



Bureau of Environmental Health  
8930 Stanford Blvd | Columbia, MD 21045  
410.313.2640 - Voice/Relay  
410.313.2648 - Fax  
1.866.313.6300 - Toll Free

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

March 22, 2018

To: (Sill Engineering Group LLC); (Angela & Guerdy Volcy); (Craftmark Homes)

Percolation Test Report; 10865 Braeburn Drive, Columbia, MD

Percolation tests were conducted at 10865 Braeburn Drive (Tax Map 35, Parcel 228) on May 2, 2018. Tests and/or profile descriptions were documented for 8 locations. All 8 test holes passed.

All percolation tests conducted were standard tests, measuring rate of fall for a pre-wet period followed by measurement and recordation of the time required for the water level to drop 1 inch. Areas that may be included in the septic reserve area are represented by test locations having satisfactory soil condition. The area must be at least large enough to accommodate 3 systems for the planned residence.

The next step in the process is to have an engineer submit a percolation certification plan to confirm the design of the septic reserve area. The plan must include the calculations for 3 systems (or 2 systems with a BAT unit). The existing trench may be used as part of the initial system but is not large enough to accommodate a 5 bedroom residence. Any additional trench(s) must be equal in length to the existing trench (90 feet). If an equal size trench of 90 feet cannot fit within the proposed SDA, then a BAT unit plus LPD design will be required.

Should you have any questions regarding this evaluation, please contact me. I may be reached at (410) 313-1786 or by email [hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

Respectfully,

*Hank Oswald*

Hank Oswald, L.E.H.S  
Bureau of Environmental Health  
Well & Septic Program

Attachment: Percolation Test Field Notes

## Oswald, Hank

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**From:** Oswald, Hank  
**Sent:** Wednesday, April 25, 2018 1:55 PM  
**To:** dpastva@CraftmarkHomes.com; 'guerdy\_angela@hotmail.com'  
**Subject:** Perc Test\_10865 Braeburn Drive

Hello All:

I am available to conduct perc test next Tuesday May 1, 2 or 3 starting at 8:30. Please choose a date and confirm.

Thanks,

Hank

Hank Oswald  
Licensed Environmental Health Specialist  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

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## Oswald, Hank

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**From:** Oswald, Hank  
**Sent:** Friday, April 13, 2018 10:05 AM  
**To:** Paul (paul@sillengineering.com)  
**Cc:** 'dpastva@CraftmarkHomes.com'  
**Subject:** Perc Test Plan\_10865 Braeburn Drive

Hello Paul:

Jeff and I (maybe my coworker Robert too) would like to conduct a site visit prior to entertaining a test date for 10865 Braeburn Drive. Would you have the proposed test holes field located and staked. The site visit will probably happen the week of the 23<sup>rd</sup>.

Thanks,

Hank

Hank Oswald  
Licensed Environmental Health Specialist  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
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## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Wednesday, December 07, 2016 2:24 PM  
**To:** robertknudsen15@gmail.com  
**Subject:** 10865 Braeburn Road  
**Attachments:** Percolation & Plan Requirements For Developed Lots.pdf; Percolation Test Application.pdf

Hi Robert:

In response to your inquiry regarding Health Department requirements for a complete tear down/rebuild of 10865 Braeburn Road, the septic record for this property was reviewed. There were 2 repairs made to the septic system. One repair was made in 1977 and the other in 2002. Based on the as-built drawings for each repair, it's not entirely clear what was done because the drawings don't match up. I can say that if we exclude the drywell due to its age and condition etc., the trench alone is not large enough to support a 4 bedroom residence.

As mentioned on the telephone today, we will need to conduct perc testing to establish a septic disposal area (SDA) and determine if the existing drywell and trench are still adequate. Additionally, the septic contractor will need to field locate and assess the drywell and d-box to determine its current condition (dry, standing liquid etc.). The drinking water well will also have to be abandoned and a new well drilled to meet current construction standards and setback requirements prior to building permit approval.

The next step in this process will be to apply for perc testing. I've attached a copy of the perc test application and plan requirements for developed lots.

Should you have any questions, please don't hesitate to ask.

Respectfully,

Hank

Hank Oswald, L.E.H.S.  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
410.313.2648 (Fax)

## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Wednesday, December 07, 2016 11:02 AM  
**To:** 'robertknudsen15@gmail.com'  
**Subject:** 10865 Braeburn Road\_Septic Record  
**Attachments:** WS\_BraeburnRoad\_10865\_SepticPermit\_1977.pdf

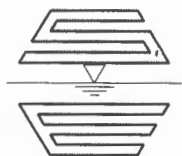
Hi Robert:

Attached, you will find a copy of the septic record for 10865 Braeburn Road.

Thanks,

Hank

Hank Oswald, L.E.H.S.  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
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11130 Dovedale Court, Suite 200  
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Website: www.sillengineering.com

Office: 443-325-5076  
Fax: 410-696-2022  
Email: info@sillengineering.com

Civil Engineering for Land Development

## SILL ENGINEERING GROUP, LLC

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July 31, 2018

**Mr. Kent Sheubrooks, Chief  
Division of Land Development  
Howard County Department of  
Planning and Zoning**  
3430 Courthouse Drive  
Ellicott City, Maryland 21043

Re: Braeburn, Lot 13  
10865 Braeburn Road  
Alternative Compliance Request

Dear Mr. Sheubrooks:

On behalf of the Volcys, owners of the above referenced site, Sill Engineering Group, LLC is presenting this Alternative Compliance Request to present a viable alternative to section 16.155(a)(2)(ii) of the Howard County Subdivision and Land Development Regulations which would require approval of a Site Development Plan for the proposed redevelopment located on their property.

The property is located at 10865 Braeburn Road and is known as Part of Parcel 228 on Tax Map 35, Grid 17. The property is zoned R-20 per the 10/06/13 Comprehensive Zoning Plan, and is 1.1680 Acres, more or less. The property is Lot 13 of the Braeburn subdivision which was recorded in the land records of Howard County in Plat Book 80, Page 8. The existing house which was constructed in 1964 will be demolished and a new house will be constructed in its place. The subject property is located within the planned service area for both public water and sewer but outside the Metropolitan district.

Section 16.155(a)(2)(ii) of the Howard County Subdivision and Land Development Regulations refers to applicability of Site Development Plans and states:

*(a) A site development plan, approved by the Department of Planning and Zoning, is required for:*

*(2) Residential. New residential development as follows:*

*(ii) Development of single-family detached residential lots and deeded parcels within the planned service area for both public water and sewer, except that lots in recorded subdivisions created before February 7, 1976 are exempt from site development plan requirements unless more than 5,000 square feet of disturbance is proposed and the lots have not been reconfigured or merged through the recordation of a plat recorded on or after February 7, 1976;*

The required construction of the house and improvements including stormwater management facilities will create disturbance over the 5,000 square feet limit, as such under the regulation this redevelopment is subject to a Site Development Plan approval.

Braeburn, Lot 13  
Alternative Compliance Request  
July 30, 2018

We propose this redevelopment be considered and treated as redevelopment of a lot outside the public water and sewer planned service area and be subject to the procedures in place for such a lot. A Simplified Environmental Concept Plan and a Plot plan for the redevelopment will be presented to Howard County for review and approval and will uphold the intent of the Site Development Plan.

Although this property is located within the planned service area, it is not practicable to utilize public services at this time. The most accessible water main to tie into is located in Cedar Lane under contract number 44-1760. Connecting to this system would require the water main to be extended south through Cedar Lane and north the entire length of Braeburn Road. This extension will be approximately three thousand (3,000) feet. The closest sewer connection is approximately 195 feet away from the property and would require the sewer main to be extended across a neighboring property to reach the subject property. An easement would have to be granted from neighbor to allow for the extension and the use of public sewer. Due to these unchangeable conditions this redevelopment will not be able to connect to public water or sewer systems at this time. The lot size of 1.1680 acres is consistent with the lot sizes in the west of the county that are outside of the planned service area. The redevelopment and grading are controlled and will not extend outside the lot. The lot has been previously developed and the redevelopment has been limited to the upgraded house and accompanying improvements such as the driveway, septic system and stormwater management features. The existing pool and patio in the rear yard will remain. The proposed redevelopment has been designed to maintain natural and existing drainage patterns and will not cause any negative affect to the neighboring lots. Because of these reasons it would be appropriate to consider this redevelopment as one on a similar lot outside the planned service area.

According to Section 16.154 of the Howard County Subdivision and Land Development Regulations the purpose of the Site Development Plan is to indicate the location and construction specifications for buildings, structures, paved areas, grading, drainage, on-site utilities, sidewalks, trails, required forest conservation area, landscaping and other improvements within a site proposed for development. The intent of the regulation will still be served by implementing our alternative proposal. All features and improvements that would be presented on the Site Development Plan are presented on the Simplified Environmental Concept Plan and if needed can be refined on the Plot Plan that would accompany the building permit. As part of our design, stormwater management obligations have been reviewed and addressed to the maximum extent practicable and will be submitted for approval by Howard County as part of the Simplified Environmental Concept Plan review.

The existing septic will be updated to accommodate the new house and this upgrade will be reflected on the Simplified Environmental Concept Plan. There is an approved Percolation Certification Plan for the property that was signed in July 2018 that is compliant with the current Health department regulations.

Denial of this request and strict compliance with Section 16.155(a)(2)(ii) of the Howard County Subdivision and Land Development Regulations will create an extraordinary hardship of the property owners by requiring them to face an unnecessary Site Development Plan review period that will extend their redevelopment into next year. This redevelopment project requires the existing house to be razed. In preparation for the required demolition the Volcys are currently renting a secondary home as well as paying the mortgage and associated property fees for the subject property and have been since January 2018. The Site Development Plan process, requiring a full Environmental Concept Plan review, as well as the Site Development Plan review will add approximately 9-12 months to the redevelopment process.

Braeburn, Lot 13  
Alternative Compliance Request  
July 30, 2018

This prolonged review does not seem warranted or justifiable since the alternative we've presented is a common practice for lots in the west of the county, and this site is a western lot in features and characteristics. The only opposing feature is that this lot is within the planned service area for public water and sewer. As explained above, there are practical difficulties to tie this lot into the public utility systems qualifying the handling of this lot as a lot outside the planned service area.

