACKGROUND:**
TAX MAP: 28
GRID: 9
PARCEL: 48
LOT: 13
DEED REFERENCE: LIBER 5891 FOLIO 307
ELECTION DISTRICT: FIFTH
ZONING: RR-DEO.
AREA: 29.37 ACRES ±
DPZ FILES: EOP-13-025, SP-13-010, F-14-095, GP-15-081
3. 2" TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON AERIAL SURVEY FLN BY WINGS TOPOGRAPHY INC. ON OR ABOUT MARCH 2007.
4. PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
5. SOILS DATA BASED ON THE USDA SOIL SURVEY OF HOWARD COUNTY, MO, DATED MAY, 2008.
6.  THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS EASEMENT SHALL BECOME NUL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO MAKE ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
7. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
8. EXISTING WELLS, SEPTIC SYSTEMS, AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWAGE DISPOSAL AREAS HAVE BEEN SHOWN.
9. THE WELL SHALL BE DRILLED PRIOR TO HEALTH DEPARTMENT APPROVAL OF THE BUILDING PERMIT. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO APPLYING FOR A BUILDING PERMIT. IT WILL NOT BE CONSIDERED "GOVERNMENT DELAY" IF THE WELL DRILLING HOLDS UP HEALTH DEPARTMENT APPROVAL OF THE BUILDING PERMIT.
10. A SITE PLAN FOR BAT INSTALLATION WAS APPROVED ON _____ BY THE HOWARD COUNTY HEALTH DEPARTMENT.

LEGEND

-
- Figure 1 displays various symbols used in site plans, organized into two columns. The left column contains graphical symbols, and the right column contains their corresponding descriptions.
- Top Row:** A dashed line with '550' above it. **PROPOSED CONTOURS**
 - Second Row:** The text '66x06' above the text 'LOD'. **PROPOSED SPOT ELEVATION**
 - Third Row:** A horizontal line with 'SSF' above it. **LIMIT OF DISTURBANCE (LOD)**
 - Fourth Row:** A rectangular box with a wavy pattern and 'SCE' inside. **SUPER SILT FENCE**
 - Fifth Row:** A rectangular box with a cross-hatch pattern. **STABILIZED CONSTRUCTION ENTRANCE**
 - Sixth Row:** A dashed line with 'RL' above it. **ROOF LEADER**
 - Seventh Row:** A circle with a dot and '(1)' inside. **PROPOSED WELL (DRILLED)**
 - Eighth Row:** A rectangular box with a solid black fill and '25' above it. **PRIMARY SEPTIC TRENCH**
 - Ninth Row:** A rectangular box with a solid black fill and '20' above it. **SECONDARY SEPTIC TRENCH**
 - Tenth Row:** A rectangular box with a dashed border. **TERTIARY SEPTIC TRENCH**
 - Eleventh Row:** A rectangular box with a stippled pattern. **FOREST CONSERVATION EASEMENT**
 - Twelfth Row:** A rectangular box with a diagonal cross-hatch pattern. **IN PERVIOUS AREA TREATED BY ROOFTOP DISCONNECTIONS (N-1) AND/OR DRYWELLS (N-5)**
 - Thirteenth Row:** A rectangular box with a horizontal line pattern. **IN PERVIOUS AREA TREATED BY NON-ROOFTOP DISCONNECTIONS (N-2)**
 - Fourteenth Row:** A rectangular box with a vertical line pattern. **NON-ROOFTOP DISCONNECTION AREA (N-2)**
 - Fifteenth Row:** A rectangular box with a horizontal line pattern and '75 WLS MAX' below it. **ROOFTOP DISCONNECTION AREA (N-1)**
 - Sixteenth Row:** A rectangular box with a cross-hatch pattern and '(N-5)' below it. **DRYWELL (N-5)**



I HEREBY 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 NO. 17942, EXP. DATE 09/03/2016.

