



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: 6/17/19

ONSITE SEWAGE DISPOSAL SYSTEM

P 56528

APPROVAL DATE: 07/10/2019

PERMIT: CONSTRUCTION

A

PROPERTY ADDRESS: 4450 Route 97

SUBDIVISION:

LOT:

TAX ID: 04-321804

CONTRACTOR: Hatfield's Equipment

EMAIL: ken@hatfieldsequipment.com

CONTRACTOR ADDRESS: P.O. Box 519, Annapolis Junction, MD 20701

PHONE: 301-490-4289

CONTRACTOR CERTIFIED FOR BAT INSTALLATION:



MDE



MANUFACTURER:

PROPERTY OWNER: Decatur LLC.

EMAIL:

OWNER ADDRESS: 511 Ashton Road, Ashton, MD 20861

PHONE: 301-370-1188

BAT UNIT MODEL: Norweco TNT LP 600

PUMP SIZE: N/A

PUMP TANK CAPACITY: N/A

OPERATION & MAINTENANCE AGREEMENT

DATE SIGNED: 7/20/18

DATE RECORDED: 7/23/19

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS:

4

APPLICATION RATE:

1.2

TRENCHES:

LINEAR FEET REQUIRED: 336

INLET DEPTH: 4

TRENCH WIDTH: 3

MAXIMUM BOTTOM DEPTH: 8

MINIMUM SPACE

BETWEEN TRENCHES: 9

EFFECTIVE AREA BEGINNING DEPTH: none

LOCATION:

PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.

NOTES:

*Must stake everything. (SDA, initial and replacement trenches, tank, DBOX) for layout.

ISSUED BY: Robert Freemon

ISSUE DATE: 6/17/19

EXPIRATION DATE: 6/17/20

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 DOWNGRAIENT 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

19000607

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

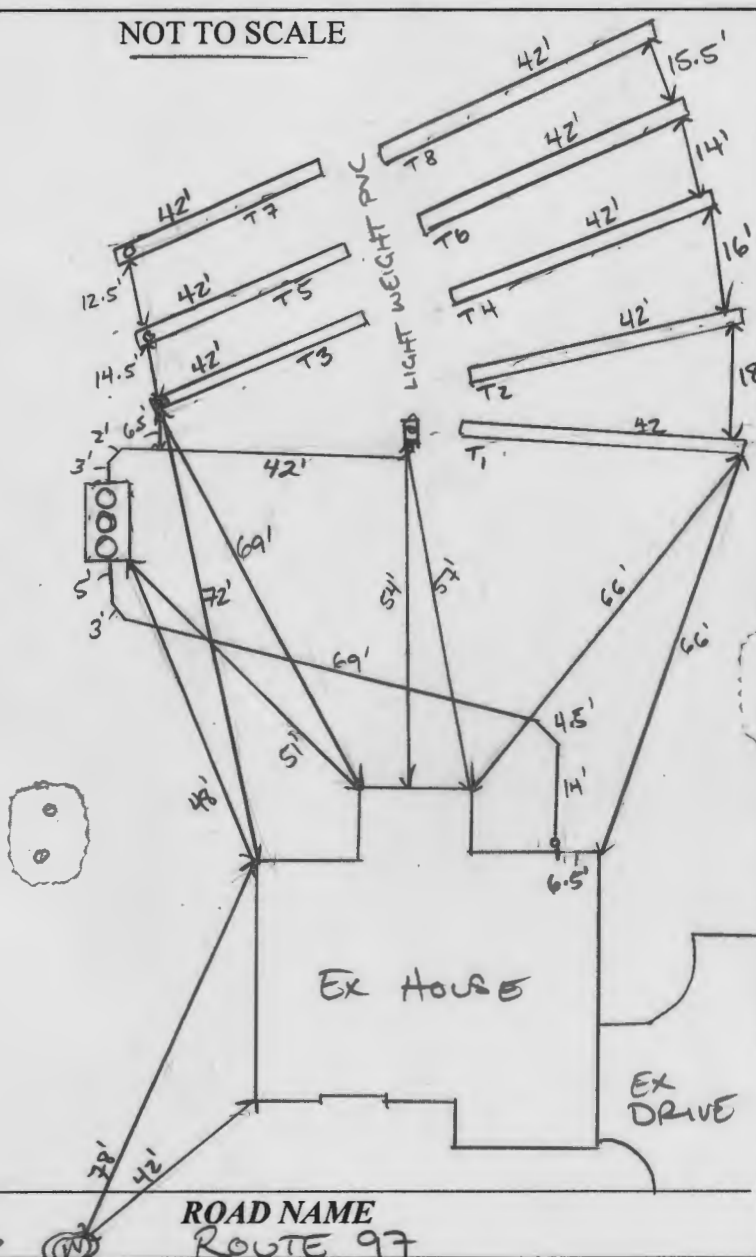
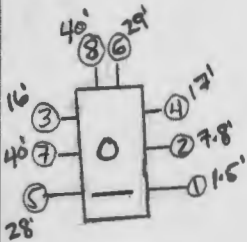
NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.

PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.

CALL 410-313-1771 TO SCHEDULE INSPECTIONS.

NOT TO SCALE

D BOX DETAIL w/
FT TO TRENCH
⑦



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	4'	8'
NUMBER OF TRENCHES 8		
TOTAL LENGTH 336 F		
ABSORPTION AREA 1008 SF		
DISTRIBUTION BOX LEVEL SPEED		
DISTRIBUTION BOX BAFFLE YES		
DISTRIBUTION BOX PORT YES		

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL YES	
MANUFACTURER	BACKLIVER
CAPACITY	INTLP 600 GAL
SEAM LOC	TOP
TANK LID DEPTH	21'
BAFFLES	CAT
BAFFLE FILTER	BAT
MANHOLE LOC	FRONT/MID/BACK
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	BAT
DATE ON LID	N/A
PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

PRE-CONSTRUCTION:

7/3/2019 TANK, SDA, TRENCHES STAKED. SYSTEM IS NOT CPD. HEAVY RUN OFF DOWN CENTER OF SDA. T₁ TO DIG FROM DISTAL END TOWARD PROXIMAL END TO LEVEL 8' BOTTOM WITH 1' DIFFERENCE END TO END DUE TO CENTER CUTTING. TRENCHES UNDER VARY IN SPACE 13'-11". 10' MIN BETWEEN DEEP TRENCH REQUIRED. (V)

INSTALLATION: 07/09/2019 SHC AND PART OF SL INSTALLED. OK TO BACKFILL. TANK PIT DUG. 4/8 TRENCHES COMPLETE (LOWER). 7/10/2019 TANK SET. WATER RUNNING INTO TANK PIT FROM FOUNDATION. TRENCHES COMPLETE. D BOX SET. 7 HOLE BOX w/ END PORT CUT TO FIT 2 PIPE. RESEALED w/ HYDRAULIC CEMENT. D BOX LEVELED w/ SPEED LEVELS. (PM)

FINAL INSPECTOR

DATE OF APPROVAL

07/10/2019

4450 ROUTE 97
~~BROOKVILLE~~ BROOKVILLE MD.

of the Circuit Court for
Howard County
Land Records/Licensing

Thomas Dorsey Building
3250 Bendix Road
Columbia, MD 21045
410-313-5850

LR - Agreement Recording Fee		
	1x	20.00 20.00

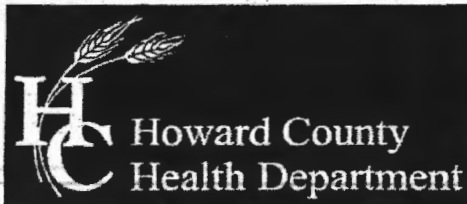
Name: PEREIRA
Ref: 61

LR - Agreement Surcharge		
	1x	40.00 40.00

SubTotal:		60.00
Total:		60.00

CRD-Credit	60.00
Credit Card Confirmation : 8269G	

07/23/2018 13:45 CC13-LH
#10711406/1247/109
~ Thank you for visiting us today ~



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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 20 day of July 2018, among GENIVALDO PEREIRA, 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 4450, Route 97, Brookville MD, in the 04 Election District of Howard County, Maryland, and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 27, Block # 0001, Parcel # 0014, Deed Reference # 7153100352 and Tax Account # 04 321804 ("the Property").

WHEREAS, The Property 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

NOOK 600 BNR

NOW, THEREFORE, the parties hereto agree as follows:

A. Owner hereby grants to the County the right to enter upon the Property at any reasonable time with prior notice 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.

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 Property 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 Property that the system shall require maintenance or other attention. Upon taking title to the Property, 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.

Ben Ruffin 7/20/2018
Howard County Health Department

[Signature] 7-20-18
Owner #1 Signature Date

GENIVALDO PEREIRA 7-20-18
Owner #1 Print Name

Owner#2 Signature Date

Owner #2 Print Name

Buyer #1 Signature Date

Buyer #2 Signature Date

Buyer #1 Print Name

Buyer #2 Print Name



BACK RIVER PRE-CAST, LLC
PO BOX 329
GLYNDON, MD 21071
PH# 410-833-3394

NORWECO CERTIFICATION

PROPERTY OWNER: DECTUR, LLC	INSTALLATION COMPANY: HATFIELD
ADDRESS: 4450 ROUTE 97	CERTIFIED INSTALLER: TODD TRACEY
CITY, ZIPCODE & COUNTY: BROOKEVILLE, 20833, HOWARD	PERMIT#
SIZE OF SYSTEM INSTALLED:	DATE INSTALLED: 07-09-19
600 GPD CONCRETE	START-UP DATE: 08-14-19
NUMBER OF BEDROOMS:	DATE OF FINAL INSPECTION:
TYPE OF INSTALLATION: NEW CONSTRUCTION	DATE OF ELECTRICAL INSPECTION:
ELECTRICAL WIRING PER ELECTRICAL INSTRUCTIONS: YES	TANK LEVEL: YES
HT. OF CONTROL PANEL ABOVE FINAL GRADE: 30"	BURIAL DEPTH OF TANK: 12"
SYSTEM WIRED ON A 15-AMP DEDICATED CIRCUIT WITH STD. BREAKER: YES	RISERS 4" - 6" ABOVE GRADE: YES
LENGTH(S) OF UF WIRE PAST LAST AERATION RISER(S): 60"	VENTED LID(S) ON AERATION CHAMBER(S): YES
FEMALE PLUG(S) WIRED TO UF WIRE: YES	ANY GROUND SETTLING AROUND TANK: NO
CONDUIT(S) ENTERING AERATION RISER MADE WITH A WATERTIGHT CONNECTION: YES	
IS THE INSIDE OF THE CONDUIT ENTERING THE CONTROL PANEL(S) AND AERATION RISER(S) SEALED WITH DUCT SEAL: YES	

ON 2ND PAGE MAKE A ROUGH SKETCH OF THE HOUSE ,WHERE THE SYSTEM IS LOCATED, WHERE THE CONTROL PANEL IS LOCATED , WHERE THE FRONT OF THE IS AND DIRECTIONS TO THE PROPERTY.

