

Bureau of Environmental Health
 8930 Stanford Boulevard, Columbia, MD 21045
 Main: 410-313-2640 | Fax: 410-313-2648
 TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
 Facebook: www.facebook.com/hocohealth

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

RECEIPT DATE: 4/6/17 **ONSITE SEWAGE DISPOSAL SYSTEM** P 560598
 APPROVAL DATE: 3/16/18 sec **PERMIT: CONSTRUCTION** A _____
 PROPERTY ADDRESS: 8593 Reservoir Road
 SUBDIVISION: Munro Property LOT: 3 TAX ID: 05-598280
 CONTRACTOR: Farm and Home Excavating EMAIL: _____
 CONTRACTOR ADDRESS: 901 Driver Rd, Marriottsville, MD 21104 PHONE: 410-984-0189
 PROPERTY OWNER: Davis and Irina Schuman EMAIL: Dschuman1@gmail.com
 OWNER ADDRESS: 11 Ridge Road Unit 2, Greenbelt, MD 20770 PHONE: 301-513-9322
 SEPTIC TANK SIZE (GALLONS): 1500 TANK MANUFACTURER: Unkwn
 PUMP MODEL: _____ PUMP SIZE _____ PUMP TANK CAPACITY: _____

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 3 APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>80</u>	INLET DEPTH: <u>3</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>7</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>5</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Install 1x8' trench along north edge of SPA. Place D box just after tank.	

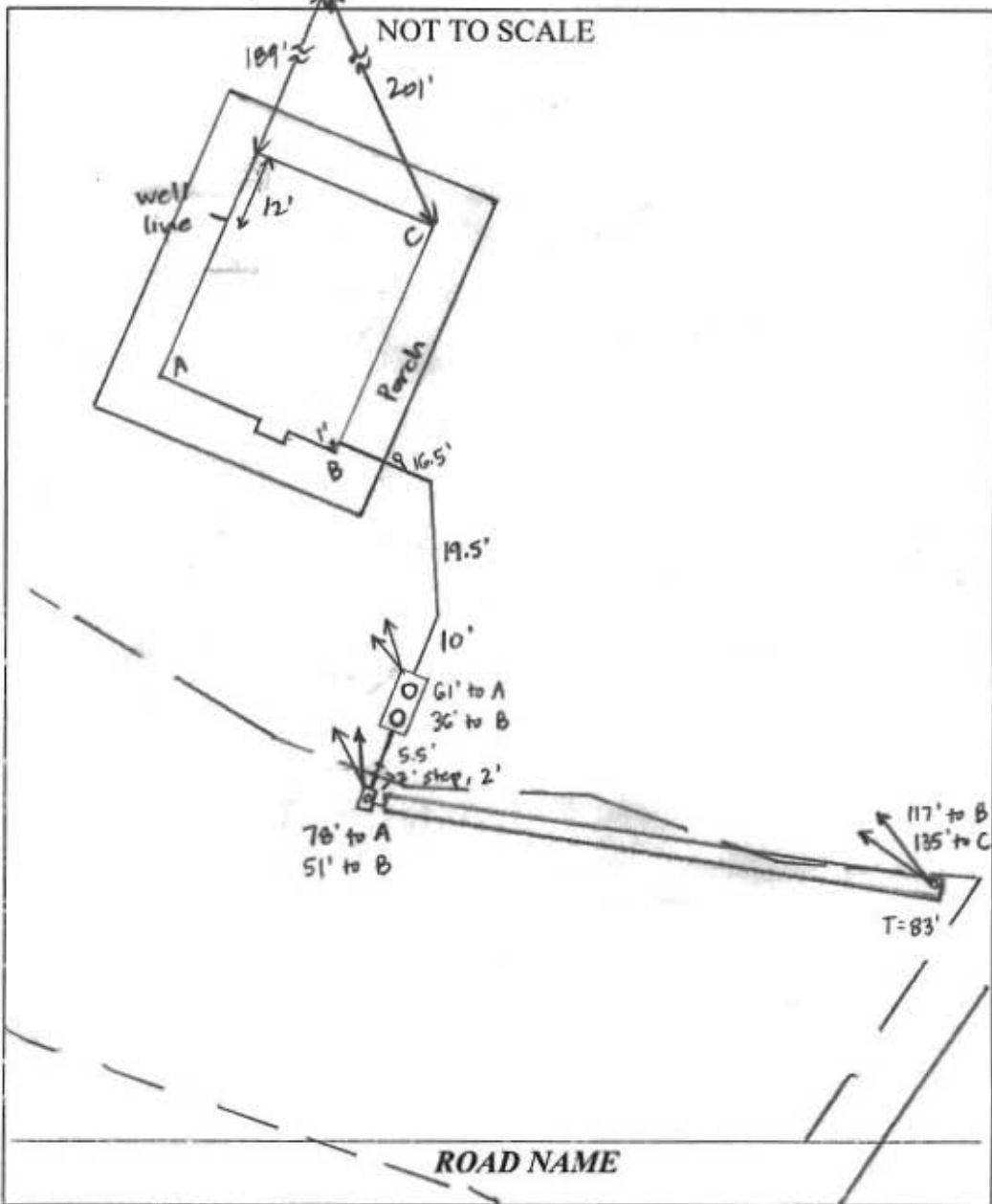
ISSUED BY: Robert Bricker ISSUE DATE: 4/6/17 EXPIRATION DATE: 4/6/18

- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM
 ELECTRICAL PERMIT ISSUED E N/A
- NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM. PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT. CALL 410-313-1771 TO SCHEDULE INSPECTIONS.

W 110-17-0027

NOT TO SCALE



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	3'	7'
NUMBER OF TRENCHES	1	
TOTAL LENGTH	83'	
ABSORPTION AREA	249' + SIDEWALL	
DISTRIBUTION BOX LEVEL	YES	
DISTRIBUTION BOX BAFFLE	YES	
DISTRIBUTION BOX PORT	YES	

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	1-2'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT + REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	YES
DATE ON LID	1-28-18

PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

PRE-CONSTRUCTION:

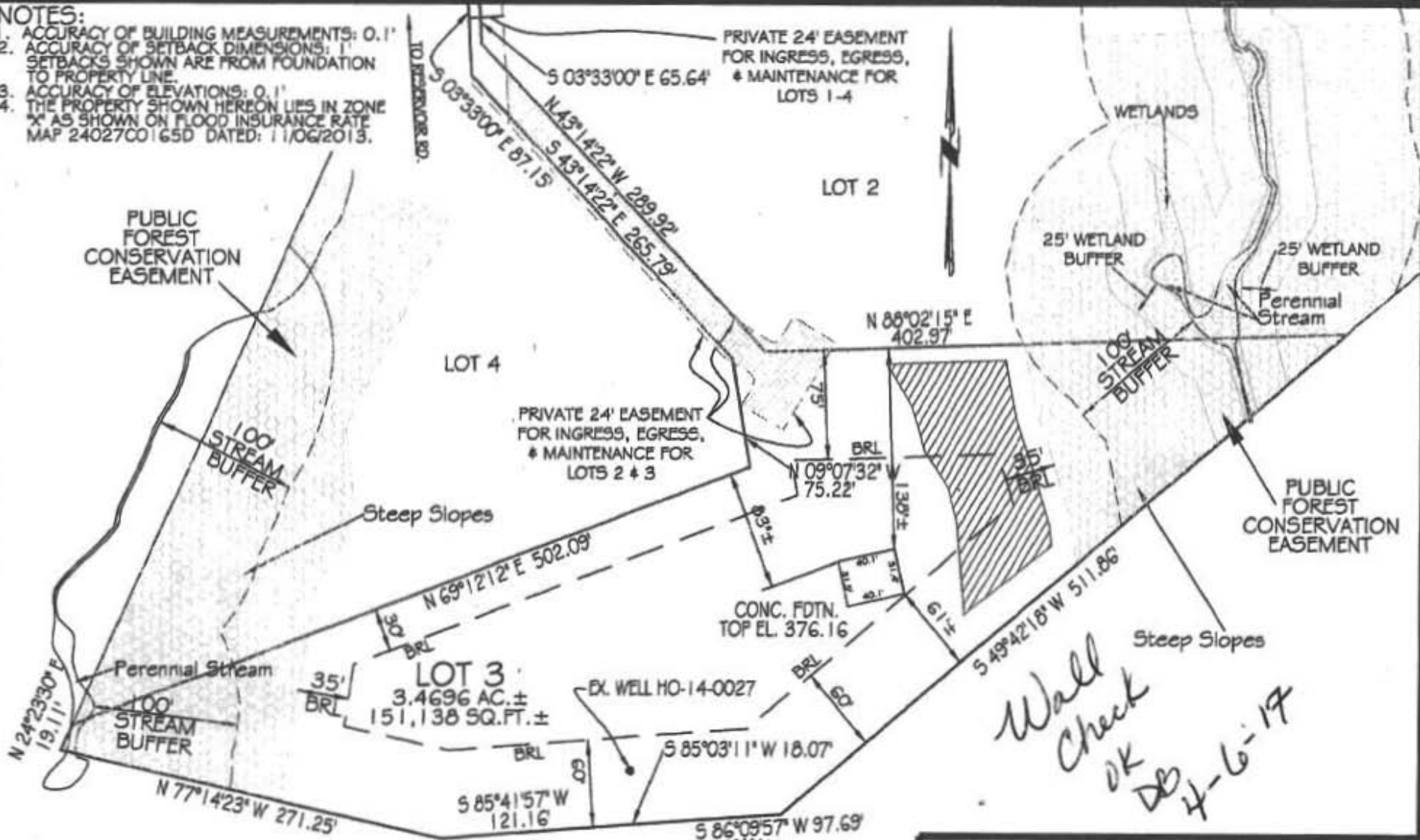
7/21/17 Met Bill from Farm + Home on site for layout. Tank and SDA corners staked, D-box and trenches also staked. Shot elevations - D-box location is 2' lower than top edge of easement. Keep D-box @ top of SDA + run 1" 80' trench to North. Contour is along SDA stakes. (SC)