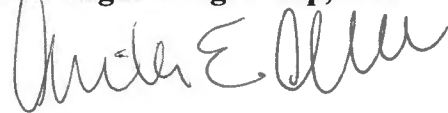
Approval of this request will not be detrimental to public interest, as stated above, the redevelopment will have no negative affect on the neighboring lots and all the information that is required to be shown on and approved by the Site Development Plan process will be shown on, reviewed and approved by the Simplified Environmental Concept Plan and Building permit procedures.

The alternative compliance plan set forth in this letter does not nullify the intent of the regulations. The Simplified Environmental Concept Plan provides a plan that sustains the purpose of the regulation that indicates the location and construction specifications for buildings, structures, paved areas, grading, drainage, on-site utilities, sidewalks, landscaping and other improvements within a site proposed for redevelopment.

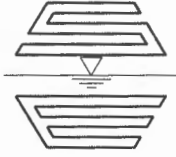
We ask for approval of this alternative compliance that will protect the purpose and intent of the Site Development Plan approval requirement while serving to a greater extent the intent of the Howard County Subdivision and Land Development Regulations. By allowing us to continue with this alternative plan presented above, the intent of the Section 16.155(a)(2)(ii) will still be served by the processing and acceptance of a Simplified Environmental Concept Plan, while freeing up County resources from an unnecessarily lengthy Site Development Plan review. Furthermore, the intent of Section 16.104. (a) which gives the Department of Planning and Zoning the authority to grant waivers in situations that may result in extraordinary hardship or practical difficulties will be served. The site has been designed to uphold the subdivision and land regulations defined in Title 16 of the Howard County, Maryland Code of Ordinances and no other waivers are intended to be presented with the redevelopment plans. Please find the an Exhibit to Accompany this Alternative Compliance Request attached.

Thank you for your consideration of this Alternative Compliance Request. Should you have any questions or comments regarding this matter, please do not hesitate to contact this office.

Sincerely,  
**Sill Engineering Group, LLC**



Anita E. Allen



11130 Dovedale Court, Suite 200  
Marriottsville, MD 21104  
Website: [www.sillengineering.com](http://www.sillengineering.com)

Office: 443-325-5076  
Fax: 410-696-2022  
Email: [info@sillengineering.com](mailto:info@sillengineering.com)  
Civil Engineering for Land Development

## SILL ENGINEERING GROUP, LLC

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July 3, 2018

**Howard County Health Department  
Bureau of Environmental Health**  
8390 Stanford Boulevard  
Columbia, Maryland 21045

Attn: Mr. Hank Oswald

Re: Braeburn, Lot 13  
10865 Braeburn Road  
Percolation Certification Plan

Dear Mr. Oswald:

As requested please find this letter to accompany the Percolation Certification Plan for the above-mentioned site.

A Percolation Certification Plan that was submitted to your office June 28, 2018 showed the conceptual design for treatment of the site's stormwater obligations.

Due to the complexities of this unique site, we had to engineer stormwater treatment outside standard measures. It is understood that our stormwater management design for the proposed drywell with impermeable liner and an outfall pipe is not a typical method of stormwater treatment. The stormwater management obligations for this site, as all sites, will have to be reviewed by Howard County Development Engineering Division (DED) to ensure the design promotes the use of the maximum amount of environmental site design techniques as practicable, in accordance with the 2000 Maryland Stormwater Design Manual, Volumes I and II, as amended by the Stormwater Management Act of 2007.

It is understood the Health Department does not want to record the Percolation Certification Plan showing the proposed atypical method of stormwater management within the 100' well radius.


For this project the Howard County development process starts with the recordation of the Percolation Certification Plan. Once approved the Environmental Concept Plan will be submitted to DED for the review of the stormwater obligations. To continue with the development process, we have omitted the designed drywell from the Percolation Certification Plan.

Thank you for your continued review of this unique site and working with us to overcome the challenges it presents. We understand that this is such a unique site, and that Health Department review of future Health Department Plans may take slightly longer than a standard lot.

Thank you for your consideration of this Percolation Certification Plan. Should you have any questions or comments regarding this matter, please do not hesitate to contact this office.

Braeburn, Lot 13  
10865 Braeburn Road  
Percolation Certification Plan  
July 3, 2018

Sincerely,  
**SILL ENGINEERING GROUP, LLC**



Anita E. Allen

## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Monday, July 02, 2018 1:55 PM  
**To:** 'Anita Allen'  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Hi Anita:

Good afternoon. You may omit the drywell now on the revised perc cert plan but we would like a letter to accompany the plan acknowledging that if for some reason DED does not approve your drywell design in the proposed location, it will likely place delays on the project in the future until a solution can be reached.

No extra fee to review a revised perc cert on our end.

Thanks,

Hank

---

**From:** Anita Allen [mailto:[anita@sillengineering.com](mailto:anita@sillengineering.com)]  
**Sent:** Monday, July 02, 2018 8:39 AM  
**To:** Oswald, Hank  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Good Morning Hank,

I'm just following up on my voicemail. If everything else is good with the plan, we can revise the plan omitting the drywell now. When the perc cert is approved we can submit our ECP to DED. When and If they approve the drywell, we will record a revised perc cert that shows the drywell. Do you see any obstacles with this approach? What's the fee for revising the perc cert?

Thanks,  
Anita

---

**From:** Anita Allen  
**Sent:** Friday, June 29, 2018 11:39 AM  
**To:** 'Oswald, Hank' <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Hi Hank,

The drywell modification is not standard, however the site is very unique and the standard means of treatment are not feasible for the entire site. I don't anticipate any problems justifying the need for the modification. The issue of stormwater management and the modification is something that DED will have to review. We need the Perc Cert approved so that we can submit the Environmental Concept Plans to DED and work through any issues they might have with the treatment measures.

Can we record the Perc Cert at this time? Worst case scenario, DED says no, and we omit the drywell from future plans.

Thank you,  
Anita

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Friday, June 29, 2018 11:05 AM  
**To:** Anita Allen <[anita@sillengineering.com](mailto:anita@sillengineering.com)>  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Hi Anita:

I checked in with our contact at the County about this design. He stated that this is modified version that wouldn't typically be allowed unless one could prove a need to modify the outfall (i.e. soils were bad, clay etc.).

Hank

---

**From:** Anita Allen [<mailto:anita@sillengineering.com>]  
**Sent:** Friday, June 29, 2018 8:16 AM  
**To:** Oswald, Hank  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Hi Hank,

Using MEP for SWM we are proposing to use impermeable liner on the drywell. If you notice General Note 18 was updated to show this. The outfall for the drywell is going the outfall system for the bio-retention facility. We can't move it downhill due to setbacks and steep slopes. I'm considerate of the intention of the setback and think this alternative will support the intention of the regulation.

If DED will not support this no drywell will be reflected on the subsequent plans including the permit plans. Let me know how we should proceed.

Thanks,  
Anita

---

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Friday, June 29, 2018 8:04 AM  
**To:** Anita Allen <[anita@sillengineering.com](mailto:anita@sillengineering.com)>  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Hi Anita:

The plan looks good but the DW is within 100 feet of the alternate well site. Move it down the hill as suggested. Any issues, please contact me.

Thanks,

Hank

---

**From:** Anita Allen [<mailto:anita@sillengineering.com>]  
**Sent:** Friday, June 29, 2018 7:42 AM  
**To:** Oswald, Hank  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Good Morning Hank,

The plans were revised and sent back in yesterday. I was informed the owners went down personally last week. We had some early delays with survey work and they are behind schedule. They are anxious to keep the plan moving. I know you guys need time to provide a complete review and I don't want to be at all pushy, but anything you could do on your end to keep this moving would make the homeowner happy.

Thank you for your continued help.

Anita

---

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Thursday, June 28, 2018 1:53 PM  
**To:** Anita Allen <[anita@sillengineering.com](mailto:anita@sillengineering.com)>  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Anita:

That should be fine.

Hank

---

**From:** Anita Allen [<mailto:anita@sillengineering.com>]  
**Sent:** Thursday, June 28, 2018 10:53 AM  
**To:** Oswald, Hank  
**Subject:** RE: Perc Cert\_10865 Braeburn Drive

Hi Hank,

I have the septic for lot 12 approximated by the attached permit. Which is dated later then the one you supplied. Is it fine to keep what I have for the septic and just add the well location as shown on the permit you supplied?

Thanks,  
Anita

---

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Thursday, June 28, 2018 9:30 AM  
**To:** Anita Allen <[anita@sillengineering.com](mailto:anita@sillengineering.com)>  
**Cc:** [guerdy\\_angela@hotmail.com](mailto:guerdy_angela@hotmail.com); [dpastva@CraftmarkHomes.com](mailto:dpastva@CraftmarkHomes.com)  
**Subject:** Perc Cert\_10865 Braeburn Drive

Hi Anita:

The perc cert plan for 10865 Braeburn Drive was rejected due to the following comments:

1. Show 3<sup>rd</sup> well site along driveway and property line while relocating DW. down the hill.
2. Relocate pump tank so it pumps up to both systems
3. Show neighboring wells and septic systems (See attachments for Lots 12 and 14)

Should you have any questions, please don't hesitate to ask.

Respectfully,

Hank

Hank Oswald  
Licensed Environmental Health Specialist  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)

[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

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Anita

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**Sent:** Thursday, June 28, 2018 9:30 AM

**To:** Anita Allen <[anita@sillengineering.com](mailto:anita@sillengineering.com)>

**Cc:** [guerdy\\_angela@hotmail.com](mailto:guerdy_angela@hotmail.com); [dpastva@CraftmarkHomes.com](mailto:dpastva@CraftmarkHomes.com)

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Should you have any questions, please don't hesitate to ask.

