

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: 3/1/17 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 5-60557

APPROVAL DATE: 3/15/17 **PERMIT: CONSTRUCTION**

A _____

PROPERTY ADDRESS: 7077 Mink Hollow Road

SUBDIVISION: _____ LOT: _____ TAX ID: 05-353238

CONTRACTOR: Hatfield's Equipment EMAIL: ken@hatfieldsequipment.com

CONTRACTOR ADDRESS: P.O. Box 519 Annapolis Junction, MD 20701 PHONE: 301-490-4289

PROPERTY OWNER: Dennis and Donna Danner EMAIL: _____

OWNER ADDRESS: P.O. Box 355, Highland, MD 20777 PHONE: 240-375-4934

SEPTIC TANK SIZE (GALLONS): 2000 TANK MANUFACTURER: Mayer Bros.

PUMP MODEL: _____ PUMP SIZE _____ PUMP TANK CAPACITY: _____

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>75' 115'</u>	INLET DEPTH: <u>3.5' 5.5'</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>13</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>3</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	<u>Install 2 x 50' trenches</u>	

ISSUED BY: Hank Oswald ISSUE DATE: 3/1/17 EXPIRATION DATE: 3-1-18

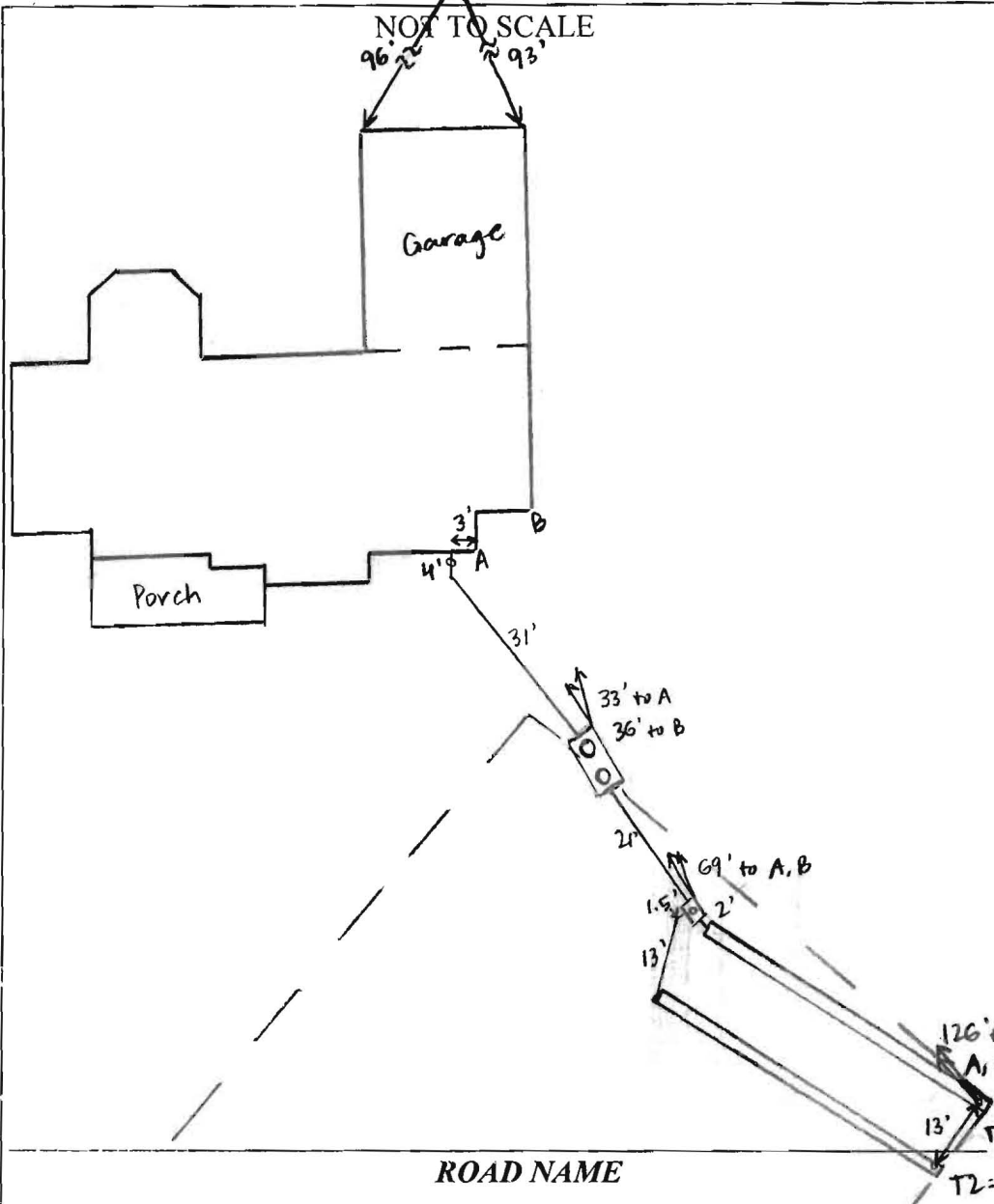
- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- 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 _____
- 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 Ho-15-0251

NOT TO SCALE
96'
93'



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	5.5'	8'
NUMBER OF TRENCHES		2
TOTAL LENGTH		116'
ABSORPTION AREA		354' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	2000 GAL
SEAM LOC	TDP
TANK LID DEPTH	4'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT + REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	YES
DATE ON LID	2-9-17

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:

3/9/17 Met Hatfield's on site for layout. SDA + tank stakes present. Up to 1' fill on upper SDA - dug down to determine real grade. Laid out 1 x 75' trench on contour. Set depth at trench end + use laser to check depths while digging. (SC) 3/13/17 Tank installed deeper than plan. won't make fall to 3.5' inlet. Will be 5.5' inlet. New trench length 116' - laid out 2 x 58' trenches at NE corner of SDA. (SC)

INSTALLATION:

3/13/17 Tank set, house connection made. Tank is traffic-bearing. (SC) 3/15/17 Trenches complete. T1 open at ends and T2 left open. 4-4.5' to stone, 3' wide. Levelled speed levelers in D-box. Tank will be ~6' deep after grading. (SC)

Oswald, Hank

From: Oswald, Hank
Sent: Thursday, February 16, 2017 8:59 AM
To: 'surveysinc@verizon.net'
Subject: RE: Danner Property_Septic Plan_Tank Spec

Surveys Inc.

This tank does not contain the slot in the middle wall as described in my email. Please contact the company and forward the spec with the appropriate details.

Thanks,

Hank

From: surveysinc@verizon.net [mailto:surveysinc@verizon.net]
Sent: Wednesday, February 15, 2017 8:13 PM
To: Oswald, Hank
Subject: Re: Danner Property_Septic Plan_Tank Spec

Hi Hank,

Attached is a 2000 gallon tank, a Md. outfit. This looks a little more updated. Let me know if anything else is needed.

Thanks

Surveys, Inc.
Gregory Benefiel
301-776-0561

Do to size constraints, this will be emailed in multiple transmissions

Feb 15, 2017 10:00:20 AM, hoswald@howardcountymd.gov wrote:

The tank spec does not seem to completely conform with Howard County Local Code Tank Specs. Please review Section 3.810 of the local code for more details about tank specs (Attached).

This tank has two 4 inch outlets. It should have one outlet. In addition, the tank is required to have a middle wall with a minimum 2 inch slot located in the center of the liquid length and extend 4 feet in length. I noticed a "plot date" of 5/31/96. Perhaps your supplier can provide an updated version of their 2000 gallon tank.

Let me know if you have any questions or wish to discuss.

Thanks,

Hank

Hank Oswald, L.E.H.S.

Howard County Health Department

Bureau of Environmental Health

Well & Septic Program

8930 Stanford Boulevard

Columbia, MD 21045

410.313.1786 (Office)

410.313.2648 (Fax)

Oswald, Hank

From: Oswald, Hank
Sent: Wednesday, February 15, 2017 10:00 AM
To: surveysinc@verizon.net
Subject: Danner Property_Septic Plan_Tank Spec
Attachments: Howard County Code_Subtitle 8 - W&S.pdf

The tank spec does not seem to completely conform with Howard County Local Code Tank Specs. Please review Section 3.810 of the local code for more details about tank specs (Attached).

