

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: 8-13-18 **ONSITE SEWAGE DISPOSAL SYSTEM** P 63979

APPROVAL DATE: ~~7-11-18~~ **PERMIT: CONSTRUCTION** A _____

PROPERTY ADDRESS: 12333 Point Ridge Drive

SUBDIVISION: Regan Property LOT: 10 TAX ID: _____

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

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

PROPERTY OWNER: MB Highland Reserve EMAIL: N/A

OWNER ADDRESS: 1686 E. Gude Drive, Rockville, MD 20850 PHONE: 410-301-762-9511

SEPTIC TANK SIZE (GALLONS): 2000 TANK MANUFACTURER: Mayer Bros or equivalent

PUMP MODEL: N/A PUMP SIZE N/A PUMP TANK CAPACITY: N/A

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 0.8

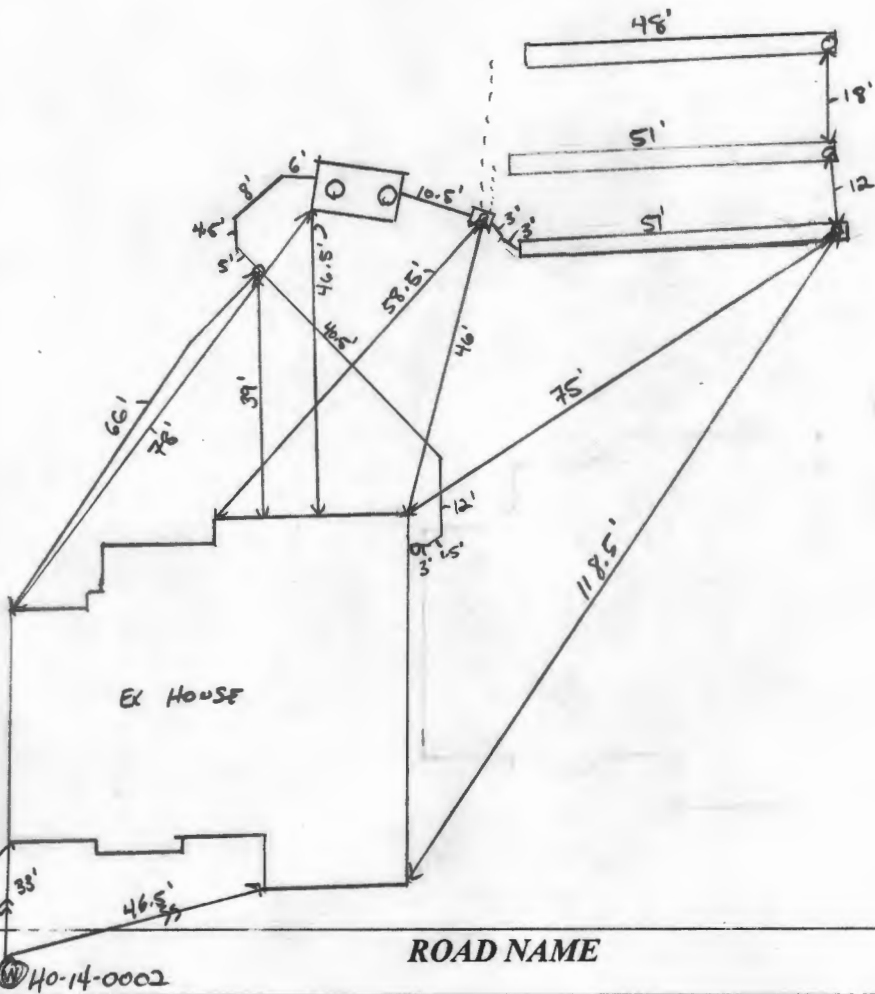
TRENCHES:	LINEAR FEET REQUIRED: <u>142</u>	INLET DEPTH: <u>4.5</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4.5</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	<u>3 x 4' TRENCHES</u>	

ISSUED BY: Dana Bernard ISSUE DATE: 8-13-18 EXPIRATION DATE: 8-13-19

- 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.

NOT TO SCALE



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	4.5'	8'
NUMBER OF TRENCHES		3
TOTAL LENGTH		150 ft
ABSORPTION AREA		450 ft ² + SIDE W/LL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA

SEPTIC TANK I LEVEL	DW1
MANUFACTURER	BABYLON
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT/BACK
6" PORT LOC	INLET
WATERTIGHT TEST	N/A
SLOTTED	YES
DATE ON LID	9/5/2018

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:

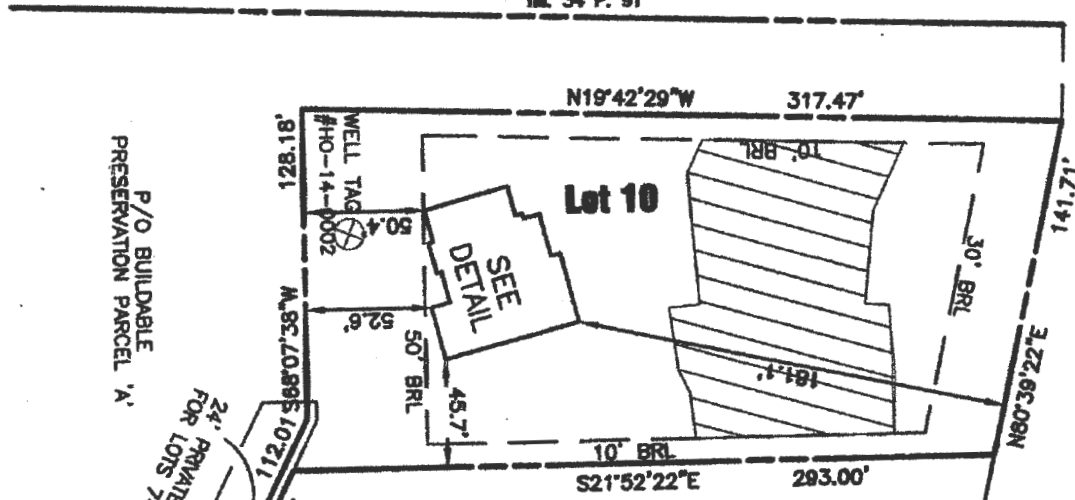
10/19/2018. TRENCH + SYSTEM LAYOUT PER PLAN. (10)

INSTALLATION: 10/22/2018 SHC INSTALLED. EFFLUENT LINE CONNECTED FROM SHC TO SEPTIC TANK. D BOX CONNECTED TO S.T. LOWER TRENCH COMPLETE MID TRENCH IN PROGRESS. (10) 10/23/2018 TRENCHES COMPLETE. D BOX SPEED LEVELS SET. TRENCH CONNECTIONS COVERED W/O INSPECTION. D BOX HAS LEAK. (C.O.) - SEAL D BOX AT TRENCH CONNECTION. LEAK SITE UNDETERMINED - NO VISIBLE WATER OUTSIDE BOX - WATER APPEARS TO LEVEL AT AN OUTLET INVERT. ONE TRENCH EST. RECEIVE EXTRA TREATMENT LOAD (UP TO ~1 GALLON). UNABLE TO DETERMINE (10)

FINAL INSPECTOR

DATE OF APPROVAL 10/23/2018

JOHN T. SWANN
& MARY E. SWANN
L. 02567/F. 0329
ZONED: RR-DEO
TM. 34 P. 91



P/O BUILDABLE
PRESERVATION PARCEL 'A'

24' PRIVATE ACCESS EASEMENT
FOR LOTS 7-11 AND PARCEL 'A'

Wall Check
OK
DB 8-13-18

Lot 9

SURVEYOR'S CERTIFICATE

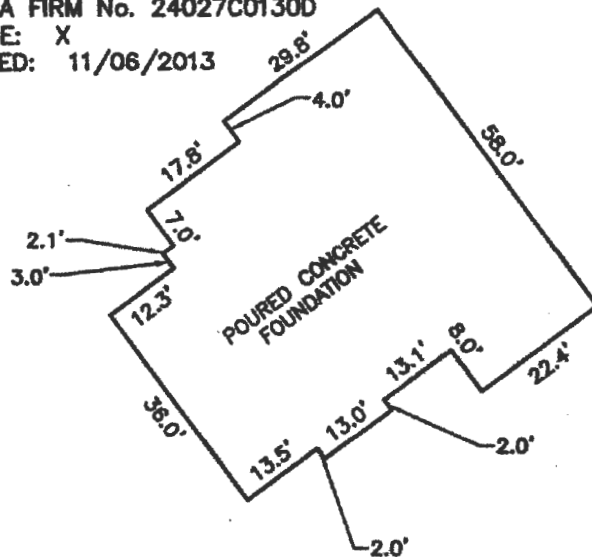
I HEREBY CERTIFY THAT THESE DOCUMENTS, WERE
PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE,
AND THAT I AM A DULY LICENSED PROFESSIONAL LAND
SURVEYOR UNDER THE LAWS OF THE STATE OF
MARYLAND, LICENSE NO. 21320, EXPIRATION DATE
1-7-2019 AND TO THE BEST OF MY PROFESSIONAL
KNOWLEDGE, INFORMATION AND BELIEF, THAT THE
DIMENSIONS OF THE BUILDING WALLS SHOWN HEREON
ARE CORRECT; THAT THEY ARE BASED ON A FIELD RUN
SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC.
ON 08/07/2018.



