



APPLICATION

FOR PERCOLATION TESTING AND SITE EVALUATION

TEST DATE(S) _____ TEST TIME _____

APP 528494

AGENCY REVIEW: _____

DATE 2/12/08

DO NOT WRITE ABOVE THIS LINE

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

CHECK AS NEEDED:

- CONSTRUCT NEW SEPTIC SYSTEM(S)
- REPAIR/ADD TO AN EXISTING SEPTIC SYSTEM
- REPLACE AN EXISTING SEPTIC SYSTEM

CHECK AS NEEDED:

- NEW STRUCTURE(S)
- ADDITION TO AN EXISTING STRUCTURE
- REPLACE AN EXISTING STRUCTURE

CHECK ONE:

- CREATE NEW ~~LOTS~~ USE
- BUILD ON AN EXISTING LOT IN A SUBDIVISION
- BUILD ON AN EXISTING PARCEL OF RECORD

IS THE PROPERTY WITHIN 2500' OF ANY RESERVOIR?

- YES
- NO

THE TYPE OF STRUCTURE IS:

- RESIDENTIAL WITH _____ PROPOSED BEDROOMS IN THE COMPLETED STRUCTURE (NOTE **UNKNOWN** IF APPROPRIATE)
- COMMERCIAL (PROVIDE DETAIL OF NUMBERS AND TYPES OF EMPLOYEES/ CUSTOMERS ON ACCOMPANYING PLAN)
- INSTITUTIONAL/GOVERNMENT (PROVIDE DETAIL OF NUMBERS AND TYPES OF EMPLOYEES/USERS ON ACCOMPANYING PLAN)

PROPERTY OWNER(S) RAHESH CHOPRA

DAYTIME PHONE _____ CELL _____ FAX _____

MAILING ADDRESS 10300 CASTLEFIELD STREET, ELLICOTT CITY, MD 21042
STREET CITY/TOWN STATE ZIP

APPLICANT Robert Vogel
LAND DESIGN & DEVELOPMENT ATTN: ROB WEBSTER

DAYTIME PHONE 443-367-0422 CELL 410-977-1324 FAX 443-367-0420

MAILING ADDRESS 5300 DORSEY HALL DRIVE, ELLICOTT CITY, MD 21042
STREET CITY/TOWN STATE ZIP

APPLICANT'S ROLE: DEVELOPER BUILDER BUYER RELATIVE/FRIEND REALTOR CONSULTANT

PROPERTY LOCATION
SUBDIVISION/PROPERTY NAME CHOPRA PROPERTY LOT NO. _____

PROPERTY ADDRESS 13306 ROUTE 108 HIGHLAND 20777
STREET TOWN/POST OFFICE

TAX MAP PAGE(S) 40 GRID 5 PARCEL(S) 66 PROPOSED LOT SIZE _____

AS APPLICANT, I UNDERSTAND THE FOLLOWING: THE SYSTEM INSTALLED SUBSEQUENT TO THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS APPLICATION IS COMPLETE WHEN ALL APPLICABLE FEES AND A SUITABLE SITE PLAN HAVE BEEN RECEIVED. I ACCEPT THE RESPONSIBILITY FOR COMPLIANCE WITH ALL M.O.S.H.A. AND "MISS UTILITY" REQUIREMENTS. APPROVAL IS BASED UPON SATISFACTORY REVIEW OF A PERC CERTIFICATION PLAN.

TEST RESULTS WILL BE MAILED TO APPLICANT. Meghan Brett
SIGNATURE OF APPLICANT

HOWARD COUNTY HEALTH DEPARTMENT, BUREAU OF ENVIRONMENTAL HEALTH, WELL AND SEPTIC PROGRAM
7178 COLUMBIA GATEWAY DRIVE COLUMBIA, MARYLAND 21046 (410) 313-2640 FAX (410) 313-2648
TDD (410) 313-2323 TOLL FREE 1-877-4MD-DHMH

A/P

8

1' dk brn scl
2' fsbk
brn scl
2' msbk
to 1' msbk
3' brn sl micaceous
variegated
saprolite
w/ medium
red-brn scl
inclusions
& an intruding
(from above)
clay laminae
red brown
C 2 D grey
C 1 part red
orange

few stones

7' H. brown sl
micaceous
saprolite (gneiss)
and brn sl

16'

9

1' dk brn scl
2' fsbk
brn scl
2' msbk
common mica
brn scl
1' csbk heavy
3.5' micaceous
brn sl, & m
micaceous
heavy
4.5' brn sl & m
saprolite
micaceous
16'

4

dk brn scl
2' fsbk
to 2' msbk
brn scl
1' csbk
to common mica
variegated
heavy sl
micaceous
irregular
boundary

lens

pale brn sl
variegated
brn sl
micaceous
stones & boulders
seen vertical
between them

10

1' dk brn scl
brn scl
3' wavy boundary
heavy sl
pale brn sl
pale brn sl
variegated
w/ black
15% stone & boulders
brn sl variegated
micaceous

16'

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/H
3/4/08	8	8.5' / 16'	Ø	1.4	4.4	3	P
3/4/08	1	6' / 16'	Ø	5	13	8	P
3/4/08	8	6.5' / 16'	Ø	2	6.3	4.3	P
3/4/08	9	6.5' / 16'	Ø	3.4	10.5	7.1	P
3/4/08	4	6.5' / 16'	Ø	1.7	5.7	4	P
3/4/08	4	16'	Visual	OK	moderately rapid		P
3/4/08	10	6' / 16'	Ø	2.2	5.2	3	P

0.7' dk brn scl
1' fsbk
brn & red brn
scl 2' msbk
common mica
3' yellow-red
heavy sl
4' dk, gray-brn
variegated
w/ black
sl saprolite
& pale brn
variegated sl
both dipping
16' 15' at bottom

REMARKS Did Not Perc 11, 12 & 13.
 SANITARIAN RB BACKHOE Mike Johnson OTHERS U. Johnson Jr Robert Webster
 TEST HOLES USED IN SDA _____ AVG. PERC TIME _____ SQ. FT/BR _____
 TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SW _____

A/P

2

0.8' brn sl 1 lb
to 2' sbk

1.8' brn scl 2msbk

red brn st scl
2 csbk

3' brn sl (heavy)
1 csbk

4' variegated sl
pm, brn, lbrn, orange

1' lt. brown ls

15' ft. grey ls

3

1' brn scl

1' brn scl
2msbk

2.5' brn scl
few gravel
1 csbk

4' brn heavy sl
pm, common
mica

6.5' variegated sl
lt. brn w/ pale
saprolite brn

5

1' dk brn scl
2' sbk
few mica

brn scl
2msbk

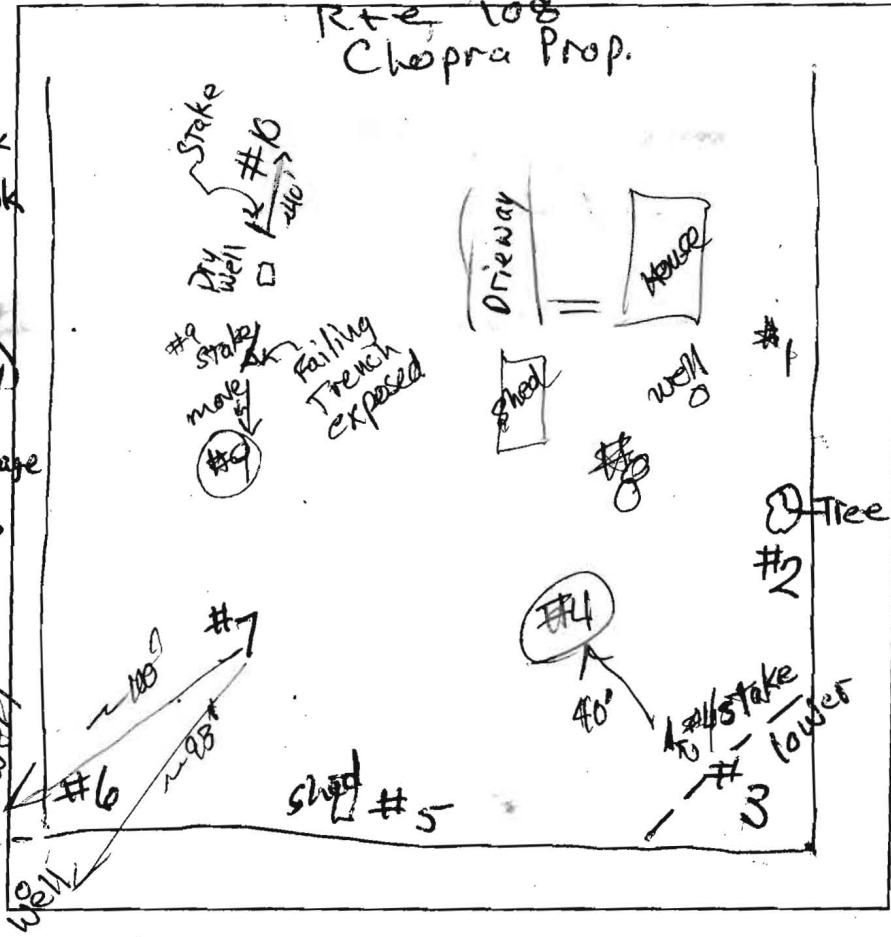
2.5' brn scl
1msbk

4' common
mica
brn heavy sl

15' brn sl
micaceous
common roots
fine

16' Saprolite

Rte 108
Chopra Prop.



