

Bureau of Environmental Health
 8930 Stanford Blvd. Columbia, MD 21045
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2323 Toll Free 1-866-313-6300
 website: www.hchealth.org

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

RECEIPT DATE: n/a **ONSITE SEWAGE DISPOSAL SYSTEM** P 533240-A
 INSTALLATION APPROVAL DATE: 9-17-14 **PERMIT** A Repair
 (Signature: KMW)

BRF - REPAIR

PROPERTY ADDRESS: 1701 New Hampton Lane
 SUBDIVISION: Breezewood Farms LOT: 2 TAX ID: 1403292339
 CONTRACTOR: J.M. Contracting EMAIL: _____
 CONTRACTOR ADDRESS: 425 Obrecht Rd., Sykesville MD 21784 PHONE: 443-277-7526
 PROPERTY OWNER: Andrea Doederlien EMAIL: aydoederlien@hotmail.com
 OWNER ADDRESS: 1701 New Hampton Lane PHONE: 410-465-4434

SEPTIC TANK SIZE (GALLONS): Existing(2000g)
 BAT UNIT: Advantex RT STATIC HEAD (FEET): Aprx. 8'
 NUMBER OF BEDROOMS: 3 (6 people) HOUSE SQ. FT. N/a APPLICATION RATE: 1.2
 DISTRIBUTION SYSTEM: GRAVITY FED LOW PRESSURE DOSED

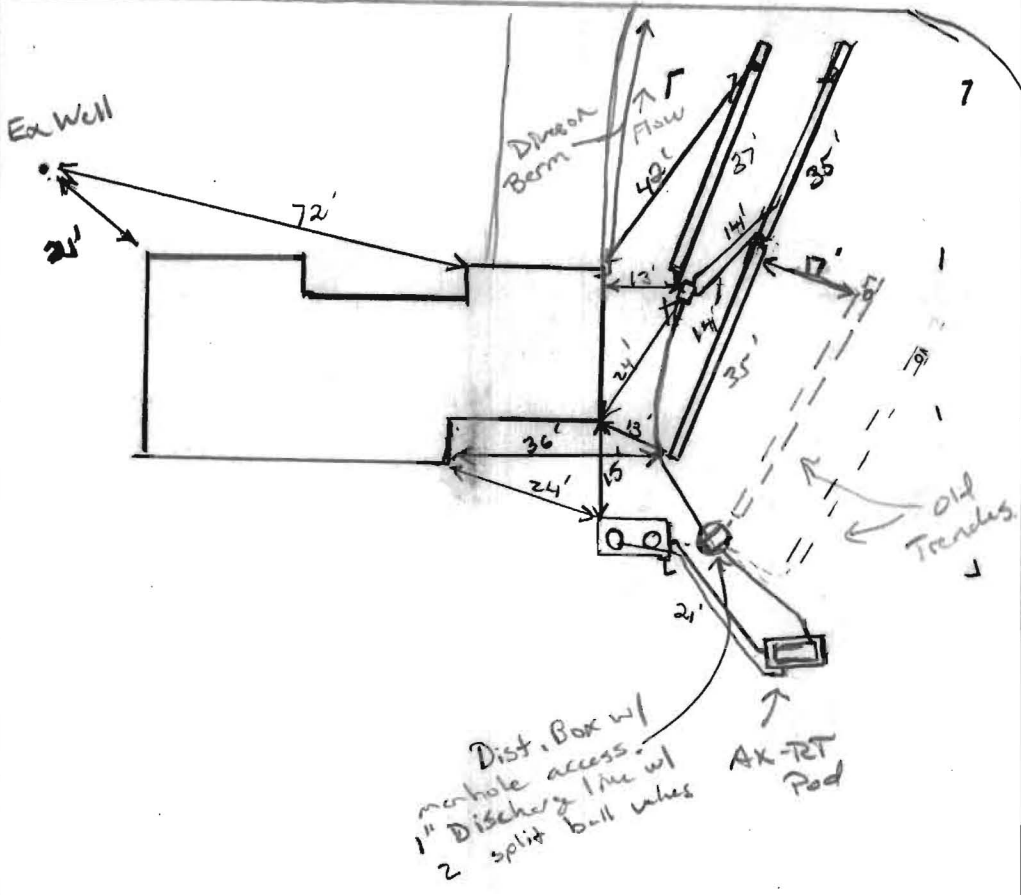
TRENCHES:	LINEAR FEET REQUIRED: <u>105'</u>	INLET DEPTH: <u>~2'</u>
	TRENCH WIDTH: <u>2</u>	MAXIMUM BOTTOM DEPTH: <u>9'</u>
	MINIMUM SPACE BETWEEN TRENCHES: _____	EFFECTIVE AREA BEGINNING DEPTH: <u>4-5.5'</u>
LOCATION:	Dist. Box to be located aprx. 10' off of side part of house. Run 2x35' trenches north towards New Hampton Lane and 1x35' trench running in opposite direction. Stay between large trees but aprx 12' or so above existing top trench.	
NOTES:	Existing trenches will be placed at rest. <u>BAT unit to be set just below existing system.</u> A bull-run valve or isolation valves or equivalent will be used. This will allow time for the old failing trenches to rest. Manhole access is required over existing Dist. Box. Observation pipes required at ends of trenches. Storm water runoff diversion practices should be set in place to redirect storm water away from septic system components.	