DIRECTIONS CAN START A FEW STREETS AWAY

EXAMPLE: RT. X LEFT ONTO XX STREET RIGHT ONTO PRIVATE DRIVEWAY 5TH HOUSE OF THE LEFT.

I certify that the Norweco Singulair TNT Wastewater Treatment System was installed according to the manufacture's specifications.

Matthew Geckle

August 14, 2019

Signature of BRP Representative

Vice-President

Date



AJ MCDONALD COMPANY, INC

FOLLOW

232 BAY DALE DR
ARNOLD, MD 21012
4438914131

*Septic tank
Pumped out*

Item 1

\$295.00

Subtotal

\$295.00

Tax

\$0.00

\$295⁰⁰

DATE

July 27, 2017

12:46 pm

VISA

VISA

5235

PAYMENT ID: MJ5RMBBYQXX1T

Cashier: JAMES J MCDONALD

4450 RT 97 Brookville MD

Hide Details

Card: VISA 5235

July 27, 2017, 12:46 PM

Method: TELEPHONE_ORDER

Authorization Code: 171420

Authorizing Network: VISA

CVM: NO CARDHOLDER VERIFICATION



4450 ROUTE 97
~~Brookville~~ BROOKVILLE MD.

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

Name: PEREIRA
Ref: 61

LR - Agreement Surcharge
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SubTotal: 60.00
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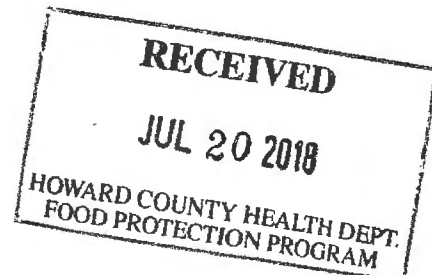
07/23/2018 13:45 CC13-LH

#10711406/1247/109

Thank you for visiting us today~

Electric Permit

E19000607



PETTIT
Development, LLC

Land Development • Excavation Services

May 31, 2018

Decatur Building Services
P.O. Box 552
Woodbine, MD 21797

Re: Jobsite @ 4450 Rt. 97, Brookeville, MD 20833

On May 31, 2018, Pettit Development uncovered and broke up existing septic tank at above referenced location for Decatur Building Services.



Respectfully,



J. Stephen Pettit
President

Easterday - Wilson Water Services, LLC

9265 Brown Church Road

Mount Airy, MD 21771

301-831-5170

Invoice

Date	Invoice #
4/17/2018	18-106

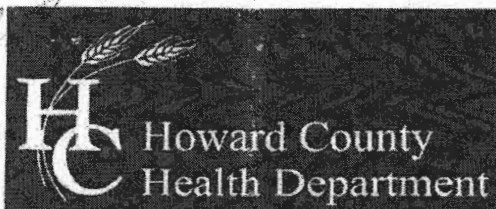
Bill To

Jim Kerwin
4450 Rt 97
Brookville, MD 20833

Location:

4450 Rt 97
Brookville, MD

P.O. Number	Terms	Rep	Project
	Due on receipt	JM	
Description			
4/13/18 Labor and materials repair well. Removed well pump , pipe and wire and trashed (per owner) Reinstalled PA and plugged. \$765.00			
HO-73-2466 80ft deep well, 21ft casing 40GPM			
			Total
			\$765.00

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Maura J. Rossman, M.D., Health Officer**APPLICATION FOR VARIANCE****TO COMAR ONSITE WATER/SEWER FOR MDE APPROVAL**Date Submitted 9/19/2017

4450 Route 97 Brookeville, MD 20833

Property Address

N/A

N/A

27

1

14

04-321804

Subdivision

Lot

Tax Map

Grid

Parcel

Tax Account #

Provide a brief site history including previously submitted and active plans with the Health Department or the County (subdivision plans, perc test applications, Building Permit applications):

Submitting a percolation certification test plan for a new SFD building permit.

In the area below, list the specific section of the Code of Maryland Regulations (COMAR) to which a variance is being requested and provide a brief summary of the regulation and an explanation of why the variance is being requested (Attach a separate sheet if necessary).

Regulation Section

Summary and Explanation

1. COMAR 26.04.02.04,J,(1)All steep slopes (>25 percent) - 25' Setback to OSDS

-The steep slopes cover a small area and are in a critical area for possible sewage disposal. This lot has limited area available for a sewage disposal system due to surrounding setbacks.

2. _____

Property Owner's Signature

Health Department Use Only

Reviewed by

HCHD Staff

Date

Recommendation:

☒

Recommended

☐

Not Recommended

HCHD Supervisor

Date

Comments/Conditions:

BAT Unit required on the sewage disposal system.

Approved by:

MDE Representative

Steven R. Krueger LEHS

Date

4/13/18

Oswald, Hank

From: Oswald, Hank
Sent: Wednesday, December 21, 2016 3:27 PM
To: 'Josh Thomas'
Cc: Bricker, Robert
Subject: RE: Soil info
Attachments: Septic Specs_4470 Route 97.pdf

Josh:

Attached, please find the septic specs for 4470 Route 97.

Regards,

Hank

From: Josh Thomas [<mailto:josh@saaland.com>]
Sent: Monday, December 19, 2016 12:58 PM
To: Bricker, Robert; Oswald, Hank
Subject: RE: Soil info

Good afternoon,

I've attached a PIA for the trench info I need. I'm not sure if this has enough info to help you find what I need, so if there's anything else I can provide that would help just let me know.

Thank you,
Josh

From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Tuesday, November 15, 2016 3:50 PM
To: Josh Thomas; Oswald, Hank
Subject: RE: Soil info

I didn't find anything. I see a vacant parcel on the county's interactive map. You may need to submit a PIA request with more info than just an address.

Robert Bricker



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

SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

Address: 4470 Route 97

Subdivision: _____ Lot: _____

Initial system: Application rate: 0.6 Effective area beginning depth: 8 Bottom maximum depth: 8

1st Replacement: Application rate: 0.6 Effective area beginning depth: 7 Bottom maximum depth: 7

2nd Replacement: Application rate: 0.6 Effective area beginning depth: 7 Bottom maximum depth: 7

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:

$$\frac{W + 2}{W + 1 + 2D} \times 100 = \text{Percent of length of standard trench where } W = \text{trench width and } D = \text{depth between effective area beginning depth and trench bottom.}$$

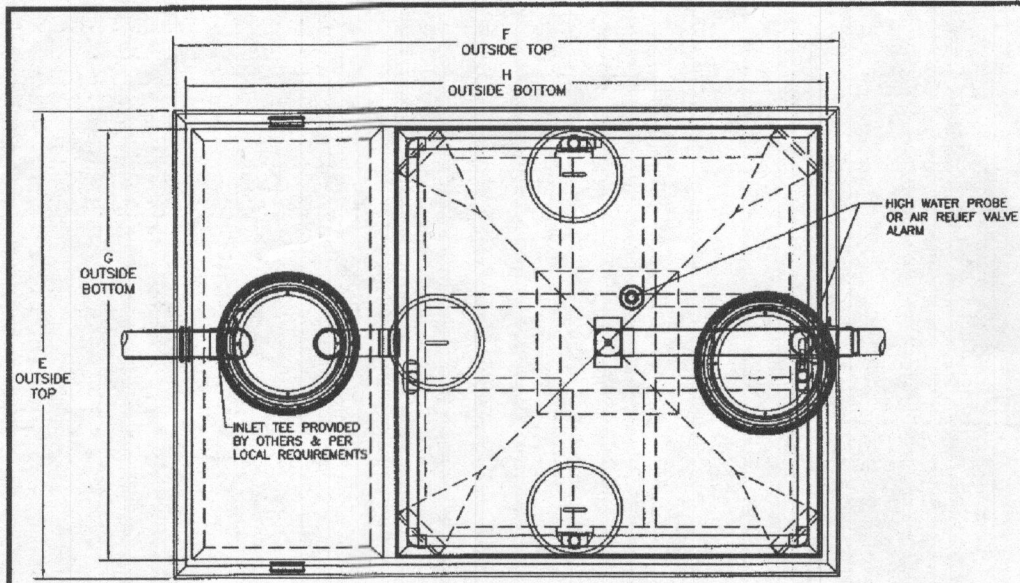
Standard design requirements:

- 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:

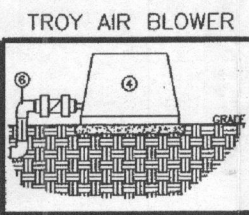
Show 3 systems or 2 systems
with a BAT unit