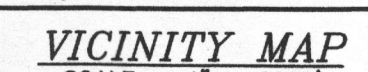
R. JACOB HIKMAT, P.E.

7/25/15
DATE:

SYMBOL	RATING	NAME	K FACTOR
GgB	(B)	GLENELG LOAM, 0-3% SLOPES.	.20
GgB	(B)	GLENELG LOAM, 3-8% SLOPES.	.20

TRENCH	EX. GROUND ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
1	557.5	553.5	551.0
2	557.0	553.0	550.5

DESCRIPTION	ELEVATION
FINISHED GRADE AT SEPTIC TANK	556.8
INVERT INTO TANK	554.63
EXTERIOR BOTTOM OF TANK	549.70
INTERIOR BOTTOM OF TANK	550.20
PUMP OFF	551.45
HIGH WATER ALARM	553.45
WATER LEVEL	552.45
DEPTH OF TANK	9.5'
INVERT OUT OF TANK	556.15
STATIC HEAD	6.1'
DOSED RATE	50 GPM
PUMP RUNTIME	3 MIN.

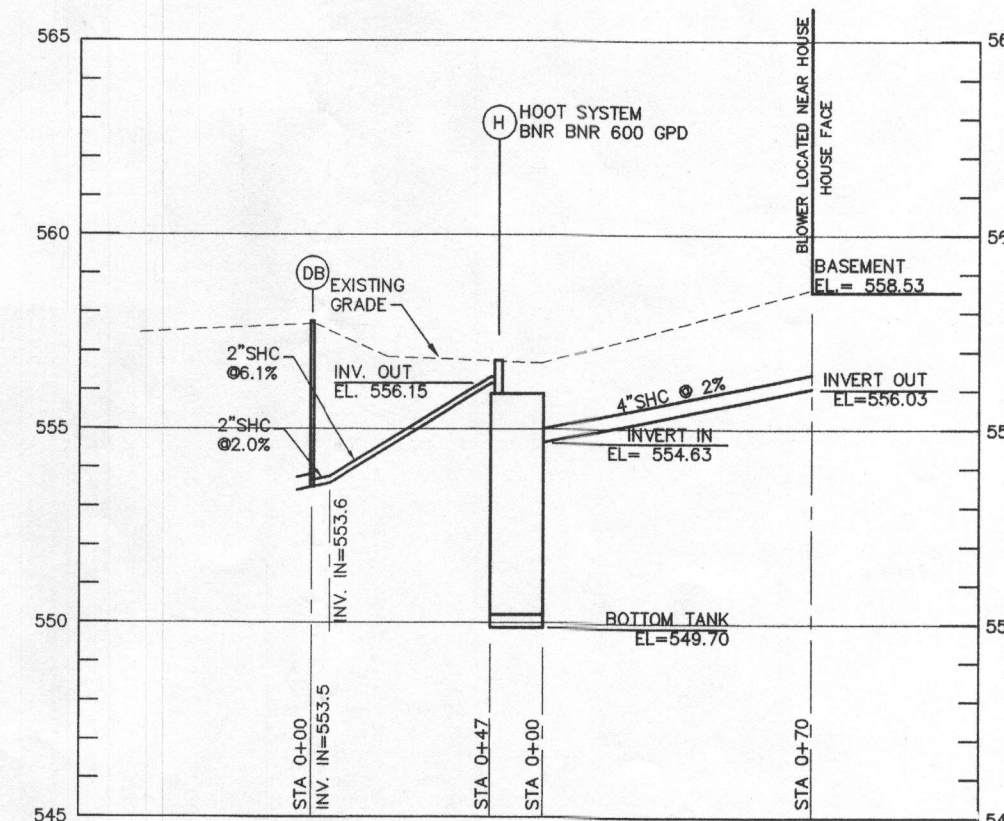
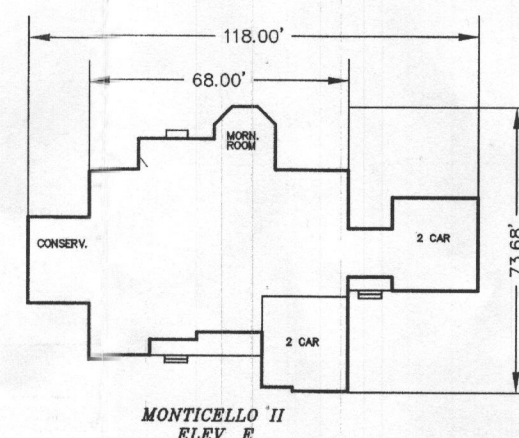
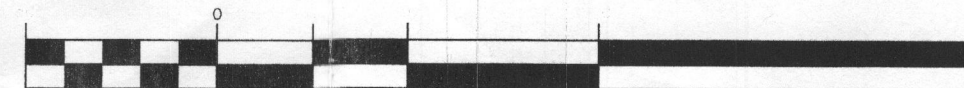
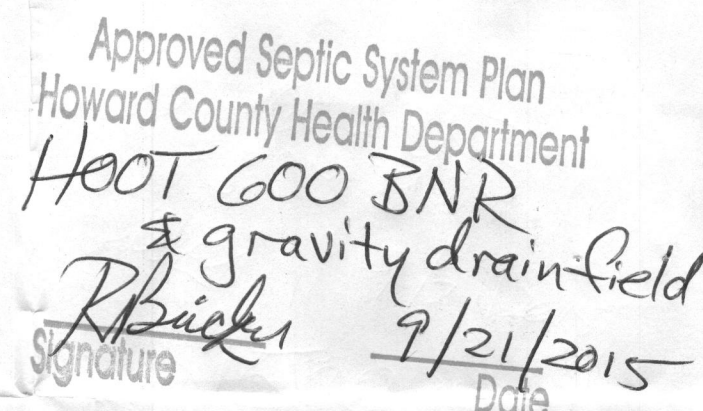