ISSUED BY: K. Wolf ISSUE DATE: *5/29/2014 EXPIRATION DATE: 5/29/2015
 *Permit Revised on 8/22/14

- 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 DOWNGRADIENT 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

**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



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
2'	2'	9'
NUMBER OF TRENCHES		3
TOTAL LENGTH		107'
ABSORPTION AREA		214' + SW
DISTRIBUTION BOX LEVEL		Yes
DISTRIBUTION BOX BAFFLE		90° bend
DISTRIBUTION BOX PORT		Yes

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	Yes
MANUFACTURER	Babylux
CAPACITY	2000 GAL
SEAM LOC	Top
TANK LID DEPTH	2'
BAFFLES	Yes
BAFFLE FILTER	—
MANHOLE LOC	Front/Rear
6" PORT LOC	none
WATERTIGHT TEST	OK
SLOTTED	Yes (Baffle)
DATE ON LID	—

PUMP/SEPTIC TANK LEVEL	
SEPTIC TANK LEVEL	Yes
MANUFACTURER	Advantex
CAPACITY	AX-RT GAL
SEAM LOC	Fiberglass Pool
TANK LID DEPTH	@ Grade
BAFFLES	N/A
BAFFLE FILTER	Yes
MANHOLE LOC	N/A
6" PORT LOC	N/A
WATERTIGHT TEST	—
SLOTTED	N/A
DATE ON LID	—

8/28/14 BAT unit installed. No Advantex rep present. Could not start unit, OK to cover work. Need start-up certification from supplier prior to approval (KW)

9/17/14 Met BAT manufacturer in field. start-up performed on system (KW)

PRE-CONSTRUCTION:

8/26/14 Trenches laid out. Set Dbox approx 10' off side corner of house, Run 2x35' trenches towards New Hampton Ln. and 1x35' trench in opp direction. BAT rep. not onsite also word from them as to tank delivery. (KW)

INSTALLATION:

8/26/14 pm Top trench complete. lower trenches partial complete. Need utility marks along New Hampton Lane. No word from Advantex on BAT. tank delivery (KW) 8/27/14 Received call from contractor on-site, tank and Advantex Rep. to be onsite around 9:30 am (KW) 8/27/14 Ernie w/ Atlanta 2 solutions onsite installing RT unit, Trenches complete. Phone call on-site to Bob Johnson w/ Advantex. Asked if it was OK to install 2 ball valves on 1" discharge. OK just not inside unit. OK to cover trenches. Stayed onsite while unit being installed. conversations w/ owner on new system, old system, etc... Will need start-up of unit (KW)

FINAL INSPECTOR

J. Wall

DATE OF APPROVAL

9-17-14

File Review:

October 20, 2014

Breezewood Farms Lot 2 Sec 2
1701 New Hampton Lane

Following the septic system failure in May 2014 of a repair system installed in May 2010, an in-depth review of the file was done in an effort to evaluate potential factors contributing to the recent failure.

A focus of the review centered on the percolation test results conducted over the course of the property history. This covered initial testing performed in 1965, along with additional testing performed in 2010 and 2014 as part of system repair installations. Though terminology and enhanced precision of soil profiling has occurred from 1965 to present time, sufficient detail was provided to evaluate all testing periods. Testing in both 1965 and 2010 showed areas that failed percolation testing in the area equating to behind the house. All three test periods showed passing percolation testing in the area to the right side of the house (when facing New Hampton Lane) moving towards New Hampton Lane. Based upon topography constraints and soil testing, this is the only area on the property for septic system installations.

In further evaluating testing from 2010 and 2014, the relative location of test pit #5 (2010) seems to best equate to test pit B in 2014; while test pit #6 (2010) more closely approximates the location of test pit A in 2014. Soil profiles are generally similar in their description; more importantly, the testing depths are consistent in showing depths of adequate water movement (test pits #5 and B) and similar slow to no movement (test pits #4 and A). In both repair scenarios, inspectors (Env. Health Specialists) utilized an effective area beginning around 4-4 1/2 feet that was consistent with test assessments.