6

1' brn scl
2' sbk

2' brn scl
2msbk

dk brn sl
micaceous
Saprolite

4.5' brown ls
micaceous
Saprolite
few fine roots
6' to 10'

7

1' dk brn scl
2' sbk

1' brn scl 2msbk

1.5' brn scl 1csbk

2.5' brn scl 1csbk

4' Irregular
boundary
brn heavy sl
micaceous

brn scl on

5.5' brn scl
micaceous
Saprolite

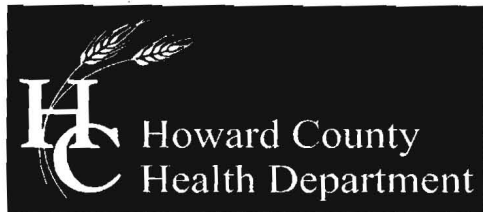
DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/H
3/4/08	2	6' / 15'	9:37	9:43	9:50	7min	P
3/4/08	3	6.5' / 16'	9:54	10:09	< 1" pulled		F
3/4/08	3	7.5' / 16'	10:21	10:24	10:31	7	P
3/4/08	5	6.5' / 16'	10:10	10:13	10:18	5	P
3/4/08	6	7' / 16'	10:34	10:38	re pour		-
3/4/08	6	7' / 16'	10:35	10:36	10:38	2"	P
3/4/08	7	7' / 16'	Ø	1.6	5.6	4	P
3/4/08	4	6.5' / 16'	Ø	1.7	5.7	4	P

REMARKS _____

SANITARIAN RB BACKHOE Mike Johnson OTHERS Mr. Johnson, Jr. Robert Webster

TEST HOLES USED IN SDA _____ AVG. PERC TIME _____ SQ. FT/BR _____

TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SW _____



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

May 19, 2008

To: Robert Vogel
Robert H. Vogel Engineering, Inc.

From: Robert Bricker, RS, CPSS
Development Coordination Section
Well & Septic Program

RE: PERCOLATION CERTIFICATION PLAN, 13306 Route 108, PC528404

Further consideration for the referenced Percolation Certification Plan may occur when the following edits and additions have been completed:

- 1) three discrete well locations or a 1500 square-foot well reserve area (re: wellbox) must be presented
- 2) the locations of the existing septic tank and the dry well must be shown and labeled, including the phrase "To Be Abandoned"
- 3) the label "Approximate Location of Septic System" is replaced by the label "Septic Trench Exposed"; the location point appears accurate as it should (being that it was next to a surveyed stake location)
- 4) remove the 'box' depicting "approximate location of septic system" as it misrepresents the locations of the dry well and septic tank
- 5) the septic easement area does not include the existing asphalt driveway
- 6) the fate of the 1-story shed must be clearly stated
 - a) if it remains, the shed area and a setback of 5 feet are excluded from the septic easement
 - b) if it is to be removed, add a Note stating that the shed will be removed prior to Building Permit approval
- 7) Note # 4 should read: REPLACEMENT WELL WILL BE DRILLED AND APPROVED PRIOR TO BUIILDING PERMIT APPROVAL
- 8) To Note #6 add PRIOR TO BUILDING PERMIT APPROVAL
- 9) To Note 10, add PRIOR TO BUILDING PERMIT APPROVAL
- 10) The vicinity of the west property corner has relatively lower elevation and drains much slower than the remainder of the subject property. Remove a triangular shape from the corner of the proposed septic easement such that the hypotenuse of the removed section is about 20 feet in length.

Show any planned changes in the footprint of the existing structure as well as any anticipated expansion of the paved area that may be required for parking, turn-around, or emergency vehicle access.

CC: File

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS

June 24, 2008

Mr. Robert Bricker
Howard County Health Department
7178 Columbia Gateway Drive
Columbia, Maryland 21046

Re: Chopra Property
Percolation Certification Plan
13306 Route 108
PC 528494

Dear Mr. Bricker,

In accordance with your comment letter dated June 17, 2008 we are resubmitting the attached plan (3 copies for signature). The following is point by point response to your comments.

1. The PC# and address have been added to the title block.
2. The purpose note has been added.
3. The estimated wastewater discharge is provided for the worst case condition. We believe that the project may be smaller than the tabulation.
4. "Existing septic trench to be abandoned (location confirmed)" has been labeled.
5. "Existing drywell to be abandoned (approximate location)" has been labeled.
6. "Septic tank to be abandoned (approximate location)" has been labeled.

Should you have any questions regarding this matter, please do not hesitate to contact this office.

Sincerely,
ROBERT H. VOGEL ENGINEERING, INC.



Robert H. Vogel, P.E.
President

RHV:mcr

cc: Mr. Joe Rutter – Land Design & Development

8407 Main Street · Ellicott City · Maryland 21043
Tel 410.461.7666 · Fax 410.461.8961



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

June 17, 2008

To: Robert Vogel
Robert H. Vogel Engineering, Inc.

From: Robert Bricker, RS, CPSS
Development Coordination Section
Well & Septic Program

RE: PERCOLATION CERTIFICATION PLAN_CHOPRA PROPERTY, 13306 Route 108,
PC528494

A thorough review of Health Department records for the subject property indicate that a dug well existed in the basement of the residence and that it was to have been abandoned and capped.

There is no confirmation this was completed. Prior to approving the Percolation Certification Plan, I would like to inspect the basement for evidence of this former drinking water source.

Edit the Title Block, locations and labels for existing septic system components, and add 2 notes on the Percolation Certification Plan (June 2008) as follows and/or as indicated on the 2 photocopies of the plan:

- 1) Add to title block, the property address (**13306 Route 108**) and our reference number (**PC528494**)
- 2) Add a purpose statement (see suggested Note 12)
- 3) Add a note giving the estimate of wastewater discharge (see suggested Note 13)

Use these labels for existing septic system components and show the approximate locations for septic tank and dry well as indicated on photocopy of plan.

- 4) EX. SEPTIC TRENCH TO BE ABANDONED (LOCATION CONFIRMED)
- 5) EX. DRY WELL TO BE ABANDONED (APPROX. LOCATION)
- 6) SEPTIC TANK TO BE ABANDONED (APPROX. LOCATION)

Submit 3 copies of the Percolation Certification Plan for signature approval

Copy: File

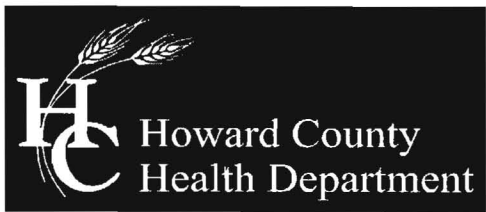
GENERAL NOTES:

1. THE CONTOURS AND ELEVATIONS SHOWN HEREON ARE BASED ON A FIELD RUN SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING INC., APRIL 2008.
2. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, DATED APRIL 2008.
3. ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
4. REPLACEMENT WELL WILL BE DRILLED AND APPROVED PRIOR TO BUILDING PERMIT APPROVAL.
5. A GROUNDWATER APPROPRIATIONS PERMIT WILL BE OBTAINED FROM MDE PRIOR TO SUBMITTING WELL PERMIT APPLICATIONS AND DRILLING WELLS.
6. THE EXISTING WELL IS TO BE PROPERLY ABANDONED AND SEALED PRIOR TO BUILDING PERMIT APPROVAL.
7. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
8. ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. THE EXISTING SHED IS SET UP ON BLOCKS ABOVE GRADE. THERE IS NO FOUNDATION OR SLAB ASSOCIATED WITH THE SHED.
10. THE EXISTING SEPTIC SYSTEM WILL BE PROPERLY ABANDONED PRIOR TO BUILDING PERMIT APPROVAL.
11. EXISTING SHED TO BE REMOVED PRIOR TO BUILDING PERMIT APPROVAL.

12. Purpose of this Percolation Certification Plan is to define a septic easement for an assisted living facility.

13. Estimated wastewater discharge will be
$$\text{gal/day} = 100 \text{ gal/bed/day} \times \text{beds}$$





Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

March 11, 2008

Rahesh Chopra
10308 Castlefield Street
Ellicott City, Maryland 21042

RE: PERCOLATION TEST RESULTS, 13306 Route 108, A-528404

Dear Mr. Chopra,

Percolation testing was conducted on the subject property on March 4, 2008. Field data collected are shown on the Percolation Test Worksheet enclosed with this letter. Recommended Inlet and Trench Bottom depths, and Usable Sidewall all are based on observed soil properties and characteristics at respective test locations as well as the particular soils materials tested. The recommended depth to trench Inlet is 4 feet, with 2 to 4 feet of gravel to Trench Bottom at 6 to 8 feet, and as it relates to depth of trench the Usable Sidewall ranges from 1.5 feet to 3.5 feet. The proposed Trench Width is 3 feet. The required Trench Length per bed (re: per client) will vary inversely with trench depth, shorter with greater depth, longer for a trench only 6 feet to bottom.

According to the submitted plan, the existing well is to be abandoned (and it will be properly sealed). Wells on neighboring properties to the north and northeast were observed, and both will impact the usable area of soils. These two wells must be shown on the ensuing Percolation Certification Plan. Similarly, the well on the adjoining property to the northwest must be shown on the Percolation Certification Plan.

Howard County Code designates the wastewater discharge for an assisted-living facility to be 100 gallons per day per bed (re: per client). A maximum daily flow of 1600 gallons is expected for the proposed facility on the subject property. A 2500-gallon septic tank (minimum volume) will be required. (Should a 2500 gallon tank not be available, a 3000 gallon tank will be required.) The proposed use as an assisted-living facility is a change in use as the current use for the subject property is residential.