Respectfully,

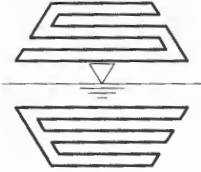
Hank

Hank Oswald  
Licensed Environmental Health Specialist  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

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 Website: www.sillengineering.com

Office: 443-325-5076  
 Fax: 410-696-2022  
 Email: info@sillengineering.com

Civil Engineering for Land Development

**SILL ENGINEERING GROUP, LLC**

To: Mr. Jeff Williams  
 Howard County Health Department  
 Bureau of Environmental Health  
 8930 Stanford Boulevard  
 Columbia, MD 21045

Date:	June 28, 2018
Attention:	Hank Oswald
Re:	10865 Braeburn Drive Braeburn, Lot 13 Percolation Certification Plan
Project #:	18-001

**We are sending you**

<input checked="" type="checkbox"/> Attached	Under Separate Cover Via Mail the following:	
Letter	Originals	Other:
<input checked="" type="checkbox"/> Plans	Computations	

Quantity	Description	Quantity	Description
3	Percolation Certification Plan		
1	Response Letter		

**These are transmitted as checked below**

<input checked="" type="checkbox"/> For Approval	As Requested	Please Return After Using
<input checked="" type="checkbox"/> For Review	For Your Use	As Approved

Comments:

Copy To:

Signed:

*Anita E. Allen*  
 Anita E. Allen

Received by:

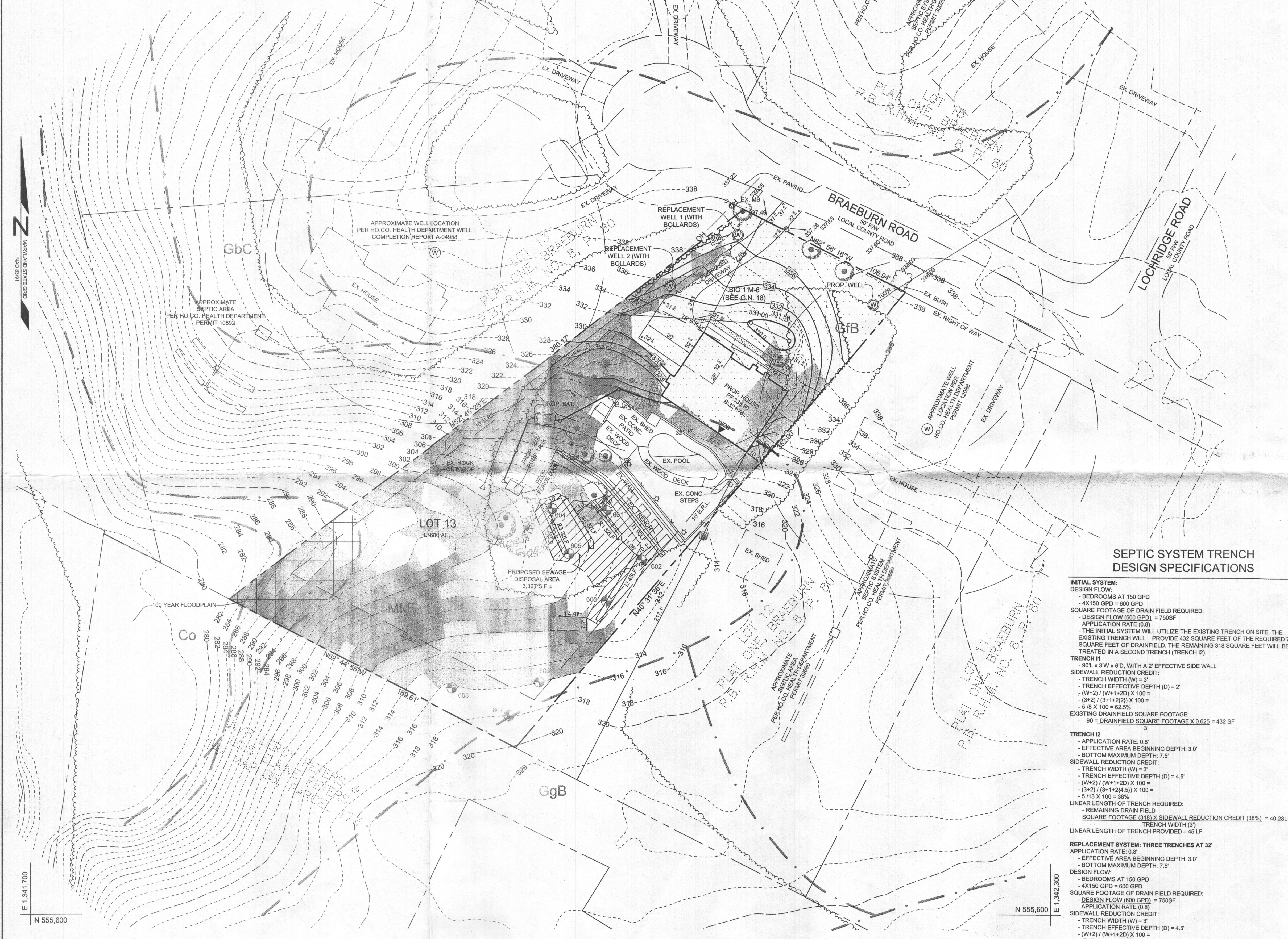
Date Received:

RECEIVED  
JUN 28 2018  
HOWARD COUNTY HEALTH DEPT.  
FOOD PROTECTION PROGRAM

Michelle Dwyer  
~~Boat American~~  
Rover  
Move  
DW 100  
away from  
well

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GbB	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A	0.28
GbB	GLENELO LOAM, 3 TO 8 PERCENT SLOPES	B	0.24
MkF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.32

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.

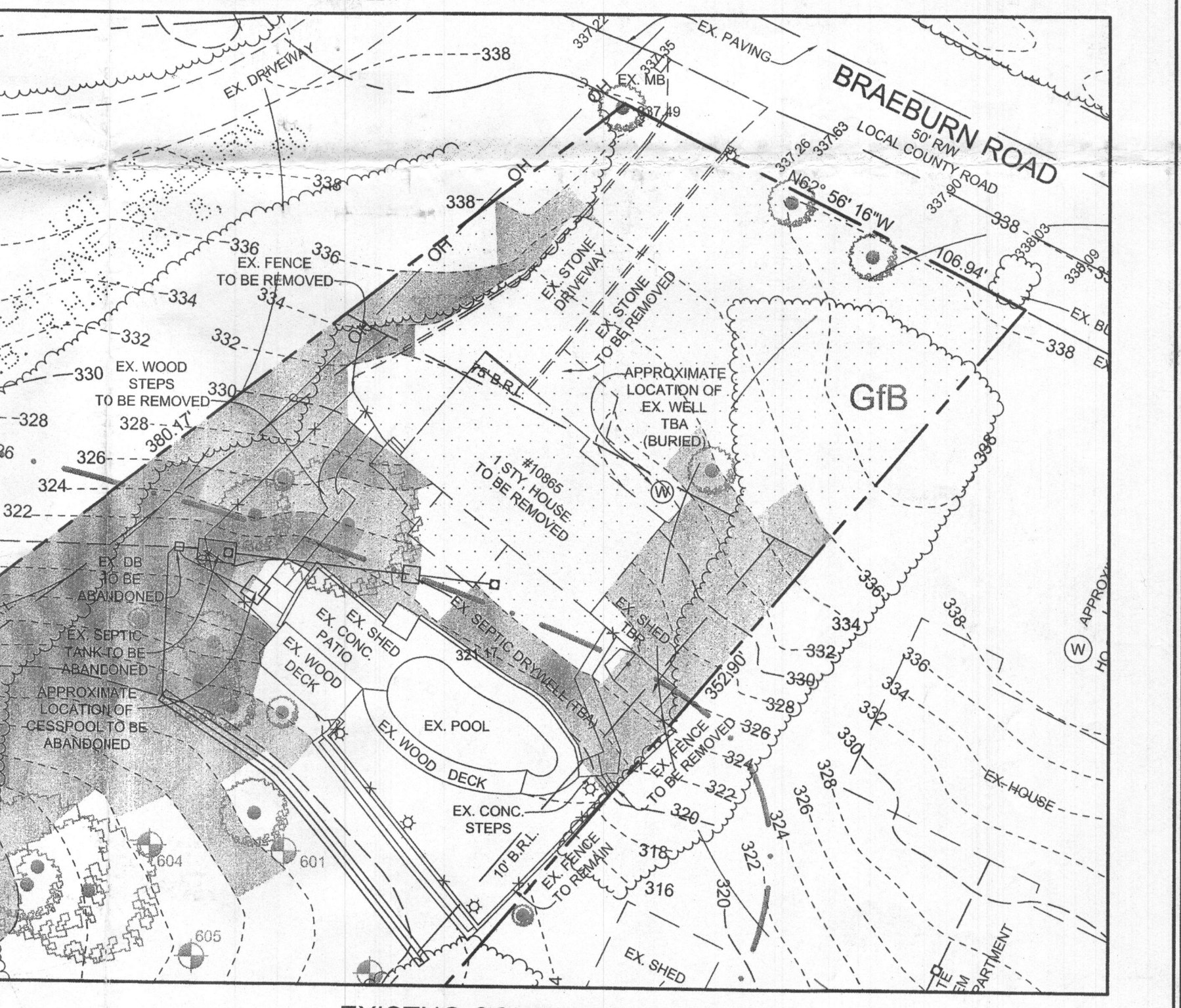


### LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- SOIL BOUNDARY
- FLOODPLAIN
- PERCOLATION TEST HOLE (HOLE PASSED)
- EXISTING METAL FENCE
- PROPOSED WELL
- EXISTING WELL
- STEEP SLOPES 15%-24%
- STEEP SLOPES 25%+
- 'A' SOIL
- 'B' SOIL
- 'C' SOIL

**VICINITY MAP**  
SCALE: 1"=200'

- ### GENERAL NOTES
- SUBJECT PROPERTY ZONED R-20 PER 02/02/04 COMPREHENSIVE ZONING PLAN.
  - TOTAL AREA OF PROPERTY: 1.176 AC±
  - REFERENCE: LIBER 4044, FOLIO 548
  - PROPERTY ADDRESS: 10865 BRAEBURN ROAD, COLUMBIA, MD 21044.
  - PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
  - DZZ THIS AREA DESIGNATES A PRIVATE SEWAGE AREA, AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). FOR LOTS CREATED PRIOR TO MARCH 1972 IT PROVIDES AT LEAST ENOUGH AREA TO ACCOMMODATE AN INITIAL AND REPLACEMENT SEPTIC SYSTEM WITH A BAT UNIT AS REQUIRED BY THE HOWARD COUNTY HEALTH DEPARTMENT. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS 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 SEWAGE AREAS. RECORDATION OF A MODIFIED SEWAGE AREA AREAS SHALL NOT BE NECESSARY.
  - THIS SITE WILL UTILIZE A BAT/PSD SYSTEM AND THEREFORE THE SEPTIC SYSTEM REQUIREMENTS HAVE BEEN REDUCED TO AN INITIAL AND ONE REPLACEMENT SYSTEM.
  - THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY SHANABERGER & LANE IN MARCH 2018.
  - THE TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY SHANABERGER & LANE, IN MARCH 2016, OFFSITE TOPOGRAPHY IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2011.
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  - ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL AREAS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN-GRADE OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN FIELD LOCATED.
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  - A VARIANCE BY MDE HAS BEEN APPROVED TO ALLOW THE SEPTIC TANK/PUMP TO BE WITHIN STEEP SLOPES.
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**EXISTING CONDITIONS DETAIL**  
SCALE: 1"=30'