To the concern raised that the latest repair was larger and deeper than in 2010, thus implying that the initial repair was improperly designed, the following provides why changes were made:

1. As stated above, the effective area of treatment has not changed – meaning that both systems are designed to begin working in the same depth. However, lacking a clear cut explanation / basis for the failure, instead of replacing with the same overall design, narrower, but deeper trenches were used to give potential added absorptive area.
2. The recommendation to use a BAT (best available technology) unit was made to enhance the overall quality of effluent, which should help prolong life use of trenches in service. Given that one of the new repair trenches would have required a pump system

to provide effluent to the trench, use of a BAT unit covered by BRF (Bay Restoration Fund) would also help offset that additional cost. Unfortunately, based upon income, the BRF does not cover the cost of trench replacement.

Additionally, in light of the age of the 2010 trenches, a ball-valve set-up was installed in an effort to help rejuvenate (rest) those trenches for potential future use with the 2014 trenches. The owners were also provided with information on an MDE (Maryland Department of Environment) "Linked Loan" program.

As for the runoff concern, minimizing excess rainwater/storm water impact to any sewage disposal area is desirable. However, as noted above, all testing conducted over time on this property limited the location of the sewage disposal area to the area of the property under the influence of runoff. The inlet depth of 4-4 1/2 feet below grade was where absorption rates were acceptable; shallower depths are not as permeable. Based upon soil profiles in many parts of the County, this inlet depth is fairly typical. Though surface infiltration does occur, it occurs at differing rates based upon a number of factors and conditions. It is difficult to conclude what level of potential contribution or role this actually played in the observed trench conditions without fully knowing actual household usage, length of surface water contact time, any changes to drainage patterns and the like.

As has been conveyed to the owners, this is an extremely rare case and is the reason why we have invested the time that we have to try and review our actions and approach taken in this matter. At this point, though not having any clear explanation, and while recognizing their concerns, frustrations and additional financial burden, I have not seen evidence that Ms. Scott did not perform her duties properly and the repair system designed and installed would have lead to an early failure.

Though considering the matter closed, I am certainly willing to review any additional information submitted by a professional consultant that has experience in site and soil evaluations and design of on-site sewage disposal.

Respectfully,



Bert Nixon, Director

Bureau of Environmental Health

Nixon, Bert F

From: Davis, Michael J
Sent: Thursday, October 09, 2014 8:05 AM
To: Nixon, Bert F
Subject: FW: Discussion from August 27th, 2014 Neighborhood meeting

Importance: High

Overdue for a response.

From: Knight, Karen **On Behalf Of** Fox, Greg
Sent: Monday, September 29, 2014 4:39 PM
To: Davis, Michael J
Subject: FW: Discussion from August 27th, 2014 Neighborhood meeting

????

Karen Knight

From: Andrea Doederlein [mailto:aydoederlein@hotmail.com]
Sent: Monday, September 29, 2014 4:27 PM
To: Fox, Greg
Subject: Discussion from August 27th, 2014 Neighborhood meeting

Mr. Fox,

It was a real pleasure meeting with you on Thursday, August 27th, at John and Jan Horan's house for the ice cream social. Talking with you and the other candidates really makes me feel that you're one of us, working toward making our county and state the place we want it to be, and that you're not the typical "politicians".

During our conversation, we discussed the situation with my county-designed and inspected septic system failing only four years after it was installed. The following is the background information you requested.

In 2010 we required a new septic system because we were going to add 1,300 square feet to our home. Our existing system was at the end of its life and wouldn't support the demands of the additional living space. A Howard County Engineer performed the percolation tests and designed the system. This system was installed and the final inspection by the county was performed on May 21st, 2010. We were told this system should last 25-30 years.

On May 16, 2014, a plumber told us he thought our septic system failed and recommended we get a specialist to look at it. On May 21, Ronnie Heaps, a septic contractor JM Contracting out of Sykesville, inspected our system and confirmed that it had failed. Kevin Wolfe, a Howard County Engineer, consulted with Ronnie and issued a permit on May 29, 2014. At the time the permit was issued, Kevin Wolfe indicated he felt the system failed due to overuse. He also indicated the system installed 4 years ago was installed as the county engineer indicated in her drawings.

After discussing the situation with our neighbors, we felt our septic use was the same, if not less than theirs and felt the system failed because it was inadequately designed. We are at the lowest point of our cul-de-sac and much of the rainwater runoff from uphill and the surrounding area flows through our yard and across our drain field. We feel this was not taken into consideration when the system was designed. We expressed our concerns to Mike Davis of the Howard County Health Department. He came to our home and looked over the area, noting the drainage area.

