



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

562352

APPLICATION

FOR PERCOLATION TESTING AND SITE EVALUATION

PROPERTY LOCATION

SUBDIVISION/PROPERTY NAME #5313 Broadwater Lane

PROPERTY ADDRESS #5313 Broadwater Lane, Clarksville, Maryland 21029

STREET

TOWN

ZIP

TAX ACCOUNT # 05-370019 TAX MAP 28 GRID 15 PARCEL 185 LOT NO. - PROPOSED LOT SIZE (ACRES) 5.00

ZONING CATEGORY RR-DEO TIER

PROPERTY OWNER(S) Saima Khan and Babar Nawaz

DAYTIME PHONE CELL 513-257-3883 EMAIL saimaandbabar@gmail.com

MAILING ADDRESS #5313 Broadwater Lane, Clarksville, Maryland 21029

STREET

CITY, STATE

ZIP

APPLICANT Babar Nawaz

RELATIONSHIP TO OWNER:

DAYTIME PHONE CELL 301-233-2421 EMAIL saimaandbabar@gmail.com

MAILING ADDRESS #5313 Broadwater Lane, Clarksville, Maryland 21029

STREET

CITY, STATE

ZIP

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

PROPERTY:

- SUBDIVISION: NUMBER OF LOTS INCLUDING RESIDUE: SUBDIVISION CLASSIFICATION (PER DEPT. OF PLANNING AND ZONING) MAJOR MINOR
CONSTRUCT NEW OSDS ON UNDEVELOPED LOT
REPAIR OR REPLACE FAILING OSDS
UPGRADE EXISTING OSDS

BUILDING:

- RESIDENTIAL WITH 9** EXISTING OR PROPOSED BEDROOMS IN THE COMPLETED STRUCTURE
COMMERCIAL (PROVIDE DETAIL OF TYPE OF USE AND NUMBERS OF EMPLOYEES/CUSTOMERS ON ACCOMPANYING PLAN)

IS THE PROPERTY WITHIN 2500 FEET OF ANY RESERVOIR?

- YES
NO

**...percolation testing for 7-bedroom Assisted Living Facility and 2-bedrooms for a Resident Family.

AS APPLICANT, I UNDERSTAND THE FOLLOWING:

- THIS APPLICATION IS VALID FOR TWO(2) YEARS FROM DATE OF FEE PAYMENT AND APPROVAL IS BASED UPON HEALTH OFFICER SIGNATURE OF A PERC CERTIFICATION PLAN PRIOR TO EXPIRATION OF THIS PERMIT.
THE APPLICATION FEE IS NON-REFUNDABLE
THIS APPLICATION MUST BE ACCOMPANIED BY ALL APPLICABLE FEES AND A SUITABLE SITE PLAN IN ORDER TO BE PROCESSED
THIS IS A PUBLIC DOCUMENT

I declare and affirm that to the best of my knowledge, the information contained herein is correct. I declare that I am the owner of the property or duly authorized to make this application on behalf of the owner. I agree to comply with all applicable state and county regulations.

By signature of this application, I hereby grant Howard County Health Department officials the right to enter onto the property for the purpose of inspecting the property as directly related to the requested permit/service.

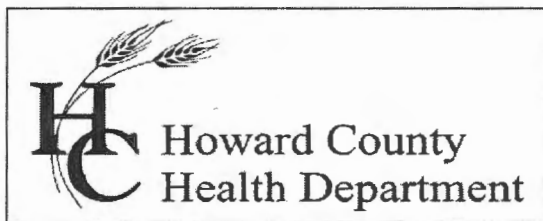
Signature of Babar Nawaz

Signature of Saima Khan

11/28/17

SIGNATURE OF APPLICANT

DATE



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

January 11, 2018

TO: Babar Nawaz, President
CRcare Group, Applicant

RE: 5313 Broadwater Lane, Percolation test results and data

Dear Mr. Nawaz,

Percolation tests were conducted, as scheduled, at 5313 Broadwater Lane on December 28, 2017. These tests were conducted to establish a sewage disposal area (SDA) in support of an anticipated building permit proposal to expand the assisted living facility on the subject property and thereby increase the volume of wastewater discharge. Excavations for 'C' and 'D' were at the staked locations, and the excavation for 'E' was about ten feet (10') downhill from that stake. Soil profiles were described at each location and tests for percolation rate were conducted at 'C' and 'E'. The percolation rate at 'D' was determined by observed soil properties in the excavation.