INSTALLATION:

3/16/18 Installation complete. House connection made, tank set + left uncovered for inspection. Trench left open - 3' wide, 3-3.5' to stone. D-box outlet pipe sealed with tar. (SC)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 3/16/18

- NOTES:**
1. ACCURACY OF BUILDING MEASUREMENTS: 0.1'
 2. ACCURACY OF SETBACK DIMENSIONS: 1'
 3. ACCURACY OF ELEVATIONS: 0.1'
 4. THE PROPERTY SHOWN HEREON LIES IN ZONE "X" AS SHOWN ON FLOOD INSURANCE RATE MAP 24027C0165D DATED: 11/06/2013.



THE INFORMATION SHOWN HAS BEEN ESTABLISHED BY CURRENT ACCEPTABLE SURVEY PROCEDURES AND FROM AVAILABLE RECORD INFORMATION. THIS DRAWING IS NOT TO BE USED FOR THE ESTABLISHMENT OF PROPERTY LINES, LOCATION OF FENCES, GARAGES, BUILDINGS, OR OTHER FUTURE IMPROVEMENTS. IT WAS PREPARED UNDER MY DIRECT SUPERVISION AND REVIEW IN ACCORDANCE WITH SEC. 09.13.06.07. OF THE ANNOTATED CODE OF MD.

G. Scott Shanaberger

STATE OF MARYLAND

G. SCOTT SHANABERGER
 PROFESSIONAL L.S. 10849
 LICENSE EXPIRATION DATE 4/2/2018
 SHANABERGER & LANE
 8726 TOWN AND COUNTRY BLVD., SUITE 200
 ELLICOTT CITY, MD. 21043
 (410)461-9563 FAX: (410)461-9699
 home@shanlane.com

FOUNDATION LOCATION DRAWING
 MUNRO PROPERTY, LOT 3
 8593 RESERVOIR ROAD

PLATS #23309-11 TITLE DEED: 16546/136
 5TH ELECTION DISTRICT, HOWARD COUNTY, MD
 TAX MAP 45 GRID 12 PARCEL 9
 SCALE: 1"=100' DATE: 1/17/17

Bricker, Robert

From: Peter Andrulis <Peter@sillengineering.com>
Sent: Friday, December 30, 2016 11:17 AM
To: Bricker, Robert
Subject: RE: Schumer residence_OSDS Plan

Sounds great Robert. Appreciate your help.

Peter S. Andrulis, RLA
Landscape Architect
11130 Dovedale Court, Suite 200
Marriottsville, MD 21104
peter@sillengineering.com
Office: 443-325-5076 ext. 108
Fax: 410-696-2022
Cell: 717-333-0388
Website: www.sillengineering.com

 Please consider the environment before printing this email.

From: Bricker, Robert [mailto:RBricker@howardcountymd.gov]
Sent: Friday, December 30, 2016 11:09 AM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Schumer residence_OSDS Plan

I'll cross out the detail on the plan and attach the Mayer Bros. detail in the file. If you want to send updated prints (3 copies), you may.

From: Peter Andrulis [mailto:Peter@sillengineering.com]
Sent: Friday, December 30, 2016 10:45 AM
To: Bricker, Robert
Subject: RE: Schumer residence_OSDS Plan

Go ahead and X it out,,, I will replace it with the attached Mayer Tank that I am doing for Rick or the spec as needed as you stated. I just found out about this on another design, I was putting on what I was told to put on, so we'll update as required.

I can update a pdf/ or the prints if you want me to.

Peter S. Andrulis, RLA
Landscape Architect
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Cell: 717-333-0388
Website: www.sillengineering.com

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Friday, December 30, 2016 10:41 AM
To: Peter Andrulis <Peter@sillengineering.com>
Cc: Paul Sill <paul@sillengineering.com>
Subject: RE: Schumer residence_OSDS Plan

Peter,

A question came up yesterday that caused me to review County Code requirements for septic tank design (Howard County Code, 3.810). When I reviewed the Schumer plan this morning I found that the septic tank detail you are using does not illustrate a tank that would meet the requirements of Howard County Code:

1. the vertical leg of the Inlet Tee is not large enough diameter (6-inch diameter required), and it is not extended far enough below the invert of the horizontal leg. (It must extend at least 16 inches below the invert of the 4-inch diameter horizontal leg.)
2. The internal wall that separates the two compartments of the tank must have a slot. The slot precludes the use of the tee that is illustrated in the detail you are using.

Briefly stated, the tank you have illustrated would be rejected and a tank that meets the Code requirements would have to be ordered.

All that being noted, I also can advise you that the illustration of the standard two-compartment, top-seam septic tank is not required content for the OSDS Design Plan. Detail drawings are required only for tanks to be used as Pump Tanks, or tanks that are to be used for (pre-)treatment such as grease traps or BAT units.

A revision of the plan is not necessary if I have your permission to 'x-out' the septic tank detail. I could approve the plan and the building permit, and the specifications would simply state a 1500-gallon, two-compartment, top seam tank per Howard County Code 3.810.

Robert Bricker, REHS/RS, L.E.H.S.

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Tuesday, December 27, 2016 4:21 PM
To: Bricker, Robert
Subject: RE: Schumer residence_OSDS Plan

Okay Robert;;

Took care of those.

plus I made the rims level at 1' of a riser height
and took care of the dist. box odd top. Mr. Sill wanted them that way
but I have fixed them at your request.

Take a look !

Peter S. Andrulis, RLA
Landscape Architect
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Marriottsville, MD 21104
peter@sillengineering.com

Website: www.sillengineering.com

 Please consider the environment before printing this email.

From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Tuesday, December 27, 2016 11:27 AM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: Schumer residence_OSDS Plan

Peter,
See attached PDF

ROBERT BRICKER, REHS/R.S., L.E.H.S.
ENVIRONMENTAL SANITARIAN II
BUREAU OF ENVIRONMENTAL HEALTH, WELL AND SEPTIC PROGRAM
8930 STANFORD BLVD., COLUMBIA, MD 21045

Phone: Desk, 410-313-2691; Program, 410-313-1771; Bureau, 410-313-1774
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E-mail: rbricker@howardcountymd.gov

Office: 443-325-5076 ext. 108
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Cell: 717-333-0388
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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Tuesday, December 27, 2016 3:45 PM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Schumer residence_OSDS Plan

Peter, Here are some needed corrections that I missed earlier:
In SEPTIC SYSTEM PROFILE,

Top of Box Elevation isn't necessary, and the (distribution) box is illustrated oddly with the top at the surface.
Proposed Septic Trench I1 has a bottom at elevation 360.5.

Under SEPTIC SYSTEM DESIGN SPECIFICATIONS,

Initial System, Trenches I1 and I2 do not have equal Elevations for Grade and Invert

Grade at Trench I1=367.5; Grade at Trench I2 = 366.0

Invert for Trench I1 = 364.5; Invert for Trench I2 = 363.0

Reverse the labels for Replacement System trenches so that R1 is the higher trench

Replacement System Trenches R1 and R2 do not have equal Elevations for Grade and Invert

Grade at R1 = 367.5; Grade at R2 = 365.5

Invert for R1 = 364.5; Invert for R2 = 362.5

Maybe this is the last edit.
Robert Bricker, REHS/RS, L.E.H.S.

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Tuesday, December 27, 2016 2:13 PM
To: Bricker, Robert
Subject: RE: Schumer residence_OSDS Plan

Robert;

This is our correct plan,,,

I have reworded the note # 6 to read correctly,

cleaned up those R trenches and added a revision date to the revision block.