This tank has two 4 inch outlets. It should have one outlet. In addition, the tank is required to have a middle wall with a minimum 2 inch slot located in the center of the liquid length and extend 4 feet in length. I noticed a "plot date" of 5/31/96. Perhaps your supplier can provide an updated version of their 2000 gallon tank.

Let me know if you have any questions or wish to discuss.

Thanks,

Hank

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

Oswald, Hank

From: surveysinc@verizon.net
Sent: Tuesday, August 30, 2016 4:36 PM
To: Oswald, Hank
Subject: Re: RE: RE: BAT Plan_7077 Mink Hollow Road
Attachments: HPSC0781.pdf

Hank,

I called and left a message. The tank specifications are not on my plan, sorry about that. I had everything laid out on the plan, but apparently didn't attached them. Attached is the tanks specs. Thanks for adding them to the plan.

Surveys, Inc.
Gregory Benefiel
301-776-0561
Do to size constraints, this will be emailed in multiple transmissions

Aug 30, 2016 10:01:40 AM, hoswald@howardcountymd.gov wrote:

Was there supposed to be an attachment?

From: surveysinc@verizon.net [<mailto:surveysinc@verizon.net>]
Sent: Monday, August 29, 2016 3:30 PM
To: Oswald, Hank
Subject: Re: RE: BAT Plan_7077 Mink Hollow Road

Hank,

I are you looking for on this cross section? There is the length view, width view, dimensions are in letter form and a chart that defines dimension of each letter. The details of the tank itself.

This is in 4-5 different details on the plan.

Surveys, Inc.
Gregory Benefiel
301-776-0561
Do to size constraints, this will be emailed in multiple transmissions

Aug 29, 2016 12:09:33 PM, hoswald@howardcountymd.gov wrote:

I don't see it on the plan.

From: surveysinc@verizon.net [mailto:surveysinc@verizon.net]
Sent: Monday, August 29, 2016 12:07 PM
To: Oswald, Hank
Subject: Re: BAT Plan_7077 Mink Hollow Road

Hank,

There are specifications on the plan with Cross sections A-A and B-B. Is there a different cross Section?

Surveys, Inc.
Gregory Benefiel
301-776-0561
Do to size constraints, this will be emailed in multiple transmissions

Aug 29, 2016 12:03:49 PM, hoswald@howardcountymd.gov wrote:

Surveys Inc.

Gregory Benefiel:

Can you send me a cross section of the Norweco BAT unit and I will attach it to the BAT plan. The cross section is provided by the Norweco/vender.

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Bureau of Environmental Health

Well & Septic Program

8930 Stanford Boulevard

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Facebook: www.facebook.com/hocohealth

Twitter: [HowardCoHealthDep](https://twitter.com/HowardCoHealthDep)

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

August 24, 2016

Surveys Inc.
350 Main Street
Laurel, MD

Sent via email to: 'surveysinc@verizon.net'

**RE: BAT Plan Review
 7077 Mink Hollow Road
 Danner Property**

Surveys, Inc.
Gregory Benefiel:

This letter is in response to the BAT Plan for 7077 Mink Hollow Road (Danner Property). Upon review of the plan, some items need to be added or changed on the plan. Please revise the plan to include the following:

- 1.) Size system for 5 bedrooms (Per Owner).
- 2.) Replace 960LP (Not used in this county) with Norweco TNT 500 (up to 5 bedroom design flow)
- 3.) Show cross section and details of all BAT components
- 4.) Verify max depth on tank. Its stated 4 feet but it might be 3 feet.
- 5.) Septic Trench Info, Length of Trench = 167. Is this correct?
- 6.) Show distribution box

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

Respectfully,

Hank Oswald

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

Oswald, Hank

From: Oswald, Hank
Sent: Wednesday, August 24, 2016 12:34 PM
To: surveysinc@verizon.net
Cc: dmdanner@verizon.net; Dennis Danner (d2danner@verizon.net)
Subject: BAT Plan Review Comments_7077 Mink Hollow Road
Attachments: BAT Plan Response_Danner Prop.pdf

Surveys, Inc.
Gregory Benefiel

Mrs. Danner dropped off a set of BAT Plans today. Please review attached letter for comments.

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

Thanks,

Hank

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

Oswald, Hank

From: Oswald, Hank
Sent: Thursday, July 28, 2016 10:18 AM
To: surveysinc@verizon.net
Cc: dmdanner@verizon.net; Dennis Danner (d2danner@verizon.net)
Subject: BAT Plan Requirements_7077 Mink Hollow Road
Attachments: HCHDBuildingPermitApplicationWellSeptic.pdf; BAT site plan requirements 9-19-13.pdf; OM agreement_revision 2.22.16.pdf; Sewage Disposal System Spec sheet.pdf; BAT Plan Memo_7077 Mink Hollow Road.pdf

Surveys Inc./Homeowner:

This office is in receipt of a building permit and Environmental Concept Plan for 7077 Mink Hollow Road. Please review attachments for information regarding the **building permit application process** for properties on well and septic systems as well as **BAT site plan requirements (See memo regarding additional req)**. Also, attached is a copy of the **septic system design spec sheet** to assist you with the BAT Plan design calculations etc. along with the **Operation and Maintenance agreement** to be completed by the homeowners.

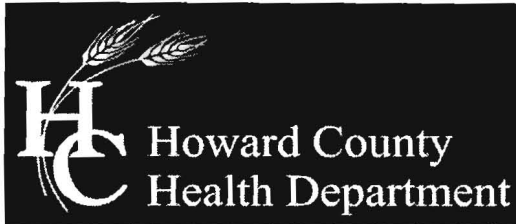
Please also forward a copy of the **floor plans** for this project directly to the Health Department. Please note that if a full bath rough in is being presented in the unfinished basement with windows, then you may want to size the BAT Plan for at least one additional future bedroom.

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

Respectfully,

Hank

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

Facebook: www.facebook.com/hocohealth

Twitter: [HowardCoHealthDep](https://twitter.com/HowardCoHealthDep)

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

July 28, 2016

Surveys, Inc.
350 Main Street
Laurel, MD 20707

Sent via email to: surveysinc@verizon.net

RE: BAT Plan Review
 7077 Mink Hollow Road

Gregory Benefiel:

This letter is in response to the BAT Plan submitted for 7077 Mink Hollow Road (Tax Map 40, Parcel 357). In addition to the BAT Plan requirements attached in email, please include the following on the BAT plan:

- 1.) Provide separate plan for BAT Installation and label it "Site Plan for BAT Installation".
- 2.) Add appropriate notes to this plan and eliminate any unnecessary notes. See BAT Plan attachment
- 3.) Add two alternate well sites to plan or add a 1500 square foot well box around existing well meeting setback requirements. Add 100 foot radius in either case.
- 4.) Add dose volume and run-time for pump. Dose should be approximately 50 – 80 gallons/minute, run-time will correspond to pump flow rate and dose
- 5.) Add Pump Model #
- 6.) Add Hoot Pump Curve
- 7.) Add head loss calculations and plot point on pump curve. Match corresponding dose and run time.
- 8.) Add trench calculations for initial plus (2) replacement systems.
- 9.) Plot trenches for initial plus (2) replacement systems in the SDA
- 10.) Please note if first system changes in size on plan, then the LOD may need to be relocated.

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

Respectfully,

Hank Oswald

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

Oswald, Hank

From: Donna Danner <dmdanner@verizon.net>
Sent: Tuesday, May 10, 2016 2:54 PM
To: Oswald, Hank
Cc: surveysinc@verizon.net
Subject: RE: Perc Cert Plan Review Comments

Yes, please, thanks, Donna

From: Oswald, Hank [<mailto:hoswald@howardcountymd.gov>]
Sent: Tuesday, May 10, 2016 2:37 PM
To: surveysinc@verizon.net
Cc: dmdanner@verizon.net; Dennis Danner (d2danner@verizon.net)
Subject: RE: Perc Cert Plan Review Comments

Surveys Inc.

The plan submitted was labeled "Percolation Test Plan". I can redline the plan to read " Percolation Certification Plan" Please let me know or resubmit correction.

Thanks,

Hank

From: Oswald, Hank
Sent: Friday, May 06, 2016 9:04 AM
To: surveysinc@verizon.net
Cc: dmdanner@verizon.net; Dennis Danner (d2danner@verizon.net)
Subject: Perc Cert Plan Review Comments

Surveys Inc.