A 10,000 square foot septic easement must be defined on the Percolation Certification Plan. While percolation test results indicate soils' conditions that are satisfactory for onsite wastewater disposal, not all of the area tested can be approved for inclusion in a septic easement. Area represented by location #3 is to be excluded as it is a relatively lower topographic position, and the area represented by location #1 is to be excluded as it represents a relatively higher topographic position (relative to direction trenches are likely to be oriented). There is a 5 foot setback from the existing shed, if it remains. The setbacks from the proposed primary structure is 20 feet, from the abandoned well is 25 feet, and 100 feet from the proposed wells or existing wells (such as neighbors wells) that are to remain. The area from stake #9 location the existing dry well is unsuitable for further use as wastewater disposal. Other regulated setbacks apply to the subject property, but will not impact the usable area as much as these listed items.

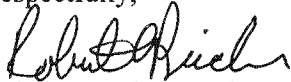
A trench was exposed at location stake #9. Standing, murky water at 1.5 foot depth, and the septic odor indicate that the existing septic system is failing. The existing septic system is believed to consist of a septic tank, a dry well, and a trench (approx. 40 feet length).

This existing septic system will be properly abandoned at a designated time. The issue of its current failing status will be addressed in a separate communication.

Percolation test locations #11, #12 and #13 were not dug. Test #4 was conducted about 40 feet east of stake location #4; #9 was conducted about 40 feet northwest of stake location #9, and #10 was conducted about 40 feet southeast of stake location #10.

Review and approval of an anticipated Building Permit is contingent upon submission of a Percolation Certification Plan that meets state and county requirements. If you have any questions regarding this evaluation or requirements for the Percolation Certification Plan, please contact me at the above address or by calling (410) 313-2691.

Respectfully,



Robert C. Bricker, RS, CPSS
Well and Septic Program
Development Coordination Section

Enclosures (2)

CC: Robert H. Vogel Engineering, Inc.
Robert Webster, Land Design and Development
File



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

March 11, 2008

Rahesh Chopra
10308 Castlefield Street
Ellicott City, Maryland 21042

RE: Failing septic system, 13306 Route 108

Dear Mr. Chopra,

During percolation testing on the subject property on March 4, 2008, a distribution trench for the existing trench was exposed. This occurred at stake #9, a location staked by your consulting engineer. Standing, murky water at 1.5 foot depth, and the septic odor indicate that the existing septic system is failing. Also, a patch of dark green grass growing in relatively softer soil, about 40 feet from the exposed trench and slightly upgrade, likely indicates the location of the failing dry well. A cleanout for the septic system was not evident.


On March 4, wastewater was observed on the soil surface. The Health Department recommends that you have the septic tank pumped immediately. This action will allow several days for the standing water in the dry well and trench to be absorbed by the soil.

Effluent may also be pumped from the dry well, though this should be undertaken only with caution and some consideration. Minor excavation, even with hand tools, to expose the top of the dry well may result in release of pressure and emergence of effluent onto the soil surface, and therefore the creation of a nuisance condition.

The existing septic system will be properly abandoned when a new system is approved and installed prior to Building Permit approval. It is desirable that the Percolation Certification Plan be approved, or at least be developed and under review, prior to a necessity to replace the failing system. We advise that you apply diligence in maintaining the existing septic system, thereby preventing contamination of groundwater or the soil surface.

If you have any questions regarding this notice, please contact me at the above address or by calling (410) 313-2691.

Respectfully,


Robert C. Bricker, RS, CPSS
Well and Septic Program
Development Coordination Section

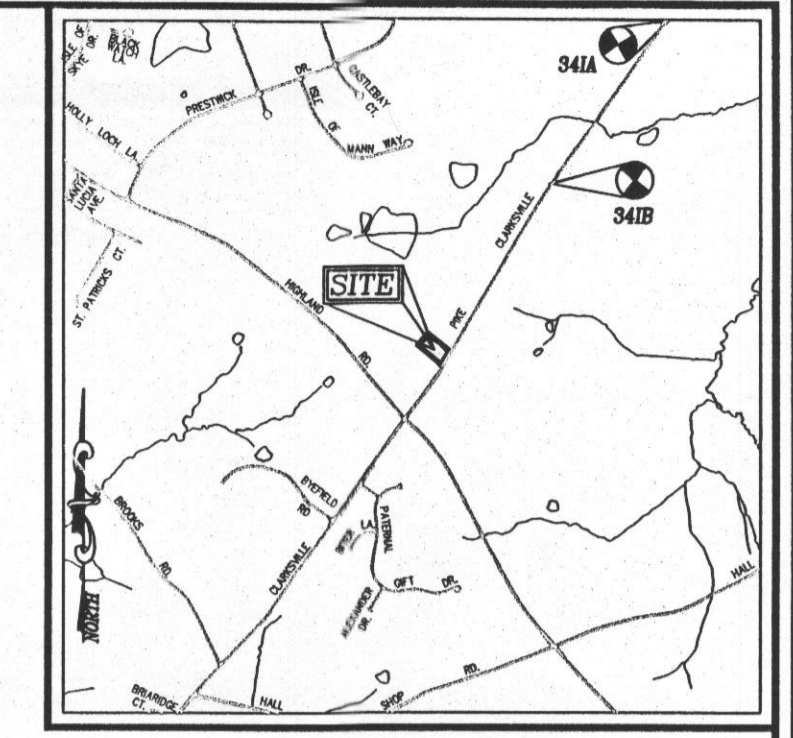
Copy: File

GENERAL NOTES:

1. THE CONTOURS AND ELEVATIONS SHOWN HEREON ARE BASED ON A FIELD RUN SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING INC., APRIL 2008.
2. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, DATED APRIL 2008.
3. ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
4. REPLACEMENT WELL WILL BE DRILLED AND APPROVED PRIOR TO BUILDING PERMIT APPROVAL.
5. A GROUNDWATER APPROPRIATIONS PERMIT WILL BE OBTAINED FROM MDE PRIOR TO SUBMITTING WELL PERMIT APPLICATIONS AND DRILLING WELLS.
6. THE EXISTING WELL IS TO BE PROPERLY ABANDONED AND SEALED PRIOR TO BUILDING PERMIT APPROVAL.
7. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
8. ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. THE EXISTING SHED IS SET UP ON BLOCKS ABOVE GRADE. THERE IS NO FOUNDATION OR SLAB ASSOCIATED WITH THE SHED.
10. THE EXISTING SEPTIC SYSTEM WILL BE PROPERLY ABANDONED PRIOR TO BUILDING PERMIT APPROVAL.
11. EXISTING SHED TO BE REMOVED PRIOR TO BUILDING PERMIT APPROVAL.
12. THE PURPOSE OF THIS PERCOLATION CERTIFICATION PLAN IS TO DEFINE A SEPTIC EASEMENT FOR AN ASSISTED LIVING FACILITY.
13. ESTIMATED WASTEWATER DISCHARGE WILL BE:
 1,000 GAL/DAY = 100 GAL/BED/DAY x 10 BEDS
 150 GAL/DAY = 150 GAL/APARTMENT/DAY x 1 APARTMENT
 (SIZE SUBJECT TO CHANGE)
 TOTAL WASTEWATER DISCHARGE = 1,150 GAL. PER DAY

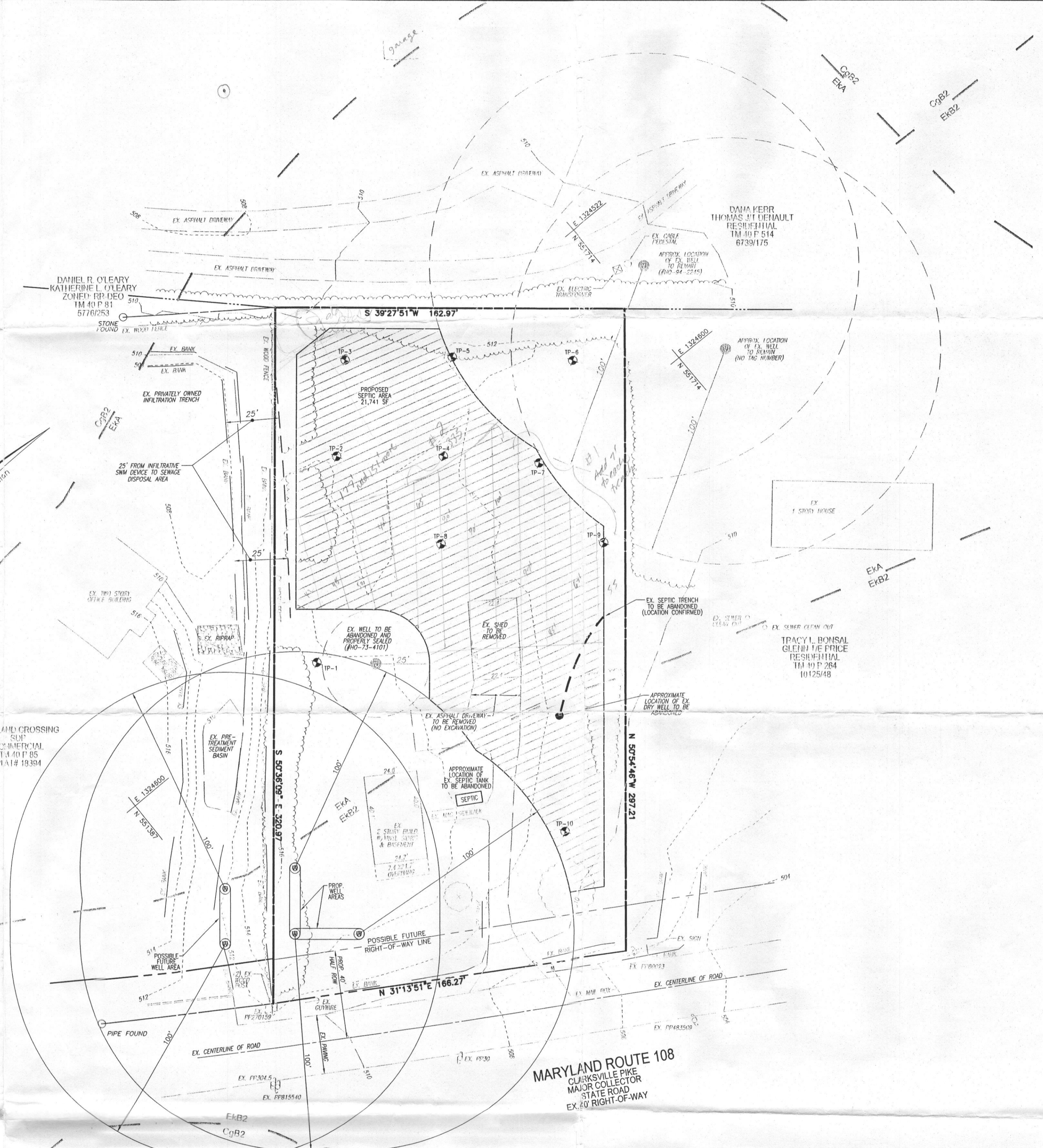
BENCHMARKS			
NO.	NORTHING	EASTING	ELEVATION
34A	553271.91	1325838.75	471.94
34B	554973.52	1327078.77	442.80

34A - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE EAST SIDE OF ROUTE 108, 7.1' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW SURFACE.
 34B - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE WEST SIDE OF ROUTE 108, 2.9' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW SURFACE.