### PERCOLATION CERTIFICATION PLAN

#### BRAEBURN LOT 13

10865 BRAEBURN ROAD  
 HOWARD COUNTY, MARYLAND

TAX MAP 35 GRID 17  
 5TH ELECTION DISTRICT

PARCEL 228

**OWNER**  
 ANGELA CRUMP VOLCY &  
 GUERDY VOLCY  
 PSC 78 BOX 12  
 APO AP 96326

**BUILDER**  
 CRAFTMARK HOMES  
 C/O DAVID PASTVA  
 135 BEVERLY ROAD, SUITE 330  
 McLEAN, VA 22101  
 703-342-2012

**SILL ENGINEERING GROUP, LLC**  
 1130 Dovedale Court, Suite 200  
 Marriottsville, Maryland 21104  
 Phone: 443.325.5076  
 Fax: 410.696.2022  
 Email: info@sillengineering.com  
 Civil Engineering for Land Development

DESIGN BY: PS  
 DRAWN BY: AEA  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: JULY 3, 2018  
 PROJECT #: 18-001  
 SHEET #: 1 of 1

PROFESSIONAL CERTIFICATION: 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. 32025, EXPIRATION DATE: JUNE 20, 2019.

### SEPTIC SYSTEM TRENCH DESIGN SPECIFICATIONS

**INITIAL SYSTEM:**  
 DESIGN FLOW:  
 - BEDROOMS AT 150 GPD  
 - 4X150 GPD = 600 GPD  
 SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:  
 - DESIGN FLOW (600 GPD) = 750SF  
 APPLICATION RATE (0.8)  
 - THE INITIAL SYSTEM WILL UTILIZE THE EXISTING TRENCH ON SITE, THE EXISTING TRENCH WILL PROVIDE 432 SQUARE FEET OF THE REQUIRED 750 SQUARE FEET OF DRAINFIELD, THE REMAINING 318 SQUARE FEET WILL BE TREATED IN A SECOND TRENCH (TRENCH I2).

**TRENCH I1**  
 - 90' x 3'W x 6'D, WITH A 2' EFFECTIVE SIDE WALL  
 SIDEWALL REDUCTION CREDIT:  
 - TRENCH WIDTH (W) = 3'  
 - TRENCH EFFECTIVE DEPTH (D) = 2'  
 $(W-2) / (W+1+2D) \times 100 =$   
 $(3-2) / (3+1+2(2)) \times 100 =$   
 $5 / 13 \times 100 = 38\%$   
 EXISTING DRAINFIELD SQUARE FOOTAGE:  
 - 90' x DRAINFIELD SQUARE FOOTAGE X 0.625 = 432 SF  
 3

**TRENCH I2**  
 - APPLICATION RATE: 0.8'  
 - EFFECTIVE AREA BEGINNING DEPTH: 3.0'  
 - BOTTOM MAXIMUM DEPTH: 7.5'  
 SIDEWALL REDUCTION CREDIT:  
 - TRENCH WIDTH (W) = 3'  
 - TRENCH EFFECTIVE DEPTH (D) = 4.5'  
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 LINEAR LENGTH OF TRENCH REQUIRED:  
 - REMAINING DRAIN FIELD  
 SQUARE FOOTAGE (318) X SIDEWALL REDUCTION CREDIT (38%) = 40.28LF  
 TRENCH WIDTH (3')  
 LINEAR LENGTH OF TRENCH PROVIDED = 45 LF

**REPLACEMENT SYSTEM: THREE TRENCHES AT 32'**  
 APPLICATION RATE: 0.8'  
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 - BOTTOM MAXIMUM DEPTH: 7.5'  
 DESIGN FLOW:  
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 SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:  
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 LINEAR LENGTH OF TRENCH REQUIRED:  
 - SQUARE FOOTAGE (750) X SIDEWALL REDUCTION CREDIT (38%) = 95LF  
 TRENCH WIDTH (3')  
 LINEAR LENGTH OF TRENCH PROVIDED = 98 LF

EX. GRADE: TRENCH I1: 305.50' TRENCH I2: 305.25' TRENCH R1: 308.00' TRENCH R2: 305.75' TRENCH R3: 304.00'  
 INVERT: 305.50' 305.25' 305.00' 302.75' 301.00'

**PLAN VIEW**  
SCALE: 1"=30'

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

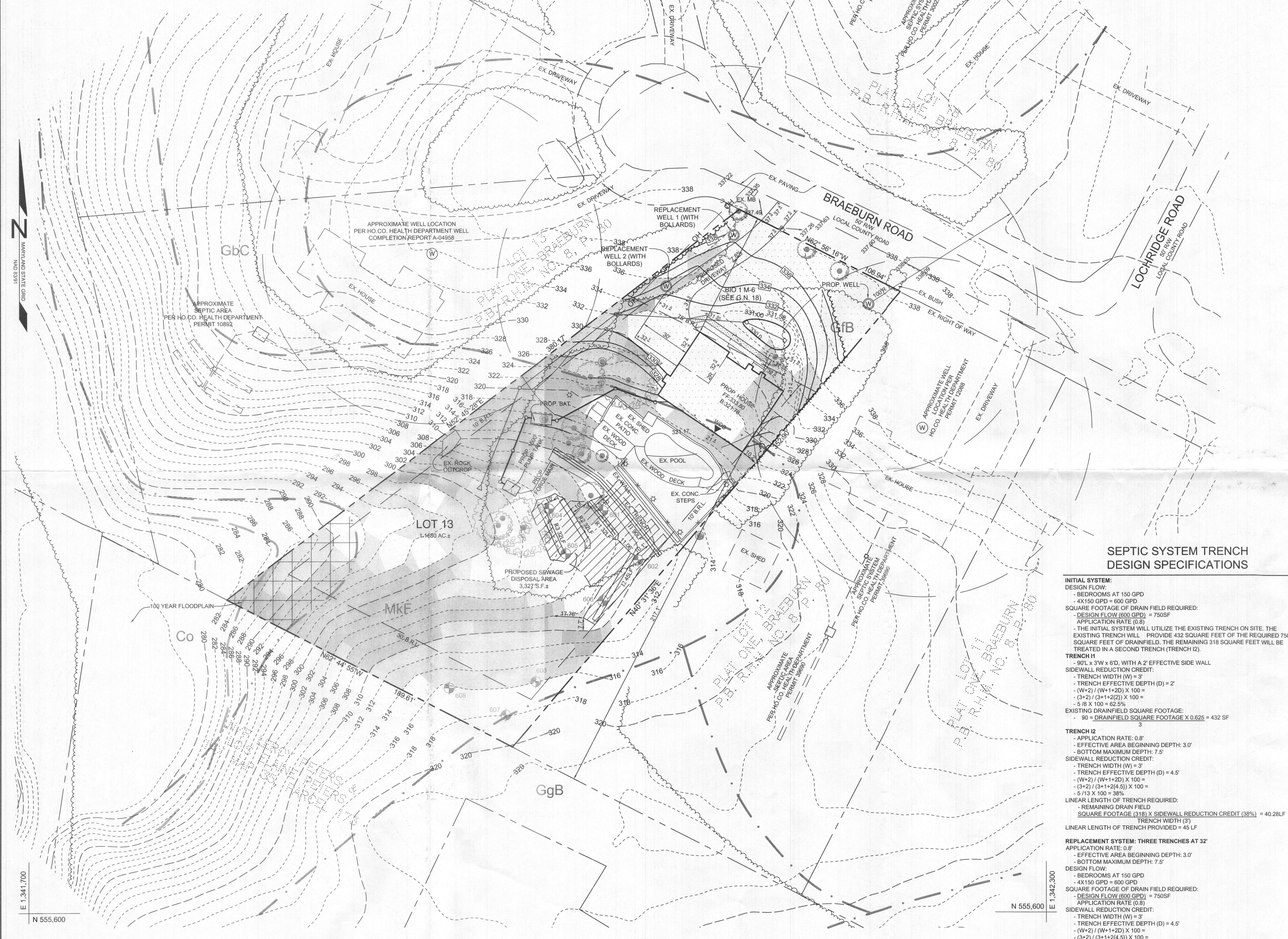
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**PAUL M. SILL, PE, LEED AP**  
 LICENSED PROFESSIONAL ENGINEER #32025