Good morning. The following comments relate to the review of the percolation certification plan for **7077 Mink Hollow Road** submitted on 5/5/16:

- 1.) Add Purpose Statement indicating purpose of this plan. (i.e. The purpose of this plan is to establish a 10,000 sq. ft. sewage disposal area on this lot.)
- 2.) Change Note 18 to read, "All wells and septic systems located within 100' of the property boundaries and 200' down gradient of any wells and/or septic systems have be shown".
- 3.) Add labels to the culverts
- 4.) Eliminate any Legend Symbol that is not displayed on this plan (i.e. sewer manhole etc.)
- 5.) Show the other perc'd test holes on the plan
- 6.) Show a 100 foot well arc around the entire well box
- 7.) Place a "box" symbol next to MDE statement at bottom of plan

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

Respectfully,

Hank

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

Oswald, Hank

From: Oswald, Hank
Sent: Monday, August 15, 2016 9:49 AM
To: 'Dennis Danner'; 'surveysinc@verizon.net'
Cc: 'dmdanner@verizon.net'; surveysinc@verizon.net
Subject: RE: Danner Prop. 7077 E. Mink Hollow Rd.

Hi Mr. Danner:

I spoke to my supervisor about your concerns. The floor plan shows a partially finished basement and even states "finished recreation room" and shows a "guest room". Additionally, the building permit application does not specify an unfinished basement. If you send in a revision to the building permit application indicating that the basement will be completely unfinished along with floor plan showing an unfinished basement, then we won't count the guest room as a bedroom in the basement. However, it is strongly recommended that the BAT Plan is sized to accommodate at least one future bedroom in the basement due to the full bathroom rough-in.

We are also counting the "Sunken bonus room" as a bedroom because it has doors, windows, and direct access to a full bathroom. If you show a floor plan without doors and a 4 foot wide opening leading into this room then by definition it is not a bedroom.

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

Respectfully,

Hank

From: Dennis Danner [<mailto:d2danner@verizon.net>]
Sent: Wednesday, August 10, 2016 4:27 PM
To: Oswald, Hank; surveysinc@verizon.net
Cc: dmdanner@verizon.net
Subject: RE: Danner Prop. 7077 E. Mink Hollow Rd.

Hank, I am not planning on finishing the basement. The architect drew it for possible future use if we ever sell the house. I plan to have a reloading room with a bathroom nearby. I was going to rough in the plumbing so that if anyone ever wanted to finish the basement they wouldn't have to bust the slab. I can cross out the finished basement parts that are shown on the plans, but would still like to rough in a three piece bathroom in the basement. Also where is the 6th bedroom? I only want 4. One on first floor 3 on second. The long room called the sunken bonus room will be my trophy room and office. Please advise what I need to do. Thanks, Dennis

From: Oswald, Hank [<mailto:hoswald@howardcountymd.gov>]
Sent: Wednesday, August 10, 2016 2:11 PM
To: surveysinc@verizon.net
Cc: Dennis Danner (d2danner@verizon.net); dmdanner@verizon.net
Subject: RE: Danner Prop. 7077 E. Mink Hollow Rd.

Surveys Inc:

I just received the floor plans for the Danner property. By bedroom definition (see attachment), the floor plans show 6 bedrooms. The BAT Plan is only sized for 4 bedrooms. Please revise the BAT Plan accordingly before submitting to the H.D. for review.

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

Thanks,

Hank

From: surveysinc@verizon.net [mailto:surveysinc@verizon.net]

Sent: Tuesday, August 09, 2016 1:05 PM

To: Oswald, Hank

Subject: Danner Prop. 7077 E. Mink Hollow Rd.

Hank,

Attached is the revised BAT Site plan for your review. The Maintenance agreement is done waiting for new recorded deed information, will forward to you ASAP.

Changed Tank manufacture. This tank does not required a pump, so pump information was not added to plan. Any questions, please call.

Thanks

Surveys, Inc.

Gregory Benefiel

301-776-0561

Do to size constraints, this will be emailed in multiple transmissions

Oswald, Hank

From: Oswald, Hank
Sent: Wednesday, August 10, 2016 2:11 PM
To: 'surveysinc@verizon.net'
Cc: Dennis Danner (d2danner@verizon.net); dmdanner@verizon.net
Subject: RE: Danner Prop. 7077 E. Mink Hollow Rd.
Attachments: Section 3.801 Bedroom Definition.pdf

Surveys Inc:

I just received the floor plans for the Danner property. By bedroom definition (see attachment), the floor plans show 6 bedrooms. The BAT Plan is only sized for 4 bedrooms. Please revise the BAT Plan accordingly before submitting to the H.D. for review.

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

Thanks,

Hank

From: surveysinc@verizon.net [<mailto:surveysinc@verizon.net>]
Sent: Tuesday, August 09, 2016 1:05 PM
To: Oswald, Hank
Subject: Danner Prop. 7077 E. Mink Hollow Rd.

Hank,

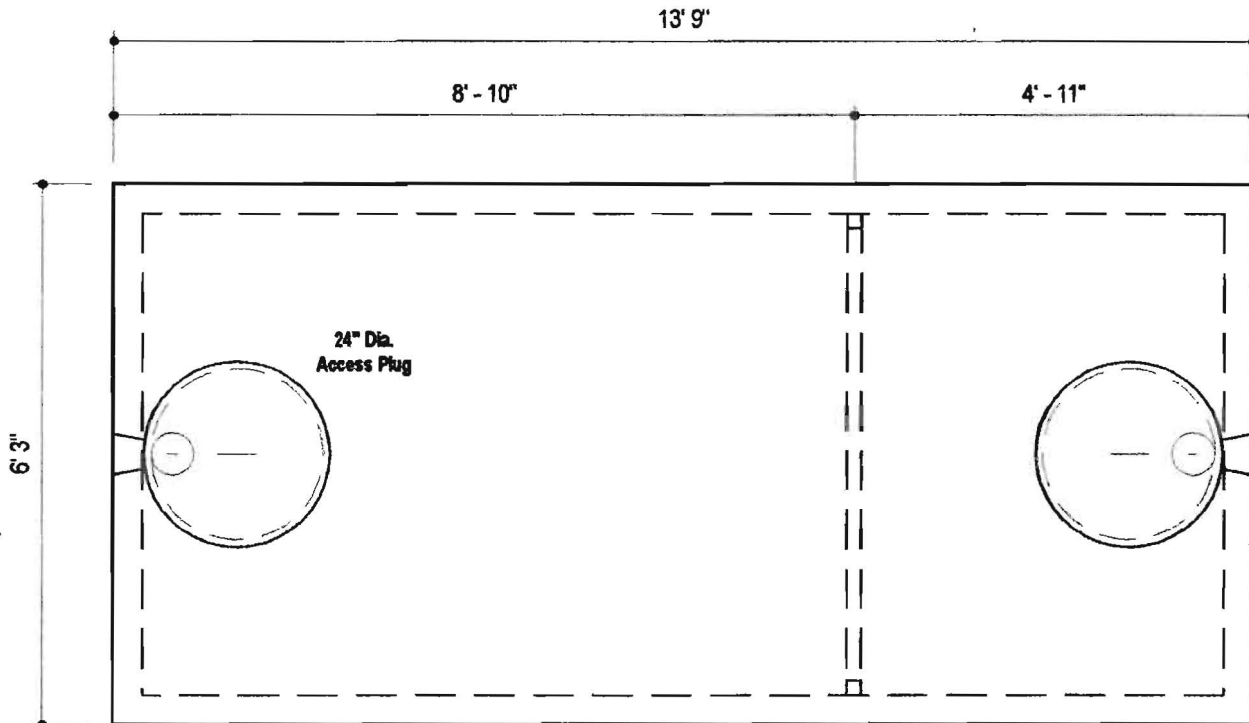
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Changed Tank manufacture. This tank does not required a pump, so pump information was not added to plan. Any questions, please call.