Do try to determine
overuse
septic was next connected
to septic

Did not determine
that it was from
overuse (via ?ing
owner)

Word meeting don't
really know

overuse

permeable
vs treatment capability
didn't seem to differ to try &
know it failed quickly - deeper next-

Both Kevin Wolfe and Mike Davis explained the process they use to design and install septic systems. They explained the equations used and felt that the previous engineer followed the proper procedure and used the proper equations. However, they both felt the system should have lasted much longer than it did.

The county demands we replace the failed system, and as the homeowners we were expected to bear the entire cost which was to be paid in full upon installation. We explained that we couldn't afford that amount in the near term so the installation would have to wait a few months. Kevin Wolfe told us that grant funds were available if we installed a special septic tank approved by the Bay Restoration Fund. We applied and were approved but the grant only covered the tank installation, not the drain fields. Even with the grant, we were handed a bill for \$7,400.

Although the current Howard County engineers have been helpful, we feel the original engineer has the primary responsibility for the system failure by not taking into account the neighborhood drainage across our property when the system was designed. This was demonstrated by the fact that the new County-designed system is much larger and installed deeper than the previous system. The County engineer who designed the failed system was Heidi Scott and the installation contractor was Bob Covey. Heidi Scott is no longer an employee of Howard County and Bob Covey has retired.

The County-designed system that was projected to last at least 25 years failed in only 4 years. According to the installation contractor and the County engineer, a septic failure after only 4 years is extremely rare. Although the current engineer claimed it was due to overuse, there's no way four people could use 25 years' worth of water in only 4 years. Besides, we never added the additional 1,300 square feet to our home for which the new septic was designed so it should have lasted even longer. We feel the system was not properly designed which was verified by the new system needed to replace it. Because the failed system was designed and mandated by a Howard County engineer we feel the county engineer let us down and should be responsible for the replacement cost.

We ask that you review the circumstances and seek your advice on provisions made for holding county personnel responsible for the work they perform resulting in mistakes like ours that place a financial burden on the taxpayers.

Again, it was a pleasure talking with you. We know Howard County is not small, and having officials take the time to visit with us in our neighborhood meant a lot to us.

Sincerely,

Andrea Doederlein

Don't have MDE
(Bany) to provide expert
things we've done
to help them out
linked loans
(given
waived perc fee
pointed them to BRF

BRF cleaner efficient
BRT - costs to pump
Based on income - wouldn't
qualify for trench
tested this time under
wet season

limited site location
for septic

builder took money
but never built

percs behind house
to support addition
failed (2010)

Typically

Don't make recs on SWM
speed bump or other option

Didn't find any indications of House
problem other than a premature
failure

Nixon, Bert F

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Sent: Thursday, October 09, 2014 8:05 AM
To: Nixon, Bert F
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Sincerely,

Andrea Doederlein



Atlantic Solutions, Ltd.

Delivering a Cleaner Tomorrow

2417 East Main Road • Portsmouth, RI 02871
Office (401) 293-0176 • Fax (401) 293-0178
www.atlanticsolutionsltd.com

August 26, 2014

Kevin Wolf
Environmental Health Specialist Supervisor
Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045

Re: BRF - AdvanTex Treatment System
1701 New Hampton Ln, Woodstock

Kevin:

The existing tank at the above referenced property meets the requirements of the AdvanTex AXRT Treatment System with the exception of the existing risers. For this reason the risers will be changed to watertight PVC risers mechanically attached to the tank at time of installation, therefore meeting the requirements of the treatment system.

Please call if you have any questions.

Sincerely

Bob Johnson
Vice President

Williams, Jeffrey

From: Williams, Jeffrey
Sent: Tuesday, August 26, 2014 11:50 AM
To: aydoederlein@hotmail.com
Cc: Davis, Michael J
Subject: Linked loan program

As we discussed, here is the link:

http://www.mde.state.md.us/programs/Water/QualityFinancing/LinkedDeposit/Pages/Programs/WaterPrograms/Water_Quality_Finance/Link_Deposit/index.aspx

And here is the contact person at MDE: Larry Love 410-537-3110

Jeff Williams
Program Supervisor, Well & Septic Program
Bureau of Environmental Health
Howard County Health Dept.
410-313-4261
jewilliams@howardcountymd.gov

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Wolf, Kevin

From: Bob Johnson [bjohnson@septicssystems.net]
Sent: Wednesday, August 27, 2014 11:26 AM
To: Wolf, Kevin
Subject: RE: 1701 New Hampton Lane_Andrea Doederlien Property
Attachments: 20140827111516984.pdf

Kevin:

Attached is the approval letter for the tank at this site. No modifications are required to the tank structure.