VICINITY MAP
 SCALE: 1"=2,000'
 ADC MAP COORDINATE: PG. 14 / C-12

LEGEND	
RIGHT-OF-WAY LINE	---
BOUNDARY LINE	---
ADJACENT BOUNDARY LINE	---
EXISTING CONTOURS	--- 362 --- --- 360 ---
EXISTING TREE LINE	~~~~~
SOIL BOUNDARY	CgB2 EKA
PASSED PERC. TEST	⊗
FAILED PERC. TEST	●
PROPOSED WELL	⊙
EXISTING WELL	⊕
EXISTING TREES	⊕
EXISTING UTILITY POLE AND GUYWIRE	⊕ →
EXISTING STREET SIGN	⊕



PERCOLATION PLAN
 SCALE: 1"=30'

THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS EASEMENT SHALL BE NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECROCIATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EKA	ELIOT SILT LOAM, 0 TO 3 PERCENT SLOPES	B
EB2	ELIOT SILT LOAM, 3 TO 8 PERCENT SLOPES	B

OWNER
 RAJESH CHOPRA
 10308 CASTLEFIELD STREET
 ELLICOTT CITY, MD 21042

DEVELOPER
 LAND DESIGN AND DEVELOPMENT
 JOE RUTTER
 5300 DORSEY HALL DRIVE
 ELLICOTT CITY, MD 21042
 443-367-0422

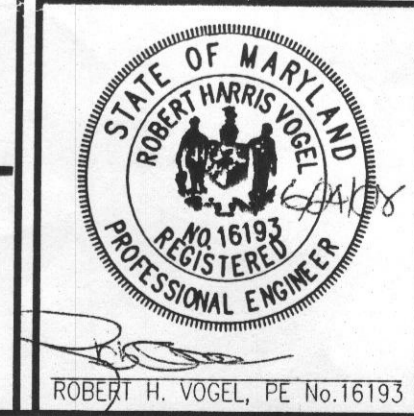
NO.	REVISION	DATE

PERCOLATION CERTIFICATION PLAN
CHOPRA PROPERTY
 13306 ROUTE 108
 PC-528494

TAX MAP 40 BLOCK 5
 5TH ELECTION DISTRICT
 DPZ REFS:

ZONED: RESIDENTIAL
 L 10409/F 493 PARCEL 66
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961



DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: JUNE, 2008
 SCALE: AS SHOWN
 W.O. NO.: 07-21

1 SHEET 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. 16193 EXPIRATION DATE: SEPTEMBER 27, 2001.

NOTE:
 APPROVED FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

B. N. Nutter for Peter Beilensen
 COUNTY HEALTH OFFICER
 DATE: 7/14/2008

William D. Barber
 LAND SURVEYOR
 DATE: 6-24-2008

GENERAL NOTES:

1. THE CONTOURS AND ELEVATIONS SHOWN HEREON ARE BASED ON A FIELD RUN SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING INC., APRIL 2008.
2. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, DATED APRIL 2008.
3. ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
4. REPLACEMENT WELL WILL BE DRILLED AND APPROVED PRIOR TO BUILDING PERMIT APPROVAL.
5. A GROUNDWATER APPROPRIATIONS PERMIT WILL BE OBTAINED FROM MDE PRIOR TO SUBMITTING WELL PERMIT APPLICATIONS AND DRILLING WELLS.
6. THE EXISTING WELL IS TO BE PROPERLY ABANDONED AND SEALED PRIOR TO BUILDING PERMIT APPROVAL.
7. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
8. ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. THE EXISTING SHED IS SET UP ON BLOCKS ABOVE GRADE. THERE IS NO FOUNDATION OR SLAB ASSOCIATED WITH THE SHED.
10. THE EXISTING SEPTIC SYSTEM WILL BE PROPERLY ABANDONED PRIOR TO BUILDING PERMIT APPROVAL.
11. EXISTING SHED TO BE REMOVED PRIOR TO BUILDING PERMIT APPROVAL.
12. THE PURPOSE OF THIS PERCOLATION CERTIFICATION PLAN IS TO DEFINE A SEPTIC EASEMENT FOR AN ASSISTED LIVING FACILITY.
13. ESTIMATED WASTEWATER DISCHARGE WILL BE:
 1,600 GAL/DAY = 100 GAL/BED/DAY x 16 BEDS
 150 GAL/DAY = 150 GAL/APARTMENT/DAY x 1 APARTMENT
 (SIZE SUBJECT TO CHANGE)
 TOTAL WASTEWATER DISCHARGE = 1750 GAL PER DAY

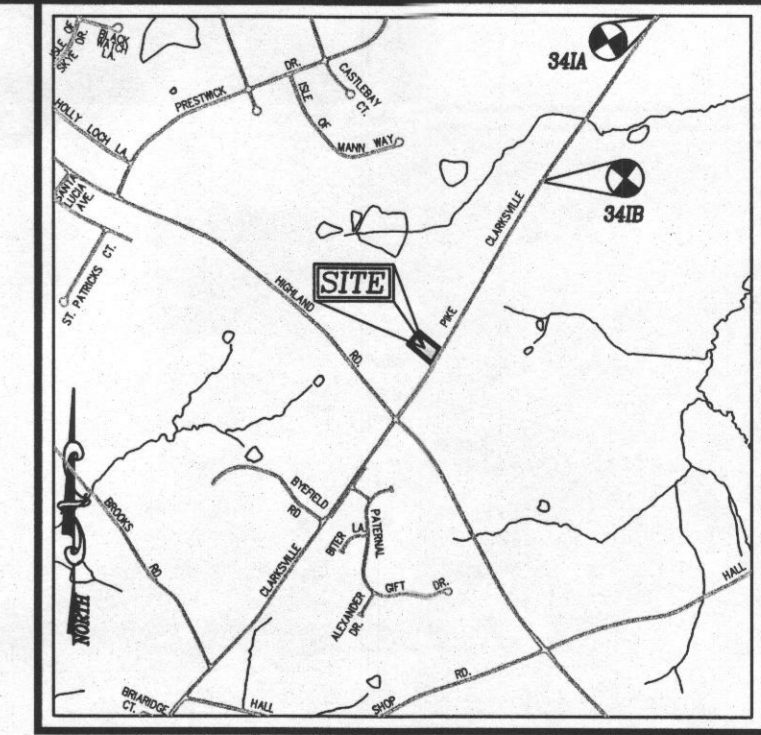
SEPTIC SYSTEM DESIGN:

USE PRETREATMENT: BIOMICROBICS MICRO FAST 3.0 OR EQUIVALENT.
 DESIGN FLOW: 1750 GPD
 TRENCH LOADING RATE: 2-15 MIN., WITH PRETREATMENT: 1.2 GPD/SF
 TRENCH WIDTH: 2.0 FEET
 DEPTH OF GRAVEL BELOW PIPE INVERT : 4 FEET
 TRENCH SPACING, WALL TO WALL: 6 FEET
 SEPTIC TANK SIZE: 1-1,000 GALLON AND 1-1500 GALLON
 DISTRIBUTION PIPE INVERT, BELOW SOIL SURFACE: 4 FEET
 EFFECTIVE SIDEWALL: 3.5"
 REQUIRED ABSORPTION AREA: 1750 GPD/1.2 GPD/SF = 1458 SF
 REQUIRED TRENCH LENGTH: 1458/2 X 0.4 = 292 FEET (PER SYSTEM)

AN ADVANCED PRE-TREATMENT SYSTEM, WHICH UTILIZES BEST AVAILABLE TECHNOLOGY TO PERFORM NITROGEN REDUCTION, MUST BE INSTALLED ON THE SEPTIC SYSTEM LOCATED AT 13306 RTE. 108, CLARKSVILLE, MD 20777 (TAX MAP 40, PARCEL 66) FOR THE PURPOSE OF INCREASING THE COMMERCIAL LOADING RATE OF THE SEPTIC EFFLUENT DISTRIBUTION TO 1.2 GAL/DAY/SQ.FT. ABSORPTION AREA. A SUPPLEMENTAL SITE PLAN WITH ALL OF THE NECESSARY DETAILS FOR THE INSTALLATION OF THE SYSTEM WILL BE REQUIRED PRIOR TO THE RELEASE OF THE BUILDING PERMIT (IF APPLICABLE) AND THE SEPTIC SYSTEM INSTALLATION PERMIT. IN ADDITION, AN OPERATION AND MAINTENANCE CONTRACT AGREEMENT MUST BE FILED WITH HOWARD COUNTY LAND RECORDS PRIOR TO RELEASE OF THE SEPTIC SYSTEM INSTALLATION PERMIT.