Approved: Hank Oswald Date: 12/21/16

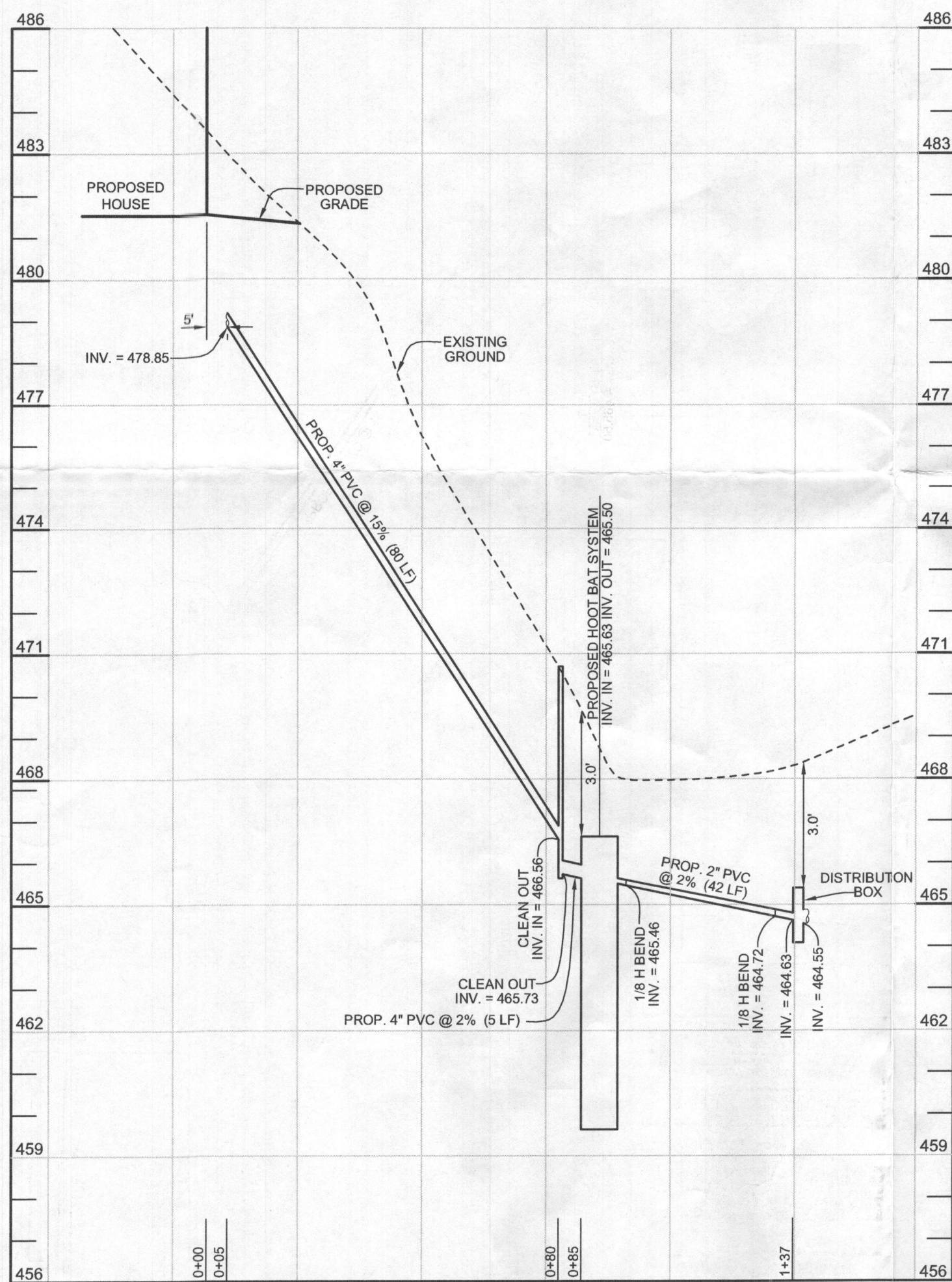


CRITICAL DIMENSIONS	
A	69.00'
B	57.00'
C	52.00'
D	3'
E	74.50'
F	106.20'
G	63.00'
H	97.00'

- THE 16-SECT SEPTIC TREATMENT SYSTEM
- 1) PRETREATMENT TANK - WHERE UNDESIRABLE OILS AND GREASES ARE REMOVED FROM WASTEWATER.
 - 2) DISTRIBUTION CHAMBER - WHERE AIR IS INTRODUCED INTO TRENCHES FOR DISPERSED.
 - 3) CHAMBERS - A TANK CHAMBER WHERE SOLIDS SETTLE OUT AND THE CLEAR EFFLUENT RISES.
 - 4) TRENCHES ARE LINED WITH POLYETHYLENE LINER. SOLIDS ARE REMOVED FROM THE TRENCHES BY THE AIR BLOWER. THE AIR BLOWER IS MOUNTED UP TO 10' FROM THE TRENCHES. MOST MAINLINE TRENCHES ARE MOUNTED UP TO 10' FROM THE TRENCHES.
 - 5) AIR BLOWER - CIRCULATES THE AIR FROM THE LINE TO THE TRENCHES FOR DISPERSED INTO THE TRENCHES.
 - 6) AIR BLOWER LINE - CIRCULATES THE AIR FROM THE PUMP TO THE BLOWER. CHECK VALVE INCLUDED.
 - 7) AIR BLOWER - ARE IT FIRST OFFERS FROM THE TRENCH INTO THE AIR BLOWER CHAMBER.
 - 8) 15' COVER - PROVIDE AIRWAY FROM ACCESS HOLES OF THE SYSTEM. UNIT REQUIRED FOR REGULAR TENDING.



HOOT HOOT SYSTEMS, LLC
 400 GPD CAPACITY DISCHARGE SYSTEM
 HOOT SYSTEMS H-600A
 DATE: 03-17-2014 BY: RS SCALE: N.T.S.



SEPTIC PROFILE VIEW
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=3'

SEPTIC TRENCH DESIGN (INITIAL SYSTEM)

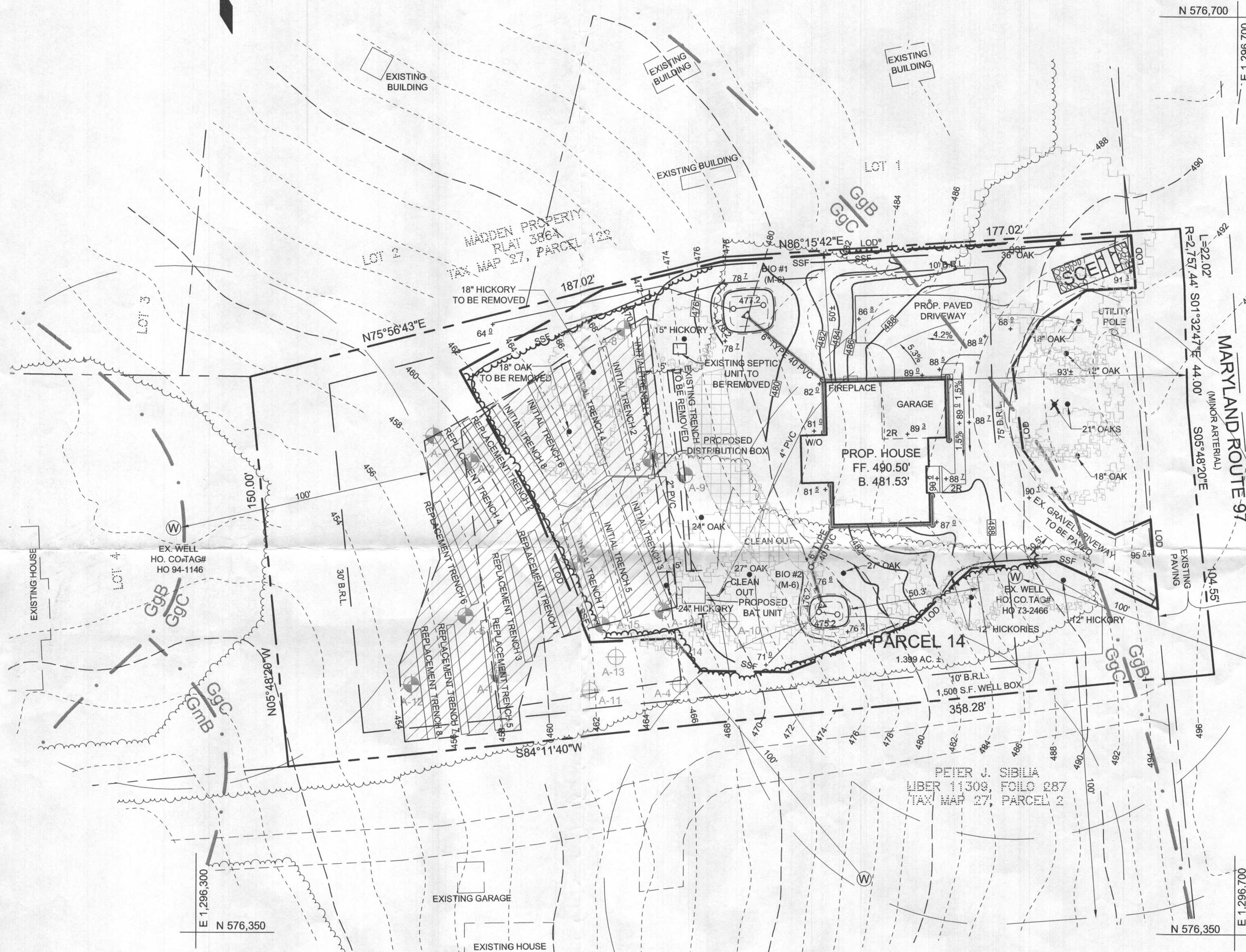
1. INITIAL SYSTEM & 1ST REPLACEMENT SYSTEM:
 - APPLICATION RATE: 0.6
 - BOTTOM MAXIMUM DEPTH: 8'
 - DISTANCE BETWEEN TRENCHES: 9'
2. DESIGN FLOW:
 - 4 BEDROOMS AT 150 GPD
 - 4 x 150 GPD = 600 GPD
3. SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (600 GPD) / APPLICATION RATE (0.6) = 1,000
4. SIDEWALL REDUCTION CREDIT:
 - NONE (1)
5. LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (1,000) x SIDEWALL REDUCTION PERCENTAGE (1) / TRENCH WIDTH (3') = 333.3'
6. LINEAR LENGTH OF TRENCH PROVIDED = 336'

SEPTIC TRENCH DESIGN (REPLACEMENT SYSTEM)

1. REPLACEMENT SYSTEM:
 - APPLICATION RATE: 0.6
 - BOTTOM MAXIMUM DEPTH: 7'
 - DISTANCE BETWEEN TRENCHES: 9'
2. DESIGN FLOW:
 - 4 BEDROOMS AT 150 GPD
 - 4 x 150 GPD = 600 GPD
3. SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (600 GPD) / APPLICATION RATE (0.6) = 1,000
4. SIDEWALL REDUCTION CREDIT:
 - NONE (1)
5. LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (1,000) x SIDEWALL REDUCTION PERCENTAGE (1) / TRENCH WIDTH (3') = 333.3'
6. LINEAR LENGTH OF TRENCH PROVIDED = 336'

SOILS LEGEND		
SYMBOL	DESCRIPTION	GROUP
GgB	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B
GgC	GLENNVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C

- NOTES:
- 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE; NATURAL RESOURCES CONSERVATION SERVICE; WEB SOIL SURVEY.
 - 2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.