Let me know how this one looks.

Peter S. Andrulis, RLA
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Cell: 717-333-0388

Bricker, Robert

From: Bricker, Robert
Sent: Thursday, December 15, 2016 10:41 AM
To: 'Peter Andrulis'
Cc: Ted Smith; Harris Woodward
Subject: RE: Septic System discussion munro 3

All,

The OSDS Plan now appears to be approvable. I will review the hard copy when possible. As the septic tank was illustrated in a location contrary to code in the original Plot Plan, and the correction was made by reconfiguring a SWM dry well and relocating the septic tank, I am requiring that a revised Plot Plan be submitted to the Department of Inspections, Licenses, and Permits. The transmittal sheet for DILP should indicate Revision required by Health Department.

Robert Bricker, REHS/RS, L.E.H.S.

From: Peter Andrulis [mailto:Peter@sillengineering.com]
Sent: Thursday, December 15, 2016 10:06 AM
To: Bricker, Robert
Cc: Ted Smith; Harris Woodward
Subject: RE: Septic System discussion munro 3

12.15.16

RE: your December 9 letter

Dear Robert:

This is a point by point response to the aforementioned comments.

- 1) We have revised the layout, working with you to accomplish the final layout. The final pipe exit from the building is in the direction you had indicated; and a clean out added where requested, along with the alignments you had suggested;
- 2) We relocated the dry well so that it is 25' from the septic tank, which has been slightly relocated, and as per discussions with you;
- 3) We have relocated the ^{Trenches} ~~sda~~ to the location you have indicated on your subsequent sketches, and shown on my final plan;
- 4) We have added the note regarding an ejector pit to be required for discharge from the basement;
- 5) We revised the top of tank note as requested;
- 6) Revised note # 6 which appeared to be a secretarial error.

I look forward to your approval of this plan !

Sincerely,

Peter S. Andrulis, RLA
Landscape Architect
11130 Dovedale Court, Suite 200
Marriottsville, MD 21104
peter@sillengineering.com
Office: 443-325-5076 ext. 108

Bricker, Robert

From: Peter Andrulis <Peter@sillengineering.com>
Sent: Thursday, December 15, 2016 10:33 AM
To: Bricker, Robert
Subject: RE: Septic System discussion munro 3
Attachments: Munro 3 Septic Plan 12.14.16.pdf

12.15.16

RE: your December 9 letter

Dear Robert:

This is a point by point response to the aforementioned comments.

- 1) We have revised the layout, working with you to accomplish the final layout. The final pipe exit from the building is in the direction you had indicated; and a clean out added where requested, along with the alignments you had suggested;
- 2) We relocated the dry well so that it is 25' from the septic tank, which has been slightly relocated, and as per discussions with you;
- 3) We have relocated the trenches to the location you have indicated on your subsequent sketches, and shown on my final plan;
- 4) We have added the note regarding an ejector pit to be required for discharge from the basement;
- 5) We revised the top of tank note as requested;
- 6) Revised note # 6 which appeared to be a secretarial error.

I look forward to your approval of this plan !

Sincerely,

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Website: www.sillengineering.com

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Thursday, December 15, 2016 9:44 AM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Septic System discussion munro 3

Peter,

These items I noticed:

There are not Failed Perc Tests so that item can be removed from the Legend.

The Replacement Trenches are now nearer to Grade elevation 367.5 than to 366.
A note or label is needed stating that an ejector pit is needed for discharge from the basement.

Robert Bricker, REHS/RS, L.E.H.S.

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Thursday, December 15, 2016 9:29 AM
To: Bricker, Robert
Subject: RE: Septic System discussion munro 3

Robert:

This drawing I think does what you need.

Am writing the letter but check to see all you need is on here.

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Wednesday, December 14, 2016 12:58 PM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Septic System discussion munro 3

Looks good

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Wednesday, December 14, 2016 12:56 PM
To: Bricker, Robert
Subject: RE: Septic System discussion munro 3

Like this?

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Wednesday, December 14, 2016 12:54 PM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Septic System discussion munro 3

Show one at the first bend. That will leave it to the installer to determine if another is needed at the bends closer to the tank.

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Wednesday, December 14, 2016 12:49 PM
To: Bricker, Robert
Subject: RE: Septic System discussion munro 3

I was going to leave the cleanouts to the installer, do you want me to show them?

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Wednesday, December 14, 2016 12:48 PM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Septic System discussion munro 3


That looks like it'll work. There needs to be a cleanout at the first bend from the house.

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Wednesday, December 14, 2016 12:45 PM
To: Bricker, Robert
Subject: RE: Septic System discussion munro 3

Robert:

Here is the central location of the tank.
A few 45's coming out,,,

Peter S. Andrulis, RLA
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Cell: 717-333-0388
Website: www.sillengineering.com

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Wednesday, December 14, 2016 11:14 AM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Septic System discussion munro 3

I thought that the location you had was very good after shifting the tank downhill and rotating the dry well. When sketching suggested trench locations, I wrote assumed pipe inverts just to be sure gravity flow could be achieved. The entire SDA could be reached from that central location. True, that it is not ideal to have a 60-70 foot run of SHC to reach the Distribution Box for the Initial System, but over a very long period of time the center location of the septic tank will prove favorable.

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Wednesday, December 14, 2016 11:03 AM
To: Bricker, Robert
Subject: RE: Septic System discussion munro 3

Robert, take a look.
It's a 20 scale plan.

Peter S. Andrulis, RLA
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Cell: 717-333-0388
Website: www.sillengineering.com

 Please consider the environment before printing this email.

From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Wednesday, December 14, 2016 10:29 AM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Septic System discussion munro 3

Peter,
Just listened to the voicemail you left. I think the revised tank location is good for reaching the entire SDA.
Robert Bricker

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Tuesday, December 13, 2016 4:40 PM
To: Bricker, Robert
Subject: RE: Septic System discussion munro 3

Peter S. Andrulis, RLA
Landscape Architect
11130 Dovedale Court, Suite 200

Marriottsville, MD 21104
peter@sillengineering.com
Office: 443-325-5076 ext. 108
Fax: 410-696-2022
Cell: 717-333-0388
Website: www.sillengineering.com

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Tuesday, November 22, 2016 4:56 PM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: RE: Septic System Tank Sizing Template

There's a simple table in COMAR 26.04.02.05. I might have scanned it to send, but I wouldn't know where to stop. Better that you know where to look.

You and all your office mates enjoy your Thanksgiving feast.

From: Peter Andrulis [<mailto:Peter@sillengineering.com>]
Sent: Tuesday, November 22, 2016 4:48 PM
To: Bricker, Robert
Subject: RE: Septic System Tank Sizing Template

Robert:

There is this handy narrative (recipe) that we put on the dwgs for sizing of the trenches.

Perhaps there would be one for the sizing of the tank.

Like you stated ,,,

Peter S. Andrulis, RLA
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Cell: 717-333-0388
Website: www.sillengineering.com

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From: Bricker, Robert [<mailto:RBricker@howardcountymd.gov>]
Sent: Tuesday, November 22, 2016 4:40 PM
To: Peter Andrulis <Peter@sillengineering.com>
Subject: Septic System Installation Plans

Peter, Attached are the guidance documents that I referred to.

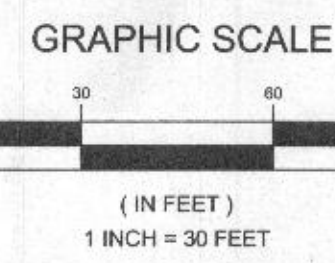
ROBERT BRICKER, REHS/R.S., L.E.H.S.
ENVIRONMENTAL SANITARIAN II
BUREAU OF ENVIRONMENTAL HEALTH, WELL AND SEPTIC PROGRAM
8930 STANFORD BLVD., COLUMBIA, MD 21045

Phone: Desk, 410-313-2691; Program, 410-313-1771; Bureau, 410-313-1774
Fax: 410-313-2648

E-mail: rbricker@howardcountymd.gov



PLAN VIEW
SCALE: 1"=30'