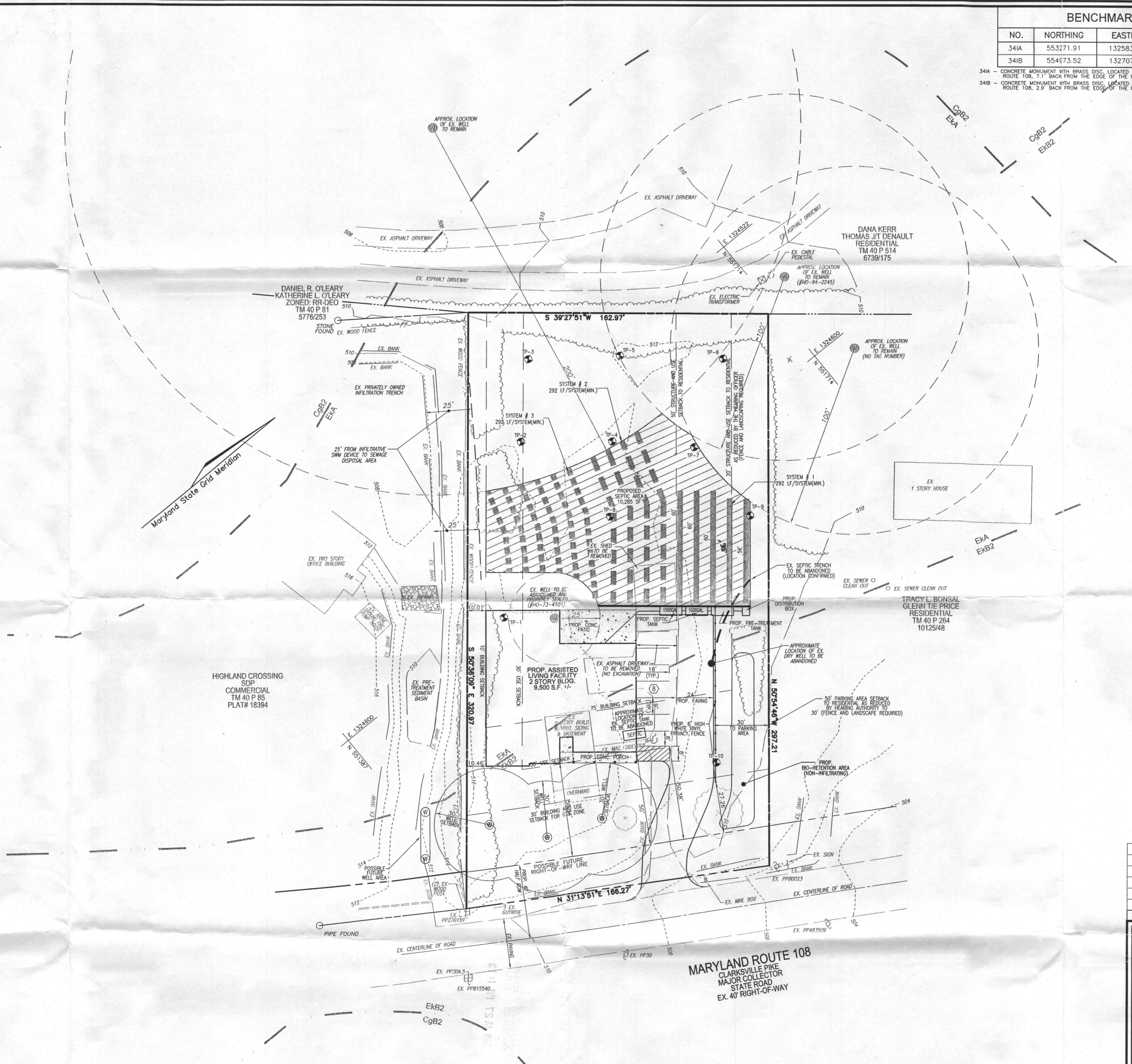
BENCHMARKS			
NO.	NORTHING	EASTING	ELEVATION
341A	553271.91	1325838.75	471.94
341B	554573.52	1327078.77	442.80

341A - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE EAST SIDE OF ROUTE 108, 7.1' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW SURFACE.
 341B - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE WEST SIDE OF ROUTE 108, 2.9' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW SURFACE.



VICINITY MAP
 SCALE: 1"=2,000'
 ADC MAP COORDINATE: PG. 14 / C-12

LEGEND	
RIGHT-OF-WAY LINE	---
BOUNDARY LINE	—
ADJACENT BOUNDARY LINE	---
EXISTING CONTOURS	--- 382 --- --- 380 ---
EXISTING TREE LINE	~~~~~
SOIL BOUNDARY	CgB2 Eka
PASSED PERC. TEST	⊗
FAILED PERC. TEST	⊙
PROPOSED WELL	⊕
EXISTING WELL	⊖
EXISTING TREES	⊕ ⊖
EXISTING UTILITY POLE AND GUYWIRE	⊕ ⊖
EXISTING STREET SIGN	⊕ ⊖



OWNER
 RAJESH CHOPRA
 10308 CASTLEFIELD STREET
 ELLICOTT CITY, MD 21042

DEVELOPER
 LAND DESIGN AND DEVELOPMENT
 JOE RUTTER
 5300 DORSEY HALL DRIVE
 ELLICOTT CITY, MD 21042
 443-367-0422

NO.	REVISION	DATE

PERCOLATION CERTIFICATION PLAN
CHOPRA PROPERTY
 13306 ROUTE 108
 PC-528494

TAX MAP 40 BLOCK 5
 5TH ELECTION DISTRICT
 DPZ REFS:

ZONED: RESIDENTIAL
 L 10409/E 493 PARCEL 66
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

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. 16193 EXPIRATION DATE: SEPTEMBER 27, 2010.

DESIGN BY: RHY
 DRAWN BY: JMR
 CHECKED BY: RHY
 REVISION: JANUARY, 2010
 DATE: OCTOBER, 2008
 SCALE: AS SHOWN
 W.O. NO.: 07-21

1 SHEET OF 1

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
Eka	ELIOAK SILT LOAM, 0 TO 3 PERCENT SLOPES	B
EKB2	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES	B

THIS AREA DESIGNATES A PRIVATE SEWER EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS EASEMENT SHALL BE NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.

NOTE:

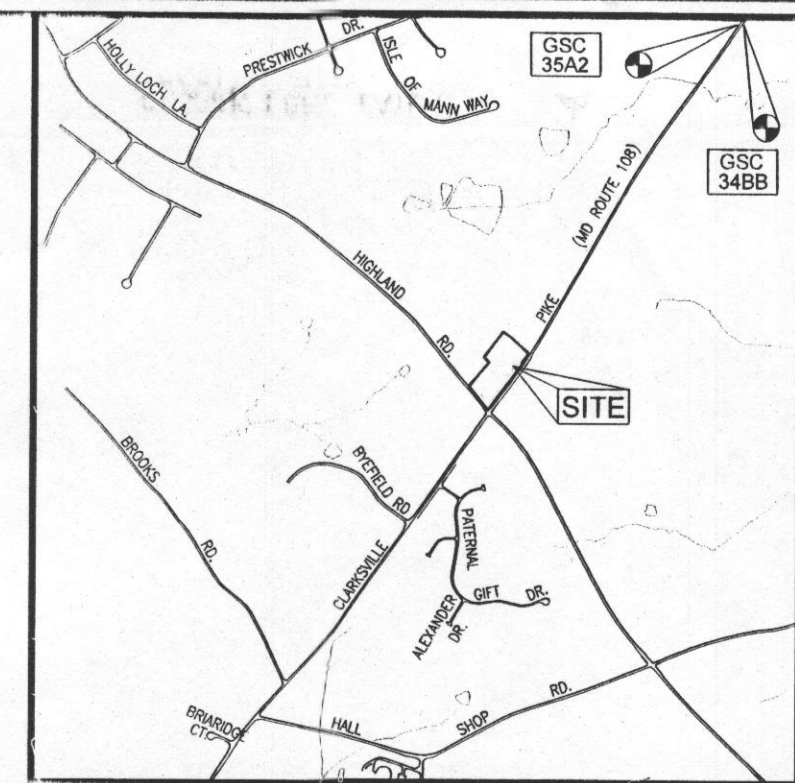
APPROVED FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

B. Wilson for Peter Brilenson 1/28/2010
 COUNTY HEALTH OFFICER DATE

PERCOLATION CERTIFICATION:
 I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS CORRECT TO MY BEST KNOWLEDGE AND BELIEF.