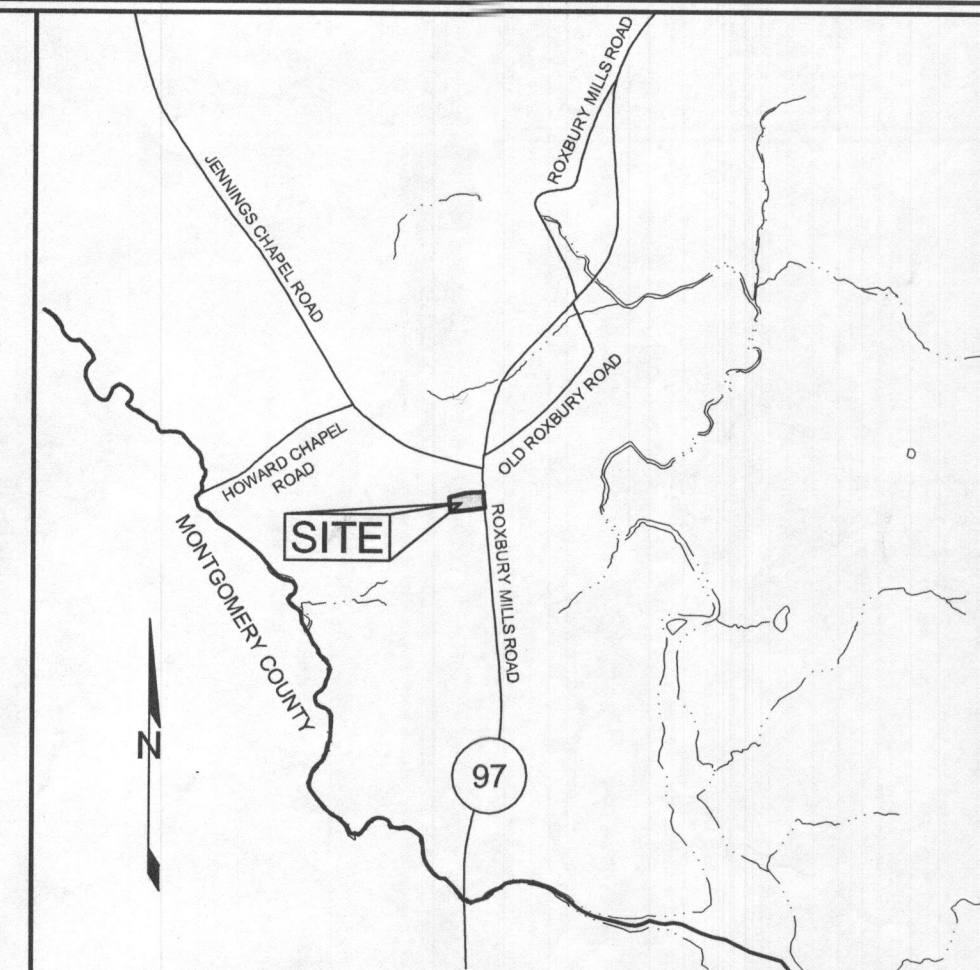
PLAN VIEW
 SCALE: 1"=30'

INITIAL SEPTIC TRENCH CHART					
TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	471.0	467.5	463.0	42'	3'
2	468.0	464.5	460.0	42'	3'
3	466.5	463.0	458.5	42'	3'
4	465.5	462.0	457.5	42'	3'
5	464.0	460.5	456.0	42'	3'
6	463.5	460.0	455.5	42'	3'
7	463.0	459.5	455.0	42'	3'
8	461.8	458.3	453.8	42'	3'

REPLACEMENT SEPTIC TRENCH CHART					
TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	463.0	459.5	456.0	42'	3'
2	460.5	457.0	453.5	42'	3'
3	459.5	456.0	452.5	42'	3'
4	459.0	455.5	452.0	42'	3'
5	458.0	454.5	451.0	42'	3'
6	457.8	454.3	450.8	42'	3'
7	456.5	453.0	449.5	42'	3'
8	455.5	452.0	448.5	42'	3'

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- EXISTING PERCOLATION TEST HOLE, PASSED
- EXISTING PERCOLATION TEST HOLE, FAILED
- PROPOSED DOWNSPOUT AND ROOF LEADER



ADC MAP 4932-B1
VICINITY MAP
 SCALE: 1"=2000'

SEPTIC NOTES

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 EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. THE BLOWER MAY NOT BE LOCATED MORE THAN 50 FEET FROM THE TANK BASED ON THE 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 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 INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
8. THE WELL (TAG # 73-2468) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
9. AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OF HOWARD COUNTY.
10. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FOR THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
11. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
12. THE EXISTING WELL MUST MEET CODE PRIOR TO BUILDING PERMIT APPROVAL.
13. THE MICRO-BIOTRETENTION ON SITE WILL BE LINED WITH AN IMPERMEABLE LINER BECAUSE THEY ARE WITHIN 100 FEET OF THE EXISTING WELL.
14. MDE'S APPROVAL OF THE VARIANCE REQUEST TO HAVE THE SDA CLOSER THAN 25 FEET TO 25% OR GREATER SLOPES REQUIRES THE INSTALLATION OF BEST AVAILABLE TECHNOLOGY.
15. THE EXISTING SEPTIC SYSTEM MUST BE PROPERLY ABANDONED WITH DOCUMENTATION SENT TO THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT APPROVAL.

*Superseded
 by Plans
 Approved 6/7/2019
 RAC*

Approved Septic System Plan
 Howard County Health Department
[Signature] 7/12/2015
 Signature Date

OWNER

DECATUR LLC
 511 ASHTON ROAD
 ASHTON MD, 20861

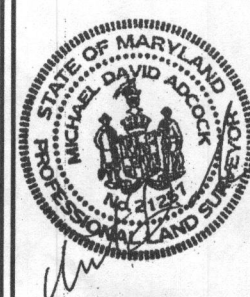
SITE PLAN FOR BAT INSTALLATION

4450 ROUTE 97

PARCEL 14

TAX MAP 27 GRID 1
 4TH ELECTION DISTRICT

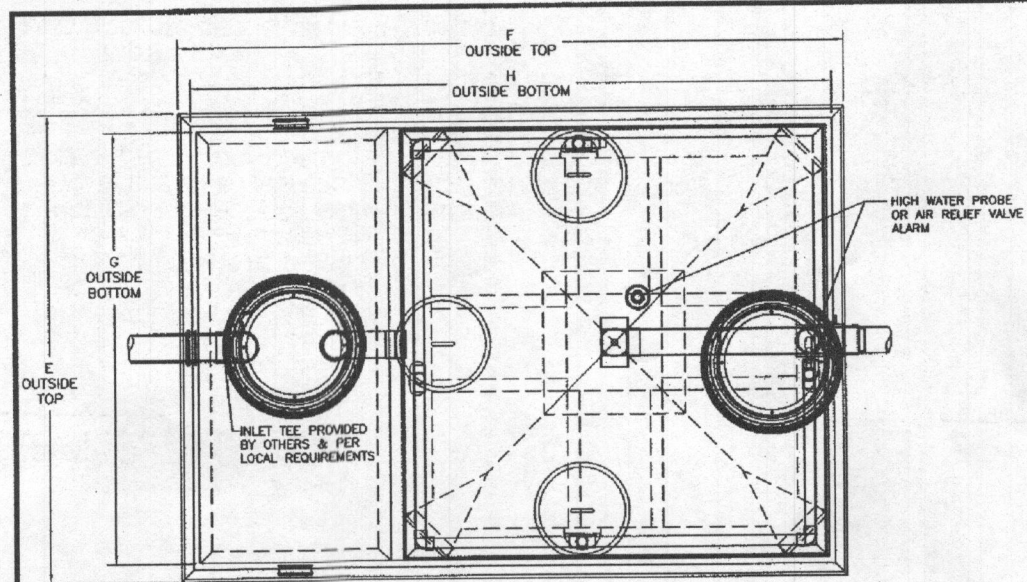
TAX ID # 321804
 HOWARD COUNTY, MARYLAND



Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@saaland.com

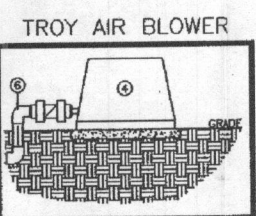
DESIGN BY: JT/DR
 DRAWN BY: JT
 CHECKED BY: DR/MA
 SCALE: AS SHOWN
 DATE: JULY 2, 2018
 PROJECT #: 16-068
 SHEET #: 2 of 2

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR, UNDER THE LAWS OF THE STATE OF MARYLAND, REG. NO. 21257, EXPIRATION DATE: 06-16-2019



CRITICAL DIMENSIONS	
A	69.00"
B	97.00"
C	52.00"
D	3"
E	74.50"
F	106.00"
G	65.00"
H	97.00"

- THE H-SERIES HOOT AIRBLOWING TREATMENT SYSTEM
- 1) PRETREATMENT TANK - WHERE ANAEROBIC DECOMPOSITION OCCURS AND STORING FOR NON-BIOLOGICAL MATERIALS.
 - 2) ADDITION CHAMBER - WHERE AIR IS INTRODUCED INTO SEWAGE FOR DECOMPOSITION.
 - 3) CLARIFIER - A STILL CHAMBER WHERE SOLIDS SETTLE OUT AND THE CLEAR EFFLUENT RISES.
 - 4) TRENCH AIR LINES ARE BLOWN - LONG LIFE, EFFICIENT LINEAR BLASTERS WITH CHAMBERED AIRFLOWER AIR MAY BE RELEASED PRESSURE RELEASES IT TO THE TANK. MAY BE REMOVED TO AVOID 10 TO 50' FROM SYSTEM. MUST MAINTAIN 10' TYP. TOWARDS TANK FOR DRAINAGE.
 - 5) AIR INJECTION - DELIVERS THE AIR FROM THE LINE TO THE TRENCHES FOR DIFFUSION INTO THE TANK.
 - 6) ADDITION LINE - DELIVERS THE AIR FROM THE PUMP TO THE MANHOLE COVER WHEN REQUIRED.
 - 7) ADDITION STONE - AIR IS FINELY DIFFUSED FROM THE STONE INTO THE ADDITION CHAMBER.
 - 8) 15" COVERS - PROVIDE ASSEMBLY POINT ACCESS INSIDE OF THE SYSTEM. (NOT REQUIRED FOR REGULAR SERVICE)



HOOT HOOT SYSTEMS, LLC
 11000 WOODBURN ROAD, SUITE 100
 GREENBELT, MD 20884
 (301) 278-1100
 WWW.HOOTHOOTSYSTEMS.COM

THIS DRAWING IS THE PROPRIETARY PROPERTY OF HOOT SYSTEMS, LLC. REPRODUCTION OR USE OF ANY PART OF THIS DRAWING OR ANY INFORMATION HEREON IS EXPRESSLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF HOOT SYSTEMS, LLC.