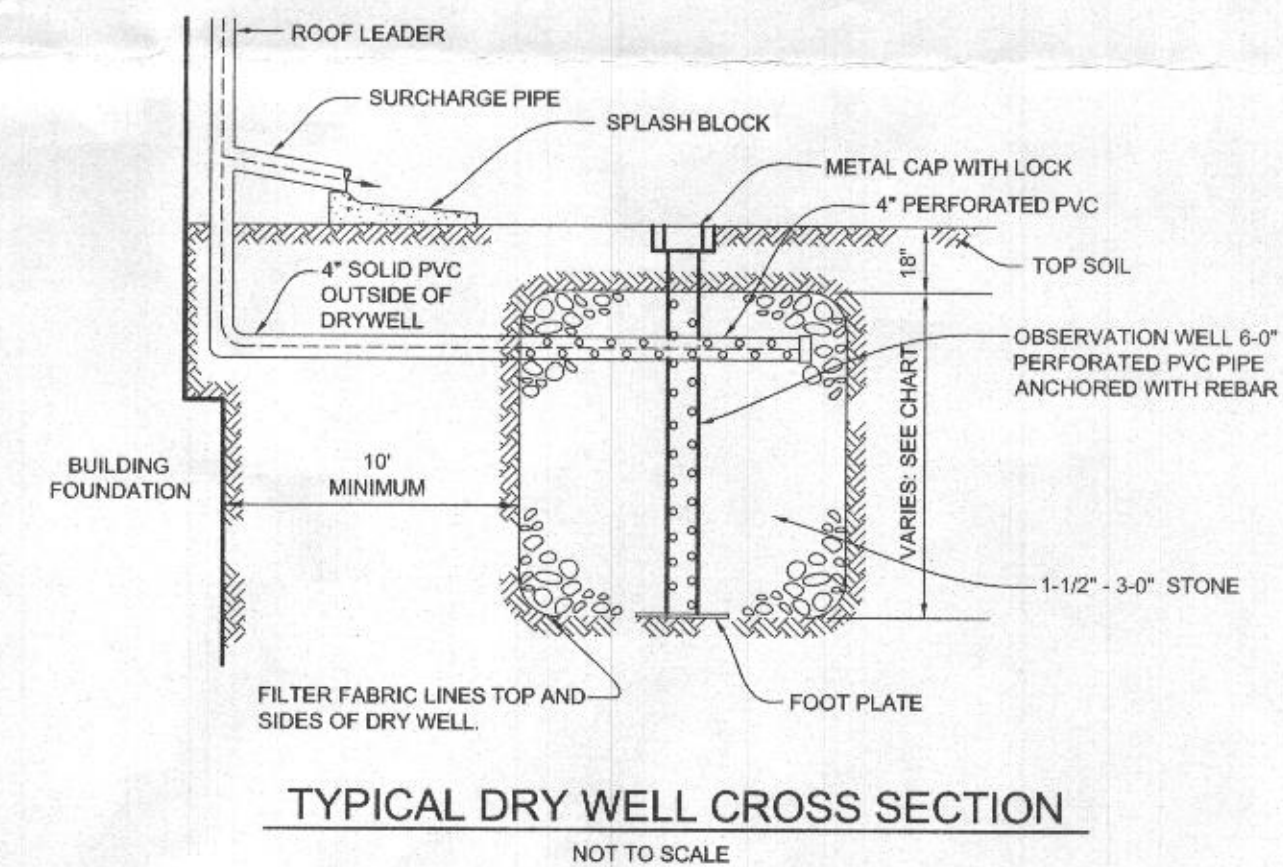


NO.	DESCRIPTION	DATE
1	REVISED SEPTIC SYSTEM LAYOUT PER HEALTH DEPT.	12/14/16
REVISIONS		

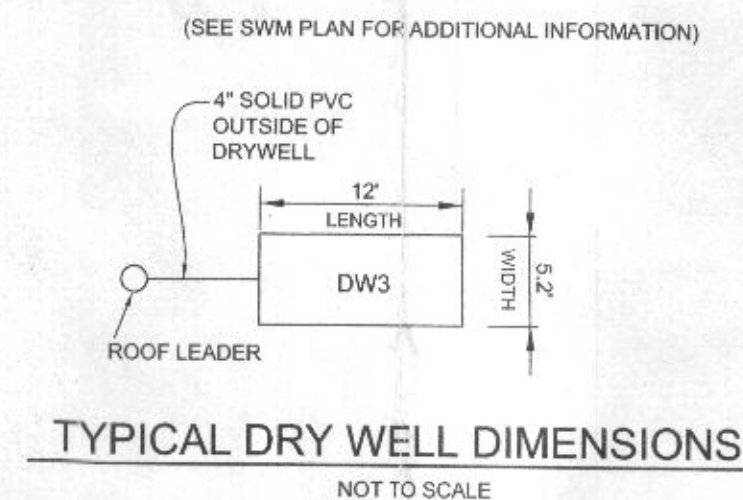
SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GmC	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.43
MaC	MANOR LOAM, 3 TO 8 PERCENT SLOPES	B	0.28

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.

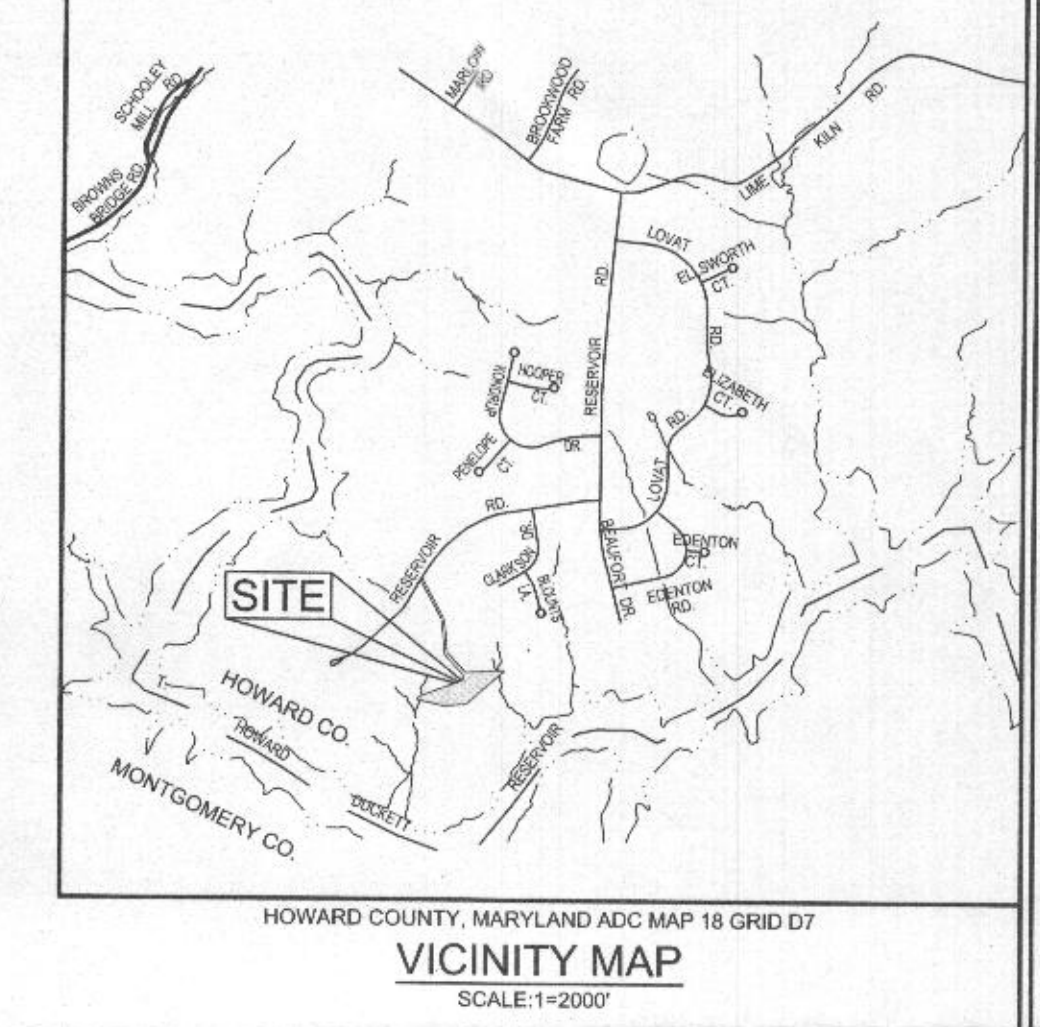
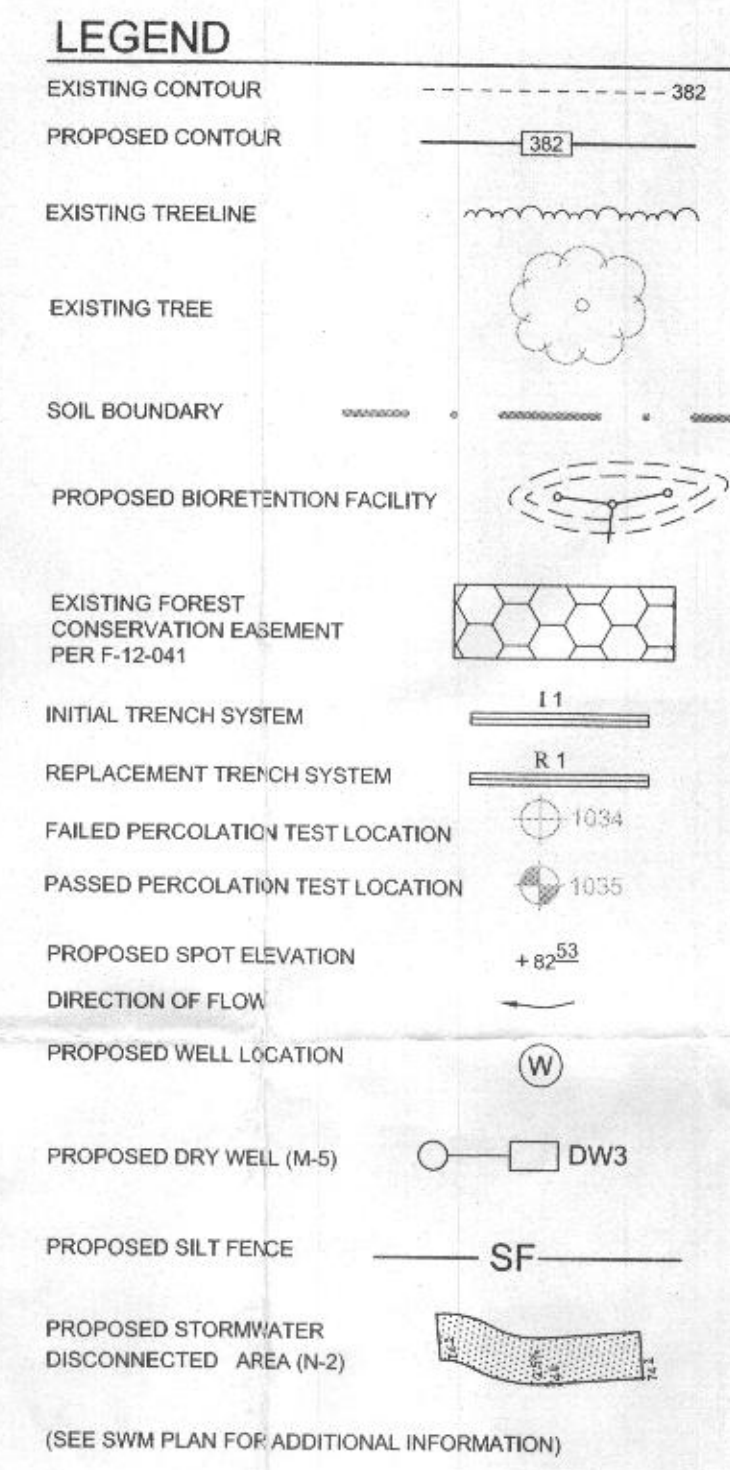
DRY WELL CHART				
LOT NO.	VOLUME REQUIRED	VOLUME PROVIDED	NO. WELLS	SIZE WELLS
3	99.0 CF	99.8 CF	4	12" LONG x 5.2" WIDE x 4.0' DEEP