Ronnie informed me he is all set with the bull run valve.

Please call with any questions.

Bob Johnson
Atlantic Solutions
877-214-9283

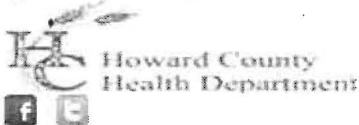
From: Wolf, Kevin [mailto:KWolf@howardcountymd.gov]
Sent: Friday, August 22, 2014 11:33 AM
To: bjohnson@septicssystems.net
Subject: 1701 New Hampton Lane_Andrea Doederlien Property

Bob,
I need a letter from you stating that the existing top seam, 2000g septic tank will ok to use in conjunction with Advantex RT unit. Please be advised that this tank is a compartmentalized tank w/o a "slot" dividing the 2 compartments. Any structural modifications to this tank may require watertightness testing.

I have scheduled a preconstruction meeting with Ronnie Heaps Tuesday August 26th 2014 at 10am on site at the property. Our intent of this repair is to install new trenches above the existing failed trenches and allow the old system to rest. Our original design placed a bull-run valve just after the existing septic tank to close off the old trenches for future use. Unfortunately, our current situation will not allow for this as we are using the BAT unit with a pump discharge. Will you allow Ronnie to install 2 'gate' valves or isolation valves just after the discharge line as to make connection to the old existing distribution box? This way we can close off the discharge to the existing system for rest and the owner does not have to dig anything up in the future.

Thanks,

Kevin M. Wolf, R.E.H.S./R.S., LEHS
Environmental Health Specialist Supervisor
Bureau of Environmental Health
Well & Septic Program
Groundwater Mgmt. Sec.
8930 Stanford Blvd.
Columbia, MD 21045
(o) 410-313-2645
(f) 410-313-2648



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LAYOUT 5/14/2010 INSP 4 _____
INSP 2 _____ INSP 5 _____
INSP 3 _____ INSP 6 _____

ISSUE DATE: 5/12/2010

APPROVAL DATE: 5/21/2010

PERMIT

P 533240
A _____

Tax ID # 1403292339

ON-SITE SEWAGE DISPOSAL SYSTEM HOWARD COUNTY HEALTH DEPARTMENT BUREAU OF ENVIRONMENTAL HEALTH

COVEY CONSTRUCTION IS PERMITTED TO INSTALL ALTER

ADDRESS: P.O. BOX 254 PHONE NUMBER: 410-750-0398
WOODSTOCK, MD 21163

SUBDIVISION: BREEZEWOOD FARMS LOT NUMBER: 2

ADDRESS: 1701 NEW HAMPTON LANE PROPERTY OWNER: TED DOEDERLEIN

SEPTIC TANK CAPACITY (GALLONS): 2000 OUTLET BAFFLE FILTER REQUIRED

PUMP CHAMBER CAPACITY (GALLONS): NA COMPARTMENTED TANK REQUIRED

NUMBER OF BEDROOMS: 3 APPLICATION RATE: 1.2

SQUARE FOOTAGE OF HOUSE: > 3,500

LINEAR FEET OF TRENCH REQUIRED: 78' *9' Bottom*

TRENCHES:	Trenches to be 3 feet wide. Inlet 3 feet below original grade. Bottom maximum depth 5 feet below grade. Effective area begins at 3 feet below original grade with 2 feet of stone below distribution pipe.
LOCATION:	Pump, fill & collapse existing drywell and septic tank, Set septic tank per layout inspection, keep 20' from proposed addition corner. Install 2 x 40' trenches on contour
NOTES:	Do not order the septic tank until after layout inspection and Sanitarian approval. Stake septic easement corners. Call for layout inspection. Mark utilities. Gravel tickets must be available for Environmental Sanitarians. Stone must be approved by the Howard County Health Department. A written variance request is required for tanks deeper than 3 feet. A traffic bearing lid is required for tanks deeper than 4 feet.