SYSTEM	APPLICATION RATE (GPD / SF)	MAXIMUM FLOW RATE (GPD)	AREA OF REQUIRED TRENCH (SF)	TRENCH WIDTH (FT)	LENGTH OF REQUIRED TRENCH (LF)	EFFECTIVE DEPTH (FT)	TRENCH BOTTOM DEPTH (FT)	TRENCH REDUCTION FACTOR**	ADJUSTED LENGTH OF REQUIRED TRENCH (LF)	MINIMUM TRENCH SPACING (FT)	PROVIDED TRENCH LENGTH (FT)
PRIMARY	1.2	750	625	3	208.3	4.5	2.5	0.62	129.2	10.0'	130
SECONDARY	1.2	750	625	3	208.3	4.5	2.5	0.62	129.2	10.0'	130
TERTIARY	1.2	750	625	3	208.3	3.0	2.0	0.62	129.2	10.0'	130

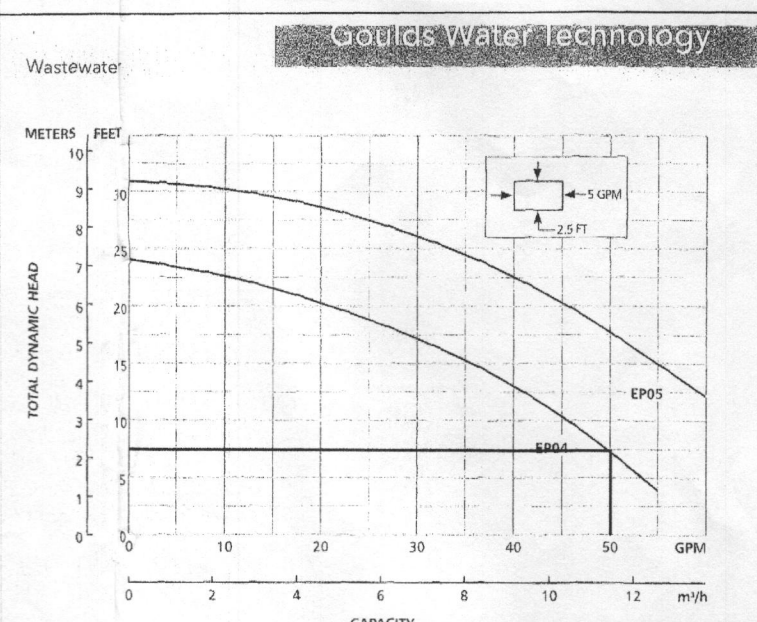
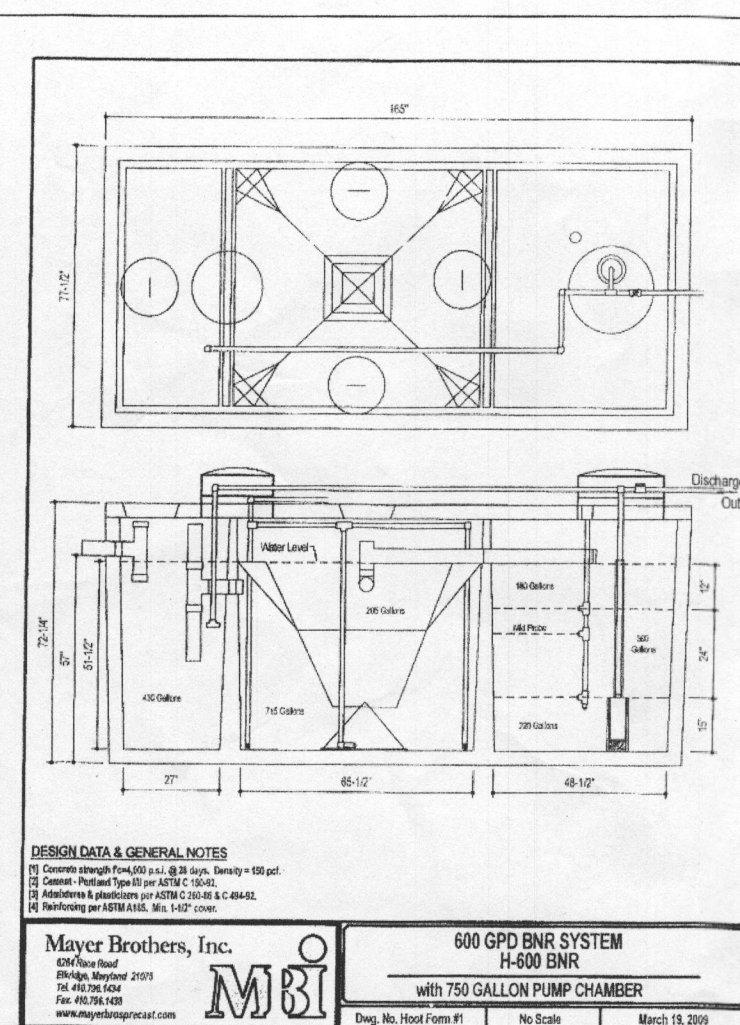
1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3.0' FEET.
3. THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
4. THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
5. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
6. WITHIN ONE (1) MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
7. ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
8. AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
9. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.

RESIDENTIAL SYSTEM DESIGN: HOOT 600 BNR
4 BEDROOM HOUSE (LIVING AREA = 3,500 SQ.FT.)
[DESIGN FLOW FOR 5 BEDROOM]
150 GALLONS X # OF BEDROOMS = VOLUME OF WASTEWATER /DAY
150 X 5 = 750 GPD
APPLICATION RATE = 1.2 GPD/SQ.FT.
DESIGN FLOW x APPLICATION RATE = SQ.FT. OF TRENCH REQUIRED
750 ÷ 1.2 = 625 SQ.FT. [USE 625]
SQ.FT. REQUIRED ÷ WIDTH OF TRENCH = LENGTH OF TRENCH
625 ÷ 3.0' = 208.33 FT
USE 24" OF GRAVEL BELOW DRAIN PIPE
208.33 X 0.62 = 129.16 [USE 130]
USE TWO (2) 65' LONG TRENCHES
A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL
REDUCTION CREDIT.
MINIMUM TANK CAPACITY = 1,500 GALLONS
PUMP: GOULDS MODEL 3871, EP04 SERIES