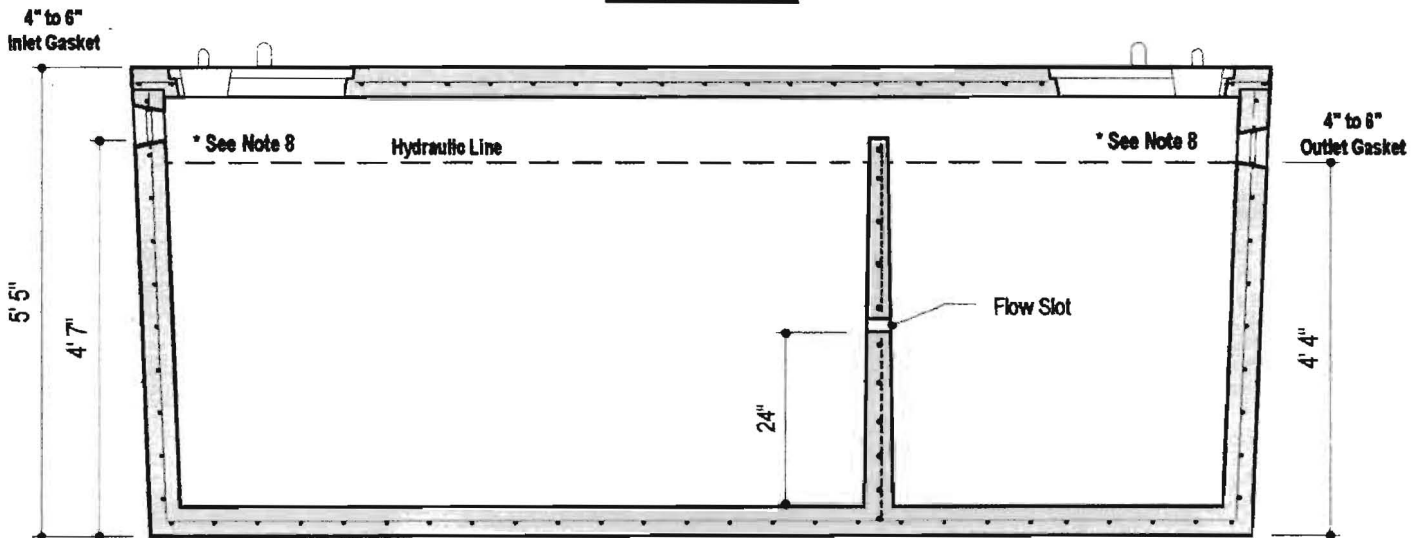
Thanks

Surveys, Inc.
Gregory Benefiel
301-776-0561

Do to size constraints, this will be emailed in multiple transmissions



PLAN VIEW



SECTION A-A

DESIGN DATA & GENERAL NOTES

- [1] Concrete strength $f_c=4,000$ p.s.i. @ 28 days. Density = 160 pcf.
- [2] Cement - Portland Type I/II per ASTM C 150-82.
- [3] Admixtures & plasticizers per ASTM C 260-96 & C 494-92.
- [4] Reinforcing per ASTM A185. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, 4" base, & 5" top thickness.
- [7] Max 3" of cover
- [8] Depending on use of tank, Inlet & Outlet baffle may be required by code.

MBI

Mayer Bros., Inc.

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

www.mayerbrosprecast.com

**2,000 GALLON SEPTIC TANK
2-Compartment**

Stock Item [Approx. 19,900 lbs]

Dwg. No. 2000-2C

No Scale

Aug 11, 2008

LEGEND

These standard symbols will be found in the drawing.

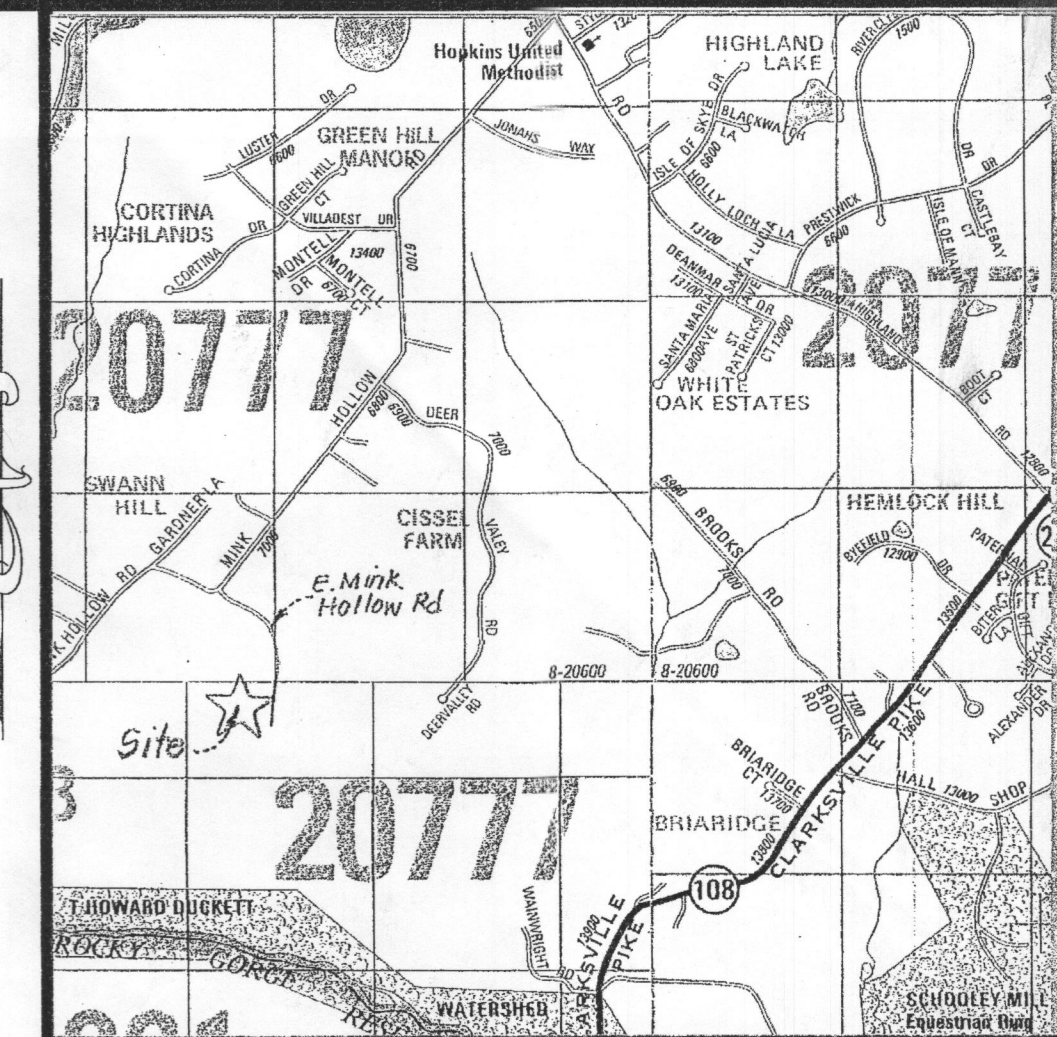
- × EX. ELEVATIONS
- + PROP. ELEVATIONS
- EX. CONTOURS
- PROP. CONTOURS
- EX. WOODLINE
- SPECIFIC TREES
- STREAM/CREEK
- CONC. CURB
- SEWER LINE
- WATER LINE
- ▨ TREE CONSERVATION
- SEWER MANHOLE
- WATER VALVE
- FIRE HYDRANT
- UTILITY POLE
- UTILITY POLE W/LGHT
- ELEC. LINE
- ED. ROAD
- SPEC. FENCE
- ▨ 15% SLOPES OR GREATER
- PASSING PERK TEST LOCATIONS
- SOILS DELINEATION LINE (Class IV-P)
- STREAM BUFFER
- SSF SUPER SILT FENCE
- LOD LIMIT OF DISTURBANCE
- STP STOCKPILE AREA
- FOREST CONSERVATION AREA
- DW DRYWELL
- ▨ PORDUS PAVEMENT

Site Plan Notes:

- Any changes 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 tank is 3.0 feet. Greater earth cover will require a heavy load bearing tank.
- Electrical work for the installation must be performed by a licensed electrician. (If required)
- The well (tag # HO-0-15-0251 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.

SITE ANALYSIS INFORMATION:

- Total area of site is 6.50 acres or 281,586 sf.
- Wetland area and buffer is 0.0 acres.
- Flood plain Area is 0.0 acres
- Forest area is 6.13 acres.
- Area of steep slopes 15% - 24.9% = 2.44 ac. and 25% and greater = 0.07 ac.
- Erodible soils = Per NRCS, no highly erodible soils consist on this site.
- Total area of disturbance = 1.41 acres at 61,420 sf.
- Green open space = 0.0 acres
- Proposed impervious area = 15,127 sf = 0.35 ac.