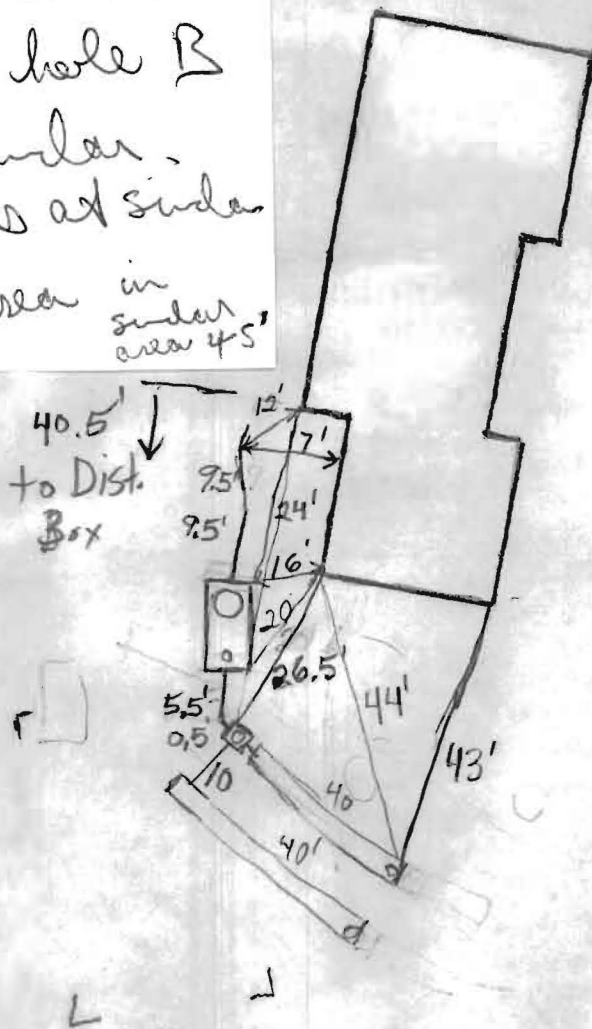
PLANS APPROVED: HEIDI SCOTT DATE: 5/11/2010

- NOTE: PERMIT VOID AFTER 2 YEARS
- NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NEITHER THE HOWARD COUNTY COUNCIL OR 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 FOR INSPECTION OF SEPTIC SYSTEM

2010 test hole 5
 equivalent to
 2014 test hole B
 Both w/ similar
 perc rates at similar
 depth
 effective area in
 similar area 45'

ALE



ROAD NAME

TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	3'	5'
NUMBER OF TRENCHES		2'
TOTAL LENGTH _____		
ABSORPTION AREA		480
DISTRIBUTION BOX LEVEL <u>Levelers</u>		
DISTRIBUTION BOX BAFFLE <u>Yes</u>		
DISTRIBUTION BOX PORT <u>Yes</u>		

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	<u>Yes</u>
MANUFACTURER	<u>Babylon</u>
CAPACITY	<u>2000</u> GAL
SEAM LOC	<u>Top</u>
TANK LID DEPTH	<u>1'-3'</u>
BAFFLES	<u>Yes</u>
BAFFLE FILTER	<u>No</u>
MANHOLE LOC	<u>Front</u>
6" PORT LOC	<u>Rear</u>
WATERTIGHT TEST	<u>No</u>
SLOTTED	<u>Yes</u>
DATE ON LID	<u>Dry</u>
PUMP/SEPTIC TANK LEVEL <u>N/A</u>	
MANUFACTURER _____	
CAPACITY _____ GAL	
SEAM LOC _____	
TANK LID DEPTH _____	
BAFFLES _____	
BAFFLE FILTER _____	
MANHOLE LOC _____	
6" PORT LOC _____	
WATERTIGHT TEST _____	
SLOTTED _____	
DATE ON LID _____	

PRE-CONSTRUCTION:

5/19

5/21/10 Tank set 16' from house to keep trenches as far uphill as possible - Not set according to layout

INSTALLATION:

FINAL INSPECTOR

B. Baker

DATE OF APPROVAL

5/21/2010

KESWICK YOUNG CO.

Design ~ Build ~ Client Advocate

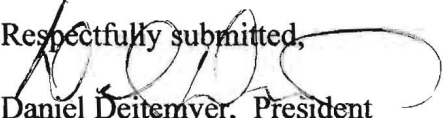
REQUEST FOR VARIANCE

To: Mr. Mike Davis
Assistant Director
Bureau of Environmental Health
Howard County Health Department

Re: 1701 New Hampton Lane
Woodstock, Maryland

The intent of this letter is to request for a variance of the setback for a future septic easement adjacent to an existing attached garage. This request asks for a setback of 10' rather than the 20' currently required. The garage is a single story with a typical footing 30" below grade.

Thank you for your consideration.

Respectfully submitted,

Daniel Deitemyer, President
Mhic # 47165

4.20.10

File Review:

October 20, 2014

Breezewood Farms Lot 2 Sec 2
1701 New Hampton Lane

Following the septic system failure in May 2014 of a repair system installed in May 2010, an in-depth review of the file was done in an effort to evaluate potential factors contributing to the recent failure.