Locations of percolation tests that 'PASS' are used to define the soils that are suitable for inclusion in an SDA proposed on the Percolation Certification Plan. The results and suitable areas for wastewater discharge may be certified by the Approving Authority's signature of the Percolation Certification Plan. Locations 'C', 'D', and 'E' have soil profiles and percolation rates that 'PASS'. On August 17, 2017, percolation tests 'A' and 'B' were conducted for the purpose of repairing the existing septic system. Locations 'A' and 'B' have soil profiles and percolation rates that 'PASS'. Altogether, the area represented by percolation tests 'A', 'B', 'C', 'D', and 'E' may be considered for approval as a sewage disposal area to serve the residential structure at 5313 Broadwater Lane.

The Percolation Certification Plan required by the Health Department must include a calculation for daily estimated peak flow for the facility based on the number of beds for client residents, plus the number of employees residing at the facility. The illustration of proposed SDA must include 3 drainfield trench systems, each with required length and the required spacing between trenches. A Trench Specifications Sheet is included as an attachment.

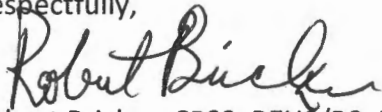
After the Percolation Certification Plan is signed by the Bureau of Environmental Health Director, the septic system upgrade may be permitted. The septic system upgrade is to be presented in an Onsite Sewage Disposal System (OSDS) Plan which must be approved for release of the upgrade permit.

You may employ an option for your engineering consultant to combine the plans. As more detailed information is being conveyed than is normally contained in a Percolation Certification Plan, the development and subsequent approval of the combined plan may require a slightly longer time period than the approval process for the Percolation Certification Plan alone. Approval of the OSDS Plan will also require submittal to the Health Department of a set of floor plans identical to those that will be submitted to the Howard County Department of Inspections, Licenses , and Permits for a building permit.

Please be advised that for installation of a septic system upgrade, all components of the upgrade system must meet current setback requirements. Apparently, this requirement will negate the use of the existing septic tank and it will have to be abandoned as it is within 100 feet of the existing well.

If you have questions related to these comments, you may reply to me via email, rbricker@howardcountymd.gov , or call my desk, 410-313-2691.

Respectfully,



Robert Bricker, CPSS, REHS/RS, L.E.H.S.
Environmental Sanitarian II
Well and Septic Program

Enclosures: Percolation Test Application and Field Worksheets
Copy: William Aldridge, P.L.S., Leon A. Podolak & Assoc. LLC (Buck@LAPodolak.com)
file

A 562352

5313 Broadwater Lane

(1)

(D)

dk brn frozen
 0.2' red & brn sl, thin platy common mica large inclusions of more brown materials, clay coatings on ped faces