DESCRIPTION: HOOT COUNTY DISCHARGE SYSTEM
 HOOT SYSTEMS H-500A

DATE: 03-17-2014
 DRAWN BY: JTB
 CHECKED BY: JTB
 SCALE: 1/2"=1'-0"

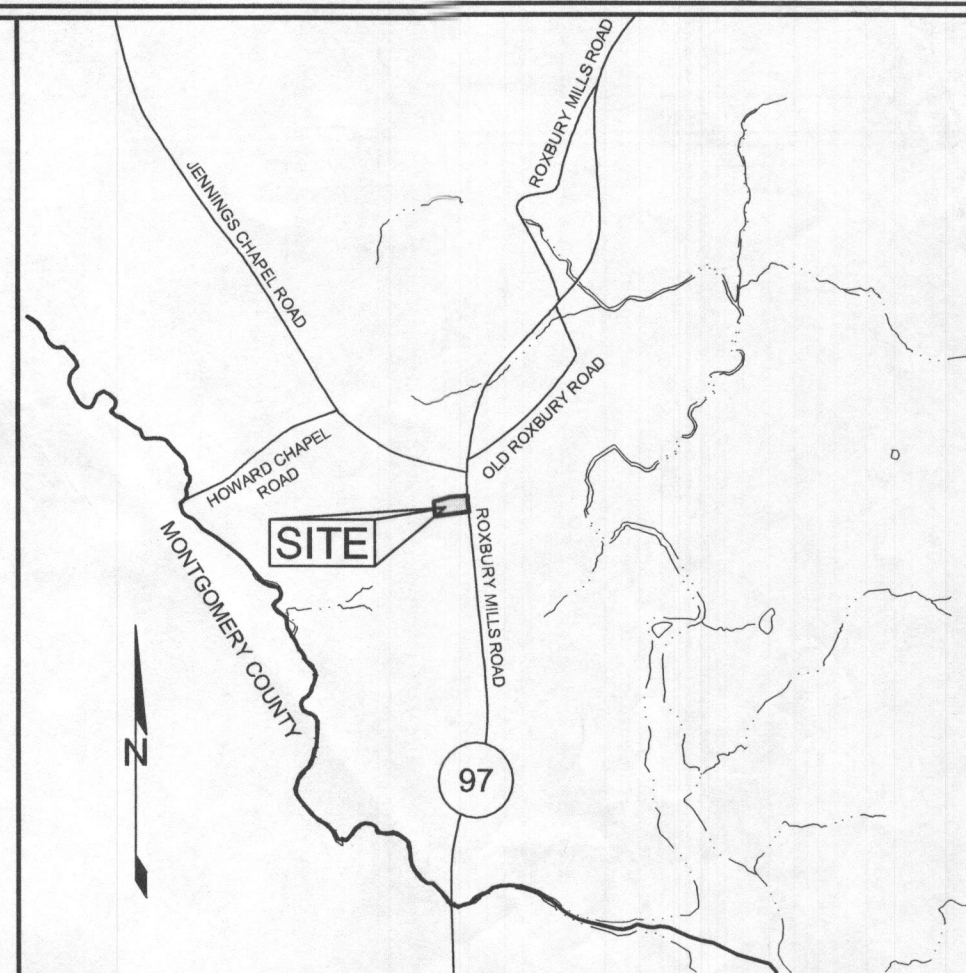
H-600A

SOILS LEGEND		
SYMBOL	DESCRIPTION	GROUP
GgB	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B
GgC	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C

- NOTES:
- 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY.
 - 2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR "K" GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

LEGEND

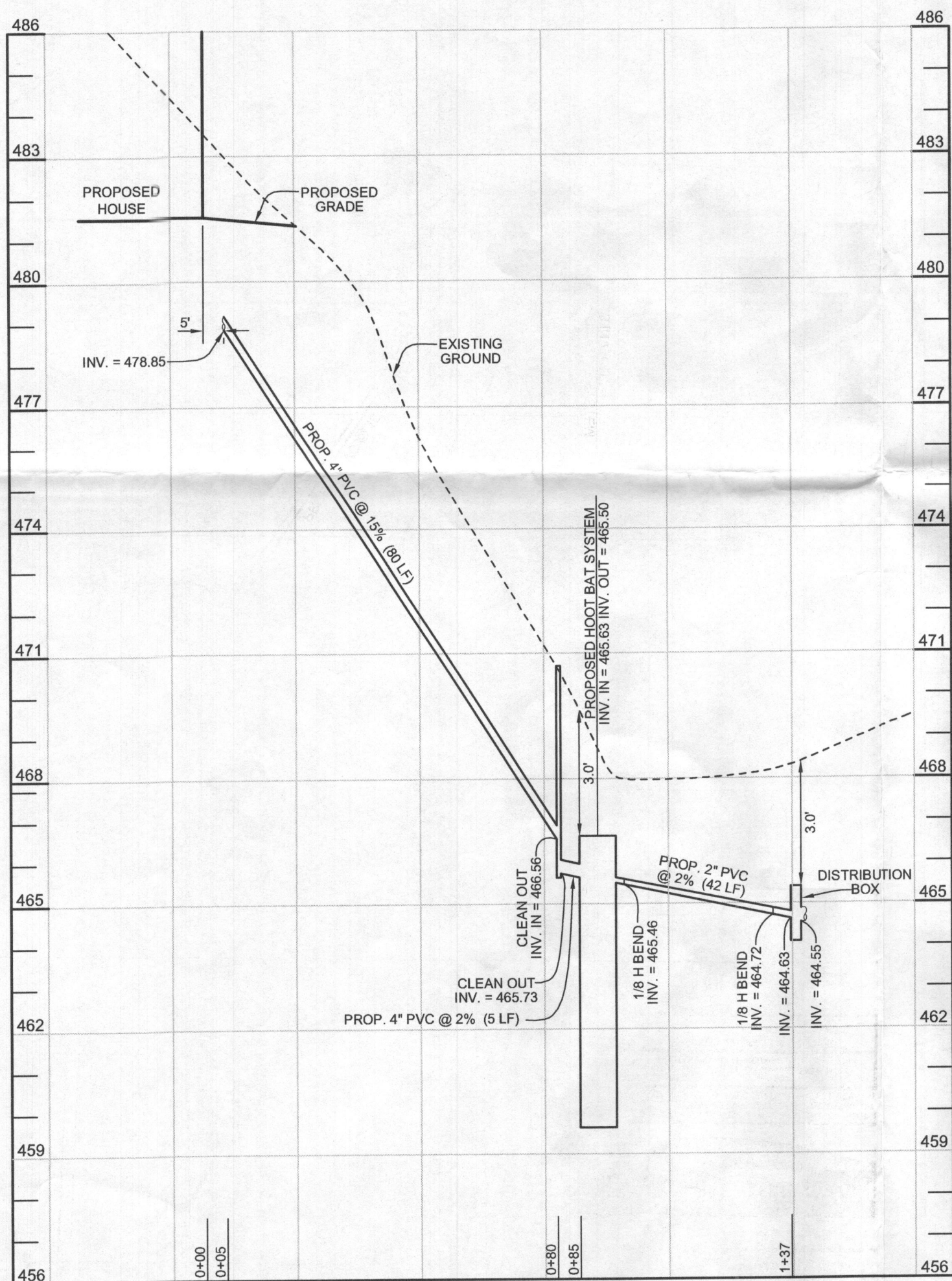
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- EXISTING PERCOLATION TEST HOLE, PASSED
- EXISTING PERCOLATION TEST HOLE, FAILED
- PROPOSED DOWNSPOUT AND ROOF LEADER



ADC MAP 4832-B1
VICINITY MAP
 SCALE: 1"=2000'

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SEPTIC PROFILE VIEW
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=3'

SEPTIC TRENCH DESIGN (INITIAL SYSTEM)

1. INITIAL SYSTEM & 1ST REPLACEMENT SYSTEM:
 - APPLICATION RATE: 0.6
 - BOTTOM MAXIMUM DEPTH: 8'
 - DISTANCE BETWEEN TRENCHES: 9'
2. DESIGN FLOW:
 - 4 BEDROOMS AT 150 GPD
 - 4 x 150 GPD = 600 GPD
3. SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (600 GPD) / APPLICATION RATE (0.6) = 1,000
4. SIDEWALL REDUCTION CREDIT:
 - NONE (1)
5. LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (1,000) x SIDEWALL REDUCTION PERCENTAGE (1%) / TRENCH WIDTH (3') = 333.3'
6. LINEAR LENGTH OF TRENCH PROVIDED = 336'

SEPTIC TRENCH DESIGN (REPLACEMENT SYSTEM)

1. REPLACEMENT SYSTEM:
 - APPLICATION RATE: 0.6
 - BOTTOM MAXIMUM DEPTH: 7'
 - DISTANCE BETWEEN TRENCHES: 9'
2. DESIGN FLOW:
 - 4 BEDROOMS AT 150 GPD
 - 4 x 150 GPD = 600 GPD
3. SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (600 GPD) / APPLICATION RATE (0.6) = 1,000
4. SIDEWALL REDUCTION CREDIT:
 - NONE (1)
5. LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (1,000) x SIDEWALL REDUCTION PERCENTAGE (1%) / TRENCH WIDTH (3') = 333.3'
6. LINEAR LENGTH OF TRENCH PROVIDED = 336'

INITIAL SEPTIC TRENCH CHART					
TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	471.0	467.5	463.0	42'	3'
2	468.0	464.5	460.0	42'	3'
3	466.5	463.0	458.5	42'	3'
4	465.5	462.0	457.5	42'	3'
5	464.0	460.5	456.0	42'	3'
6	463.5	460.0	455.5	42'	3'
7	463.0	459.5	455.0	42'	3'
8	461.8	458.3	453.8	42'	3'

REPLACEMENT SEPTIC TRENCH CHART					
TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	463.0	459.5	456.0	42'	3'
2	460.5	457.0	453.5	42'	3'
3	459.5	456.0	452.5	42'	3'
4	459.0	455.5	452.0	42'	3'
5	458.0	454.5	451.0	42'	3'
6	457.8	454.3	450.8	42'	3'
7	456.5	453.0	449.5	42'	3'
8	455.5	452.0	448.5	42'	3'