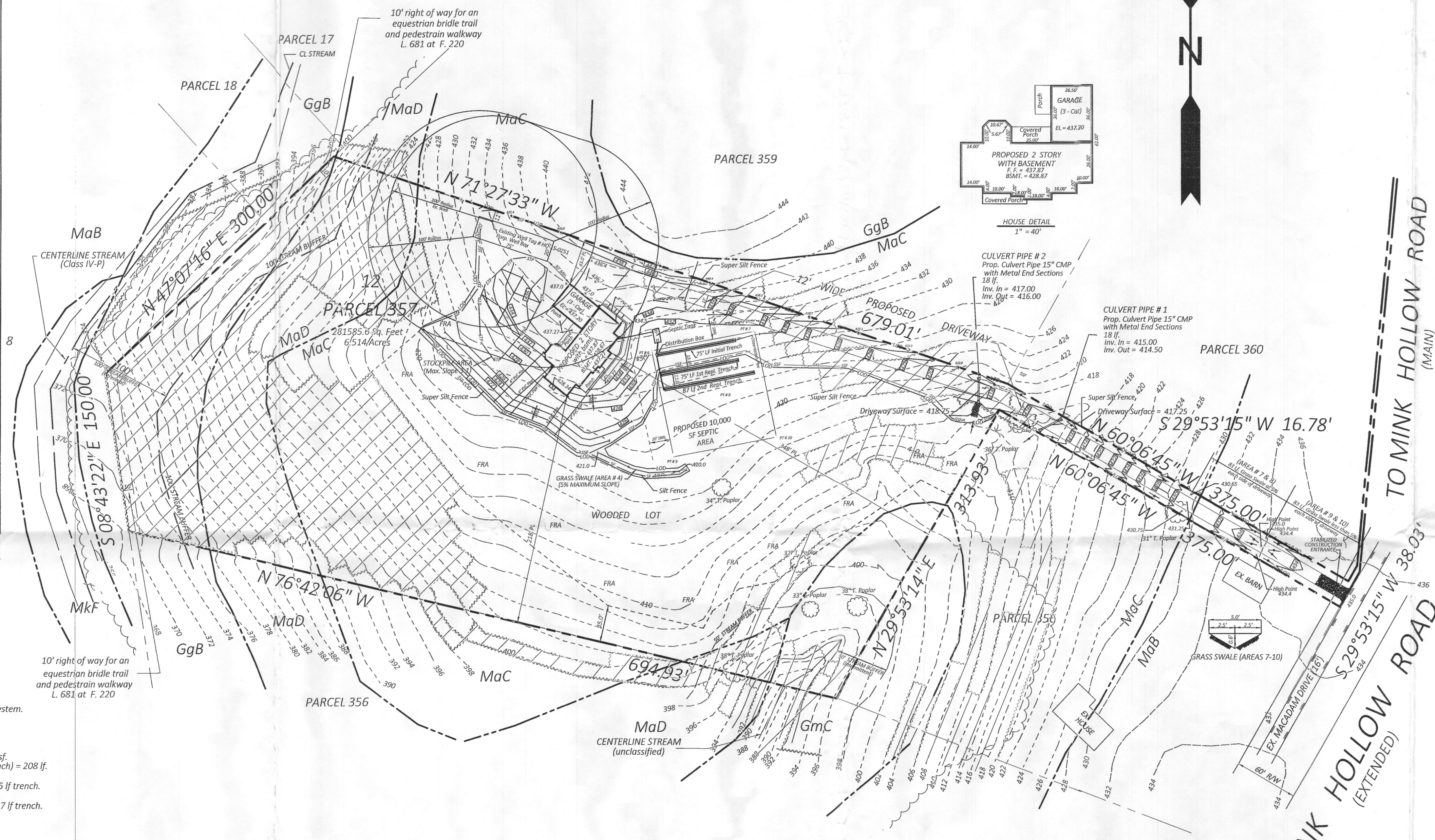
VICINITY MAP

SCALE: 1"=2000'
COPYRIGHT: A.D.C., "THE MAP PEOPLE" PERMITTED USE No 20492158

GENERAL NOTES:

- SITE ZONED: R-R DEO.
- AREA OF SITE: 281,586 SF OR 6.50 ACRES
- SITE IS LOCATED ON TAX MAP 40, GRID 08, PARCEL 357.
- SITE IS LOCATED ON ADC MAP PAGE 18, GRID 9-C.
- PROPERTY ACCOUNT NUMBER: 353238.
- WATER AND SEWER IS TO BE PRIVATE.
- OWNER/DEVELOPER/APPLICANT:
DANNER DEVELOPMENT
DENNIS DANNER
6583 HIGHLAND CT.
HIGHLAND, MD 20777
240-375-4934
- PROPERTY DESCRIPTION: DEED LIBER 669 AT FOLIO 287.
- ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- ALL WELLS ARE TO BE DRILLED PRIOR TO PERMIT ISSUANCE. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE WELL DRILLING PRIOR TO PERMIT ISSUANCE. IT WILL NOT BE CONSIDERED GOVERNMENT DELAY IF THE WELL DRILLING HOLDS UP TO THE HEALTH DEPARTMENT SIGNATURE OF THE PERMIT.
- TOPOGRAPHY OBTAINED FROM HOWARD COUNTY RECORDS AND FIELD VERIFIED AND ADJUSTED BY SURVEYOR'S INC. MARCH 15, 2016.
- PER FEMA FLOOD INSURANCE RATE MAP, PROPERTY IS IN ZONE X, COMMUNITY PANEL NUMBER 24027C01A00.
- PROPERTY ADDRESS: 7077 E. MINK HOLLOW ROAD
HIGHLAND, MARYLAND 20777
- PRIOR PERC TEST APPLICATION A-19279 PERFORMED ON NOVEMBER 13, 1973.
- CURRENT PERC TEST APPLICATION A-19279 PERFORMED ON APRIL 8, 2016.
- ALL PERC TEST HOLES PASSED AS SHOWN ON THIS PLAN
- THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY LINES.

Approved Septic System Plan
Howard County Health Department
Mark Oswald 2/24/17
Signature Date



SEPTIC TRENCH INFORMATION

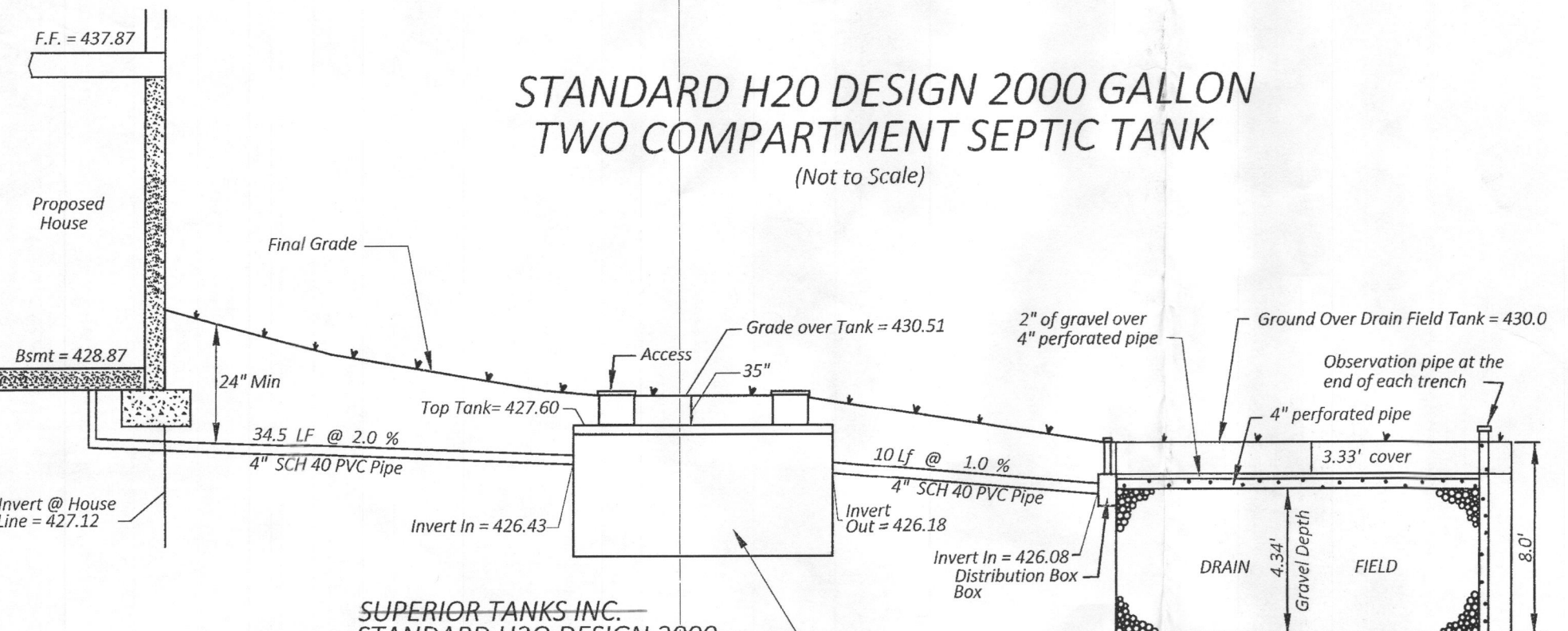
- Depth of trench.....8.0'
- Length of trench (Initial and 1st) Repl.....75 lf.
- Length of trench (2nd Repl).....87 lf.
- Width of trench.....3.0'
- Trenches to be 13.0' apart edge to edge for initial and 1st replacement trench and 11.0' for 2nd replacement.
- Invert at initial trench.....426.08
- 1st replacement.....426.69
- 2nd replacement trench.....421.68