2.5' red & brn ls many mica thin platy many medium black inclusions

6' red, yellow red & blk ls thin platy many mica

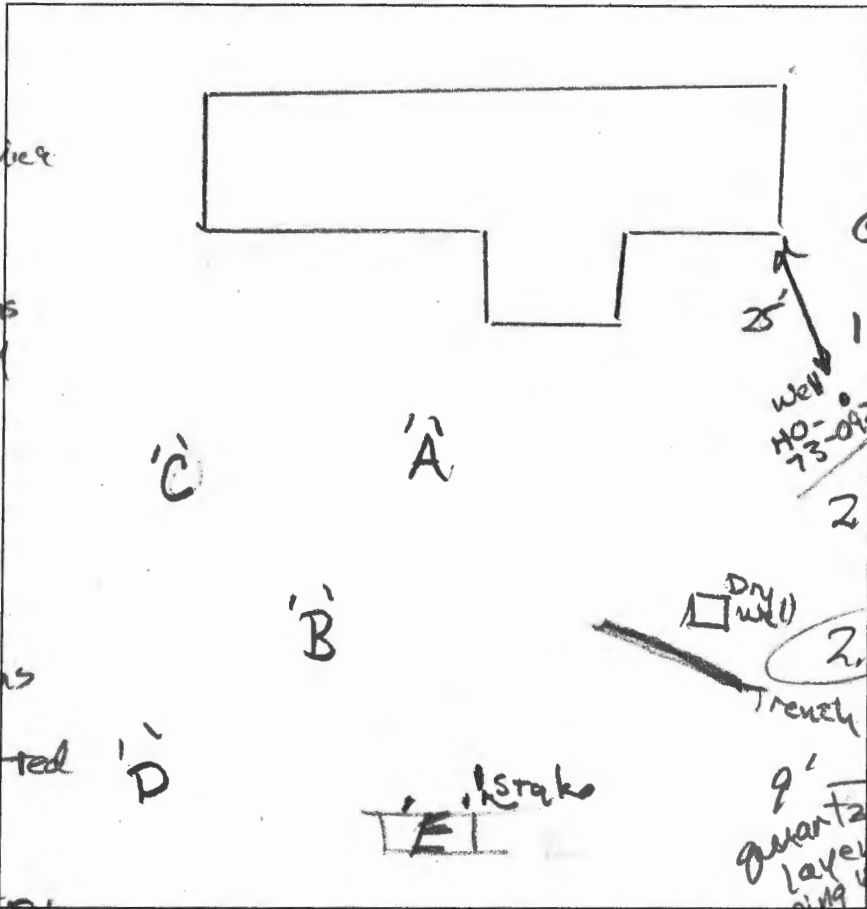
15' DRY

(E) dk brn frozen
 0.2' brn L 2 ssbk
 0.7' yel red L 2 ssbk

2.4' yel-red & blk brn sl
 Thick platy common mica 3-5% rock few clay skins

3.5' red, yellow red & blk ls thin platy many mica

15' DRY

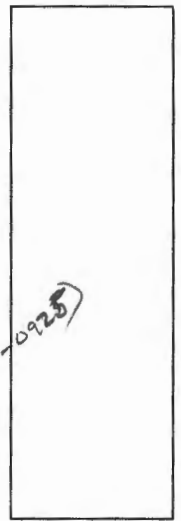
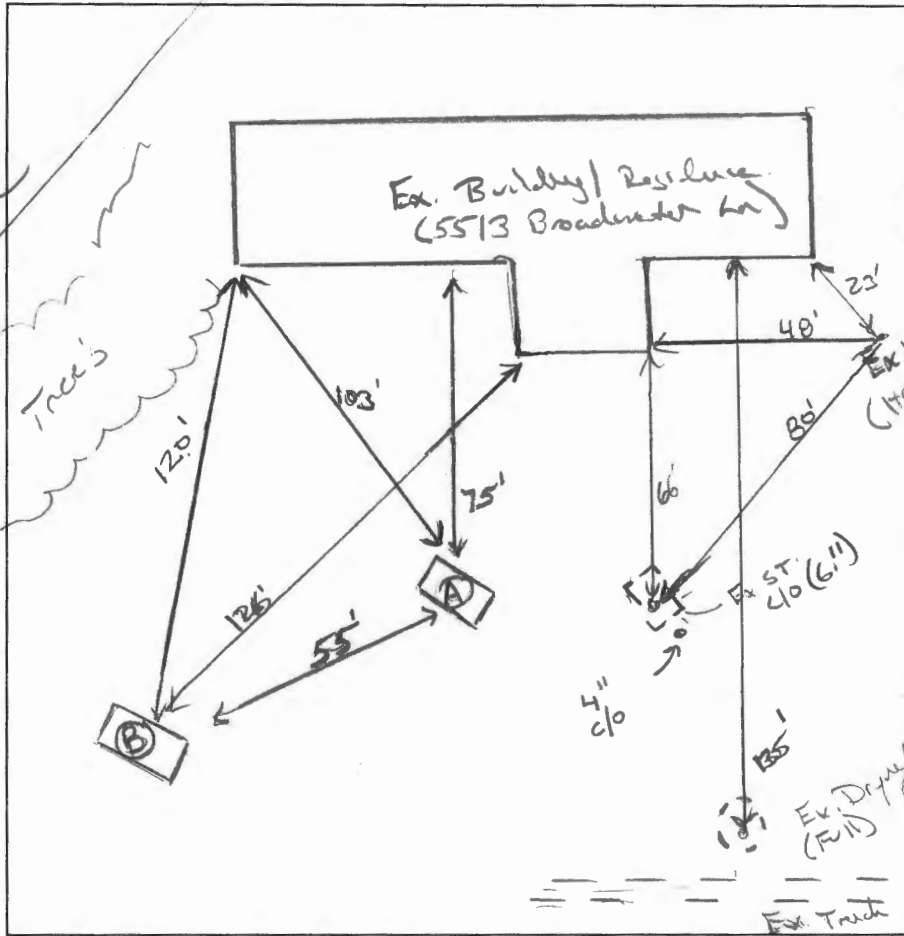