TYPICAL DRY WELL CROSS SECTION
NOT TO SCALE



TYPICAL DRY WELL DIMENSIONS
NOT TO SCALE



REVISED
 Date: 12.16.16
 Comments: Revised plot plan

GENERAL NOTES

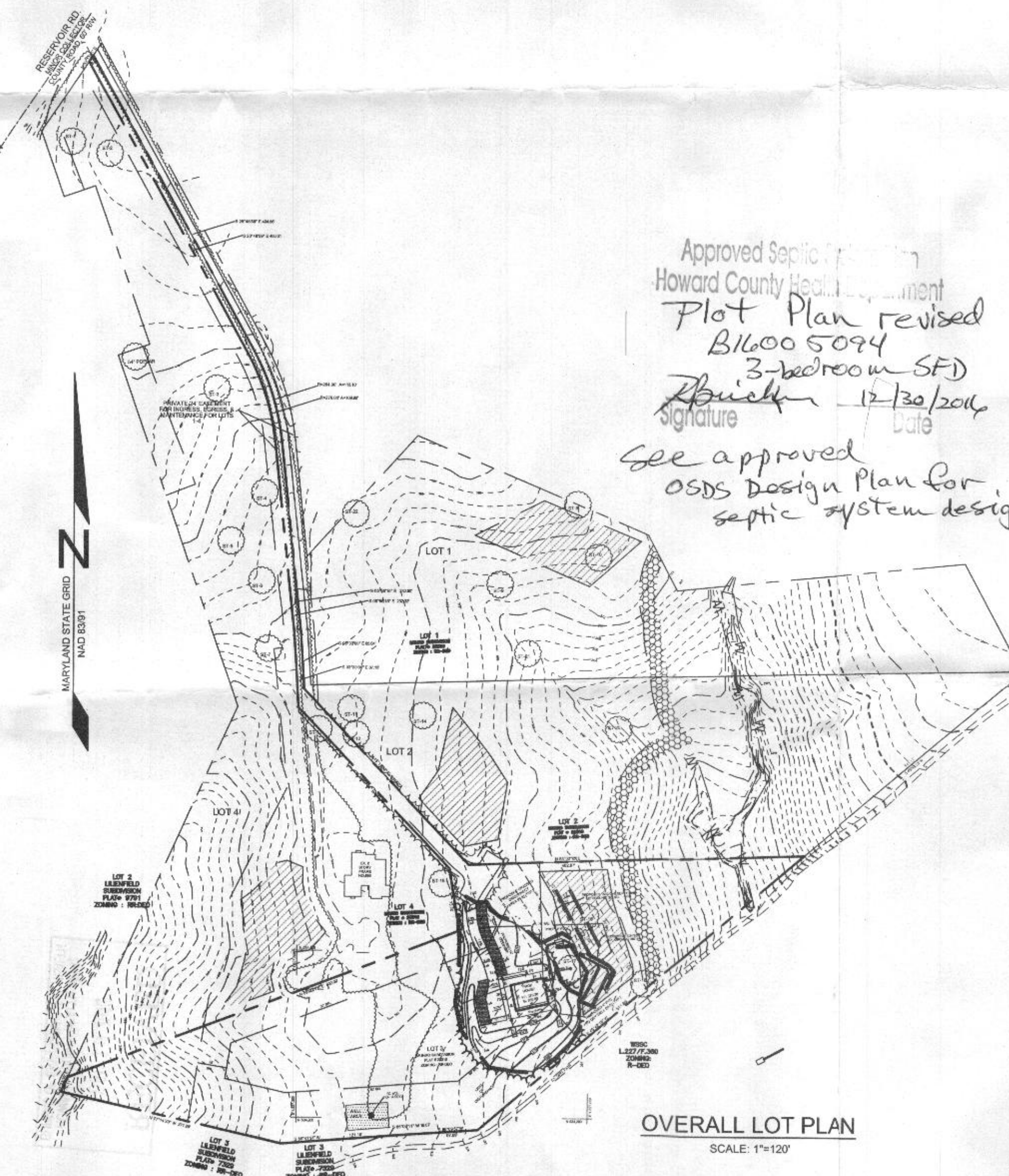
- SUBJECT PROPERTY ZONED RR-DEO PER 02/02/04 COMPREHENSIVE ZONING PLAN.
- TOTAL AREA OF PROPERTY = 3.47 AC.
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
- THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT, OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS 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 EASEMENT RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
- THE BOUNDARY SHOWN HEREON IS BASED ON HOWARD COUNTY A FIELD RUN BOUNDARY SURVEY PREPARED BY SHANBERGER & LANE, DATED JUNE 2016.
- THE TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY SHANBERGER & LANE, DATED JUNE 1, 2016.
- PROPERTY ADDRESS: 8593 RESERVOIR ROAD, FULTON, MD 20759 - LIBER 18546, FOLIO 136.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- A WETLAND AND FOREST STAND DELINEATION STUDY WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS DATED JANUARY 14, 2013.
- LIMIT OF DISTURBANCE: 25,798 SF OR 0.59 AC.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

- MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
- WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOURS TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



OVERALL LOT PLAN
SCALE: 1"=120'

Approved Septic System
 Howard County Health Department
 Plot Plan revised
 B16005094
 3-bedroom SF1
 Signature: [Signature] Date: 12/30/2016
 See approved OSDS Design Plan for septic system design

BUILDER
 FINISH WERKS CUSTOM BUILDERS
 8600 FOUNDRY ST # 2053
 SAVAGE, MD 20783
 410-514-6222 C/O HARRIS WOODWARD
 harris@finishwerks.com

PROPERTY OWNER
 DAVID & IRINA SCHUMAN
 11 RIDGE RD., UNIT 2
 GREENBELT, MD 20770
 H: (301) 513-9322
 dschuman1@gmail.com