Thomas M. Hoffmann, Sr. 1.27.10
 LAND SURVEYOR DATE

SITE PLAN
 SCALE: 1"=30'



VICINITY MAP
SCALE: 1"=2000'



- LEGEND**
- PROPOSED PERCOLATION TEST LOCATIONS \oplus
 - PASSING PERCOLATION TEST LOCATIONS \odot
 - FAILED PERCOLATION TEST LOCATIONS \bullet

- NOTES:**
1. EXIST. TOPOGRAPHY FROM HOWARD COUNTY AERIAL PHOTOMETRIC
 2. PROPERTY OUTLINE BASED ON DEED PLOT

Per Plan

TM 40 P 81
DANIEL R. O'LEARY
KATHERINE L. O'LEARY
5776/253
ZONED: RR-DEO
RESIDENTIAL

TM 40 P 514
DANA KERR
THOMAS J/T DENAULT
6739/175
RESIDENTIAL

TM 40 P 85
HIGHLAND CROSSING
SDP
PLAT# 18394
COMMERCIAL

TM 40 P 66
RAJESH K. CHOPRA
KIRTI CHOPRA
10409/493
RESIDENTIAL

TM 40 P 264
TRACY L. BONSAI
GLENN T/E PRICE
10125/48
RESIDENTIAL

MARYLAND ROUTE 108

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EKA	ELIOAK SILT LOAM, 0 TO 3 PERCENT SLOPES	C
EKB2	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C

NO.	REVISION	DATE

PERCOLATION TEST PLAN
CHOPRA PROPERTY

TAX MAP 40 BLOCK 5 PARCEL 66
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELlicOTT CITY, MD 21043 FAX: 410.461.8961



DESIGN BY: RHV/LJT
DRAWN BY: LJT
CHECKED BY: RHV
DATE: DECEMBER 2007
SCALE: 1"=30'
W.O. NO.: 04-12.00

DEVELOPER
LAND DESIGN & DEVELOPMENT
5300 DORSEY HALL DRIVE
ELlicOTT CITY, MD 21042

OWNER
RAHESH CHOPRA
10308 CASTLEFIELD STREET
ELlicOTT CITY, MD 21042

I:\Projects\04-12_VENGR\4003_PERC-TESTPLAN.DWG, 2/5/2008 2:07:22 PM

GENERAL NOTES:

1. THE CONTOURS AND ELEVATIONS SHOWN HEREON ARE BASED ON A FIELD RUN SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., APRIL 2008.
2. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, DATED APRIL 2008.
3. ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
4. REPLACEMENT WELL WILL BE DRILLED AND APPROVED PRIOR TO BUILDING PERMIT APPROVAL.
5. A GROUNDWATER APPROPRIATIONS PERMIT WILL BE OBTAINED FROM MDE PRIOR TO SUBMITTING WELL PERMIT APPLICATIONS AND DRILLING WELLS.
6. THE EXISTING WELL IS TO BE PROPERLY ABANDONED AND SEALED PRIOR TO BUILDING PERMIT APPROVAL.
7. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
8. ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. THE EXISTING SHED IS SET UP ON BLOCKS ABOVE GRADE. THERE IS NO FOUNDATION OR SLAB ASSOCIATED WITH THE SHED.
10. THE EXISTING SEPTIC SYSTEM WILL BE PROPERLY ABANDONED PRIOR TO BUILDING PERMIT APPROVAL.
11. EXISTING SHED TO BE REMOVED PRIOR TO BUILDING PERMIT APPROVAL.
12. THE PURPOSE OF THIS PERCOLATION CERTIFICATION PLAN IS TO DEFINE A SEPTIC EASEMENT FOR AN ASSISTED LIVING FACILITY.
13. ESTIMATED WASTEWATER DISCHARGE WILL BE:
1,600 GAL./DAY = 100 GAL./BED/DAY x 16 BEDS
150 GAL./DAY = 150 GAL./APARTMENT/DAY x 1 APARTMENT
(SIZE SUBJECT TO CHANGE)
TOTAL WASTEWATER DISCHARGE = 1750 GAL. PER DAY

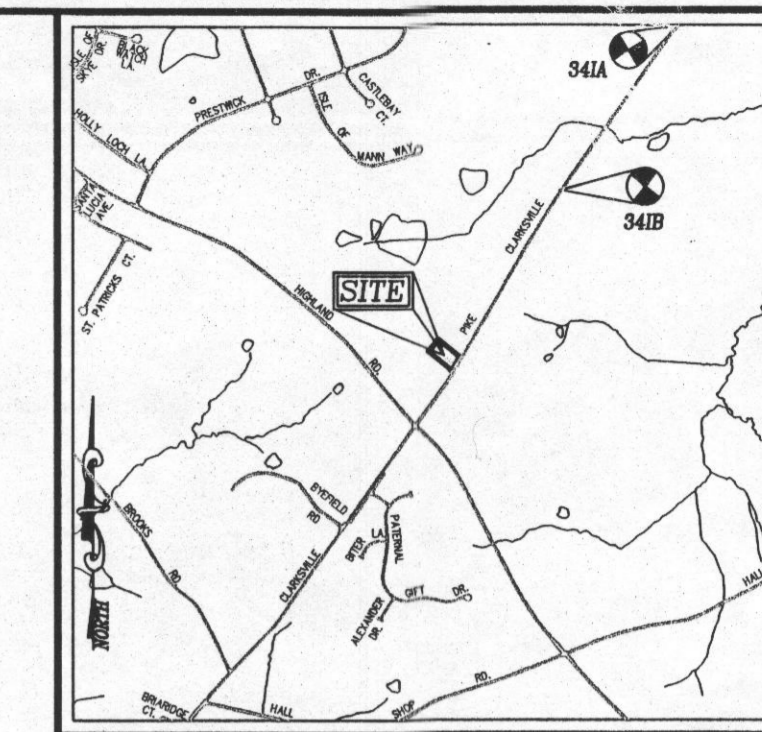
SEPTIC SYSTEM DESIGN:

USE PRETREATMENT, BIOMICROBICS MICRO FAST 3.0 OR EQUIVALENT.
DESIGN FLOW: 1750 GPD
TRENCH LOADING RATE: 2-15 MIN., WITH PRETREATMENT: 1.2 GPD/SF
TRENCH WIDTH: 2.0 FEET
DEPTH OF GRAVEL BELOW PIPE INVERT: 4 FEET
TRENCH SPACING, WALL TO WALL: 6 FEET
SEPTIC TANK SIZE: 1-1,000 GALLON AND 1-1500 GALLON
DISTRIBUTION PIPE INVERT, BELOW SOIL SURFACE: 4 FEET
EFFECTIVE SIDEWALL: 3.5'
REQUIRED ABSORPTION AREA: 1750 GPD/1.2 GPD/SF = 1458 SF
REQUIRED TRENCH LENGTH: 1458/2 X 0.4 = 292 FEET (PER SYSTEM)

AN ADVANCED PRE-TREATMENT SYSTEM, WHICH UTILIZES BEST AVAILABLE TECHNOLOGY TO PERFORM NITROGEN REDUCTION, MUST BE INSTALLED ON THE SEPTIC SYSTEM LOCATED AT 13306 RTE. 108, CLARKSVILLE, MD 20777 (TAX MAP 40, PARCEL 66) FOR THE PURPOSE OF INCREASING THE COMMERCIAL LOADING RATE OF THE SEPTIC EFFLUENT DISTRIBUTION TO 1.2 GAL/DAY/SQ.FT. ABSORPTION AREA. A SUPPLEMENTAL SITE PLAN WITH ALL OF THE NECESSARY DETAILS FOR THE INSTALLATION OF THE SYSTEM WILL BE REQUIRED PRIOR TO THE RELEASE OF THE BUILDING PERMIT (IF APPLICABLE) AND THE SEPTIC SYSTEM INSTALLATION PERMIT. IN ADDITION, AN OPERATION AND MAINTENANCE CONTRACT AGREEMENT MUST BE FILED WITH HOWARD COUNTY LAND RECORDS PRIOR TO RELEASE OF THE SEPTIC SYSTEM INSTALLATION PERMIT.

BENCHMARKS			
NO.	NORTHING	EASTING	ELEVATION
341A	553271.91	1325838.75	471.94
341B	554973.52	1327078.77	442.80

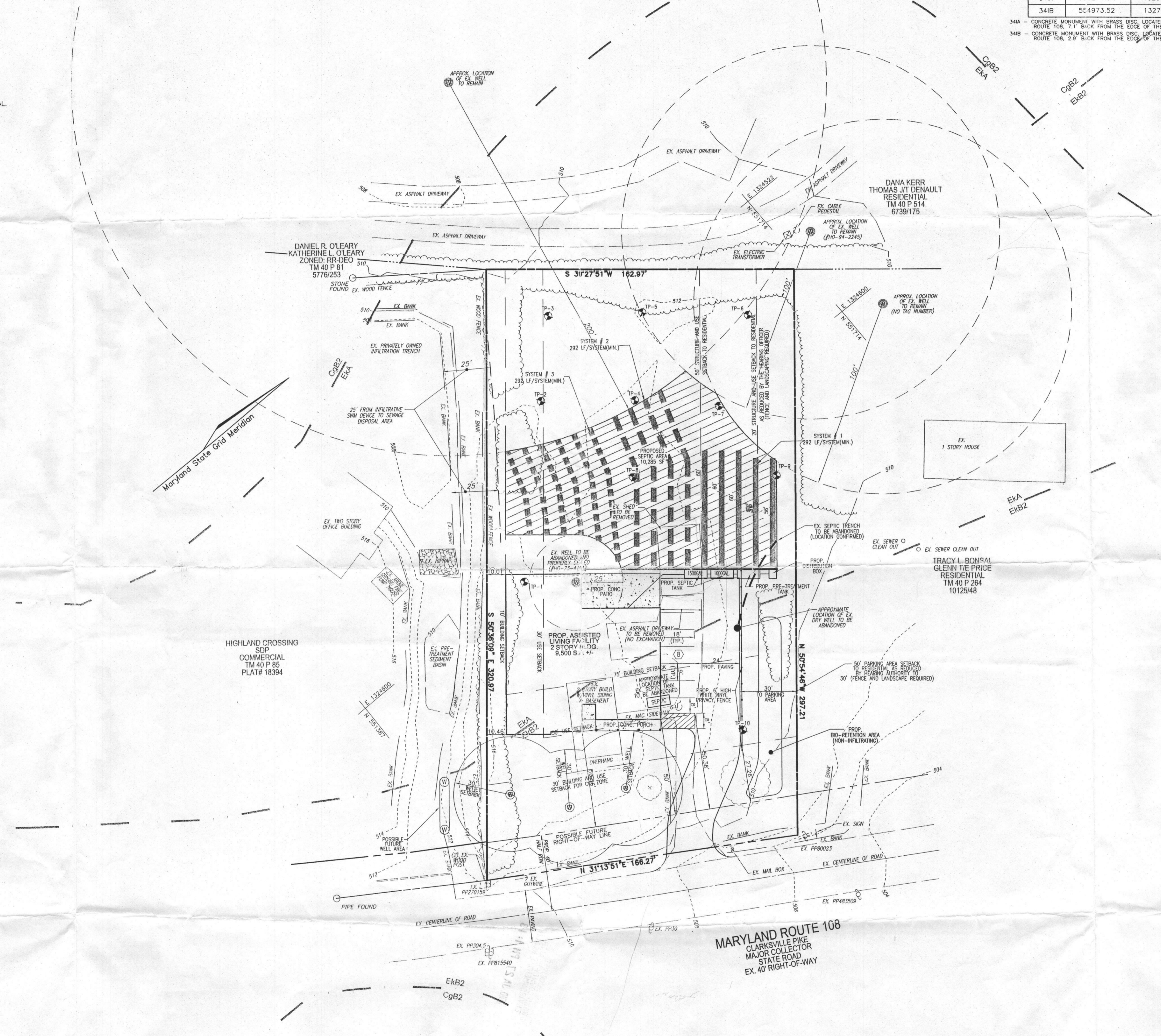
341A - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE EAST SIDE OF ROUTE 108, 7.1' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW SURFACE.
341B - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE WEST SIDE OF ROUTE 108, 2.9' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW THE SURFACE.