Donald A. Mason 8/18

DONALD A. MASON
PROFESSIONAL LAND SURVEYOR
MARYLAND REG. No. 21320

FEMA FIRM No. 24027C0130D
ZONE: X
DATED: 11/06/2013



FOUNDATION DETAIL
SCALE: 1" = 30'

10' PUBLIC TREE
MAINTENANCE EASEMENT

EX. CONC. TRASH PAD
EXIST. CONC. TRASH PAD

PRIVATE ACCESS
EASEMENT

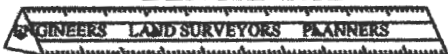
PUBLIC 6' DRAINAGE &
UTILITY EASEMENT

POINT RIDGE DRIVE
55' RIGHT-OF-WAY

L=4.87'
R=55.00'

TOP OF FOUNDATION WALL = 433.9'
OFFSET DIMENSIONS TO PROPERTY LINES ARE ± 0.1'

BENCHMARK



ENGINEERING, INC.

6480 BALTIMORE NATIONAL PIKE SUITE 315
ELLCOTT CITY, MARYLAND 21043
(P) 410-485-8105 (F) 410-485-8844

WWW.BEI-CIVLENGINEERING.COM

WALL CHECK

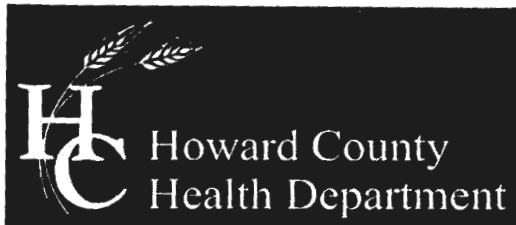
**REGAN PROPERTY
LOTS 2 THRU 23
PLAT No. 23070**

LOT No. 10

12333 POINT RIDGE DRIVE

**5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND**

FIELD OBS. BY AS
COMP. BY EWF
DRAWN BY EWF SCALE: 1" = 80' DATE: 08/07/2018



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

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TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

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

**OPERATION AND MAINTENANCE AGREEMENT
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

HR-Lot 10

THIS AGREEMENT is made this 6th day of JULY, 2018, among MB Highland Reserve LLC, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 12333 Point Ridge Drive, in the 5th Election District of Howard County, Maryland, and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 34, Block # 24, Parcel # 200, Deed Reference # Liber 15918 - Folio 00156 and Tax Account # 05-597443 ("the Property").

WHEREAS, The Property is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013. The pre-treatment device being installed is Norweco Model TNTLP-750GPD.

NOW, THEREFORE, the parties hereto agree as follows:

A. Owner hereby grants to the County the right to enter upon the Property at any reasonable time with prior notice for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County.

B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.

C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.

D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.

E. This agreement shall run with the land and upon Owner's taking title to the Property shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Property that the system shall require maintenance or other attention. Upon taking title to the Property, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Ben Ryan 7/6/2018
Howard County Health Department

X Andrew Maslan
Buyer #1 Signature Date

Andrew Maslan
Buyer #1 Print Name

X Michelle Maslan
Buyer #2 Signature Date

Michelle Maslan
Buyer #2 Print Name

- Septic tank shown is less than
25' from ~~bed retention pond~~ ^{rain garden}.

they don't need to show tank on PC,
~~if~~ they could white it out ~~and~~ and show proper
location on OSDS plan