TRENCH DESIGN

Proposed 5 Bedroom House
Application Rate = 1.2
Effective area beginning depth = 3.0', Initial & 1st repl. system.
Effective area beginning depth = 4.0', 2nd repl. system.
Bottom maximum depth = 8.0'
Design flow = 150 gallons per day (gpd) per bedroom
Design flow = 5 x 150 = 750 gpd.
Square footage of trench required = 750 gpd / 1.2 = 625 sf.
Linear length of trench required = 625 sf / 3' (wide of trench) = 208 lf.
For Initial and 1st Replacement Systems:
Sidewall reduction = 5/14 = 0.36 or 36% = 208 x 0.36 = 75 lf trench.
For 2nd Replacement System:
Sidewall reduction = 5/12 = 0.42 or 42% = 208 x 0.42 = 87 lf trench.

STANDARD H2O DESIGN 2000 GALLON TWO COMPARTMENT SEPTIC TANK

(Not to Scale)



SUPERIOR TANKS INC.
STANDARD H2O DESIGN 2000 GALLON SEPTIC TANK (or equivalent)
(Pumps are not required for this system)

OWNER/DEVELOPER

Dennis Danner
Danner Development
6583 HIGHLAND CT.
HIGHLAND, MD 20777
240-375-4934

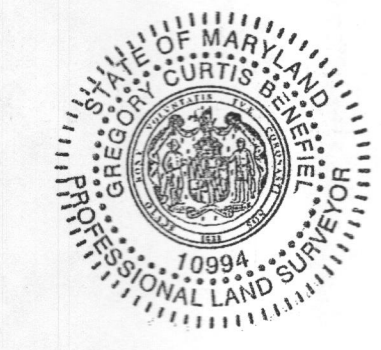
CALL "MISS UTILITY" TELEPHONE NUMBER 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION.

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF HOWARD COUNTY

Health Officer, Howard County Health Dept. Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date
Chief, Division of Land Development	Date
Director	Date



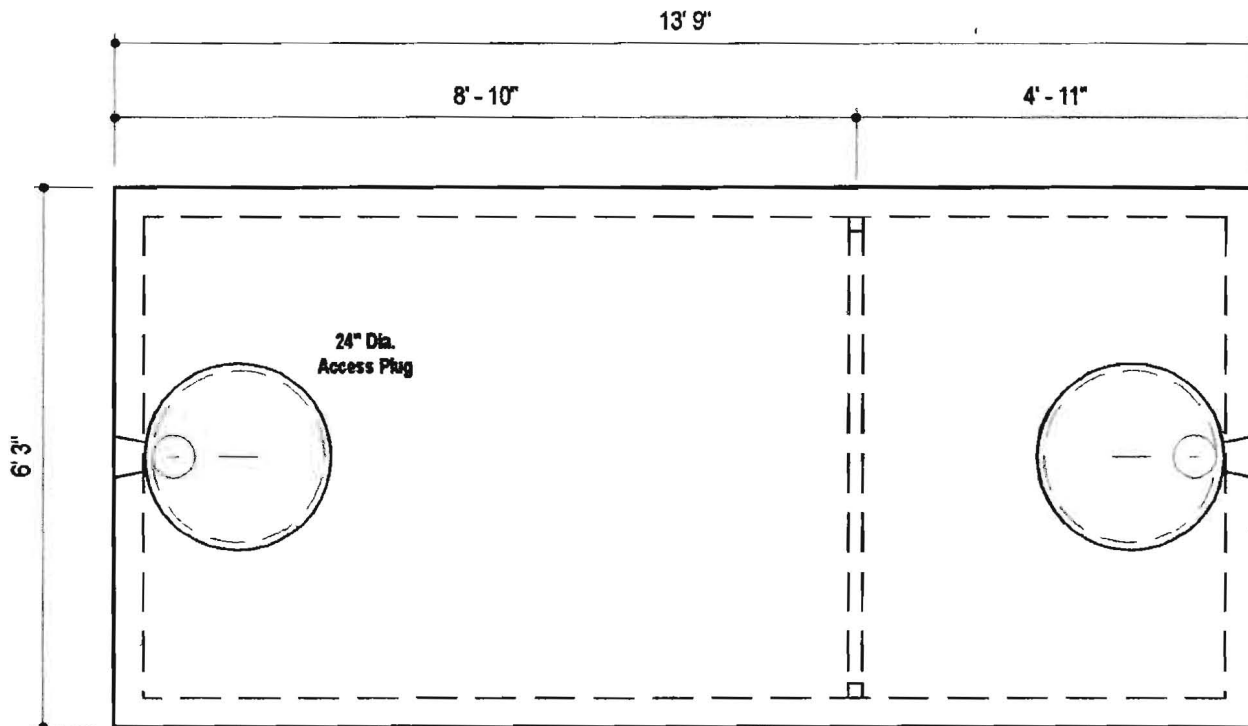
I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.
Feb 13, 2017
DATE
Mark Oswald
REGISTERED PROFESSIONAL LAND SURVEYOR, MD No. 00994
LICENSE EXP. AUG. 8, 2015

SURVEYS, INC.
SURVEYORS • ENGINEERS • LAND PLANNERS
PERMIT SERVICES
950 MAIN STREET
LAUREL, MARYLAND, 20707
PHONE 301-716-0944 FAX 301-716-0944 E-MAIL SURVEYS@OVERZON.NET

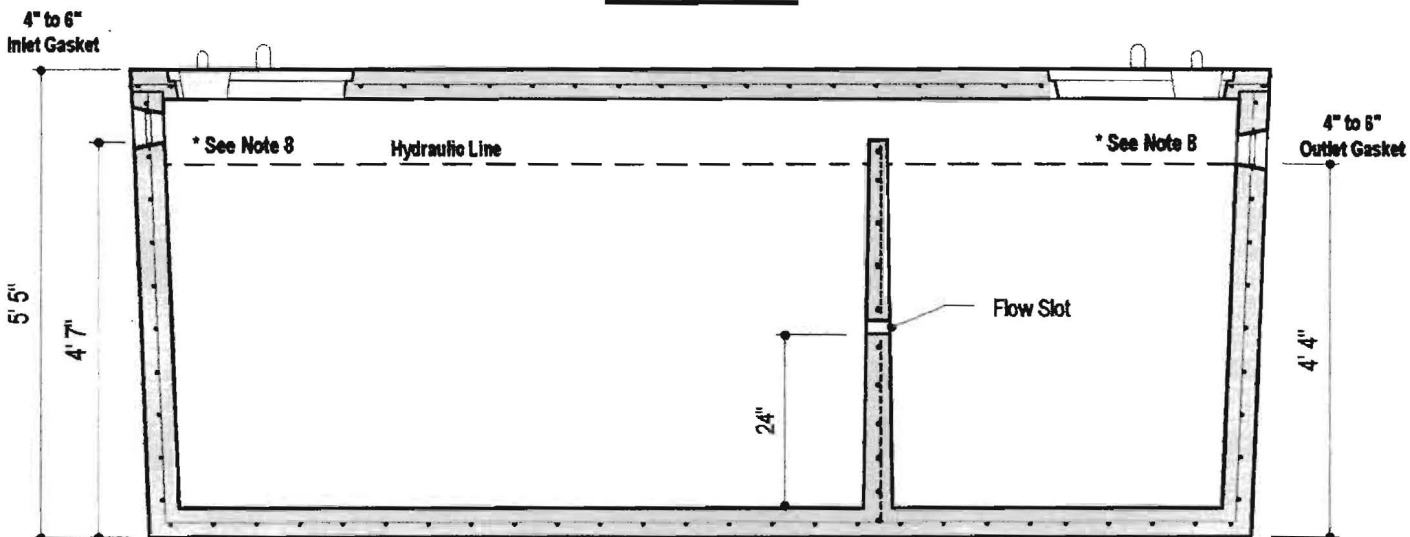
DATE	REVISION
Aug. 6, 2016	HD Comments
Feb. 13, 2017	Revise BAT system to conventional gravity flow system