A focus of the review centered on the percolation test results conducted over the course of the property history. This covered initial testing performed in 1965, along with additional testing performed in 2010 and 2014 as part of system repair installations. Though terminology and enhanced precision of soil profiling has occurred from 1965 to present time, sufficient detail was provided to evaluate all testing periods. Testing in both 1965 and 2010 showed areas that failed percolation testing in the area equating to behind the house. All three test periods showed passing percolation testing in the area to the right side of the house (when facing New Hampton Lane) moving towards New Hampton Lane. Based upon topography constraints and soil testing, this is the only area on the property for septic system installations.

In further evaluating testing from 2010 and 2014, the relative location of test pit #5 (2010) seems to best equate to test pit B in 2014; while test pit #6 (2010) more closely approximates the location of test pit A in 2014. Soil profiles are generally similar in their description; more importantly, the testing depths are consistent in showing depths of adequate water movement (test pits #5 and B) and similar slow to no movement (test pits #4 and A). In both repair scenarios, inspectors (Env. Health Specialists) utilized an effective area beginning around 4-4 1/2 feet that was consistent with test assessments.

To the concern raised that the latest repair was larger and deeper than in 2010, thus implying that the initial repair was improperly designed, the following provides why changes were made:

1. As stated above, the effective area of treatment has not changed – meaning that both systems are designed to begin working in the same depth. However, lacking a clear cut explanation / basis for the failure, instead of replacing with the same overall design, narrower, but deeper trenches were used to give potential added absorptive area.
2. The recommendation to use a BAT (best available technology) unit was made to enhance the overall quality of effluent, which should help prolong life use of trenches in service. Given that one of the new repair trenches would have required a pump system

to provide effluent to the trench, use of a BAT unit covered by BRF (Bay Restoration Fund) would also help offset that additional cost. Unfortunately, based upon income, the BRF does not cover the cost of trench replacement.

Additionally, in light of the age of the 2010 trenches, a ball-valve set-up was installed in an effort to help rejuvenate (rest) those trenches for potential future use with the 2014 trenches. The owners were also provided with information on an MDE (Maryland Department of Environment) "Linked Loan" program.

As for the runoff concern, minimizing excess rainwater/storm water impact to any sewage disposal area is desirable. However, as noted above, all testing conducted over time on this property limited the location of the sewage disposal area to the area of the property under the influence of runoff. The inlet depth of 4-4 1/2 feet below grade was where absorption rates were acceptable; shallower depths are not as permeable. Based upon soil profiles in many parts of the County, this inlet depth is fairly typical. Though surface infiltration does occur, it occurs at differing rates based upon a number of factors and conditions. It is difficult to conclude what level of potential contribution or role this actually played in the observed trench conditions without fully knowing actual household usage, length of surface water contact time, any changes to drainage patterns and the like.

As has been conveyed to the owners, this is an extremely rare case and is the reason why we have invested the time that we have to try and review our actions and approach taken in this matter. At this point, though not having any clear explanation, and while recognizing their concerns, frustrations and additional financial burden, I have not seen evidence that Ms. Scott did not perform her duties properly and the repair system designed and installed would have lead to an early failure.

Though considering the matter closed, I am certainly willing to review any additional information submitted by a professional consultant that has experience in site and soil evaluations and design of on-site sewage disposal.