Due Date 6-1-18

Date HO Signed Off _____

Date Sent to DPZ _____

PLAT TRANSMITTAL SHEET

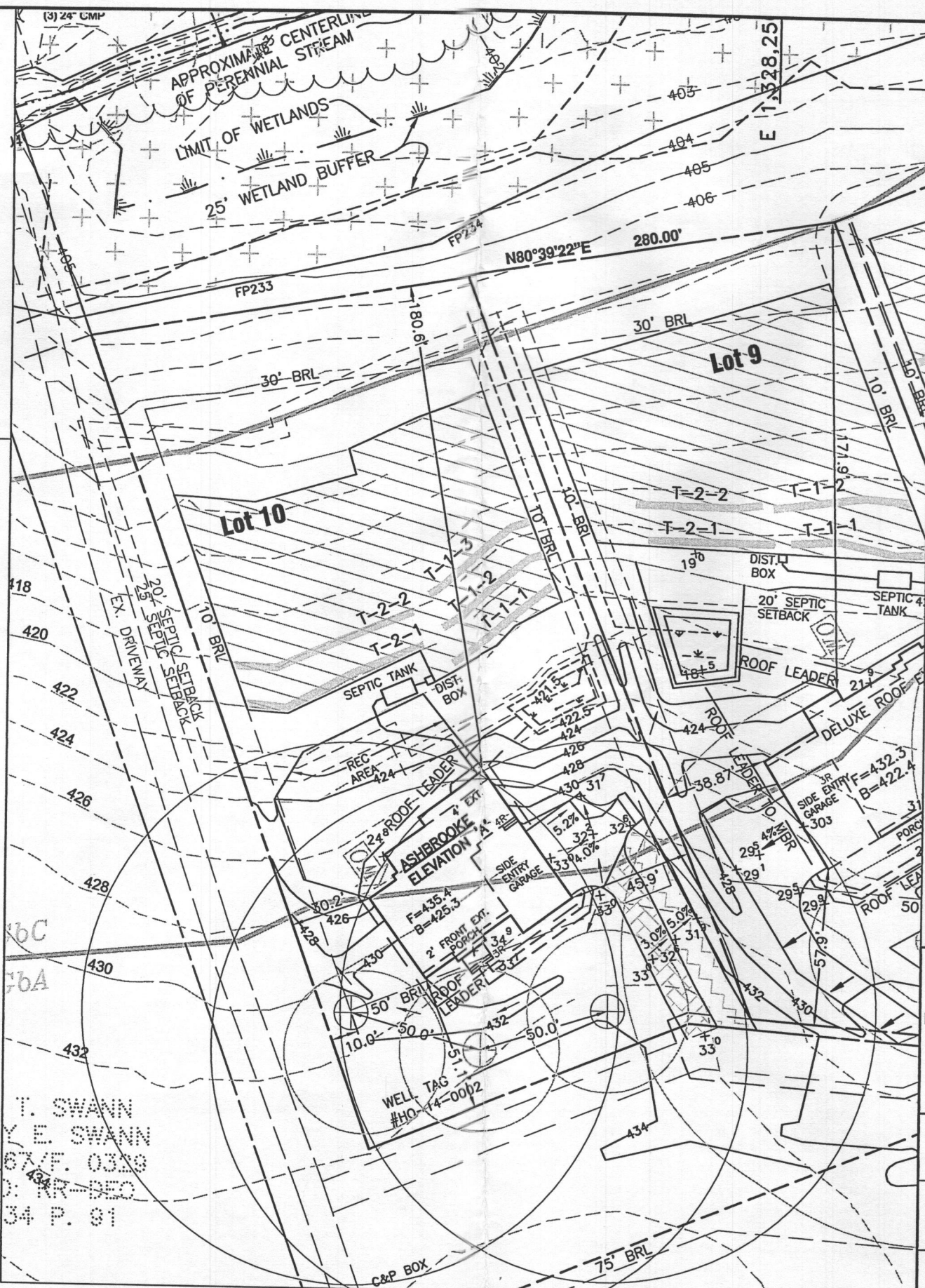
TO: Bert Nixon, Bureau Director
FROM: Khana Beard
DATE: 5-22-18
RE: PLAT# PC
PROJECT NAME Regan Property Lot #10
OF BUILDABLE LOTS 1
OF NON-BUILDABLE LOTS _____

Please find 3 paper copy(s) _____ mylar(s) for your:

- Review
- Review and Signature
- Review to Wall and Septic Program
- Pending Building Permit

LEGEND

- SOILS CLASSIFICATION *ChB2*
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA

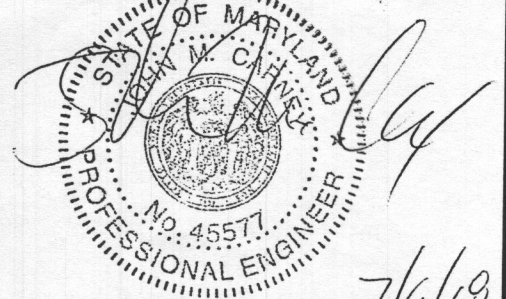


THIS PLAN IS FOR SEPTIC DESIGN ONLY

SEE MANUFACTURERS SPECIFICATIONS FOR DETAILS.
WWW.MAYERPRECAST.COM
EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.

SIGNATURE AND SEAL ARE FOR SEPTIC PROFILE AND CALCULATIONS ONLY, TANK AND DETAILS WERE NOT DESIGNED OR REVIEWED BY THE ENGINEER:

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. 45571, Expiration Date: 06-08-2020.



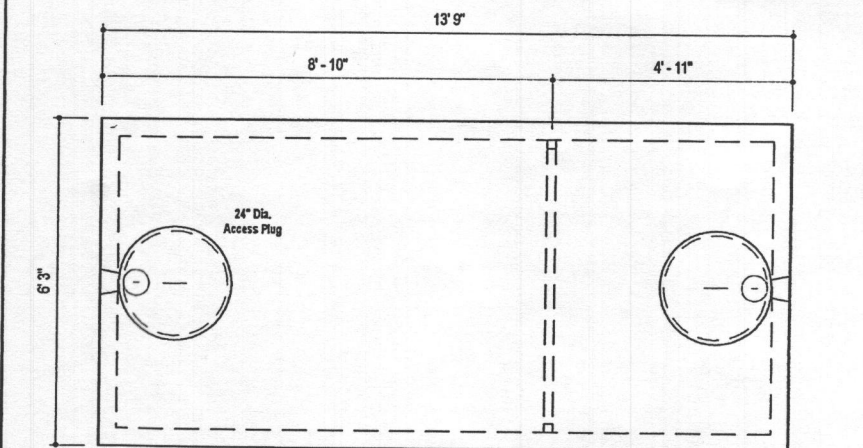
OWNER/BUILDER:

MB HIGHLAND RESERVE, LLC
1686 EAST GUDE DRIVE
ROCKVILLE, MD 20850
301-762-9511

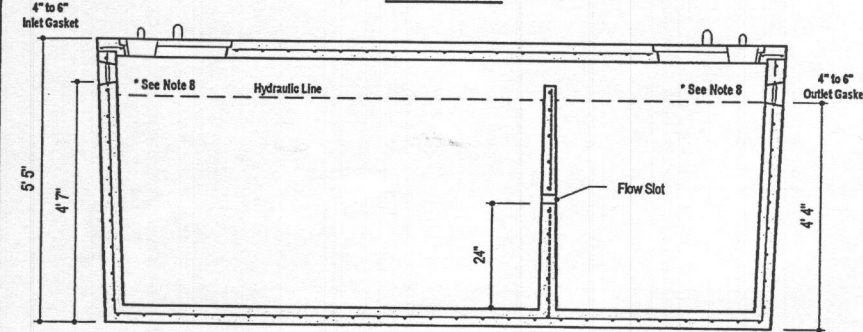
BENCHMARK

ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315
ELLCOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVLENGINEERING.COM

PROJECT:	REGAN PROPERTY LOT 10	
LOCATION:	12333 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443	
TITLE:	ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING 1 OF 2



PLAN VIEW



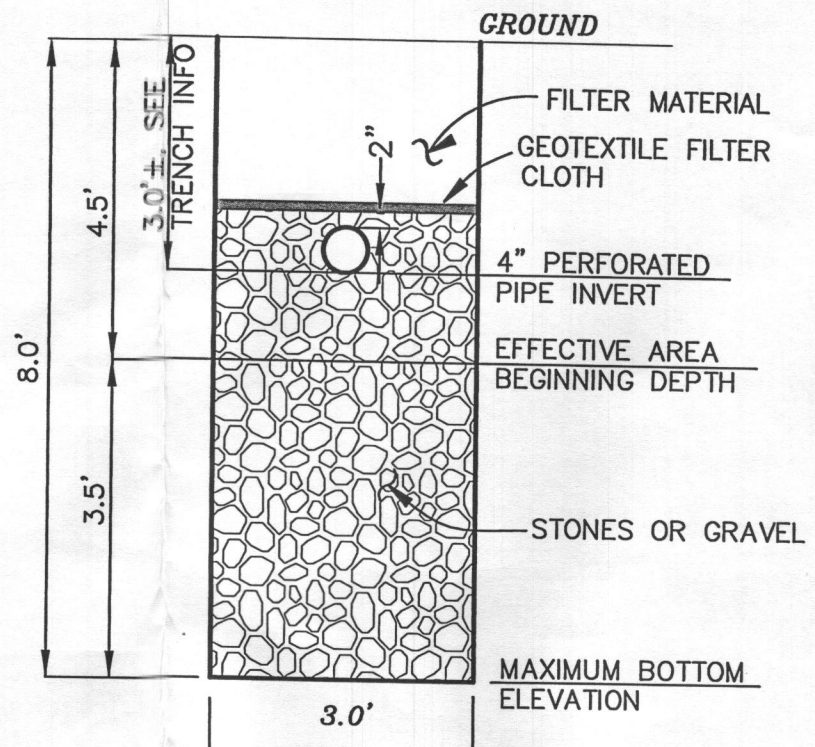
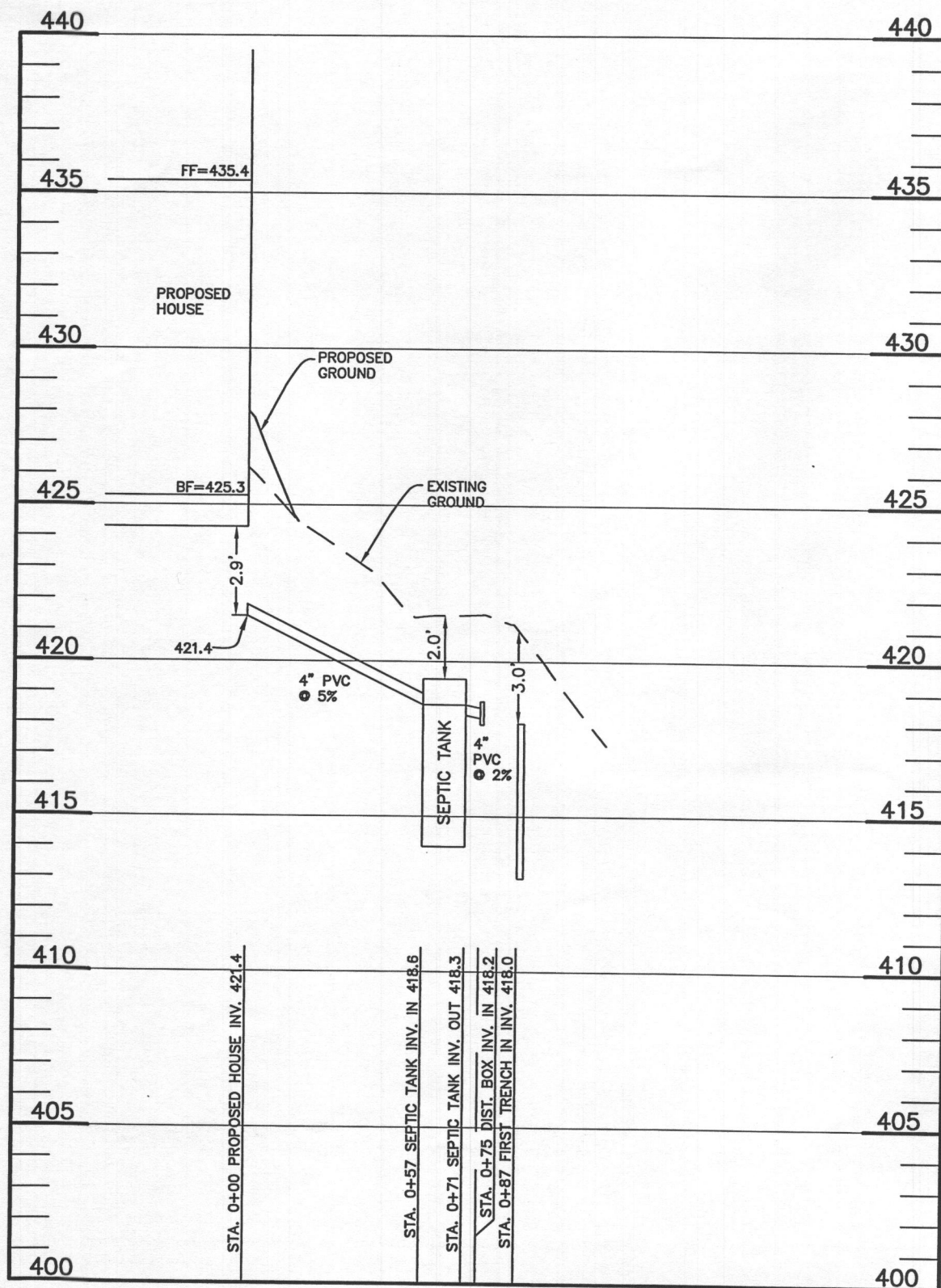
SECTION A-A