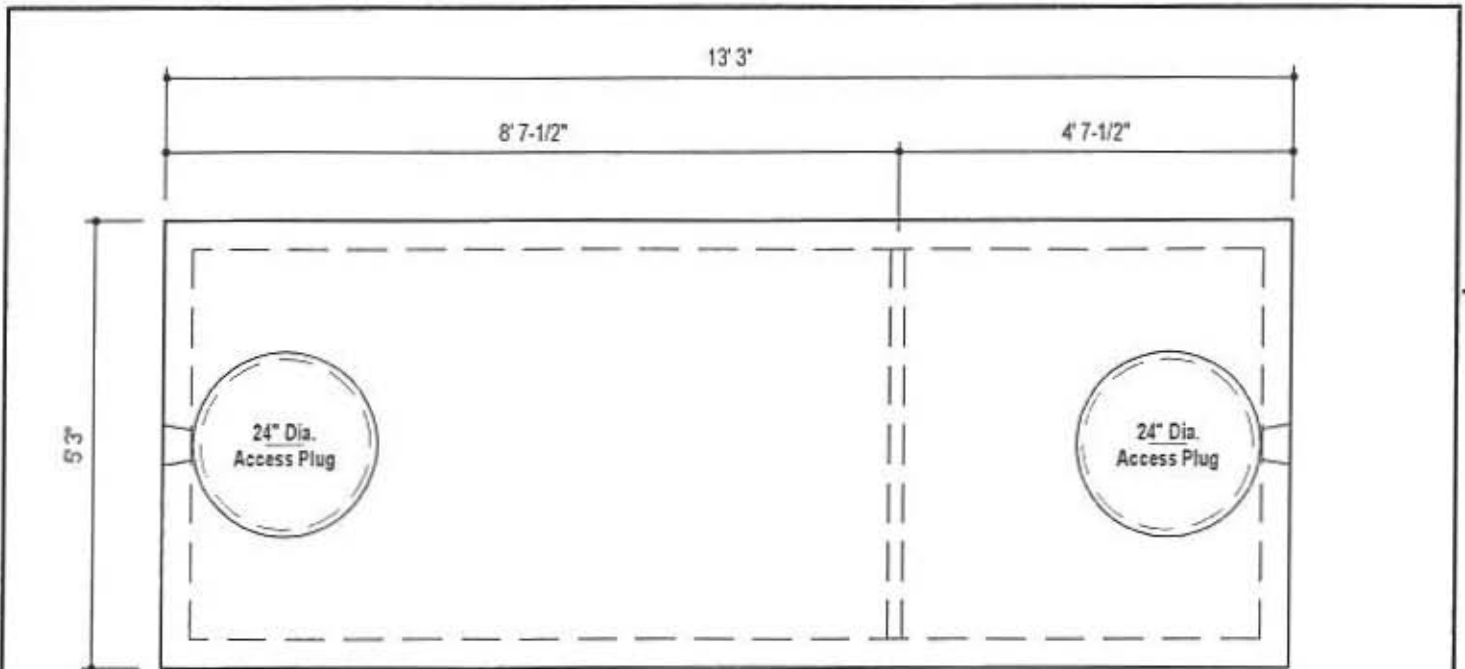
PLOT PLAN
SCHUMAN PROPERTY- MUNRO LOT 3
 8593 RESERVOIR RD. FULTON, MD 20759

TAX MAP 45 GRID 12 5TH ELECTION DISTRICT PARCEL 9 & P/O PARCEL 50 HOWARD COUNTY, MARYLAND

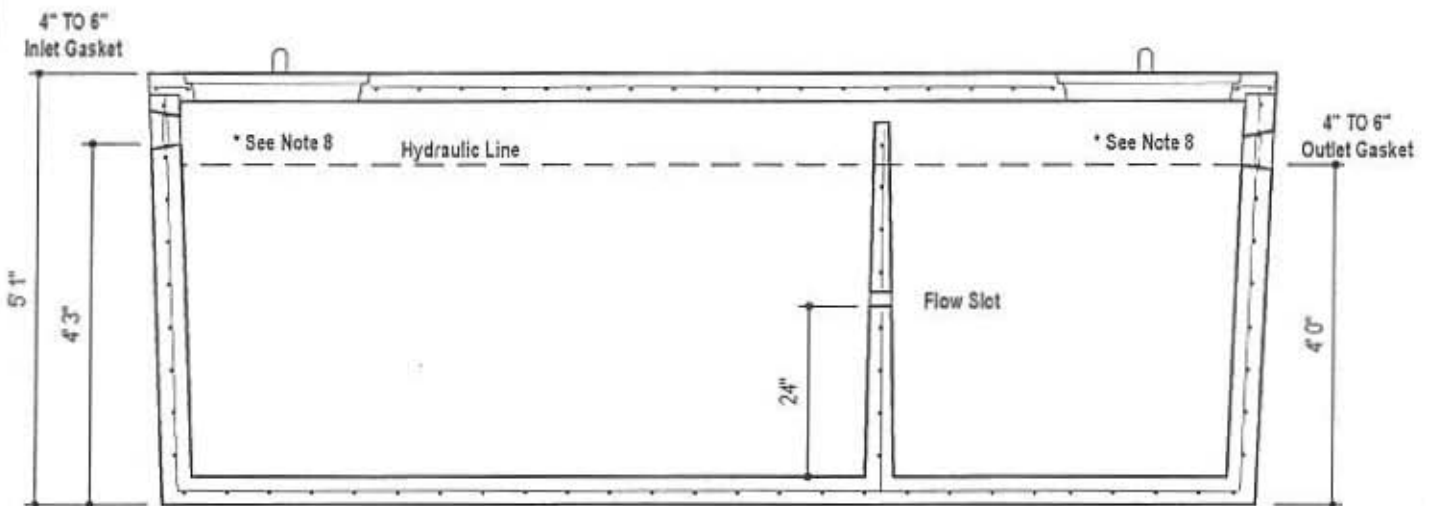
SILL ENGINEERING GROUP, LLC
 11130 Dovedale Court, Suite 200
 Marriottsville, Maryland 21104
 Phone: 443.325.5076
 Fax: 410.696.2022
 Email: info@sillengineering.com
 Civil Engineering for Land Development

DESIGN BY: PA
 DRAWN BY: PA
 CHECKED BY: PS
 SCALE: A.S.
 DATE: NOV 28, 2016
 PROJECT #: 15-049
 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, 2017



PLAN VIEW



SECTION A-A

DESIGN DATA & GENERAL NOTES

- [1] Concrete strength $f_c=4,000$ p.s.i. @ 28 days. Density = 150 pcf.
- [2] Cement - Portland Type III per ASTM C 150-92.
- [3] Admixtures & plasticizers per ASTM C 260-86 & C 484-92.
- [4] Reinforcing per ASTM A185. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, base, & top thickness.
- [7] Max 3-1/2" of cover
- [8] Depending on use of tank, Inlet & Outlet baffle may be required by code.

'OK' reB. 12/30/2016

WEIGHT = 16,750 lbs.

MBI
Mayer Bros., Inc.