dk brn frozen
 0.2' brn L 2 ssbk
 0.9' yel-red cl, 2 ssbk
 1.6' yel-red & brn L 2 msbk few mica
 2.9' red sl, few mica thick platy
 red, red-yellow and brn ls, thin platy many mica
 Dry

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/H
12/28/17	'C'	4.8/15'	11:15	11:18	11:23	5	P
12/28/17	'E'	5.5/15'	11:26	11:27:30	11:29:40	21	P
12/28/17	'D'	15'	Visual	Sidewalk	3-8'		P
					1/2 grid/42		

REMARKS Perc for SDA; see also results for 'A' & 'B', 7/25/17
 SANITARIAN R Bricker BACKHOE Freedom Spitz OTHERS S Khan & B. Nawaz & Bill Aldridge, P.L.S.
 TEST HOLES USED IN SDA _____ AVG. PERC TIME _____ SQ. FT/BR _____
 TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SW _____

10-12°F



(B)
 Dk Brk. L.
 2 Wk SSK
 10' Br / Yellow 10"
 Thick platy
 irregular Burdy
 Br / Y / K SL
 Thick pl
 common coarse mica.
 4'
 8'
 Br / Y / C. L.S
 may mica
 10% subsoil
 wk platy
 11' pale Br / Yellow
 is thick platy
 moist (16')

(A)
 8" WK Br OM,
 Dense, MRK
 Br Ch heavy
 Dense, Forable
 100% in Frags
 2 WSK
 4' red / yellow
 SL, may mica
 Thick plates
 7' Red / Brown
 Fks.
 WK thick
 platy.
 Dry.
 16"

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/H
7/25/17	(A)	5' 6" / 16" V	00:51	00:54	01:01	7	P
		1 1/2" poured @ 16' 6"			~	8 mpi	P
	(B)	6' / 16" V	00:42	00:44	00:47	3	P
		4' 6"	00:57	00:53	00:55	2	P

REMARKS Enough area to size for 2 beds total (will need floor plus to issue spilt permit)
 SANITARIAN K. Wolf. BACKHOE Dan OTHERS Helper, owner
 TEST HOLES USED IN SDA 2 AVG. PERC TIME 5 SQ. FT/BR 1.2 SPd/ft²
 TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SW _____
 * Loading Rate for Inflow system 1.2