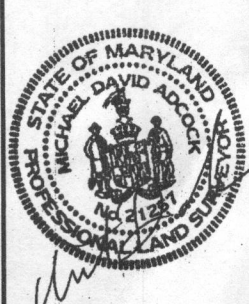
SITE PLAN FOR BAT INSTALLATION

4450 ROUTE 97

PARCEL 14

TAX MAP 27 GRID 1
 4TH ELECTION DISTRICT

TAX ID # 321804
 HOWARD COUNTY, MARYLAND



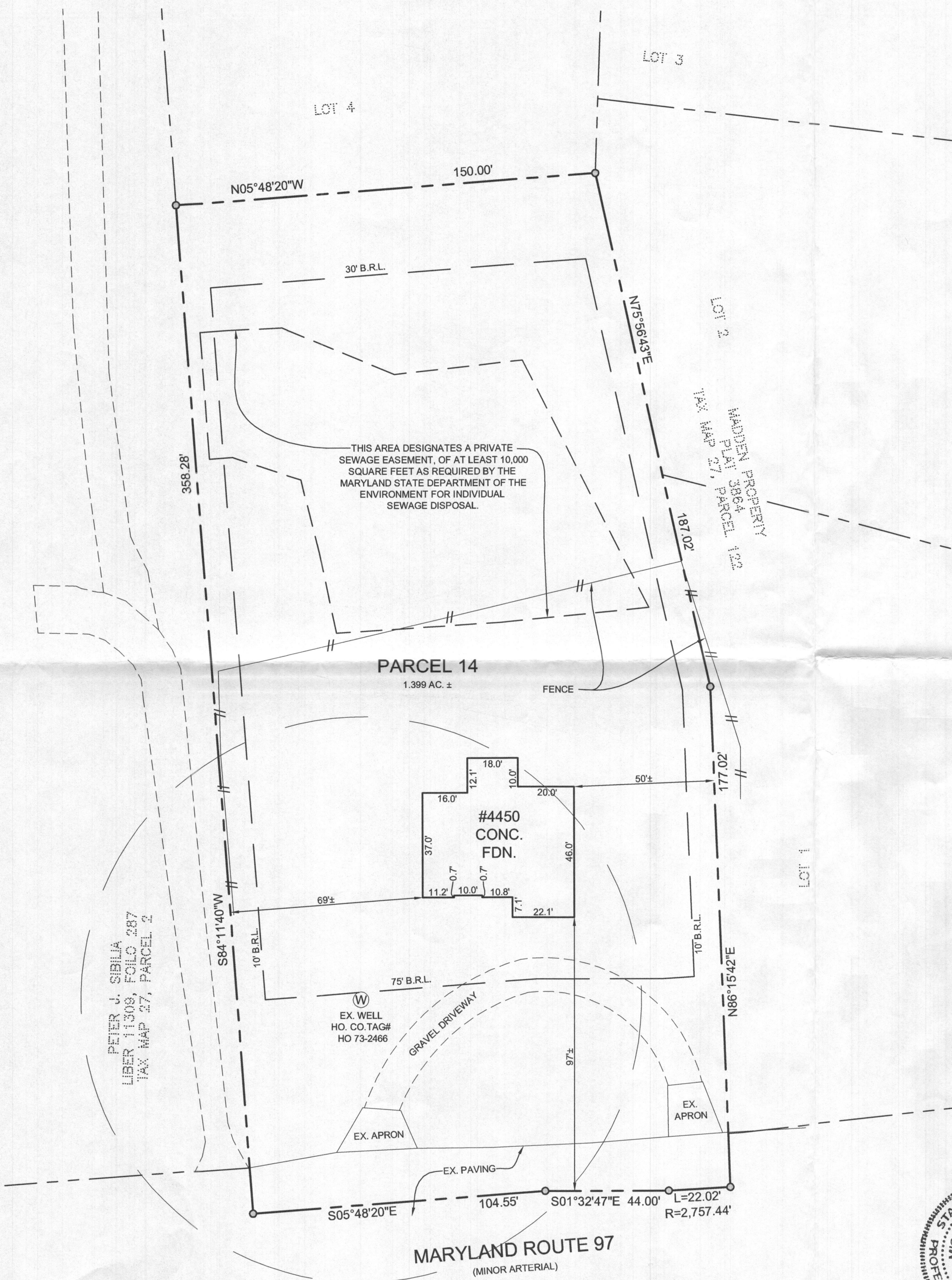
Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@saalind.com

DESIGN BY: JT/DR
 DRAWN BY: JT
 CHECKED BY: DR/MA
 SCALE: AS SHOWN
 DATE: JULY 2, 2018
 PROJECT #: 16-068
 SHEET #: 2 of 2

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR, UNDER THE LAWS OF THE STATE OF MARYLAND, REG. NO. 21257, EXPIRATION DATE: 06-16-2019.

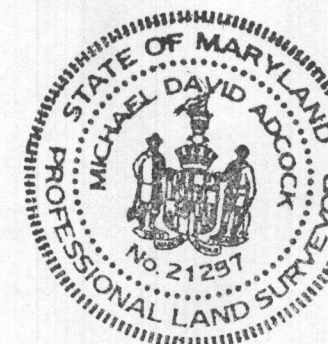
- NOTES:
1. THIS PLAT IS A BENEFIT TO THE CONSUMER ONLY INsofar AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH CONTEMPLATED TRANSFER, FINANCING OR REFINANCING PURPOSES. THIS PLAT IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATION OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE STRUCTURES. THIS PLAT DOES NOT PROVIDE FOR THE ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR FOR SECURING FINANCING OR REFINANCING.
 2. THE +/- SETBACK ACCURACY IS 1 FOOT.
 3. THIS PLAN OR PLAT IS NOT INTENDED TO SHOW ALL MATTERS RELATED TO THE PROPERTY SHOWN HEREON.
 4. IF IT APPEARS ENCROACHMENTS MAY EXIST, A BOUNDARY SURVEY IS RECOMMENDED TO DETERMINE THE EXACT LOCATION OF THE PROPERTY BOUNDARY LINES AND IMPROVEMENTS.
 5. THE LOCATION OF FENCE LINES, IF SHOWN, ARE APPROXIMATE.
 6. B.R.L. = BUILDING RESTRICTION LINE

WALL CHECK: 11-08-2018
TOP OF WALL ELEV. = 489.4'



Wall
Check OK
R/E 6/17/2018

AS-CONSTRUCTED SURVEY
4450 ROUTE 97
PARCEL 14
ROUTE 97 PROPERTY
ELECTION DISTRICT NO. 4
HOWARD COUNTY, MARYLAND



CERTIFICATION
I HEREBY CERTIFY THAT I WAS IN RESPONSIBLE CHARGE OVER THE PREPARATION OF THIS LOCATION DRAWING AND THE SURVEY WORK REFLECTED IN IT, IS IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN THE CODE OF MARYLAND TITLE 9, SUBTITLE 13, CHAPTER 06, REGULATION 12, AND THE POSITION OF EXISTING IMPROVEMENTS AS SHOWN HEREON, ARE CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

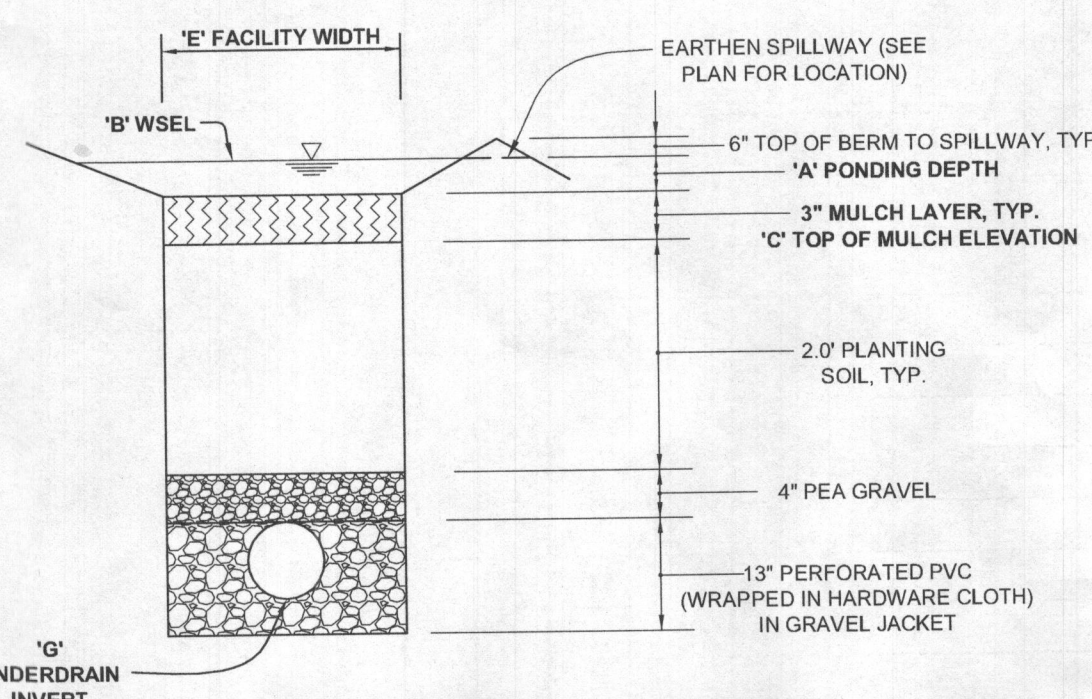
Michael D. Adcock
PROFESSIONAL LAND SURVEYOR
NO. 21257, EXPIRATION DATE: 06-16-2019

Adcock & Associates - LLC
Engineers · Surveyors · Planners

5389 Enterprise Street Suites B-C
Sykesville, Maryland 21784
Phone: 443.325.7682
Email: mike@saaland.com

REFERENCE:	PLAT NO. A-310
DATE:	NOVEMBER 12, 2018
SCALE:	1"=30'
FILE NO.:	16-068

THIS LOT DOES NOT APPEAR TO LIE WITHIN THE 100 YEAR FLOOD PLAIN AS SHOWN ON THE F.E.M.A. FLOOD HAZARD MAP 24027C-0110- AS REVISED NOVEMBER 06, 2013.