THE EXISTING WELL, TAG NO. HO-14-0159, HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN



1. THE SUBJECT PROPERTY IS ZONED RR-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
2. PARCEL BACKGROUND:
TAX MAP : 28
GRID: 9
PARCEL : 48
LOT: 13
DEED REFERENCE: LIBER 5891 FOLIO 307
ELECTION DISTRICT : FIFTH
ZONING : RR-DEO.
AREA : 29.37 ACRES ±
DPZ FILES: ECP-13-025, SP-13-010, F-14-095, GP-15-081
3. 2' TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON AERIAL SURVEY FLOWN BY WINGS TOPOGRAPHY INC. ON OR ABOUT MARCH 2007.
4. PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
5. SOILS DATA BASED ON THE USDA SOIL SURVEY OF HOWARD COUNTY, MD, DATED MAY, 2008.
6.  THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
7. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
8. EXISTING WELLS, SEPTIC SYSTEMS, AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWAGE DISPOSAL AREAS HAVE BEEN SHOWN.
9. THE WELL SHALL BE DRILLED PRIOR TO HEALTH DEPARTMENT APPROVAL OF THE BUILDING PERMIT. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO APPLYING FOR A BUILDING PERMIT. IT WILL NOT BE CONSIDERED "GOVERNMENT DELAY" IF THE WELL DRILLING HOLDS UP HEALTH DEPARTMENT APPROVAL OF THE BUILDING PERMIT.



MODEL INFORMATION													
Order No.	HP	Volt	Amps	Minimum Circuit Breaker	Phase	Plug Switch Type	Conduit Length	Discharge Connection	Minimum On-time	Minimum Off Rate	Minimum Batter Size	Maximum Solid State Size	Shipping Weight
EP041						Plug No Switch	10'	15"	Manual	Manual	15"		20.1/21.5
EP041A						Plug No Switch	10'	15"	12"	6"	15"		21.1/22.5
EP041F	115	120	20			Plug No Switch	20'	18"	Manual	Manual	15"		21.1/22.5
EP041C						Plug No Switch	20'	18"	12"	6"	15"		21.1/22.5
EP042						Plug No Switch	10'	18"	Manual	Manual	15"	X*	20.1/21.5
EP042F	220	6	10			Plug No Switch	20'	18"	Manual	Manual	15"		20.1/21.5
EP051F						Plug No Switch	20'	18"	Manual	Manual	15"		22.1/23.5
EP051AC	115	120	10			Plug No Switch	20'	18"	12"	6"	15"		23.1/24.5
EP052	220	6	5			Plug No Switch	20'	18"	Manual	Manual	15"		22.1/23.5

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

DATE _____

I HEREBY 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 NO. 17942, EXP DATE 09/03/2016.

R. JACOB HIKMAT. P.E.

9/14/95
DATE:

project	date
5-005	SEP. 2015
stratation	engineering
MM	MM
able	approval
"-EO"	

no.	description	date
	Approved BAI Pan	

GREENBERRY, LOT 13
12002 CATHERINE CLOSE ROAD, CLARKSVILLE MD
TAX MAP 28, PARCEL 48, LOT 13
FIRST ELECTION DISTRICT
HOWARD COUNTY
SITE PLAN FOR BAT INSTALLATION

**MILDENBERG,
BOENDER & ASSOC., INC.**
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296, Rm. (410) 997-0298, Fax