SYMBOLS LEGEND

- INDICATES PERCOLATION TEST LOCATION (SEE TEST RESULTS ON THIS SHEET)
- INDICATES EXISTING WELL LOCATION
- INDICATES ALTERNATE WELL LOCATION
- INDICATES EXISTING GROUND CONTOUR LINE
- THIS AREA DESIGNATES A PRIVATE SEWAGE DISPOSAL AREA OF AT LEAST 10,000 SQ.FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS SEWAGE DISPOSAL AREA SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDED OF A REVISED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
- INDICATES PRIVATE SEPTIC SYSTEM DRAIN LINES TO BE INSTALLED (SEE SEWAGE FLOW CALCULATIONS)
- INDICATES REPLACEMENT PRIVATE SEPTIC SYSTEM DRAIN LINES (SEE SEWAGE FLOW CALCULATIONS)

PROPOSED PRIVATE SEWERAGE DISPOSAL SYSTEM:
 INITIAL SEWERAGE DISPOSAL SYSTEM SHALL CONSIST OF:
 4 (FOUR) DEEP TRENCH DRAIN LINES, EACH 3FT. WIDE, 50'-0" LONG, WITH 4.0 FT. DEPTH OF STONE BELOW INVERT OF THE DRAIN LINE.
 1ST REPLACEMENT SEWERAGE DISPOSAL SYSTEM SHALL CONSIST OF:
 4 (FOUR) DEEP TRENCH DRAIN LINES, EACH 3FT. WIDE, 50'-0" LONG, WITH 4.0 FT. DEPTH OF STONE BELOW INVERT OF THE DRAIN LINE.
 2ND REPLACEMENT SEWERAGE DISPOSAL SYSTEM SHALL CONSIST OF:
 3 (THREE) DEEP TRENCH DRAIN LINES, EACH 3FT. WIDE, 71'-8" LONG, WITH 3.5 FT. DEPTH OF STONE BELOW INVERT OF THE DRAIN LINE.

SEPTIC INSTALLER SHALL TEST PIT FOR LOCATION AND ELEVATION OF EX. SANITARY SEWER CONNECTION PIPING. CONTACT THE OFFICE OF LEON A. PODOLAK AND ASSOCIATES, LLC FOR VERIFICATION OF LINES AND GRADES FOR CONNECTION TO NEW TANK INSTALLATION. ABANDON EXISTING 1,250 GALLON SEPTIC TANK IN ACCORDANCE WITH HOWARD COUNTY HEALTH DEPARTMENT REQUIREMENT. INSTALL (1)-2,000 GALLON AND (1)-1,000 GALLON, TOP SEAM, SINGLE COMPARTMENT, CONCRETE SEPTIC TANK IN SERIES AS SHOWN.

STEVE W. GILLIECE
 KATHLEEN GILLIECE
 DEED: C.M.P. 1164/746
 #13111 LINDEN CHURCH RD.

WILLIAM D. HORICE
 KAY I. HORICE
 DEED: M.D.R. 2691/640
 #5345 BROADWATER LANE

JOSEPH M. MILLS, JR., TRUSTEE
 LINDA ASHDOWN, TRUSTEE
 DEED: M.D.R. 11193/30
 #5341 BROADWATER LANE

ALLEN W. CURRANG, TRUSTEE
 BARBARA A. CURRANG, TRUSTEE
 DEED: W.A.R. 17236/147
 #13025 LINDEN CHURCH RD.

PAUL W. VON STEIN, TRUSTEE
 ELISABETH A. VON STEIN, TRUSTEE
 DEED: M.D.R. 9799/723
 #13015 LINDEN CHURCH RD.