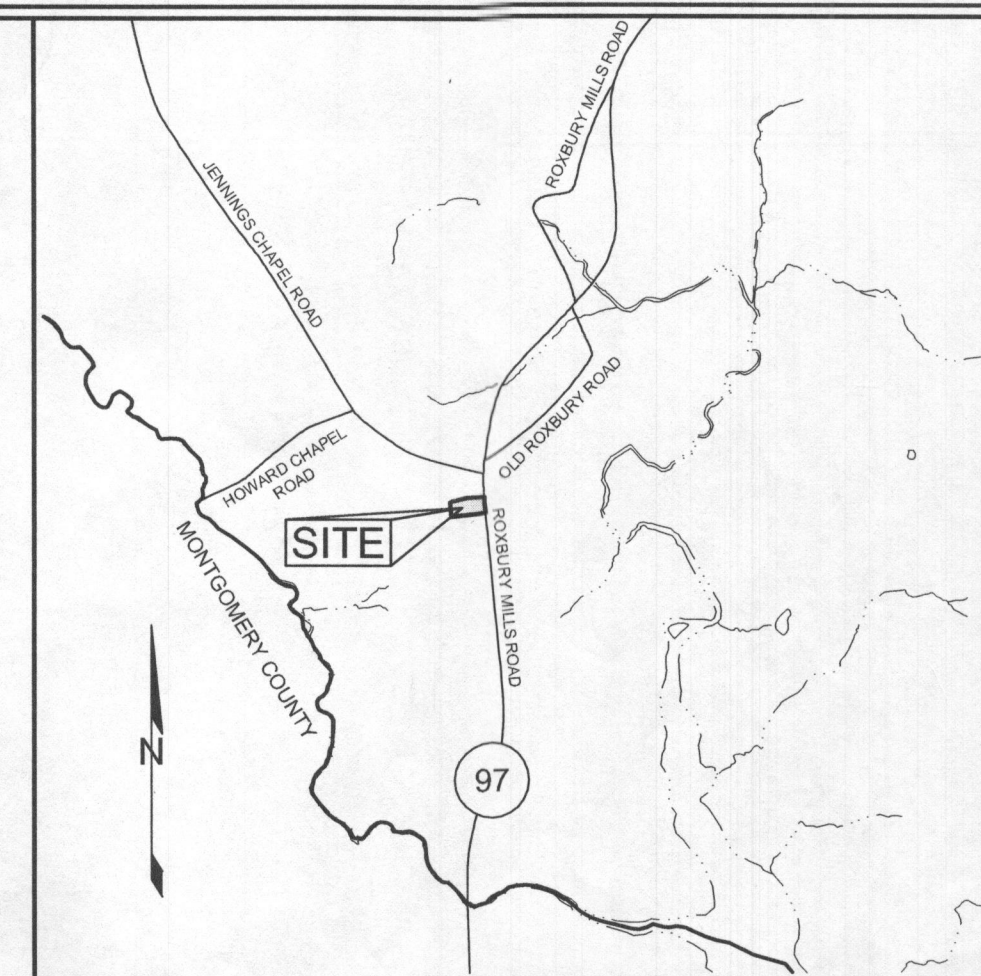
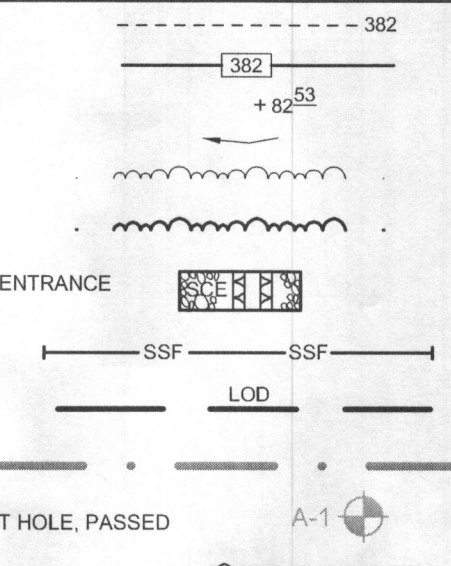
BIORETENTION FACILITY
TYPICAL SECTION
NOT TO SCALE

- NOTES:
- FOR ADDITIONAL INFORMATION, SEE THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II.
 - SEE CHART, THIS SHEET, FOR ELEVATIONS AND DISTANCES
 - FILTER FABRIC IS TO BE USED ON THE SIDES OF THE FACILITY.
 - BIOTRENTMENT TO BE WRAPPED IN AN IMPERMEABLE LINER

NOTE: FILTER FABRIC IS TO BE USED ON THE SIDES OF THE FACILITY, AND WRAPPED IN AN IMPERMEABLE LINER

LEGEND

EXISTING CONTOUR
PROPOSED CONTOUR
PROPOSED SPOT ELEVATION
DIRECTION OF FLOW
EXISTING TREELINE
PROPOSED TREELINE
STABILIZED CONSTRUCTION
SUPER SILT FENCE
LIMIT OF DISTURBANCE
SOIL BOUNDARY
EXISTING PERCOLATION TEST
PROPOSED DOWNSPOUT
AND ROOF LEADER
EXISTING TREES TO REMAIN



ADC MAP 4932-B1

VICINITY MAP

SCALE: 1"=2000'

GENERAL NOTES

1. PROPERTY ADDRESS: 4450 ROUTE 97, BROOKVIEW MD 20833
2. TOTAL AREA OF PROPERTY: 1,399 AC.
3. SUBJECT PROPERTY ZONED RC-DEO PER 10/06/13 COMPREHENSIVE ZONING PLAN.
4. THE SETBACK SHOWN HEREON ARE BASED ON THE CURRENT HOWARD COUNTY ZONING REQUIREMENTS.
5. PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
6. THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT, OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT; RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
7. THE PROPERTY BOUNDARY IS BASED ON A FIELD RUN SURVEY PERFORMED BY ADCOCK AND ASSOCIATES, LLC, ON OR ABOUT SEPTEMBER 2016.
8. THE TOPOGRAPHY OF THIS PLAT IS AT TWO-FOOT INTERVALS AND IS BASED UPON A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED BY ADCOCK & ASSOCIATES, LLC, ON OR ABOUT SEPTEMBER 2016. SUPPLEMENTAL TOPOGRAPHY OUTSIDE THE SITE IS BASED ON HOWARD COUNTY AERIAL PHOTOGRAPHY FLOWN IN 2016 AND IS VERIFIED TO ACCURATELY REPRESENT THE RELATIVE CHANGES ON THE SUBJECT PROPERTY.
9. DEED REFERENCE: LIBER 17153, FOLIO 392
10. DEED HISTORY:
 - 1964 TO 1969 - MICHAEL A. HEILER
 - 1999 TO 2003 - THOMAS P. DORE
 - 2004 TO 2016 - SANDRA LAND DEVELOPMENT INC.
11. ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN-GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS SHALL HAVE BEEN:
 - 1. ALL DOWNSPOUTS ARE TO MAINTAIN A POSITIVE SLOPE AT ALL TIMES IN ORDER TO SUSTAIN THEIR FLOW TO THEIR MICRO-BIORETENTION FACILITIES.
 - 2. LIMIT OF DISTURBANCE (LOD): 25,468 S.F. ±
 - 3. THE MICRO-BIORETENTION ON SITE WILL BE LINED WITH AN IMPERMEABLE LINER BECAUSE THEY ARE WITHIN 100 FEET OF THE EXISTING WELLS.

NOTE: (1) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

WARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (312-1155).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-OBSTRUCTION, PERMITS FOR TEMPORARY STABILIZATION SHALL BE OBTAINED WITHIN 14 DAYS OF INITIAL SOIL DISTURBANCE. PERMITS FOR TEMPORARY STABILIZATION SHALL BE OBTAINED FOR SLOPES AND ALL SLOPES GREATER THAN 3:1 (B:1) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDING OR GRASSING (B-1), TEMPORARY SEEDING OR GRASSING (B-2), TEMPORARY SEEDING OR GRASSING WITH MULCH (B-3, B-4), TEMPORARY SEEDING (B-5), TEMPORARY SEEDING (B-6) AND MULCHING (B-6-1). TEMPORARY STABILIZATION SHALL BE DONE WITHIN 14 DAYS OF INITIAL SOIL DISTURBANCE OR RE-OBSTRUCTION TO ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND IN THE HOWARD COUNTY SEDIMENT CONTROL DIVISION PERMITS. THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL DIVISION INSPECTOR.
- SITE ANALYSIS:
- | | |
|-------------------------------------|-----------------|
| TOTAL AREA OF SITE: | 1.39 ACRES± |
| AREA DISTURBED: | 0.59 ACRES± |
| AREA TO BE REWOODED OR PLANTED: | 0.39 ACRES± |
| AREA TO BE VEGETATIVELY STABILIZED: | 0.51 ACRES± |
| TOTAL CUT: | 3,000 CU. YDS ± |
| TOTAL FILL: | 100 CU. YDS ± |
| OFF SITE WASTE/ROBBER ARE LOCATION | 250 CU. YDS ± |
- ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL DIVISION INSPECTOR.
- ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE OBTAINED PRIOR TO THE START OF ANY CONSTRUCTION. THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS REQUESTED UPON COMPLETION OF INSTALLATION OF PERMITS EROSION AND SEDIMENT CONTROLS, SHALL BE REQUIRED TO PROCEED WITH ANY OTHER DISTURBANCE OR OBSTRUCTION OF ANY OTHER BUILDING OR GRADING INSPECTION.
- NO OTHER DISTURBANCE OR OBSTRUCTION OF ANY OTHER BUILDING OR GRADING INSPECTION SHALL BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO THE START OF ANY CONSTRUCTION.
- NO OTHER DISTURBANCE OR OBSTRUCTION OF ANY OTHER BUILDING OR GRADING INSPECTION SHALL BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- IF A PROJECT IS TO BE SCHEDULED TO PROCEED WITH GRADING ACTIVITIES BEYOND ONE GRADING UNIT [MAXIMUM ACREAGE OF ONE GRADING UNIT] THEN WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AGENCY, UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 DAYS AFTER THE PROJECT MAY BE RE-STARTED ON THE SAME DAY.

STORMWATER MANAGEMENT PRACTICES			
PARCEL #	ADDRESS	MICRO-BIORETENTION M-6 (NUMBER)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)
14	4450 ROUTE 97	2	Y

SOIL LEGEND		GROUP
SYMBOL		
GgB	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B
GgC	GL ENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C

NOTES:

- 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE; NATURAL RESOURCES CONSERVATION SERVICE; WEB SOIL SURVEY.
- 2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL FERTILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

MATERIALS SPECIFICATIONS FOR MICRO-BORETENTION FACILITIES

MATERIAL PLANTINGS	SPECIFICATION SEE PLANT LIST THIS SHEET	SIZE	NOTES
		N/A	PLANTINGS ARE SITE-SPECIFIC. SEE PLANT LIST THIS SHEET
PLANTING SOIL [2'-4" DEEP]	LOAMY SAND (60% - 65%) & COMPOST (35%-40%) OR SANDY LOAM (30%) COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM. CLAY CONTENT < 5%
ORGANIC CONTENT	MIN. 10% BY DRY WEIGHT (ASTM-D-2974)		
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM; NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM AND CURTAIN DRAIN, IF REQUIRED	PEA GRAVEL: ASTM-D-448 ORNAMENTAL STONE: WASHED COBBLES	PEA GRAVEL: NO. 8 OR NO. 9 (1/8" TO 3/8") STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SD35	SLOTTED OR PERFORATED PIPE, 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3' OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 14" GALVANIZED HARDWARE CLOTH.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTRIBUTION, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DITCHES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), AND
- SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GROWING.

DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.