VICINITY MAP
SCALE: 1"=2,000'
ADC MAP COORDINATE: PG. 14 / C-12

LEGEND

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ADJACENT BOUNDARY LINE
- EXISTING CONTOURS
- EXISTING TREE LINE
- SOIL BOUNDARY
- PASSED PERC. TEST
- FAILED PERC. TEST
- PROPOSED WELL
- EXISTING WELL
- EXISTING TREES
- EXISTING UTILITY POLE AND GUYWIRE
- EXISTING STREET SIGN



SITE PLAN
SCALE: 1"=30'

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EKA	ELIOAK SILT LOAM, 0 TO 3 PERCENT SLOPES	B
EkB2	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES	B

THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS EASEMENT SHALL BE NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.

NOTE:

APPROVED FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

B. Wilson for Peter Beleson 1/28/2010
COUNTY HEALTH OFFICER DATE

PERCOLATION CERTIFICATION:
I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS CORRECT TO MY BEST KNOWLEDGE AND BELIEF.

Thomas M. Hoffman Jr 1.27.10
LAND SURVEYOR *Thomas M. Hoffman, Jr. PLS # 267* DATE

OWNER
RAJESH CHOPRA
10308 CASTLEFIELD STREET
ELLICOTT CITY, MD 21042

DEVELOPER
LAND DESIGN AND DEVELOPMENT
JOE RUTTER
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

NO.	REVISION	DATE

PERCOLATION CERTIFICATION PLAN
CHOPRA PROPERTY
13306 ROUTE 108
PC-528494

TAX MAP 40 BLOCK 5
5TH ELECTION DISTRICT
DPZ REFS:

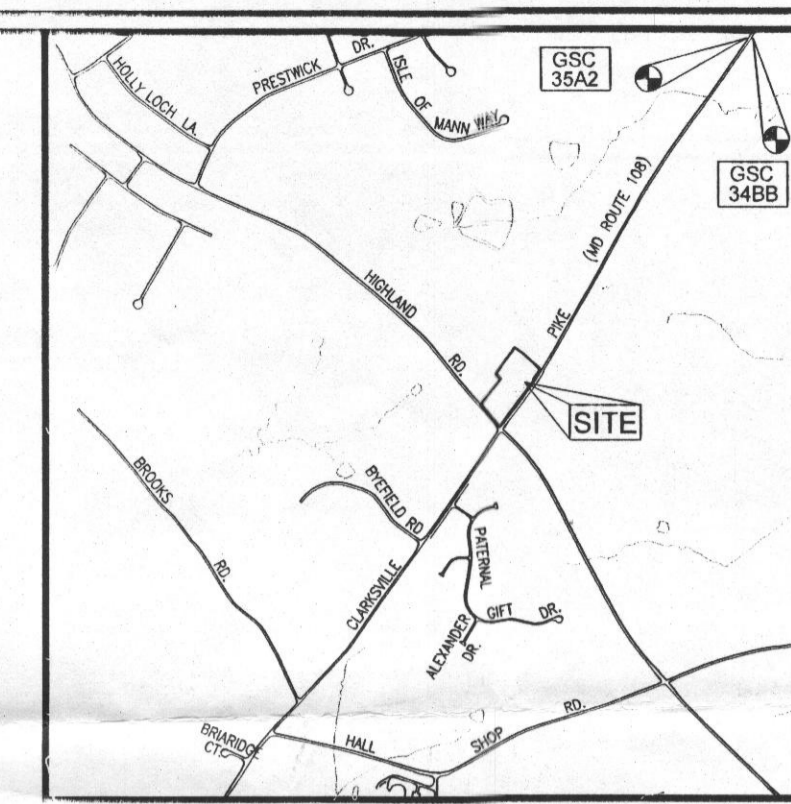
ZONED: RESIDENTIAL
L 10409/F 493 PARCEL 66
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: OCTOBER, 2008
SCALE: AS SHOWN
W.O. NO.: 07-21

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. 16193 EXPIRATION DATE: SEPTEMBER 27, 2010.

1 SHEET OF 1



VICINITY MAP
SCALE: 1"=2000'



- LEGEND**
- PROPOSED PERCOLATION TEST LOCATIONS \oplus
 - PASSING PERCOLATION TEST LOCATIONS \ominus
 - FAILED PERCOLATION TEST LOCATIONS \bullet

- NOTES:**
1. EXIST. TOPOGRAPHY FROM HOWARD COUNTY AERIAL PHOTOMETRIC
 2. PROPERTY OUTLINE BASED ON DEED LOT

SOILS LEGEND

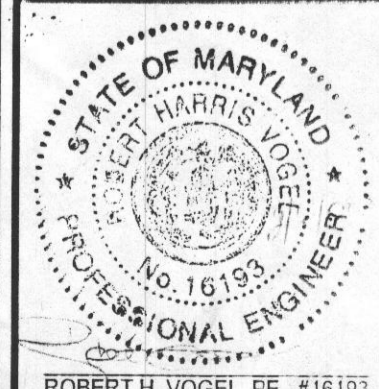
SYMBOL	NAME / DESCRIPTION	GROUP
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EKA	ELIOAK SILT LOAM, 0 TO 3 PERCENT SLOPES	C
EB2	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C

NO.	REVISION	DATE

**PERCOLATION TEST PLAN
CHOPRA PROPERTY**

TAX MAP 40 BLOCK 5 PARCEL 66
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21042 TEL: 410.461.7666 FAX: 410.461.8961



DESIGN BY: RHV/LJT
DRAWN BY: LJT
CHECKED BY: RHV
DATE: DECEMBER 2007
SCALE: 1"=30'
W.O. NO.: 04-12.00

DEVELOPER
LAND DESIGN & DEVELOPMENT
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD. 21042

OWNER
RAHESH CHOPRA
10308 CASTLEFIELD STREET
ELLICOTT CITY, MD. 21042

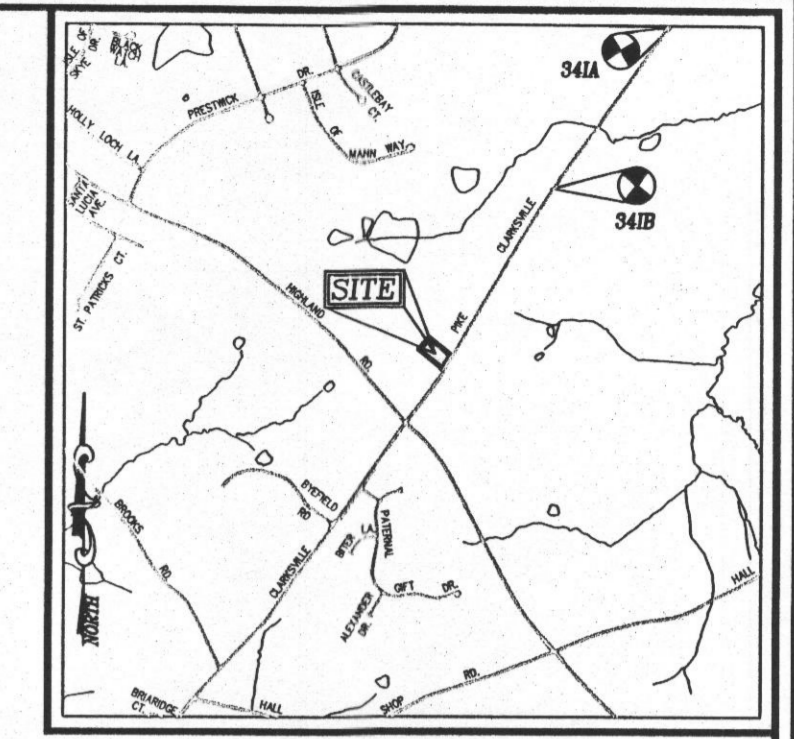
E:\Projects\04-12\ENGR\Percol\TESTPLAN.DWG, 2/5/2008 2:07:22 PM

GENERAL NOTES:

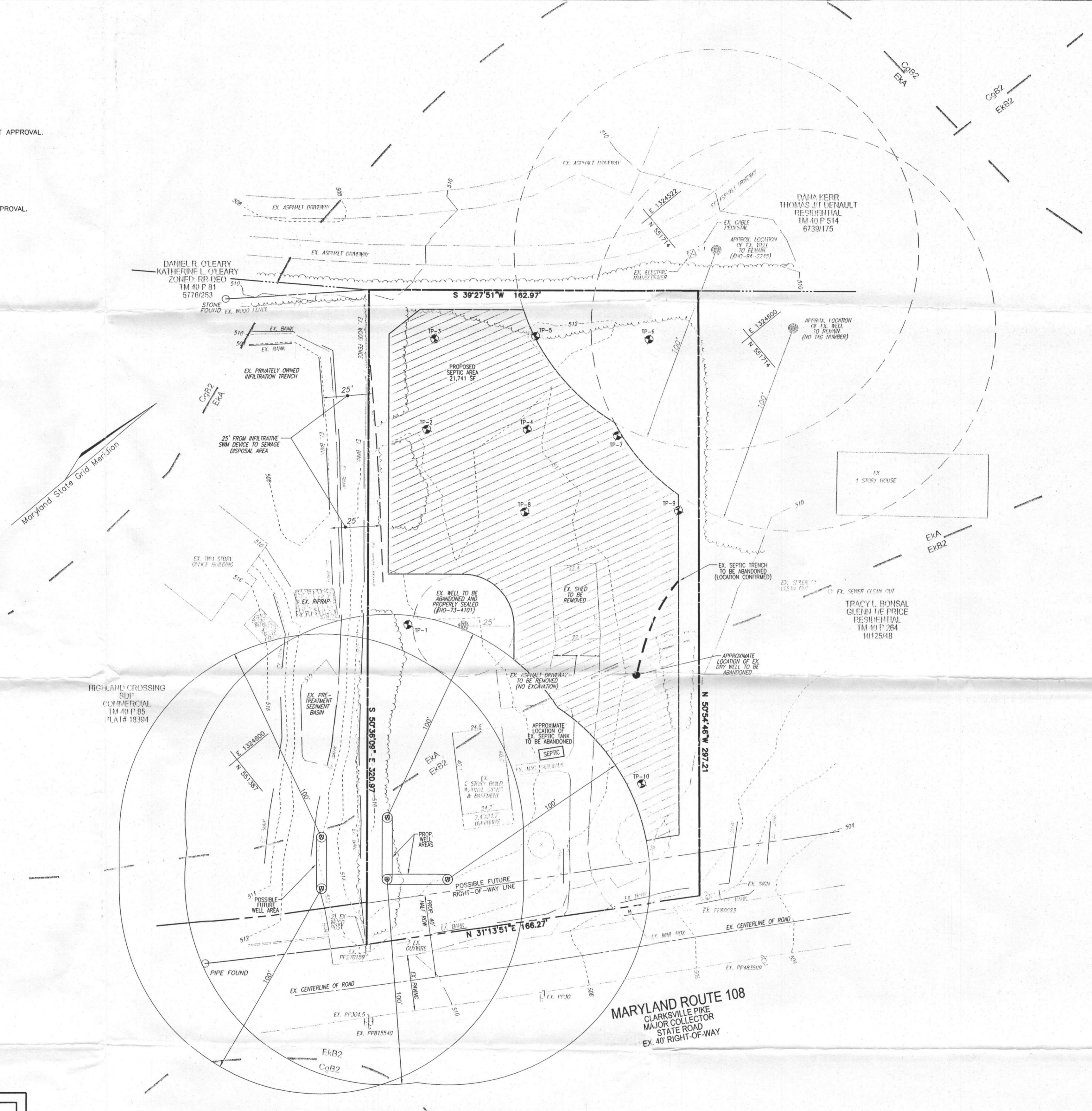
- THE CONTOURS AND ELEVATIONS SHOWN HEREON ARE BASED ON A FIELD RUN SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING INC., APRIL 2008.
- THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, DATED APRIL 2008.
- ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
- REPLACEMENT WELL WILL BE DRILLED AND APPROVED PRIOR TO BUILDING PERMIT APPROVAL.
- A GROUNDWATER APPROPRIATIONS PERMIT WILL BE OBTAINED FROM MDE PRIOR TO SUBMITTING WELL PERMIT APPLICATIONS AND DRILLING WELLS.
- THE EXISTING WELL IS TO BE PROPERLY ABANDONED AND SEALED PRIOR TO BUILDING PERMIT APPROVAL.
- 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 SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THE EXISTING SHED IS SET UP ON BLOCKS ABOVE GRADE. THERE IS NO FOUNDATION OR SLAB ASSOCIATED WITH THE SHED.
- THE EXISTING SEPTIC SYSTEM WILL BE PROPERLY ABANDONED PRIOR TO BUILDING PERMIT APPROVAL.
- EXISTING SHED TO BE REMOVED PRIOR TO BUILDING PERMIT APPROVAL.
- THE PURPOSE OF THIS PERCOLATION CERTIFICATION PLAN IS TO DEFINE A SEPTIC EASEMENT FOR AN ASSISTED LIVING FACILITY.
- ESTIMATED WASTEWATER DISCHARGE WILL BE:
1,600 GAL/DAY = 100 GAL/BED/DAY x 16 BEDS
150 GAL/DAY = 150 GAL/APARTMENT/DAY x 1 APARTMENT
(SIZE SUBJECT TO CHANGE)
TOTAL WASTEWATER DISCHARGE = 1,750 GAL. PER DAY

BENCHMARKS			
NO.	NORTHING	EASTING	ELEVATION
341A	553271.91	1325838.75	471.94
341B	554973.52	1327078.77	442.80

341A - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE EAST SIDE OF ROUTE 108, 7.1' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW SURFACE.
341B - CONCRETE MONUMENT WITH BRASS DISC, LOCATED ON THE WEST SIDE OF ROUTE 108, 2.9' BACK FROM THE EDGE OF THE PAVEMENT, AND 0.1' BELOW THE SURFACE.



VICINITY MAP
SCALE: 1"=2,000'
ADC MAP COORDINATE: PG. 14 / C-12



LEGEND	
RIGHT-OF-WAY LINE	---
BOUNDARY LINE	—
ADJACENT BOUNDARY LINE	---
EXISTING CONTOURS	--- 382 --- --- 380 ---
EXISTING TREE LINE	~~~~~
SOIL BOUNDARY	CgB2 E1A
PASSED PERC. TEST	⊗
FAILED PERC. TEST	●
PROPOSED WELL	⊙
EXISTING WELL	⊗
EXISTING TREES	⊕
EXISTING UTILITY POLE AND GUYWIRE	⊕
EXISTING STREET SIGN	⊕

OWNER
RAJESH CHOPRA
10308 CASTLEFIELD STREET
ELLCOTT CITY, MD 21042

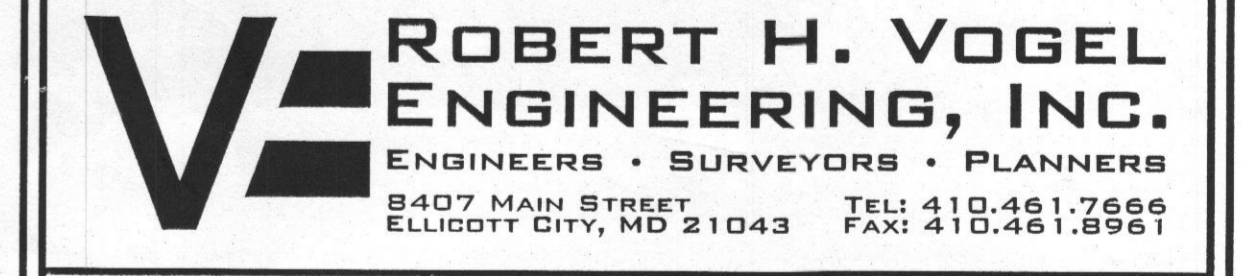
DEVELOPER
LAND DESIGN AND DEVELOPMENT
JOE RUTTER
5300 DORSEY HALL DRIVE
ELLCOTT CITY, MD 21042
443-367-0422

NO.	REVISION	DATE

PERCOLATION CERTIFICATION PLAN
CHOPRA PROPERTY
13306 ROUTE 108
PC-528494

TAX MAP 40 BLOCK 5
5TH ELECTION DISTRICT
DPZ REFS:

ZONED: RESIDENTIAL
L 10409/F 493 PARCEL 66
HOWARD COUNTY, MARYLAND



ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: JUNE, 2008
SCALE: AS SHOWN
W.O. NO.: 07-21

1 SHEET OF 1

PERCOLATION PLAN
SCALE: 1"=30'

THIS AREA DESIGNATES A PRIVATE SEWER EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS EASEMENT SHALL BE NULL AND VOID UPON CONNECTION TO A PUBLIC SEWER SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWER EASEMENT. RECORDATION OF A MODIFIED SEWER EASEMENT SHALL NOT BE NECESSARY.

SYMBOL	NAME / DESCRIPTION	TYPE
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
E1A	ELLOK SILT LOAM, 0 TO 3 PERCENT SLOPES	B
E1B2	ELLOK SILT LOAM, 3 TO 8 PERCENT SLOPES	B

NOTE:

APPROVED FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

B. Nelson for Peter Beilenson
COUNTY HEALTH OFFICER
DATE: 7/17/2008

William D. Baker
LAND SURVEYOR
DATE: 6-24-2008

PERCOLATION CERTIFICATION:
I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS CORRECT TO MY BEST KNOWLEDGE AND BELIEF.

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. 16193 EXPIRATION DATE: SEPTEMBER 27, 2008