SITE PLAN FOR BAT INSTALLATION
7077 E. MINK HOLLOW ROAD
TAX MAP 40, PARCEL 357
DANNER PROPERTY
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE	DESIGNER	CHECKED BY
1"=60'	DB	GB
DATE	DRAFTER	FIELD BOOK
JULY 2014	DB	BK 60/P 30
JOB NUMBER	SHEET NUMBER	FILE NUMBER
16-24	1 OF 1	L-421



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 I/II per ASTM C 150-92.
- [3] Admixtures & plasticizers per ASTM C 260-86 & C 494-92.
- [4] Reinforcing per ASTM A186. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, 4" base, & 6" top thickness.
- [7] Max 3" of cover
- [8] Depending on use of tank, Inlet & Outlet baffle may be required by code.

MBI

Mayer Bros., Inc.

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

www.mayerbrosprecast.com

**2,000 GALLON SEPTIC TANK
2-Compartment**

Stock Item [Approx. 19,900 lbs]

Dwg. No. 2000-2C

No Scale

Aug 11, 2008

LEGEND

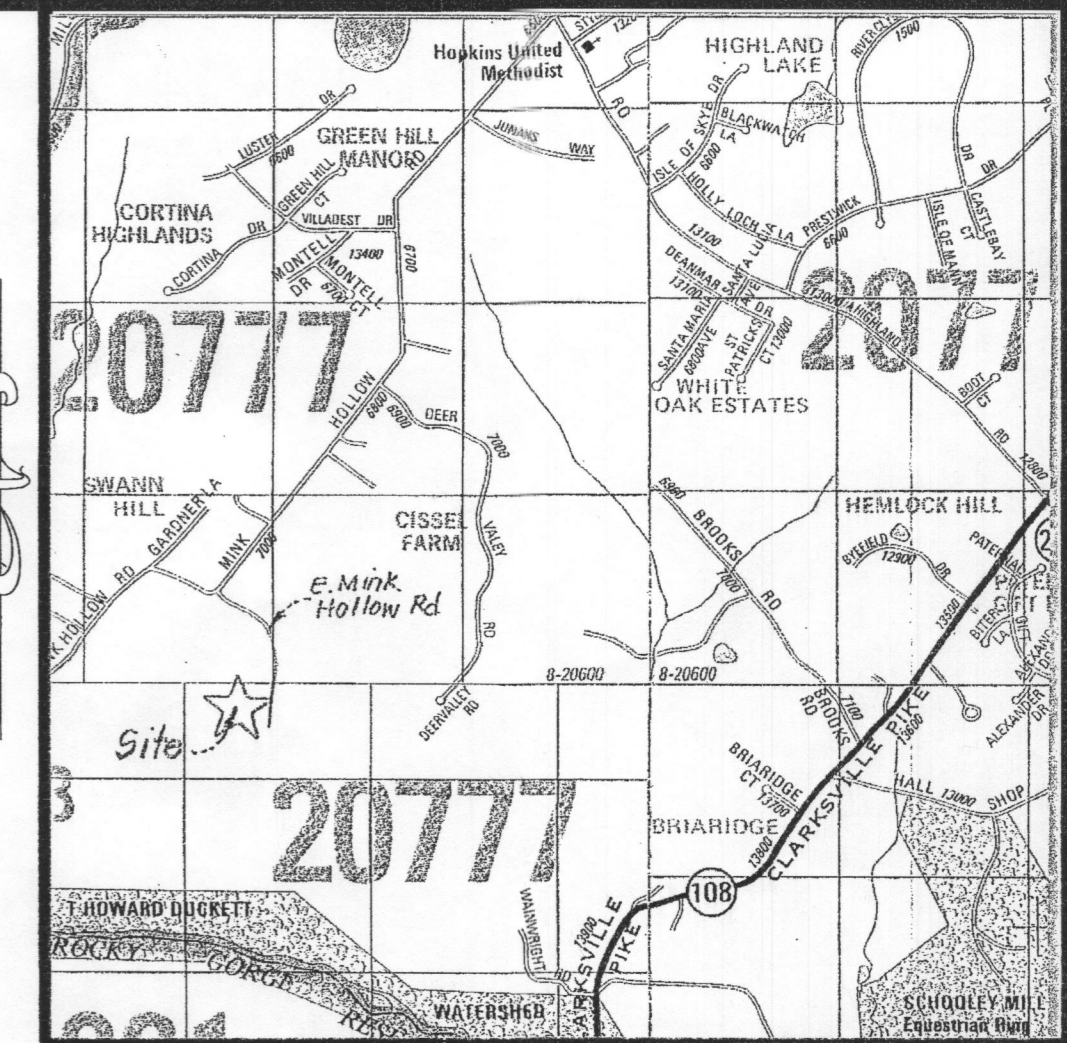
These standard symbols will be found in the drawing.

- x EX. ELEVATIONS
- + PROP. ELEVATIONS
- EX. CONTOURS
- PROP. CONTOURS
- EX. WOODLINE
- SPECIFIC TREES
- STREAM/CREEK
- CONC. CURB
- SEWER LINE
- WATER LINE
- TREE CONSERVATION
- SEWER MANHOLE
- WATER VALVE
- FIRE HYDRANT
- UTILITY POLE
- UTILITY POLE W/LGHT
- ELEC. LINE
- ED. ROAD
- SPEC. FENCE
- 15% SLOPES OR GREATER
- PASSING PERK TEST LOCATIONS
- SOILS DELINEATION LINE
- STREAM BUFFER
- SSF SUPER SILT FENCE
- LOD LIMIT OF DISTURBANCE
- STP STOCKPILE AREA
- FOREST CONSERVATION AREA
- DW DRYWELL
- POROUS PAVEMENT

- Site Plan Notes:
- Any changes 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 tank is 3.0 feet. Greater earth cover will require a heavy load bearing tank.
 - Electrical work for the installation must be performed by a licensed electrician. (If required)
 - The well (tag # HO-0-15-0251 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.

SITE ANALYSIS INFORMATION:

- Total area of site is 6.50 acres or 281,586 sf.
- Wetland area and buffer is 0.0 acres.
- Flood plain Area is 0.0 acres
- Forest area is 6.13 acres.
- Area of steep slopes 15% - 24.9% = 2.44 ac. and 25% and greater = 0.07 ac.
- Erodible soils = Per NRCs, no highly erodible soils consist on this site.
- Total area of disturbance = 1.41 acres or 61,420 sf.
- Green open space = 0.0 acres
- Proposed impervious area = 15,127 sf = 0.35 ac.