DATE: 7/3/18

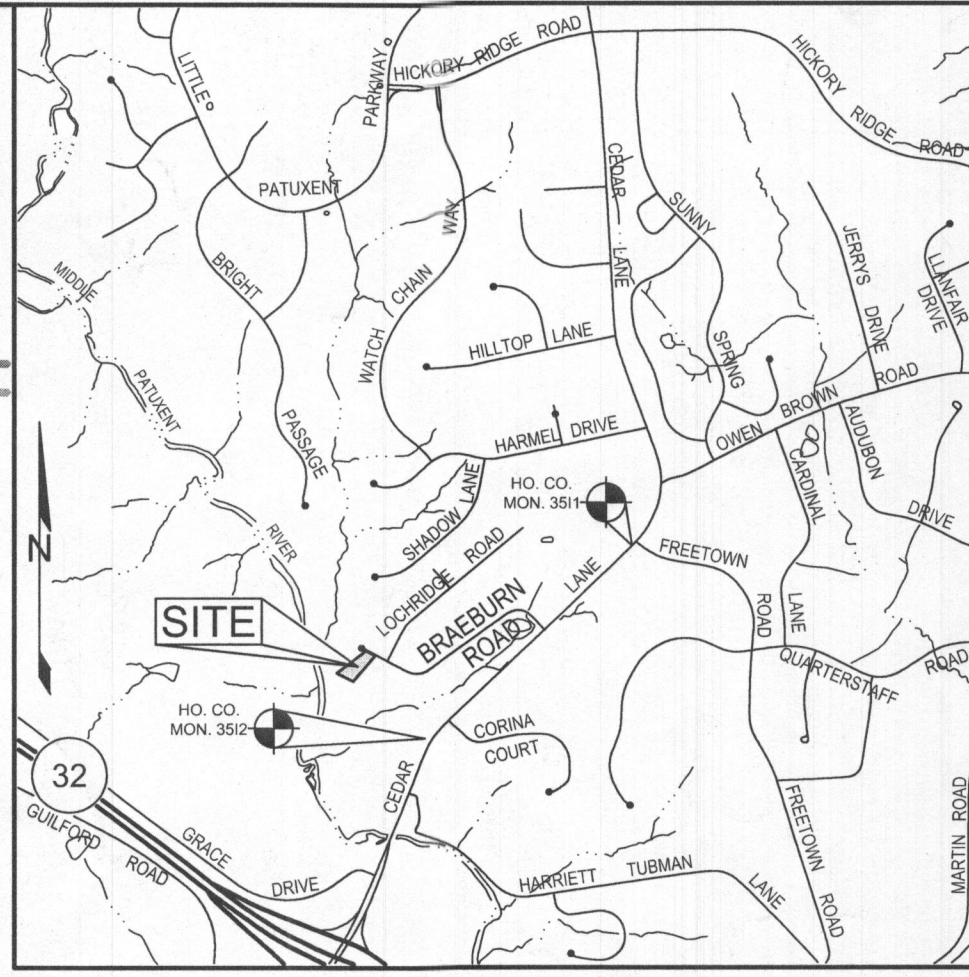
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- PROPOSED SPOT ELEVATION
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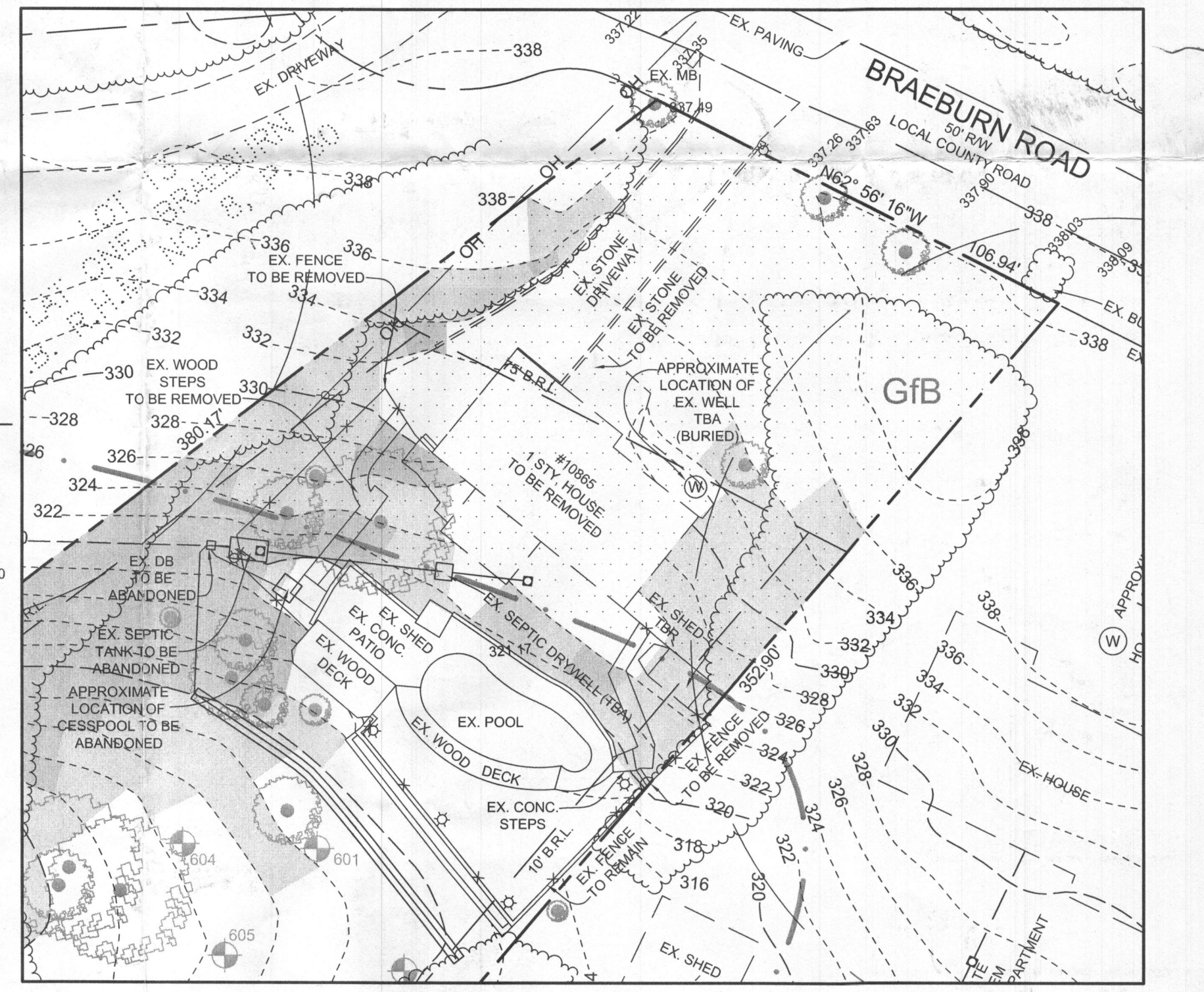
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 $(3-2) / (3+1.2(2)) \times 100 =$   
 $5.18 \times 100 = 62.5\%$   
 EXISTING DRAINFIELD SQUARE FOOTAGE:  
 $90 \times \text{DRAINFIELD SQUARE FOOTAGE} \times 0.625 = 432 \text{ SF}$

**TRENCH I2**  
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EX. GRADE	TRENCH I1:	TRENCH I2:	TRENCH R1:	TRENCH R2:	TRENCH R3:
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EXISTING CONDITIONS DETAIL  
SCALE: 1"=30'

### PERCOLATION CERTIFICATION PLAN

#### BRAEBURN

LOT 13  
 10865 BRAEBURN ROAD  
 PARCEL 228  
 TAX MAP 35 GRID 17  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**OWNER**  
 ANGELA CRUMP VOLCY &  
 GUERDY VOLCY  
 PSC 78 BOX 12  
 APO AF 96326

**BUILDER**  
 CRAFTMARK HOMES  
 C/O DAVID PASTVA  
 1355 BEVERLY ROAD, SUITE 330  
 McLEAN, VA 22101  
 703-342-2012

**SILL ENGINEERING GROUP, LLC**  
 11130 Dovedale Court, Suite 200  
 Marriottsville, Maryland 21104  
 Phone: 443.325.5076  
 Fax: 410.696.3022  
 Email: info@sillingengineering.com  
 Civil Engineering for Land Development

DESIGN BY: PS  
 DRAWN BY: AEA  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: JULY 3, 2018  
 PROJECT #: 18-001  
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APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

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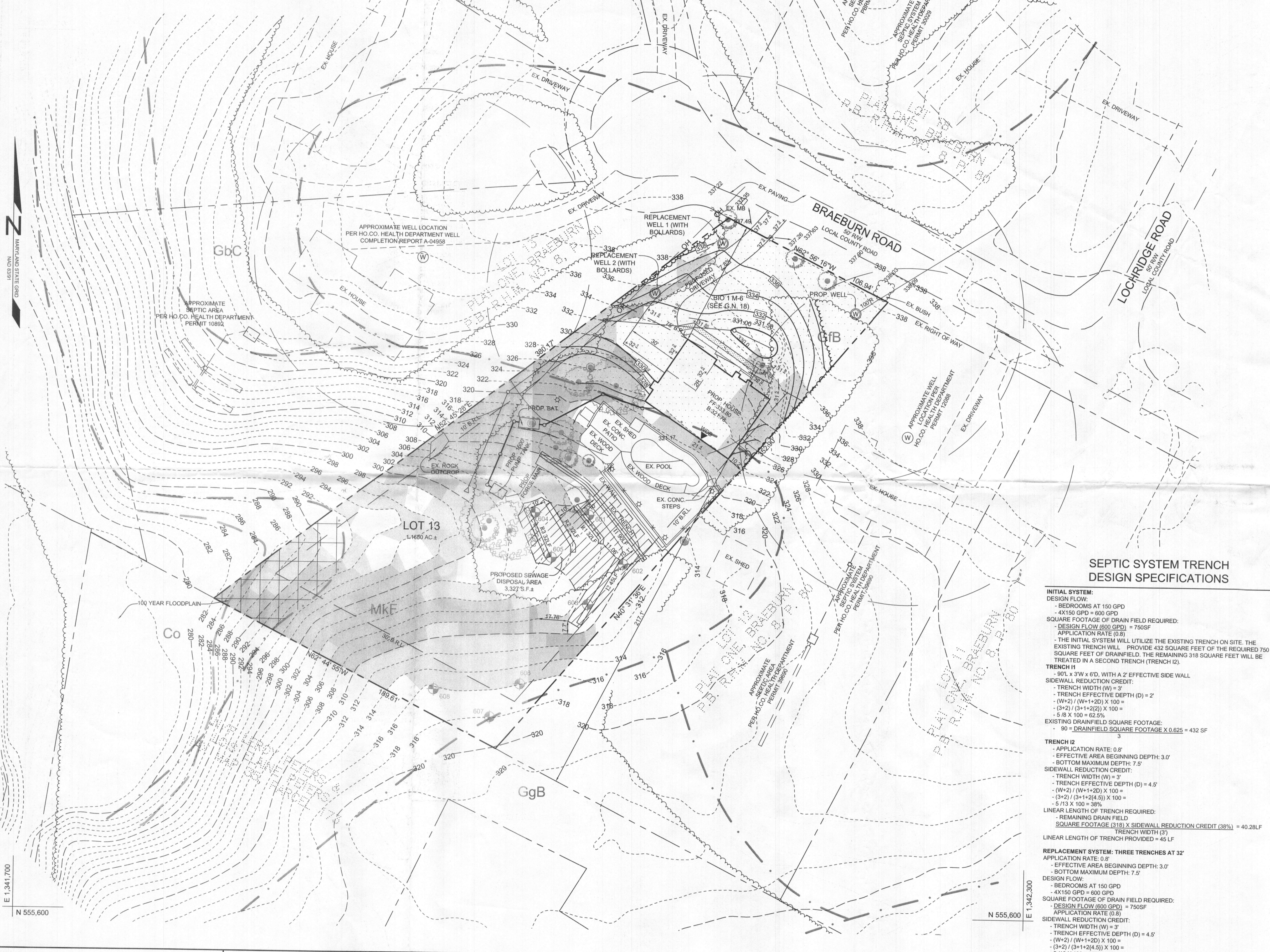
COUNTY HEALTH OFFICER  
 HOWARD COUNTY HEALTH DEPARTMENT  
 DATE: 7/10/18