- 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-260-98 & C-494-92.
 - [4] Reinforcing per ASTM A195, Min. 1-1/2" cover.
 - [5] Top slab sealed with butyl rope mastic.
 - [6] 4" wall, 4" base, 8" 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.mayerbroscast.com

**2,000 GALLON SEPTIC TANK
2-Compartment**
Stock Item [Approx. 19,900 lbs]
Dwg. No. 2000-2C No Scale Aug 11, 2008

PLAN VIEW
1" = 50'



TYPICAL TRENCH DETAIL
NOT TO SCALE

TRENCH INFORMATION	
INITIAL SYSTEM	
TRENCH T-1-1	FIRST REPAIR
TRENCH T-1-2	TRENCH T-2-1
TRENCH T-1-3	TRENCH T-2-2
TRENCH T-1-4	TRENCH T-2-3

INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	4.5	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.45	
Trench width	3	
Effective Area Depth	3.5	
Linear Length of trench Required	142	lf

1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	4.5	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.45	
Trench width	3	
Effective Area Depth	3.5	
Linear Length of trench Required	142	lf

Lot 10 Septic
SCALE: 1"=50' HORIZ., 1"=5' VERT.

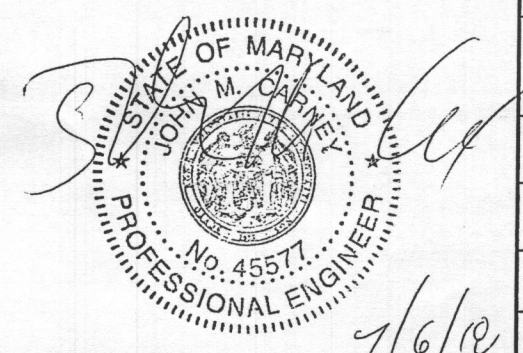
INV. OUT OF HOUSE	421.4
INV. IN SEPTIC TANK	418.6
INV. OUT SEPTIC TANK	418.3
TOP OF SEPTIC TANK	419.5
GROUND OVER SEPTIC TANK	421.5
INV. IN DIST. BOX	418.2
INV. OUT DIST. BOX	418.1
TOP OF DIST. BOX	418.6
GROUND OVER DIST. BOX	421.3

THIS PLAN IS FOR SEPTIC DESIGN ONLY

SEE MANUFACTURES SPECIFICATIONS FOR DETAILS. EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.