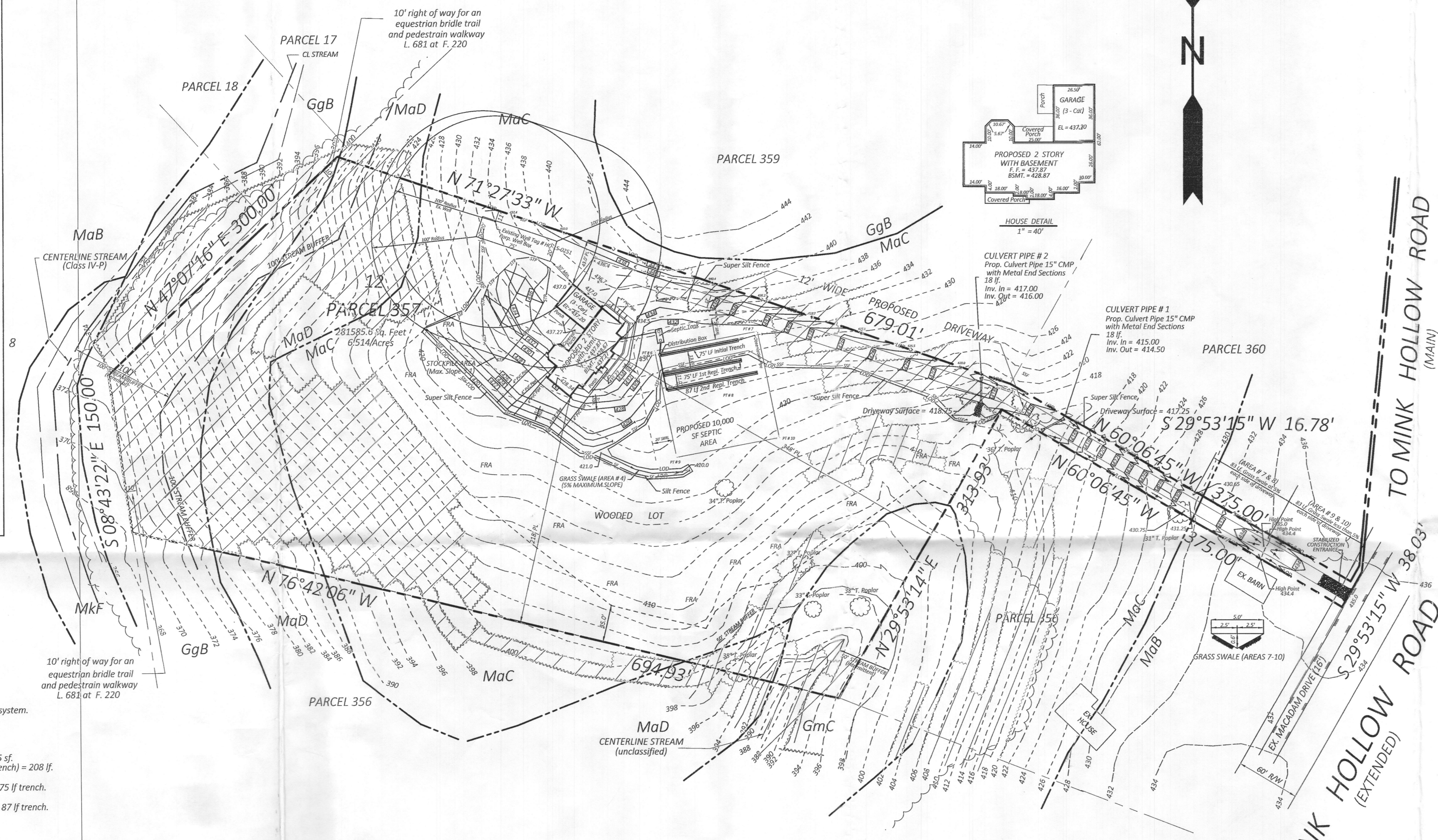


VICINITY MAP

SCALE: 1"=200'
COPYRIGHT: A.D.C., "THE MAP PEOPLE" PERMITTED USE No 20492158

GENERAL NOTES:

- SITE ZONED: R-R DEO.
- AREA OF SITE: 281,586 SF OR 6.50 ACRES
- SITE IS LOCATED ON TAX MAP 40, GRID 08, PARCEL 357.
- SITE IS LOCATED ON ADC MAP PAGE 18, GRID 9-C.
- PROPERTY ACCOUNT NUMBER: 353238.
- WATER AND SEWER IS TO BE PRIVATE.
- OWNER/DEVELOPER/APPLICANT:
DANNER DEVELOPMENT
DENNIS DANNER
6583 HIGHLAND CT.
HIGHLAND, MD 20777
240-375-4934
- PROPERTY DESCRIPTION: DEED LIBER 669 AT FOLIO 287.
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SEPTIC TRENCH INFORMATION

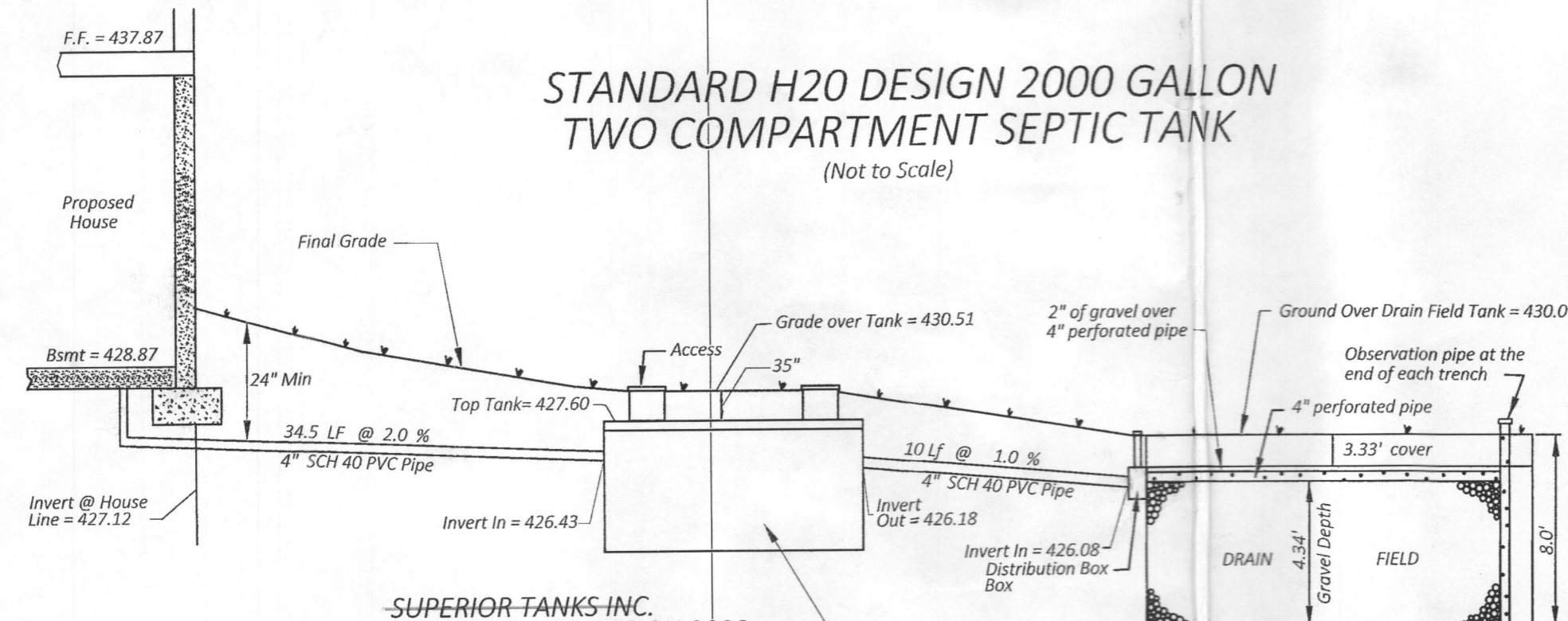
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- 1st replacement.....425.68
- 2nd replacement trench.....421.68

TRENCH DESIGN

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(Not to Scale)



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STANDARD H2O-DESIGN 2000 GALLON SEPTIC-TANK (or equivalent)
(Pumps are not required for this system)

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OWNER/DEVELOPER

Dennis Danner
Danner Development
6583 HIGHLAND CT.
HIGHLAND, MD 20777
240-375-4934

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF HOWARD COUNTY

Health Officer, Howard County Health Dept. Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date
Chief, Division of Land Development	Date
Director	Date



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Feb 13, 2017
DATE
CURTIS M. GENDREAU
REGISTERED PROFESSIONAL LAND SURVEYOR, MD No. 10994
LICENSE EXP. AUG. 8, 2016

SURVEYS, INC.

SURVEYORS * ENGINEERS * LAND PLANNERS
PERMIT SERVICES
950 MAIN STREET
LAUREL, MARYLAND, 20707
PHONE 301-716-0541 FAX 301-716-0641 E-MAIL SURVEYS@GMAIL.COM

DATE	REVISION
Aug. 6, 2016	HD Comments
Feb. 13, 2017	Revise BAT system to conventional gravity flow system

SITE PLAN FOR BAT INSTALLATION

7077 E. MINK HOLLOW ROAD
TAX MAP 40, PARCEL 357
DANNER PROPERTY
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE	DESIGNER	CHECKED BY
1"=60'	DB	GB
DATE	DRAFTER	FIELD BOOK
JULY 2014	DB	BK 60 / P 30
JOB NUMBER	SHEET NUMBER	FILE NUMBER
16-24	1 OF 1	L-421