PAUL M. SILL, PE, LEED AP  
 LICENSED PROFESSIONAL ENGINEER #32025  
 DATE: 7/3/18

PLAN VIEW  
SCALE: 1"=30'

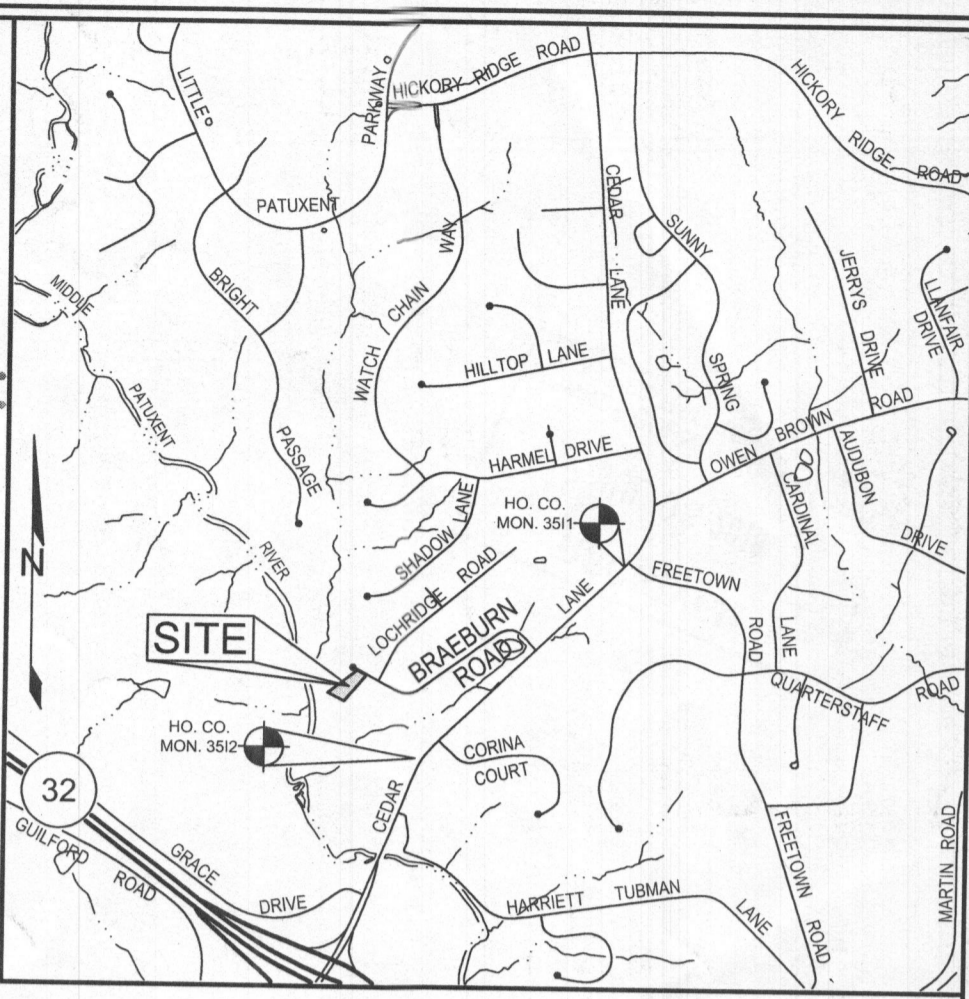
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  - TBA\* TO BE ABANDONED
  - THE NEW WELL MUST BE DRILLED AND THE OLD WELL MUST BE ABANDONED PRIOR TO BUILDING PERMIT APPROVAL.
  - A VARIANCE BY MDE HAS BEEN APPROVED TO ALLOW THE SEPTIC TANK/PUMP TO BE WITHIN STEEP SLOPES.
  - THE PROPOSED MICRO-BIORETENTION FACILITY LOCATED WITHIN THE 100' WELL RADIUS IS TO BE LINED AND SETBACK FROM ANY WELL AND OR PROPOSED WELL LOCATION BY AT LEAST 50 FEET.

### SEPTIC SYSTEM TRENCH DESIGN SPECIFICATIONS

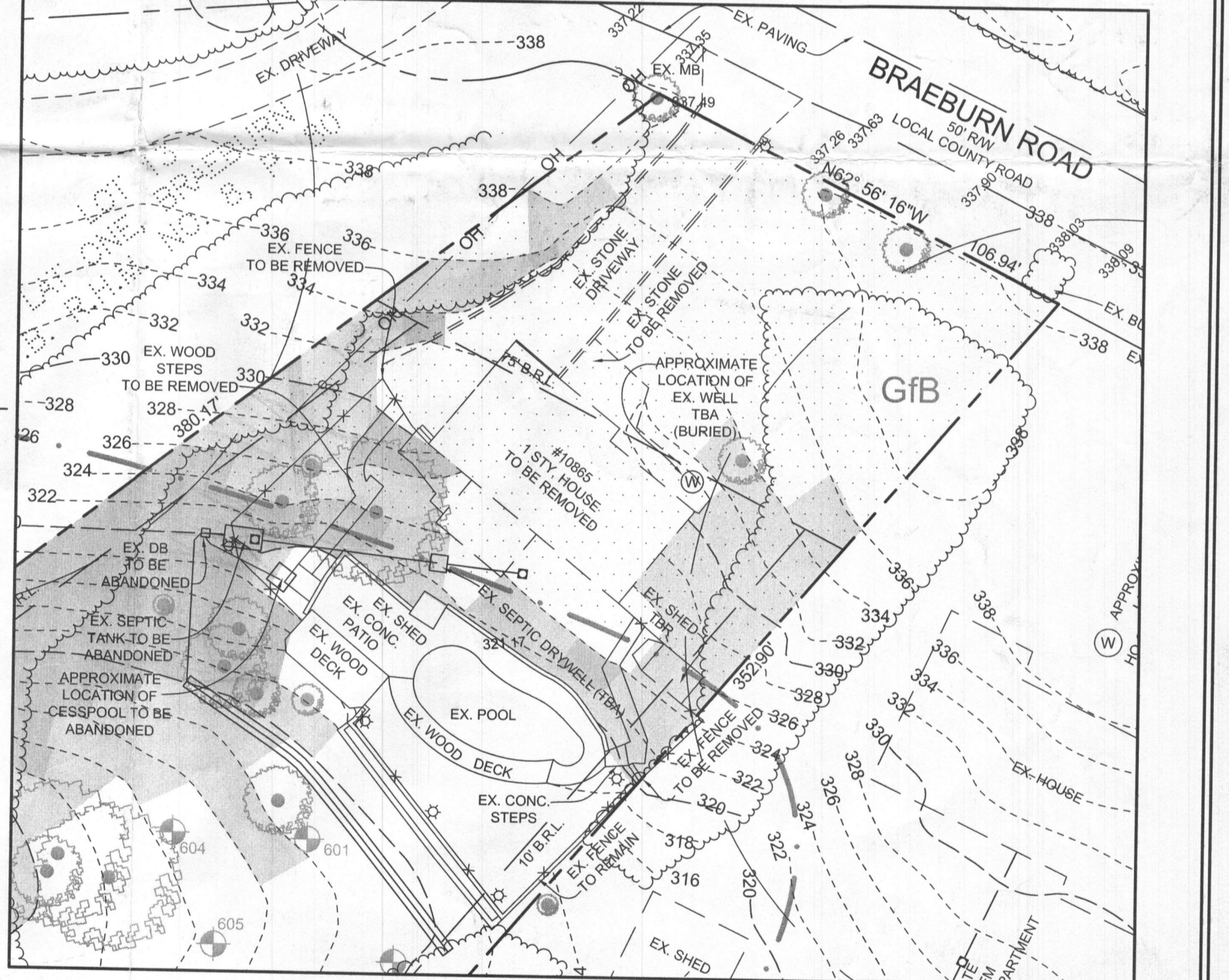
**INITIAL SYSTEM:**  
 DESIGN FLOW:  
 - BEDROOMS AT 150 GPD  
 - 4X150 GPD = 600 GPD  
 SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:  
 - DESIGN FLOW (600 GPD) = 750SF  
 APPLICATION RATE (0.8)  
 - THE INITIAL SYSTEM WILL UTILIZE THE EXISTING TRENCH ON SITE. THE EXISTING TRENCH WILL PROVIDE 432 SQUARE FEET OF THE REQUIRED 750 SQUARE FEET OF DRAINFIELD. THE REMAINING 318 SQUARE FEET WILL BE TREATED IN A SECOND TRENCH (TRENCH I2).