HERMAN RUBENSTEIN
 ELIZABETH RUBENSTEIN
 DEED: C.M.P. 1090/635
 #5317 BROADWATER LANE

SUBDIVISION/SITE: **#5313 Broadwater Lane, Clarksville**

Test #	Test Type	Ground Elev.	Percolation Rate	Percolation Rate	Comments	Date	Test #	San.
A	DT	748.15	7 min at 5.5 ft		>8 minutes at 16.5 feet	07/25/17	A	Wolf
B	DT	745.75	2 min at 4.5 ft	3 min at 6 ft	>2 minutes at 16.0 feet	07/25/17	B	Wolf
C	DT	746.40	5 min at 4.8 ft		>2 minutes at 15.0 feet	12/28/17	C	Bricker
D	OH	742.35			>2 minutes at 15.0 feet	12/28/17	D	Bricker
E	DT	741.60	2 min at 5.5 ft		>2 minutes at 15.0 feet	12/28/17	E	Bricker

SEWAGE FLOW CALCULATIONS

Calculations based on State of Maryland COMAR 26.04.02.05
 Proposed 14 bedroom Assisted Living Facility with Resident Family
 Design flowrate = 100 gallons per day per bedroom (Assisted Living Facility)
 150 gallons per day per bedroom (Resident Family)
 Sewage Flow = (14 beds) x (100 GPD) + (2 bedrooms) x (150 GPD)
 Sewage Flow = 1,700 gallons per day (GPD)
 Maximum Load Rate = 1.2 GPD / SQ.FT.
 Absorptive Area = 1,700 GPD / (1.2 GPD / SQ.FT.) = 1,417 SQ.FT.

SEPTIC TANK DESIGN
 Tank Volume = 1,125 + 0.75 x (1,700) = 2,400 gallons
 An existing 1,250 gallon septic tank is currently installed for the existing house at #5313 Broadwater Lane. This existing tank is to be abandoned per Health Department requirements and (1) proposed 2,000 gallon septic tank and (1) proposed 1,000 gallon septic tank, single compartment, shall be installed (in series) to provided the required volume.

SEWAGE DISPOSAL SYSTEM DESIGN
DEEP TRENCH SYSTEM DESIGN (INITIAL AND 1ST REPLACEMENT SYSTEM)
 Length of standard trench (3ft. wide) = 1,417 sq. ft. = 473 ft.
 Trench stone depth = 4.0 feet
 Deep trench conversion factor = (w+2) / (w+1+2d) = 41.67%
 Length of deep trench required = (473 ft.) x (0.4167) = 198 ft.
 198 feet of deep trench with a stone depth of 4.0 feet is required.
 Use four deep trench drain lines, each 3.0 ft. wide, 50'-0" feet long, with a depth of stone of 4.0 feet below invert of drain line.

DEEP TRENCH SYSTEM DESIGN (2ND REPLACEMENT SYSTEM)
 Length of standard trench (3ft. wide) = 1,417 sq. ft. = 473 ft.
 Trench stone depth = 3.5 feet
 Deep trench conversion factor = (w+2) / (w+1+2d) = 45.45%
 Length of deep trench required = (473 ft.) x (0.4545) = 215 ft.
 215 feet of deep trench with a stone depth of 3.5 feet is required.
 Use three deep trench drain lines, each 3.0 ft. wide, 71'-8" feet long, with a depth of stone of 3.5 feet below invert of drain line.

GENERAL NOTES:

- Zoning: RR-DEO (RURAL RESIDENTIAL - DENSITY EXCHANGE OPTION)
- Current Title Reference:
 TAX MAP: 28 GRID: 15 PARCEL: 185 TAX ACCT. NO.: 05-370019
 SAIMA KHAN BABAR NAWAZ
 DEED: W.A.R. 17849/316 5.000 ACRES±
- The topography of this plot is taken from Howard County GIS data and was field verified and updated on October 20, 2017 by Leon A. Podolak & Associates, LLC.
- Water: PRIVATE
 Sewer: PRIVATE
- Soil types shown hereon were taken from the National Resources Conservation Service Web Soil Survey 2.0, National Cooperative Soil Survey, Howard County, Maryland (MD013), Soil Maps Version 12, Sept. 18, 2017. (<http://websoilsurvey.nrcs.usda.gov>)
- Any changes to a private sewage easement shall require a revised percolation certification plan.
- 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 upgrade the private sewerage facilities and designate an area of at least 10,000 sq.ft. for private sewerage facilities, for the existing dwelling at #5313 Broadwater Lane, to comply with Howard County Code.
- A composite sample (not a grab sample) over a period of several days must be obtained at the septic tank inlet. Analyses for total suspended solids (TSS) and biological oxygen demand (BOD) are required. If the analyses indicate TSS exceeding 300mg/l and/or BOD exceeding 300mg/l, an advanced pre-treatment unit must be included in the septic system design.