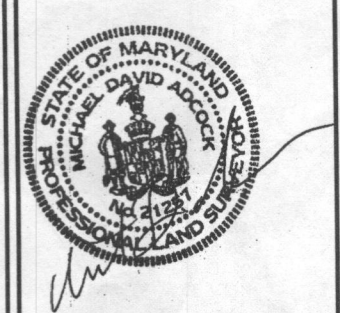
OWNER

DECATUR LLC.
511 ASHTON ROAD
ASHTON MD. 20861
443.300.7792

PLOT PLAN

4450 ROUTE 97

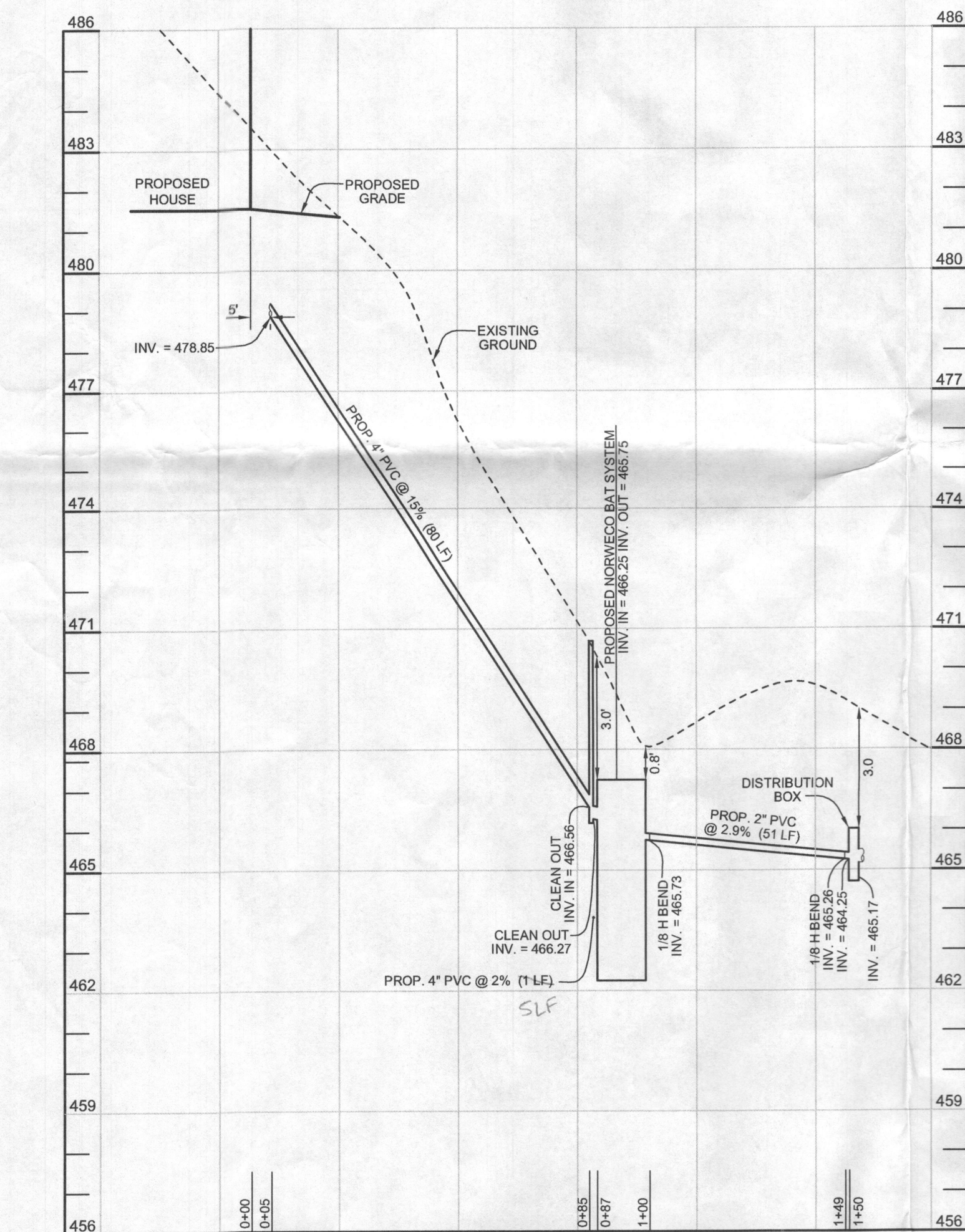
PARCEL 14

TAX MAP 27 GRID 1
4TH ELECTION DISTRICT

**Adcock &
Associates · LLC**
Engineers · Surveyors · Planners

3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7683
Email: info@saaland.com

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, REG. NO. 21257, EXPIRATION DATE: 06-16-2019



1. INITIAL SYSTEM & 1ST REPLACEMENT SYSTEM:
 - APPLICATION RATE: 0.6
 - BOTTOM MAXIMUM DEPTH: 8'
 - DISTANCE BETWEEN TRENCHES: 9'
2. DESIGN FLOW:
 - 4 BEDROOMS AT 150 GPD
 - 4 X 150 GPD = 600 GPD
3. SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (600 GPD) / APPLICATION RATE (0.6) = 1,000
4. SIDEWALL REDUCTION CREDIT:
 - NONE (1)
5. LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (1,000) X SIDEWALL REDUCTION (37 = 333)
6. LINEAR LENGTH OF TRENCH PROVIDED = 336'

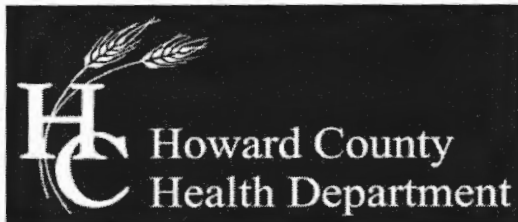
1. REPLACEMENT SYSTEM:
 - * APPLICATION RATE: 0.6
 - * BOTTOM MAXIMUM DEPTH: 7"
 - * DISTANCE BETWEEN TRENCHES: 9'
2. DESIGN FLOW:
 - * 4 BEDROOMS AT 150 GPD
 - * 4 x 150 GPD = 600 GPD
3. SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - * DESIGN FLOW (600 GPD) / APPLICATION RATE (0.6) = 1,000
4. SIDEWALL REDUCTION CREDIT:
 - * NONE (1)
5. LINEAR LENGTH OF TRENCH REQUIRED:
 - * DRAINFIELD SQUARE FOOTAGE (1,000) x SIDEWALL REDUCTION PERCENTAGE (1) / TRENCH WIDTH (7") = 333.3'
6. LINEAR LENGTH OF TRENCH PROVIDED = 336'

TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	463.0	459.5	456.0	42'	3"
2	460.5	457.0	453.5	42'	3"
3	459.5	456.0	452.5	42'	3"
4	459.0	455.5	452.0	42'	3"
5	458.0	454.5	451.0	42'	3"
6	457.8	454.3	450.8	42'	3"
7	456.5	453.0	449.5	42'	3"
8	455.5	452.0	448.5	42'	3"

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 EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. THE BLOWER MAY NOT BE LOCATED MORE THAN 50 FEET FROM THE TANK BASED ON THE MANUFACTURER'S SPECIFICATIONS.
4. THE BAT SYSTEM MUST BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
5. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER. WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE HEALTH DEPARTMENT THE DEPARTMENTS OF THE ENGINEER AND HEALTH DEPARTMENT, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT SYSTEM.
6. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
7. THE WELL (TAG # 73-2496) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
8. THE EXISTING WELL AND EXISTING TANK MUST BE MAINTAINED AND SIGNED BY ALL APPLICABLE PARTIES AND RECORDED IN LAND RECORDS OF HOWARD COUNTY.
9. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FOR THE WELL AND THE EXISTING TANK PRIOR TO THE APPROVAL OF THE INSTALLATION.
10. ALL WELLS AND SEPTIC SYSTEMS MUST BE LOCATED AT LEAST 10 FEET FROM THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
11. THE EXISTING WELL MUST MEET CODE PRIOR TO BUILDING PERMIT APPROVAL.
12. THE EXISTING TANK MUST BE 12" OR 18" DIA. AND BE LINED WITH AN IMPERMEABLE LINER BECAUSE THEY ARE WITHIN 100 FEET OF THE EXISTING WELL.
13. MDE'S APPROVAL OF THE VARIANCE REQUEST TO HAVE THE SDA CLOSER THAN 25 FEET TO 25% OR GREATER SLOPES REQUIRES THE INSTALLATION OF BEST AVAILABLE TECHNOLOGY.
14. THE BAT AND SEPTIC SYSTEM MUST BE MAINTAINED AND SIGNED WITH DOCUMENTATION SENT TO THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT APPROVAL.

DESIGN BY: JT/DR
DRAWN BY: JT
CHECKED BY: DR/MA
SCALE: AS SHOWN
DATE: MAY 24, 2019
PROJECT #: 16-068
SHEET #: 2 of 2

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR, UNDER THE LAWS OF THE STATE OF MARYLAND, REG. NO. 21257, EXPIRATION DATE: 06-18-2019



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: 4450 Route 97 (was 4470)

Subdivision: _____ Lot: _____

Initial system:	Application rate: <u>0.4</u>	Effective area beginning depth: <u>8</u>	Bottom maximum depth: <u>8</u>
1 st Replacement:	Application rate: <u>0.6</u>	Effective area beginning depth: <u>7</u>	Bottom maximum depth: <u>7</u>
2 nd Replacement:	Application rate: <u>0.6</u>	Effective area beginning depth: <u>7</u>	Bottom maximum depth: <u>7</u>

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:

$$\frac{W + 2}{W + 1 + 2D} \times 100 = \text{Percent of length of standard trench where } W = \text{trench width and } D = \text{depth between effective area beginning depth and trench bottom.}$$

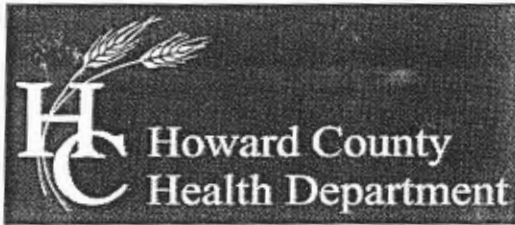
Standard design requirements:

- Trenches must be located to provide room for 3 systems in the disposal area
- 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:

- Show 3 systems or 2 systems with a BAT Unit
- Stay away from Perc \pm 4

Approved: Ruth for E Date: 7/14/17



Bureau of Environmental Health

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Twitter: HowardCoHealthDep

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

SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

Address: 4450 Route 97 (Was 4470)

Subdivision: _____ Lot: _____

Initial system: Application rate: 0.6 Effective area beginning depth: 8 Bottom maximum depth: 8
1st Replacement: Application rate: 0.6 Effective area beginning depth: 7 Bottom maximum depth: 7
2nd Replacement: Application rate: 0.6 Effective area beginning depth: 7 Bottom maximum depth: 7

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:

$$\frac{W + 2}{W + 1 + 2D} \times 100 = \text{Percent of length of standard trench where } W = \text{trench width and } D = \text{depth between effective area beginning depth and trench bottom.}$$

Standard design requirements:

- Trenches must be located to provide room for 3 systems in the disposal area
- 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:

- No sidewall credit, Bottom area only
- Show 3 systems or 2 systems with a BAT unit. If two systems only fit with unequal length trenches a Low Pressure Dosing system with a BAT unit will be required.

Approved: [Signature] Date: 11/3/17