SIGNATURE AND SEAL ARE FOR SEPTIC PROFILE AND CALCULATIONS ONLY, TANK, PUMP, AND DETAILS WERE NOT DESIGNED OR REVIEWED BY THE ENGINEER:

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. 45577, Expiration Date: 06-08-2020.



OWNER/BUILDER:	BENCHMARK ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CIVILENGINEERING.COM	
PROJECT:	REGAN PROPERTY LOT 10	
LOCATION:	12333 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443	
TITLE:	ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING 2 OF 2

Bernard, Dana

From: Bernard, Dana
Sent: Thursday, June 21, 2018 3:23 PM
To: 'John Carney'
Subject: RE: 12333 Point Ridge Drive

No. Because the septic tank is less than 25 feet away from the rain garden. And we need to adjust the trenches to 71 feet. (2 trenches for the initial)

Thanks

Dana

From: John Carney [<mailto:jcarney@bei-civilengineering.com>]
Sent: Thursday, June 21, 2018 1:35 PM
To: Bernard, Dana
Subject: RE: 12333 Point Ridge Drive

Dana, I saw that this perc cert was approved. Thank You!!

Was the OSDS approved too? How about 12348 and 12349 Point Ridge Drive? Thanks, John

From: John Carney <jcarney@bei-civilengineering.com>
Sent: Tuesday, June 12, 2018 9:51 AM
To: 'Bernard, Dana' <dbernard@howardcountymd.gov>
Subject: RE: 12333 Point Ridge Drive

Dana, I think I am missing something here....I am ending up 18 lf short for the first system if I try to put two trenches across the whole SDA and I am not utilizing the top of the area. The spec sheets says to use 0.8 application rate, 4.5' beginning effective depth and 8.0' bottom. Which calculates to 142 lf required. If I span the whole area I get two trenches at 62 lf.

Has the application rate changed or something else? Additionally, with the current layout I am using the top of the system and the 2nd repair can be two 65' long trenches behind the walkout, fits nicely. John

From: Bernard, Dana <dbernard@howardcountymd.gov>
Sent: Monday, June 11, 2018 2:46 PM
To: 'John Carney' <jcarney@bei-civilengineering.com>
Subject: RE: 12333 Point Ridge Drive

1. I received your revision and I am sending it up for signature. However you must send a revised OSDS plan. Also lets try to utilized this area better. Please separate the initial system and the first repair into 2 trenches on contour. As shown in the diagram below:

This design will give the best utilization for the area and allow more room for future systems.

Distributi

on Box



Trench



0 feet

50 feet

From: John Carney [<mailto:jcarney@bei-civilengineering.com>]

Sent: Friday, June 01, 2018 12:08 PM

To: Bernard, Dana

Subject: RE: 12333 Point Ridge Drive

Dana, we have a better spot for the tank, it will be just west of the dbx. I'd like to hold the secondary well at 43' from the existing well and 10' from the property line. This will pull the secondary well location closer to the front of the lot. This will allow the house to slide to the left by 6' and make the parking area better. Would this revision be okay? John

From: Bernard, Dana <dbernard@howardcountymd.gov>

Sent: Friday, June 01, 2018 11:36 AM

To: John Carney <jcarney@bei-civilengineering.com>

Subject: 12333 Point Ridge Drive

Good Morning John,

We need a few corrections on your revised percolation certification plan.

1. The septic tank shown is less than 25 feet away from the rain garden.
2. You don't need to show the tank on the PC, however it must be shown on the OSDS.

Thank you & Have a*")

,. . . *") ,. . . *")

(. . . (. . . * Wonderful Day !

Dana Bernard, R.E.H.S./L.E.H.S.

Environmental Specialist II

Bureau of Environmental Health

Well and Septic Program

Phone (410) 313-2775

E-mail: DBernard@howardcountymd.gov

Bernard, Dana

From: Bernard, Dana
Sent: Monday, June 11, 2018 10:40 AM
To: 'John Carney'
Subject: RE: 12218 Pleasent Springs Court

John,

We have to get a revision showing the tank within our required setbacks for the rain garden which is 25 feet and the tank has to be 25 feet away from a swale.

Thanks
Dana

From: John Carney [<mailto:jcarney@bei-civilengineering.com>]
Sent: Monday, June 11, 2018 9:31 AM
To: Bernard, Dana
Subject: RE: 12218 Pleasent Springs Court

Dana, we can adjust the swale around the pump tank, no problem. Take a look at the attached exhibit.