6264 Race Road
Elkridge, Maryland 21075
Tel. 410.796.1434
Fax. 410.796.1438
www.mayerbrosprecast.com

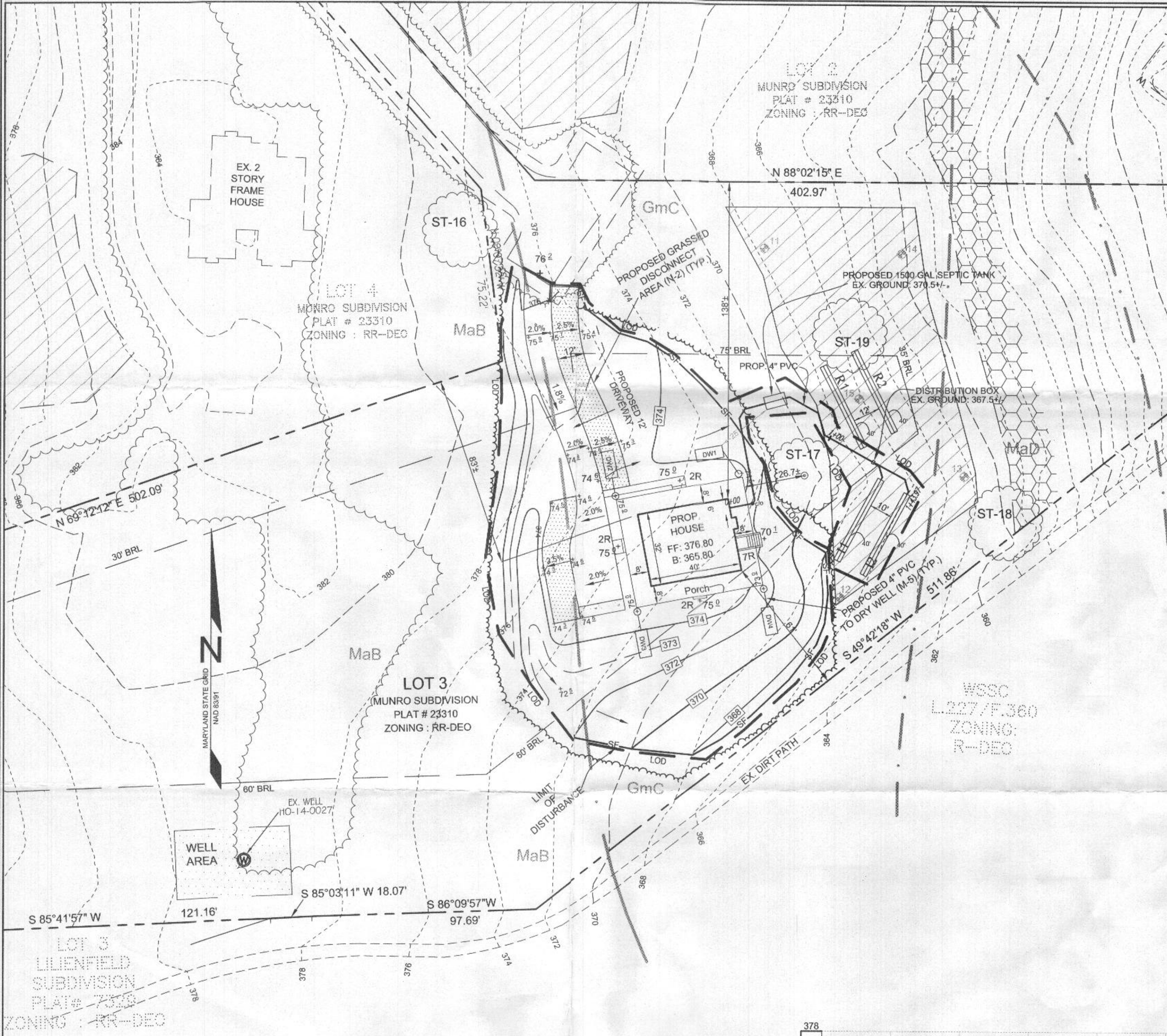
**1,500 GALLON TANK (Non-Traffic)
2-Compartment**

Stock Item

Dwg. No. 1500-2C

No Scale

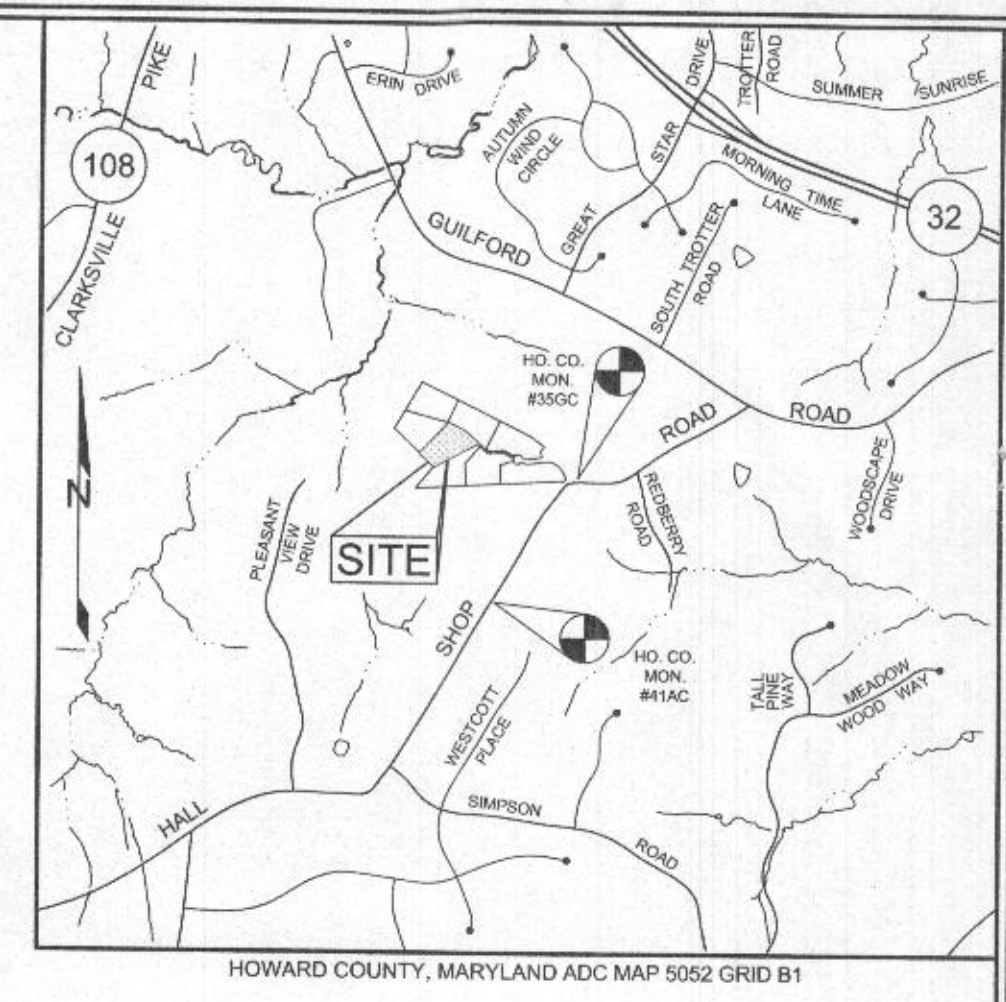
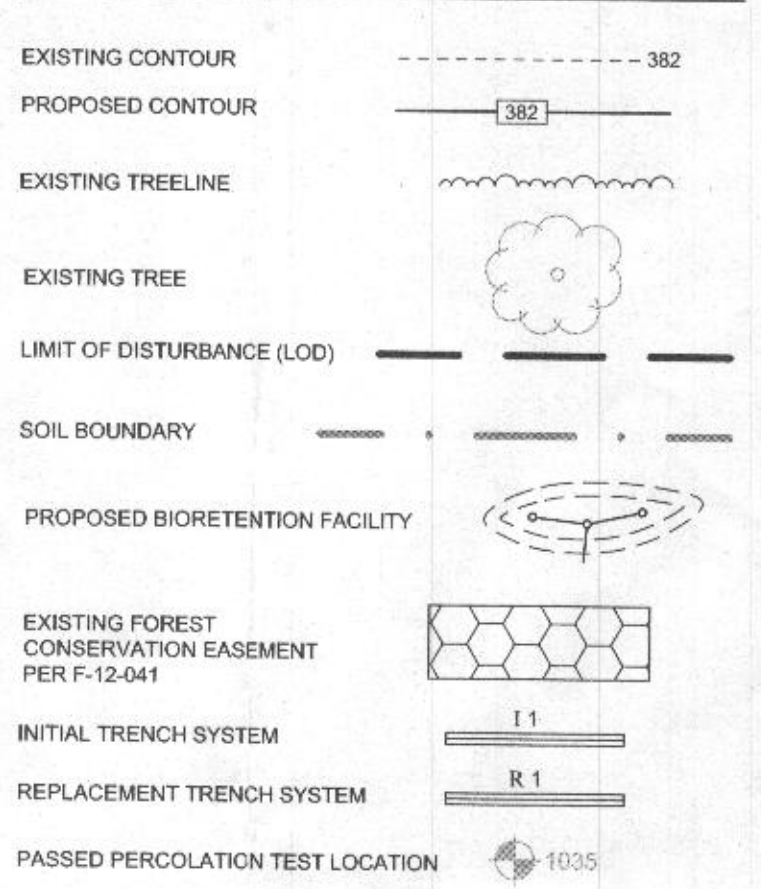
Aug. 11, 2008



SEPTIC SYSTEM TRENCH DESIGN SPECIFICATIONS

- INITIAL SYSTEM:**
 - APPLICATION RATE: 1.2
 - EFFECTIVE AREA BEGINNING DEPTH: 5.0'
 - BOTTOM MAXIMUM DEPTH: 7.0'
- DESIGN FLOW:**
 - 3 BEDROOMS AT 150 GPD
 - 3 X 150 GPD = 450 GPD
- SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:**
 - DESIGN FLOW (450 GPD) / APPLICATION RATE (1.2) = 375 SF
- SIDEWALL REDUCTION CREDIT:**
 - TRENCH WIDTH (W) = 3'
 - TRENCH EFFECTIVE DEPTH (D) = 2.0'
 - (W-2) / (W+2D) X 100 = 62.5%
- LINEAR LENGTH OF TRENCH REQUIRED:**
 - DRAIN FIELD SQUARE FOOTAGE (375) X SIDEWALL REDUCTION CREDIT (62.5%) / TRENCH WIDTH (3) = 78.1' say 80'
- LINEAR LENGTH OF TRENCH PROVIDED = 80'**
 - TWO TRENCHES @ 40.0 LF
- EX. GRADE:** TRENCH I1 = 367.5; I2 = 366.0
- INVERT:** TRENCH I1 = 364.5; I2 = 363.0