**TRENCH I1**  
 - 80" X 3'W X 6'D, WITH A 2' EFFECTIVE SIDE WALL  
 SIDEWALL REDUCTION CREDIT:  
 - TRENCH WIDTH (W) = 3'  
 - TRENCH EFFECTIVE DEPTH (D) = 2'  
 $(W+2) / (W+1+2D) \times 100 =$   
 $(3+2) / (3+1+2(2)) \times 100 =$   
 $5 / 8 \times 100 = 62.5\%$   
 EXISTING DRAINFIELD SQUARE FOOTAGE:  
 - 90' X DRAINFIELD SQUARE FOOTAGE X 0.625 = 432 SF

**TRENCH I2**  
 - APPLICATION RATE: 0.8'  
 - EFFECTIVE AREA BEGINNING DEPTH: 3.0'  
 - BOTTOM MAXIMUM DEPTH: 7.5'  
 SIDEWALL REDUCTION CREDIT:  
 - TRENCH WIDTH (W) = 3'  
 - TRENCH EFFECTIVE DEPTH (D) = 4.5'  
 $(W+2) / (W+1+2D) \times 100 =$   
 $(3+2) / (3+1+2(4.5)) \times 100 =$   
 $5 / 13 \times 100 = 38\%$   
 LINEAR LENGTH OF TRENCH REQUIRED:  
 - REMAINING DRAIN FIELD SQUARE FOOTAGE (318) X SIDEWALL REDUCTION CREDIT (38%) = 40.28LF  
 TRENCH WIDTH (3')  
 LINEAR LENGTH OF TRENCH PROVIDED = 45 LF

**REPLACEMENT SYSTEM: THREE TRENCHES AT 32'**  
 APPLICATION RATE: 0.8'  
 - EFFECTIVE AREA BEGINNING DEPTH: 3.0'  
 - BOTTOM MAXIMUM DEPTH: 7.5'  
 DESIGN FLOW:  
 - BEDROOMS AT 150 GPD  
 - 4X150 GPD = 600 GPD  
 SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:  
 - DESIGN FLOW (600 GPD) = 750SF  
 APPLICATION RATE (0.8)  
 SIDEWALL REDUCTION CREDIT:  
 - TRENCH WIDTH (W) = 3'  
 - TRENCH EFFECTIVE DEPTH (D) = 4.5'  
 $(W+2) / (W+1+2D) \times 100 =$   
 $(3+2) / (3+1+2(4.5)) \times 100 =$   
 $5 / 13 \times 100 = 38\%$   
 LINEAR LENGTH OF TRENCH REQUIRED:  
 - SQUARE FOOTAGE (750) X SIDEWALL REDUCTION CREDIT (38%) = 98LF  
 TRENCH WIDTH (3')  
 LINEAR LENGTH OF TRENCH PROVIDED = 96 LF

TRENCH I1: 309.50'    TRENCH I2: 309.25'    TRENCH R1: 308.00'    TRENCH R2: 305.75'    TRENCH R3: 304.00'  
 INVERT: 305.50'    306.25'    305.00'    302.75'    301.00'



PLAN VIEW  
SCALE: 1"=30'

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

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.

PAUL M. SILL, PE, LEED AP  
 LICENSED PROFESSIONAL ENGINEER #32025

DATE: 7/31/18

### PERCOLATION CERTIFICATION PLAN

#### BRAEBURN LOT 13

10865 BRAEBURN ROAD  
 TAX MAP 35 GRID 17  
 5TH ELECTION DISTRICT

PARCEL 228  
 HOWARD COUNTY, MARYLAND

**OWNER**  
 ANGELA CRUMP VOLCY & GUERDY VOLCY  
 PSC 78 BOX 12  
 APO AP 96326

**BUILDER**  
 CRAFTMARK HOMES  
 C/O DAVID PASTVA  
 1355 BEVERLY ROAD, SUITE 330  
 McLEAN, VA 22101  
 703-342-2012

DESIGN BY: PS  
 DRAWN BY: AEA  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: JULY 3, 2018  
 PROJECT #: 18-001  
 SHEET #: 1 of 1

PROFESSIONAL CERTIFICATION: 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. 32025, EXPIRATION DATE: JUNE 20, 2019

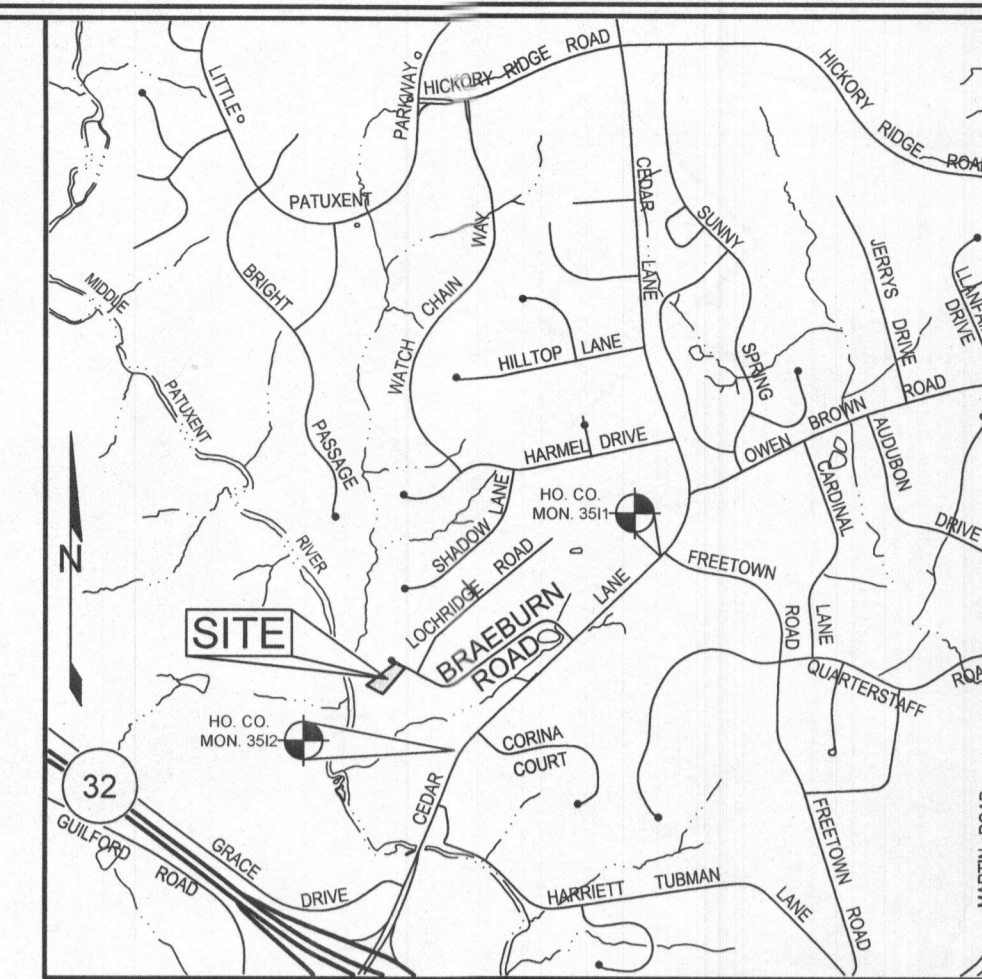
SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GfB	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A	0.28
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	0.24
MfF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.32

- NOTES:
- SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY
  - 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.

# EXHIBIT TO ACCOMPANY ALTERNATIVE COMPLIANCE REQUEST BRAEBURN LOT 13 HOWARD COUNTY, MARYLAND

## LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- SOIL BOUNDARY
- PASSED PERCOLATION TEST LOCATION
- SWM BORING LOCATION
- EXISTING TREE
- EXISTING SPECIMEN TREE
- EXISTING WELL
- STEEP SLOPES 15%-24%
- STEEP SLOPES 25%+
- 'A' SOIL
- 'B' SOIL
- 'C' SOIL

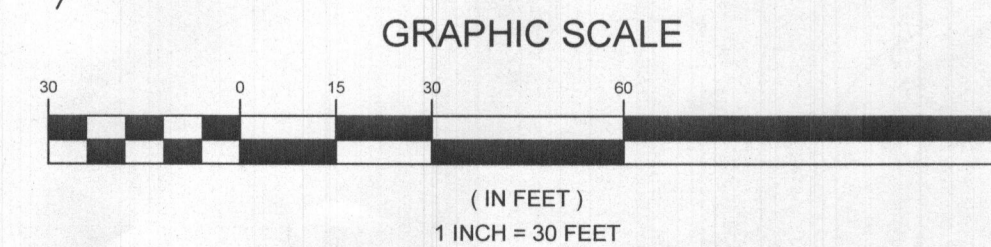


## GENERAL NOTES

- SUBJECT PROPERTY ZONED R-20 PER 02/02/04 COMPREHENSIVE ZONING PLAN.
- TOTAL AREA OF PROPERTY: 1.1680 AC.±
- REFERENCE:
  - PLAT: BRAEBURN, P.B. 8, P.N. 80
  - DEED: LIBER 4044, FOLI 548
- PROPERTY ADDRESS: 10865 BRAEBURN ROAD, COLUMBIA, MD 21044
- THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY SHANABERGER & LANE IN MARCH 2018.
- THE TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY SHANABERGER & LANE, IN MARCH 2018, OFFSITE TOPOGRAPHY IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2011.
- THE SOILS SHOWN HAVE BEEN TAKEN FROM THE US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, WEB SOIL SURVEY WEBSITE.
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
- THIS AREA DESIGNATES A PRIVATE SEWAGE AREA, AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). FOR LOTS CREATED PRIOR TO MARCH 1972 IT PROVIDES AT LEAST ENOUGH AREA TO ACCOMMODATE AN INITIAL AND REPLACEMENT SEPTIC SYSTEM WITH A BAT UNIT AS REQUIRED BY THE HOWARD COUNTY HEALTH DEPARTMENT. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS 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 SEWAGE AREA/AREAS. RECORDATION OF A MODIFIED SEWAGE AREA/AREAS SHALL NOT BE NECESSARY. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THERE IS AN EXISTING HOUSE (CIRCA 1964) THAT IS LOCATED ON-SITE AND SHALL BE RAZED.
- THE EXISTING WELL AND SEPTIC SYSTEM ARE TO BE ABANDONED.
- THIS SITE WILL UTILIZE A BAT/PLPS SYSTEM AND THEREFORE THE SEPTIC SYSTEM REQUIREMENTS HAVE BEEN REDUCED TO AN INITIAL AND ONE REPLACEMENT SYSTEM.
- A VARIANCE BY MOE HAS BEEN APPROVED TO ALLOW THE SEPTIC TANK/PUMP TO BE WITHIN STEEP SLOPES.
- THE PROPOSED MICRO-BIORETENTION FACILITY AND DRYWELL FACILITY LOCATED WITHIN THE 100' WELL RADIUS IS TO BE LINED AND SETBACK FROM ANY WELL AND OR PROPOSED WELL LOCATION BY AT LEAST 50 FEET.
- A FIELD REVIEW PERFORMED BY ECO-SCIENCE PROFESSIONALS IN JUNE, 2018 HAS CONFIRMED THAT NO WETLAND, STREAMS OR BUFFERS ARE PRESENT ON THE PROPERTY.
- THERE ARE NO CEMETERIES WITHIN THE PROJECT BOUNDARY.
- EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:
  - WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
  - SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM);
  - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
  - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
  - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
  - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
- TBA= TO BE ABANDONED
- TBR= TO BE REMOVED
- UNDER SECTION 15.1202(B)(2)(I)(A) OF THE HOWARD COUNTY CODE THIS SITE IS EXEMPT FROM FOREST CONSERVATION OBLIGATIONS BECAUSE THE DEVELOPMENT IS ON AN EXISTING SINGLE LOT AND THE TOTAL CUTTING, CLEARING OR GRADING IS LESS THAN 40,000 SQUARE FEET. A DECLARATION OF INTENT WITH THE DEPARTMENT OF PLANNING AND ZONING.
- APPROVAL OF THE SIMPLIFIED ECP DOES NOT CONSTITUTE APPROVALS OF SUBSEQUENT OR ASSOCIATED SITE DEVELOPMENT PLANS, SUBDIVISION PLANS, GRADING OR BUILDING PERMITS, PLAN REVISIONS OR FOREST CONSERVATION PLANS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL COMMENTS AS THE DEVELOPMENT PLAN PROGRESSES THROUGH THE PLAN REVIEW OR PERMIT APPLICATION PROCESS.
- LIMIT OF DISTURBANCE = 20,500 SQ. FT.
- LIMIT OF CLEARING = 4,141 SQ. FT.