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEMS
Signature for Maria Rosemary 4/25/2018
 HEALTH OFFICER, HOWARD COUNTY HEALTH DEPT. DATE: 4/25/2018

PERCOLATION CERTIFICATION PLAN for #5313 BROADWATER LANE

(RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN DEED: W.A.R. 17849/316)
 #5313 BROADWATER LANE NEAR CLARKSVILLE
 5-TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PROPERTY OWNERS / APPLICANT
 SAIMA KHAN
 BABAR NAWAZ
 #5313 BROADWATER LANE
 CLARKSVILLE, MARYLAND 21029
 PHONE: 301-233-2421

Signature
 Peter L. Podolak, P.E.

#5313 BROADWATER LANE HOWARD CO. TAX MAP: 28 GRID: 15 PARCEL: 185 TAX ACCT. NO.: 05-370019

LEON A. PODOLAK and ASSOCIATES, L.L.C.

SHEET 1 OF 1

SURVEYING and CIVIL ENGINEERING
 147 East Main St. (P.O. Box 216) Westminster, Maryland 21157
 (410) 848-2229 - (410) 876-1228

Date: 12-15-2017
 Revision: ADD PERC TEST LOCATIONS
 1-23-2018 PERC TEST RESULTS AND FINALIZE SYSTEM DESIGN
 2-27-2018 MAXIMIZE BEDROOMS FOR SAIMA KHAN BABAR NAWAZ
 3-27-2018 SEPTIC SYSTEM DESIGN HEALTH DEPT COMMENTS

Date: Nov. 28, 2017
 Scale: 1"=50'
 Drawing No.

I hereby 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.
Signature of Peter L. Podolak
 PETER L. PODOLAK, P.E. Reg.no. 19561

PLAN VIEW
 SCALE: 1"=50'

SYMBOLS LEGEND

- $\Delta \circ$ INDICATES PERCOLATION TEST LOCATION (SEE TEST RESULTS ON THIS SHEET)
- Δ EX. WELL INDICATES EXISTING WELL LOCATION
- \triangle ALTERNATE WELL INDICATES ALTERNATE WELL LOCATION
- 500' --- INDICATES EXISTING GROUND CONTOUR LINE
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 $Seepage\ Flow = 1,700\ gallons\ per\ day\ (GPD)$
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 Absorptive Area = 1,700 GPD / (1.2 GPD / SQ.FT.) = 1,417 SQ.FT.

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SEWAGE DISPOSAL SYSTEM DESIGN

DEEP TRENCH SYSTEM DESIGN (INITIAL AND 1ST REPLACEMENT SYSTEM)

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 Length of deep trench required = $(473\ ft.) \times (0.4167) = 198\ ft.$
 198 feet of deep trench with a stone depth of 4.0 feet is required.
 Use four deep trench drain lines, each 3.0 ft. wide, 50'-0" feet long, with a depth of stone of 4.0 feet below invert of drain line.

DEEP TRENCH SYSTEM DESIGN (2ND REPLACEMENT SYSTEM)

Length of standard trench (3ft. wide) = 1,417 sq. ft. = 473 ft.
 Trench slope depth = 3.5 feet
 Deep trench conversion factor = $(w+2) / (w+1+2d) = 45.45\%$
 Length of deep trench required = $(473\ ft.) \times (0.4545) = 215\ ft.$
 215 feet of deep trench with a stone depth of 4.0 feet is required.
 Use three deep trench drain lines, each 3.0 ft. wide, 71'-8" feet long, with a depth of stone of 3.5 feet below invert of drain line.