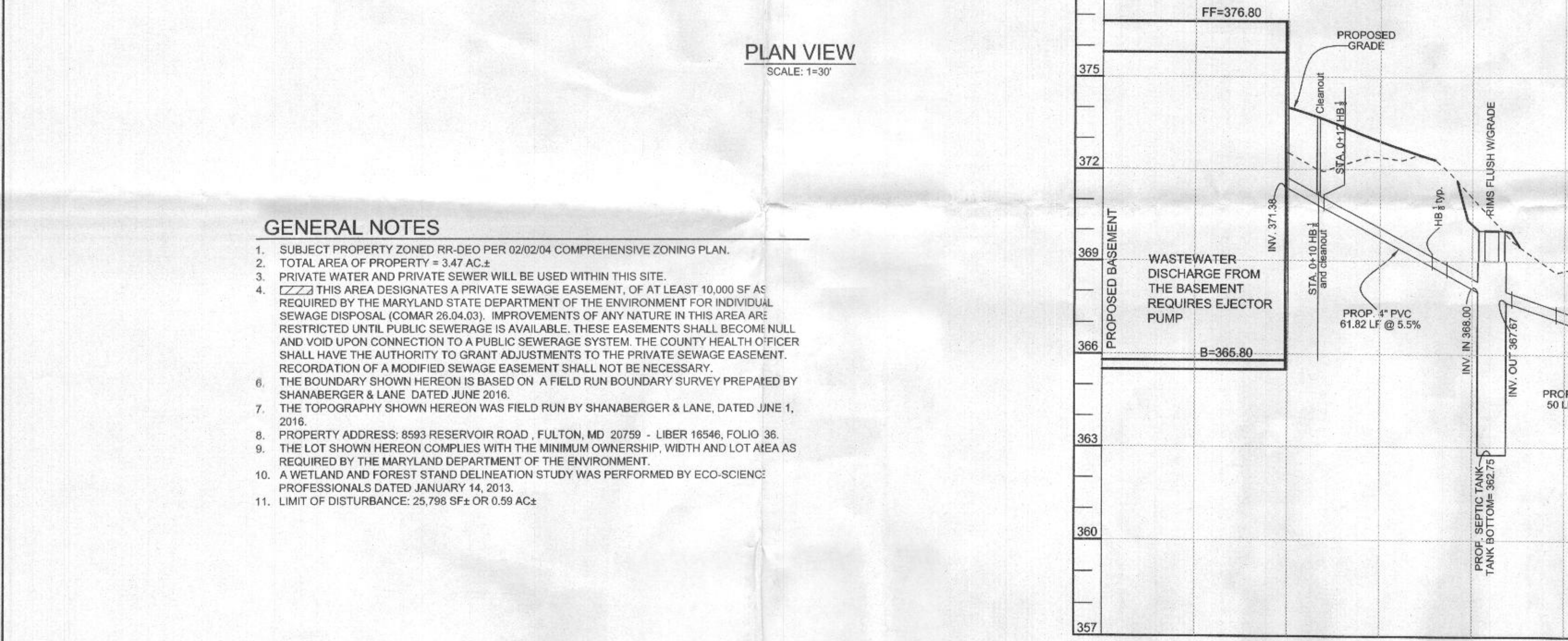
LEGEND



SOILS LEGEND

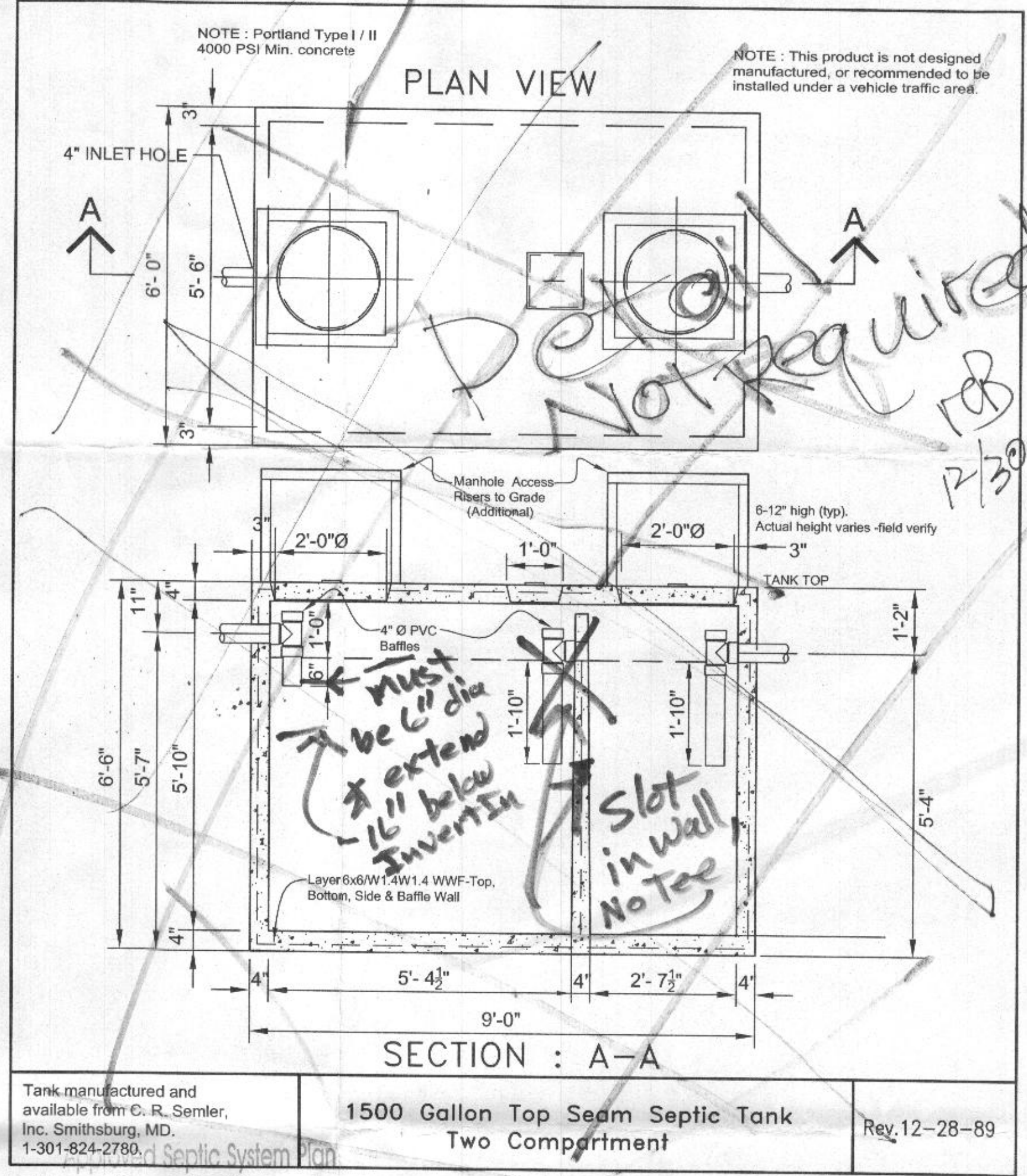
SYMBOL	NAME / DESCRIPTION	GROUP	K _f FACTOR
GbA	GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES	B	0.20
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	B	0.20
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24

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 EROSION FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.



SEPTIC SYSTEM NOTES

- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- THE WELL TAG # HO-14-0027 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
- 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.
- WASTEWATER DISCHARGE FROM THE BASEMENT REQUIRES AN EJECTOR PUMP.



Howard County Health Department
 1500 gal Septic Tank per HoCo Code 3.810
 to Gravity Distribution
Signature 12/30/2016
 3 bedroom SFD
 B11605094

PROPERTY OWNER

DAVID & IRNA SCHUMAN
 11 RIDGERS, UNIT 2
 GREENBET, MD 20770
 H: (301) 513-9322
 dschumant@gmail.com
BUILDER
 FINISH WORKS CUSTOM BUILDERS
 8600 FOUNDRY ST # 2053
 SAVAGE, MD 20783
 410-514-6222 C/O HARRIS WOODWARD
 harris@frshworks.com

**ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
 SCHUMAN PROPERTY- MUNRO LOT 3**

8593 RESERVOIR RD. FULTON, MD 20759
 TAX MAP 45 GRID 12 5TH ELECTION DISTRICT
 PARCEL 9 & P/O PARCEL 50
 HOWARD COUNTY, MARYLAND

DESIGN BY: PA
 DRAWN BY: PA
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: DECEMBER 28, 2016
 PROJECT #: 15-049
 SHEET #: 1 of 1



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

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 28, 2017