Respectfully,



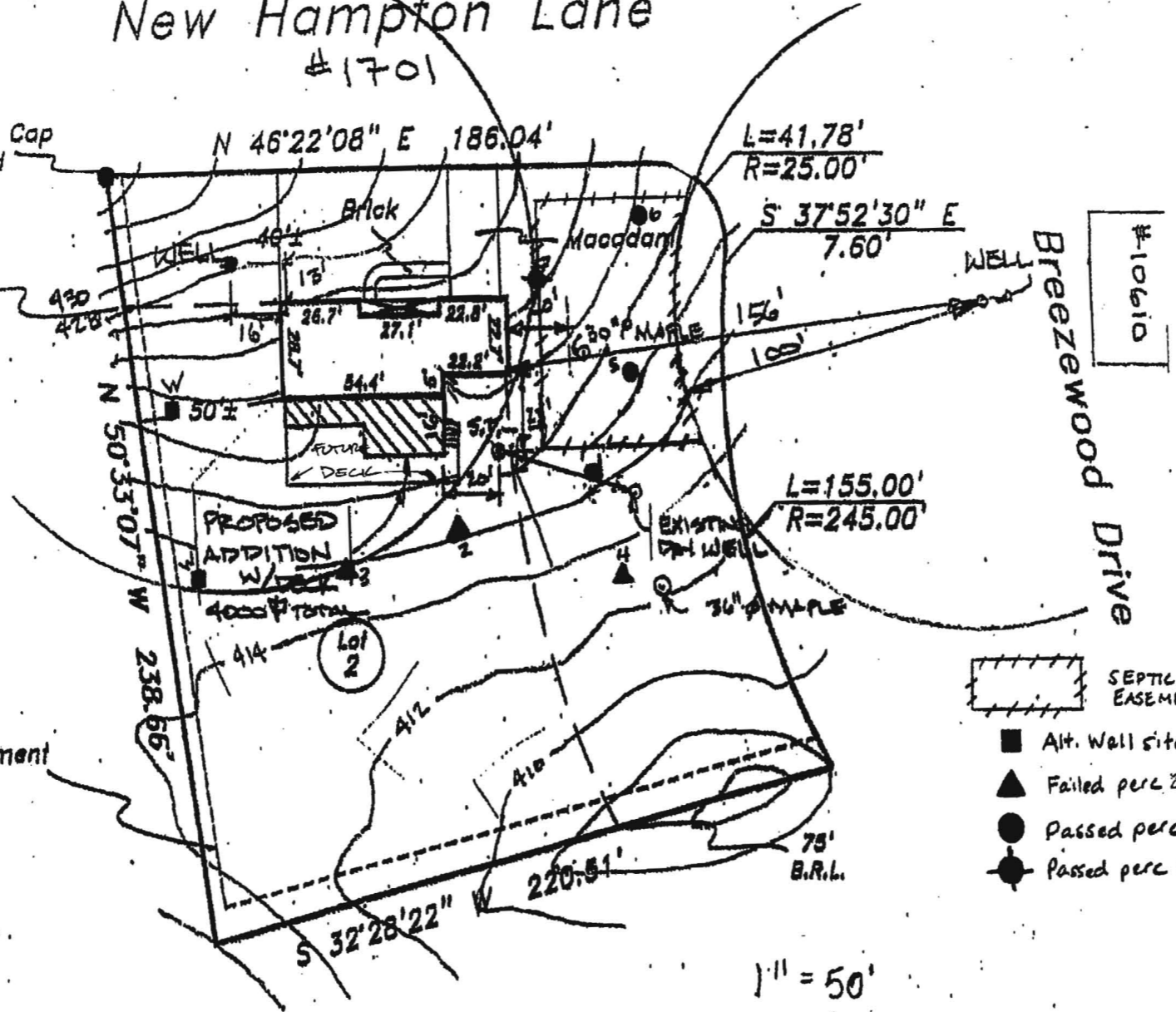
Bert Nixon, Director

Bureau of Environmental Health

Not to be used, or guaranteed by this location. Inaccuracy 1/2"

New Hampton Lane #1701

ANDREA OBERG
 NEW HAMPTON LANE
 WOODSTOCK, MD. 21163
 465-4434



"I certify that the information shown hereon is based on field work performed by me or under my direct supervision, and is correct, to the best of my knowledge and belief."
Dan Putney CONTRACTOR

"Approved For Private Water and Sewerage Systems"
Nipon for Peter Brilenson 5/7/10
 Health Officer, Howard County Health Dept. Date *ngt*

- Notes-
- Any changes to a private sewage easement shall require a revised percolation certification plan.
 - The topography of this plat is taken from County supplied plot and is verified to accurately represent relative changes on the subject property.
 - 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.
 - The purpose of this plan is to show an area suitable for the replacement of the existing septic system.
 - The existing septic system will be upgraded prior to building permit approval.
 - This area designates a private sewerage area as required by the Maryland State Department of the Environment for individual sewage disposal. For lots created prior to March of 1972 it provide at least enough area to accommodate an initial and two replacement septic systems as required by the Howard County Health Department. Improvements of any nature in this area are restricted until public sewerage is available. This area 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 area. Recordation of a modified sewerage area shall not be necessary.

SEPTIC EASEMENT

- Alt. Well site
- ▲ Failed perc 2010
- Passed perc 2010
- Passed perc 1965



DRAWING BY:
 DANIEL DEITONISE
 #3-463-8021

property is shown in Zone C
 FIRM Map of Howard County,
 on Community Panel #
 00108, Effective 12-4-88

I certify that I have surveyed the property shown hereon,
 town as Lot 2, Section Two,
 Breezewood Farms
 recorded among the land records of Howard County,
 in Pl Bk 10 folio 87
 for the purpose of locating the improvements thereon.



LOCATION DRAWING
 1701 New Hampton Lane
 Howard County, Maryland
 Election District No. 03

NTT Associates, Inc. Scale: 1"=50'

This plat is of benefit to the consumer only insofar as it is required under or a title insurance company or its agent in connection with a contemplated transfer, financing, or refinancing purposes.