GENERAL NOTES:

- Zoning: RR-DEO (RURAL RESIDENTIAL - DENSITY EXCHANGE OPTION)
- Current Title Reference:
 TAX MAP: 28 GRID: 15 PARCEL: 185 TAX ACCT. NO.: 05-370019
 SAIMA KHAN BABAR NAWAZ
 DEED: W.A.R. 17849/316 5.000 ACRES.
- The topography of this plot is taken from Howard County GIS data and was field verified and updated on October 20, 2017 by Leon A. Podolak & Associates, LLC.
- Water: PRIVATE
- Sewer: PRIVATE
- Soil types shown hereon were taken from the National Resources Conservation Service Web Soil Survey 2.0, National Cooperative Soil Survey, Howard County, Maryland (MD013). Soil Maps Version 12, Sept. 18, 2017. (<http://websoilsurvey.nrcs.usda.gov>)
- Any changes to a private sewage easement shall require a revised percolation certification plan.
- The purpose of this plan is to upgrade the private sewerage facilities and designate an area of at least 10,000 sq.ft. for private sewerage facilities, for the existing dwelling at #5313 Broadwater Lane, to comply with Howard County Code.
- A composite sample (not a grab sample) over a period of several days must be obtained at the septic tank inlet. Analyses for total suspended solids (TSS) and biological oxygen demand (BOD) are required. If the analyses indicate TSS exceeding 300mg/l and/or BOD exceeding 300mg/l, an advanced pre-treatment unit must be included in the septic system design.

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEMS
[Signature]
 HEALTH OFFICER, HOWARD COUNTY HEALTH DEPT. DATE 4/25/2018

PERCOLATION CERTIFICATION PLAN for #5313 BROADWATER LANE

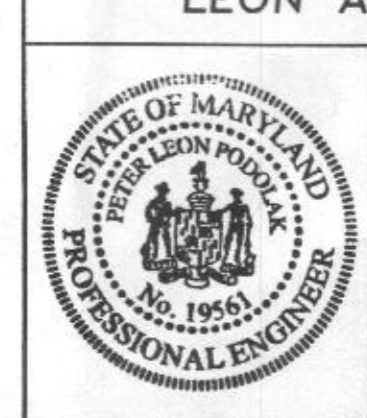
(RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN DEED: W.A.R. 17849/316)
 #5313 BROADWATER LANE NEAR CLARKSVILLE
 5-TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PROPERTY OWNERS / APPLICANT
 SAIMA KHAN
 BABAR NAWAZ
 #5313 BROADWATER LANE
 CLARKSVILLE, MARYLAND 21029
 PHONE: 301-233-2421

Signed Per Cert

#5313 BROADWATER LANE HOWARD CO. TAX MAP: 28 GRID: 15 PARCEL: 185 TAX ACCT. NO.: 05-370019

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SURVEYING and CIVIL ENGINEERING
 147 East Main St. (P.O. Box 266) Westminster, Maryland 21157
 (410) 848-2229 - (410) 876-1226

[Signature]
 Peter L. Podolak, P.E. Date

I hereby certify that these documents were prepared or approved by me, and I am a duly licensed professional engineer under the laws of the State of Maryland, license no. 19561, expiration date: 3-3-2020.

Date	Revision
12-15-2017	ADD PERC. TEST LOCATIONS
1-23-2018	PERC. TEST RESULTS and FINALE SYSTEM DESIGN
2-27-2018	WARPAGE RESPONSE FOR SEPTIC SYSTEM DESIGN
3-27-2018	HEALTH DEPT COMMENTS

Date: Nov. 28, 2017
 Scale: 1"=50'
 Drawing No.

I hereby 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.

[Signature]
 Peter L. Podolak, P.E. Reg. no. 19561