SITE ANALYSIS DATA SHEET	
ENVIRONMENTAL AREA	SIZE OR USE
TOTAL PROJECT AREA	1.1680 AC ±
ROW TO BE DEDICATED	N/A
PROPOSED PROJECT AREA	1.1680 AC ±
LIMIT OF DISTURBANCE	0.4706 AC ±
GREEN OPEN AREA (LAWN)	0.3615 AC ±
PROPOSED IMPERVIOUS AREA	0.1091 AC ±
PROPOSED SITE USES	RESIDENTIAL
WETLANDS	0 AC ±
WETLAND BUFFERS	0 AC ±
FLOODPLAINS	0.0027 AC ±
FLOODPLAIN BUFFERS	0 AC ±
EXISTING FOREST	0 AC ±
SLOPES GREATER THAN 15%	0.2673 AC ±
HIGHLY ERODIBLE SOILS	0.0572 AC ± (1)

BENCHMARKS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
3511	557,110.407	1,344,893.68	400.083	41' SOUTHWEST OF CROSS BUTTON, 39' NORTHWEST OF ED OF SIDEWALK RAMP
3512	555,100.7812	1,342,733.0529	329.758	10.5' WEST OF CEDAR LANE, 31.67' NORTHEAST OF SOUTHERN DW. HSE #6636



SHEET INDEX	
SHEET NO.	DESCRIPTION
1	EXISTING CONDITION PLAN
2	CONCEPTUAL GRADING, LAYOUT, SEDIMENT AND EROSION CONTROL AND SWM PLAN

**EXISTING CONDITIONS PLAN**

**BRAEBURN**  
LOT 13  
10865 BRAEBURN DRIVE  
ZONED: R-20  
PARCEL 228  
5TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**OWNER**  
ANGELA CRUMP VOLCY & GUERDY VOLCY  
PSC 78 BOX 12  
APO AP 96326  
C/O DAVID PASTVA 703-342-2012

**BUILDER**  
CRAFTMARK HOMES  
C/O DAVID PASTVA  
135 BEVERLY ROAD, SUITE 330  
MCLEAN, VA 22101  
703-342-2012

**SILL ENGINEERING GROUP, LLC**  
11130 Dovedale Court, Suite 200  
Marriottsville, Maryland 21104  
Phone: 443.325.5076  
Fax: 410.696.2022  
Email: info@sillengineering.com  
Civil Engineering for Land Development

DESIGN BY: PS  
DRAWN BY: AEA  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: AUGUST 1, 2018  
PROJECT #: 18-001  
SHEET #: 1 of 2

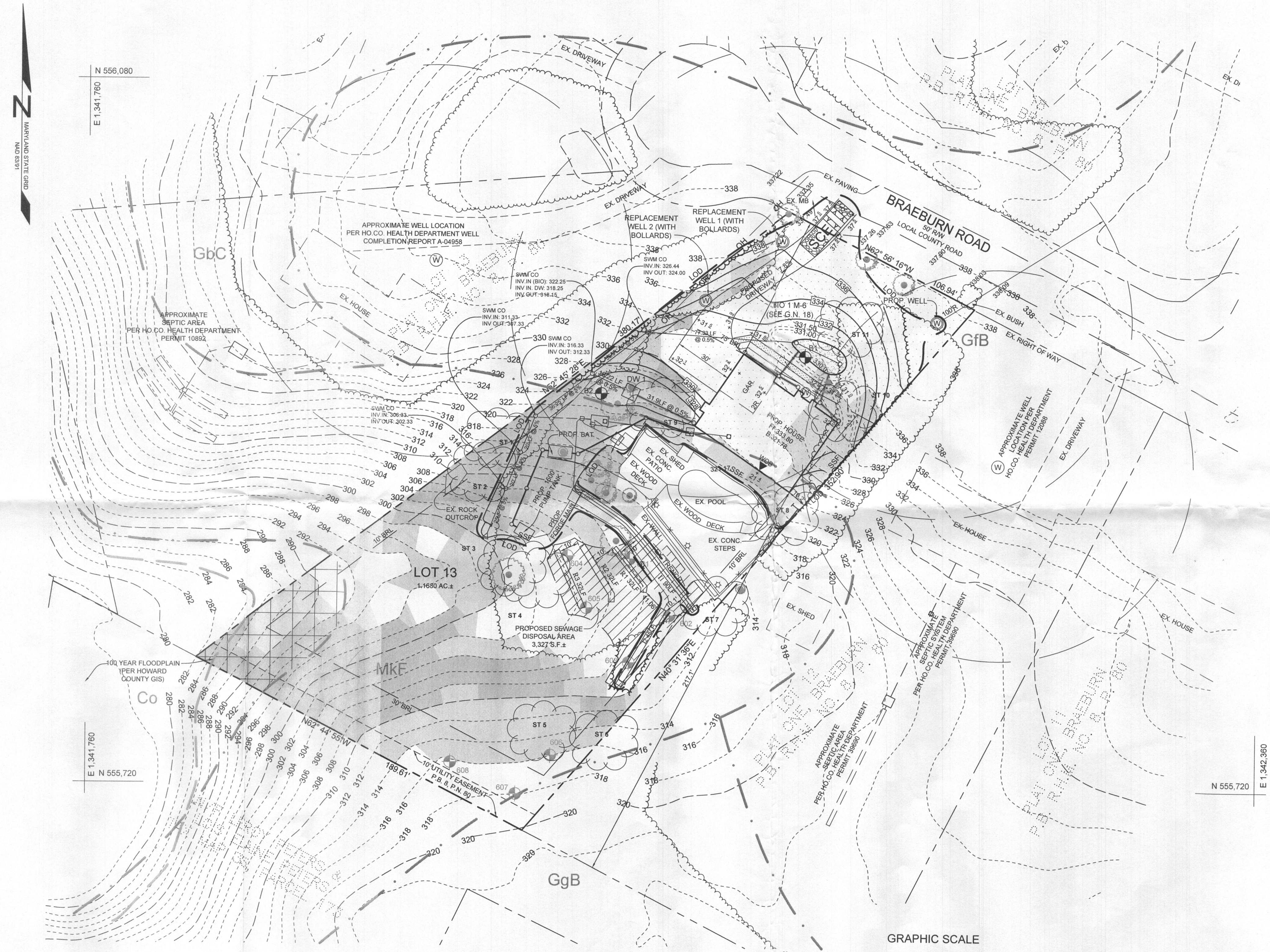
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SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GfB	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A	0.28
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	0.24
MkF	MANOR-BRINKLOW COMPLEX, 25 TO 85 PERCENT SLOPES, VERY ROCKY	B	0.32

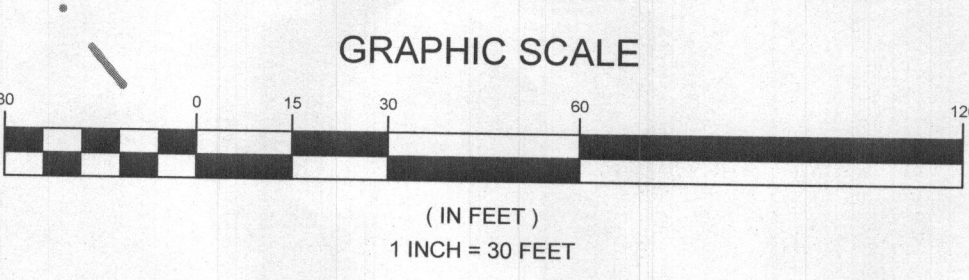
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**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING TREE
- SOIL BOUNDARY
- PROPOSED ROOF LEADER (4" PVC TYP. WITH DOWNSPOUT)
- PROPOSED BIORETENTION FACILITY (M-6)
- PROPOSED DRYWELL
- SILT FENCE
- SILT FENCE
- LIMIT OF DISTURBANCE
- PROPOSED DRAINAGE AREA
- STABILIZED CONSTRUCTION ENTRANCE
- PASSED PERCOLATION TEST LOCATION
- PROPOSED WELL
- STEEP SLOPES 15%-24%
- STEEP SLOPES 25%+
- 'A' SOIL
- 'B' SOIL
- 'C' SOIL
- EXISTING SPECIMEN TREE



**PLAN VIEW**  
SCALE: 1"=30'



**CONCEPTUAL GRADING, LAYOUT, SEDIMENT & EROSION CONTROL AND STORMWATER MANAGEMENT PLAN**  
**BRAEBURN**  
 LOT 13  
 10865 BRAEBURN DRIVE  
 TAX MAP 35 GRID 17 5TH ELECTION DISTRICT  
 ZONED: R-20  
 PARCEL 228 HOWARD COUNTY, MARYLAND

**OWNER**  
 ANGELA CRUMP VOLCY & GUERDY VOLCY  
 PSC 78 BOX 12  
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DESIGN BY: PS  
 DRAWN BY: AEA  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: AUGUST 1, 2018  
 PROJECT #: 18-001  
 SHEET #: 2 of 2

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