We did look at a few other locations for the pump tank with regards to the rain garden. The distance to the filter area of the rain garden is about 12' and the tank is uphill. We felt the 100' setback to the wells was more important. We don't see a better location for the pump tank, we don't want to put it lower in the yard and have it pump higher and further. We'd like to keep it closer to the house so the alarm and electric are simpler. Let me know if this is approvable. Thanks, John

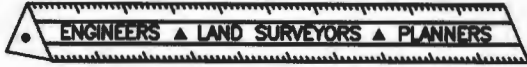
From: Bernard, Dana <dbernard@howardcountymd.gov>
Sent: Friday, June 08, 2018 4:04 PM
To: John Carney <jcarney@bei-civilengineering.com>
Subject: 12218 Pleasent Springs Court

Good Afternoon John, I was going over my review for the Regan Property Lot #16 and I approve your building permit. However, we need to adjust the location of the pump tank. It is sitting in a swale and it is less than 25 feet from the rain garden. These are items that can be adjusted on paper before the layout occurs. Could you send me a revised OSDS showing the new location .

Thank you & Have a*""
,,,'*""),,.'*""
(,,' (,,' * Wonderful Day !

Dana Bernard, R.E.H.S/L.E.H.S.
Environmental Specialist II
Bureau of Environmental Health
Well and Septic Program
Phone (410) 313-2775
E-mail: DBernard@howardcountymd.gov

BENCHMARK



ENGINEERING, INC.

8480 Baltimore National Pike • Suite 315 • Ellicott City, Maryland 21043
 410-465-6105 410-465-6644 (Fax)

LETTER OF TRANSMITTAL

DATE <u>5/18/18</u>	PROJECT No. <u>2171</u>
ATTENTION	
RE: <u>REGAN PROPERTY LOT 10</u>	
<u>REVISION OF ONSITE</u>	
<u>SEWAGE DISPOSAL SYSTEM</u>	
<u>DESIGN PLAN</u>	

TO: HOWARD COUNTY
HEALTH DEPARTMENT

- WE ARE SENDING YOU Attached Under separate cover via _____ the following items
- Photocopies Prints Originals Samples
 - Specifications Invoices Change Order Other _____

COPIES of	No. of SHEETS	DESCRIPTION
3	2	REVISED ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN FOR REGAN PROPERTY LOT 10

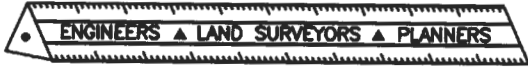
- THESE ARE TRANSMITTED as checked below
- For Comment For your use For Approval
 - For Review As requested Other _____

REMARKS:

COPY TO: _____
 RECEIVED BY: Jessie King
If enclosures are not as noted, kindly notify us at once.

SIGNED: AAO

BENCHMARK



ENGINEERING, INC.

8480 Baltimore National Pike • Suite 315 • Ellicott City, Maryland 21043
 410-465-6105 410-465-6644 (Fax)

LETTER OF TRANSMITTAL

DATE	5/17/14	PROJECT No.	2171
ATTENTION			
RE: REGAN PROPERTY LOT 10			
ONSITE SEWAGE DISPOSAL			
SYSTEM DESIGN PLAN			

TO: HOWARD COUNTY
HEALTH DEPARTMENT

WE ARE SENDING YOU Attached Under separate cover via _____ the following items

Photocopies Prints Originals Samples
 Specifications Invoices Change Order Other _____

COPIES of	No. of SHEETS	DESCRIPTION
3	1	
3	2	
1	1	ASHBROOKE ARCHITECTURALS

THESE ARE TRANSMITTED as checked below

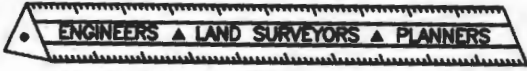
- For Comment For your use For Approval
 For Review As requested Other _____

REMARKS:

COPY TO: _____
 RECEIVED BY: [Signature]
If enclosures are not as noted, kindly notify us at once.

SIGNED: [Signature]

BENCHMARK



ENGINEERING, INC.

8480 Baltimore National Pike • Suite 315 • Ellicott City, Maryland 21043
410-465-6105 410-465-6644 (Fax)

LETTER OF TRANSMITTAL

TO: Health Dept

DATE	<u>7/6/18</u>	PROJECT No.	<u>271</u>
ATTENTION	<u>Ken Bernard</u>		
RE:	<u>Regan Lot 10</u>		
	<u>12333 Point Ridge Dr</u>		

WE ARE SENDING YOU Attached Under separate cover via _____ the following items

- Photocopies Prints Originals Samples
 Specifications Invoices Change Order Other _____

COPIES of	No. of SHEETS	DESCRIPTION
<u>3</u>	<u>2</u>	<u>Revised OSDS</u>

THESE ARE TRANSMITTED as checked below

- For Comment For your use For Approval
 For Review As requested Other _____

REMARKS: ① Moved tank to be at least 25' from Microbio retention. Reconfigured trenches as discussed in email to you.

RECEIVED 6/21/18

THANKS 09 2018
HOWARD COUNTY HEALTH DEPT.
FOOD PROTECTION PROGRAM

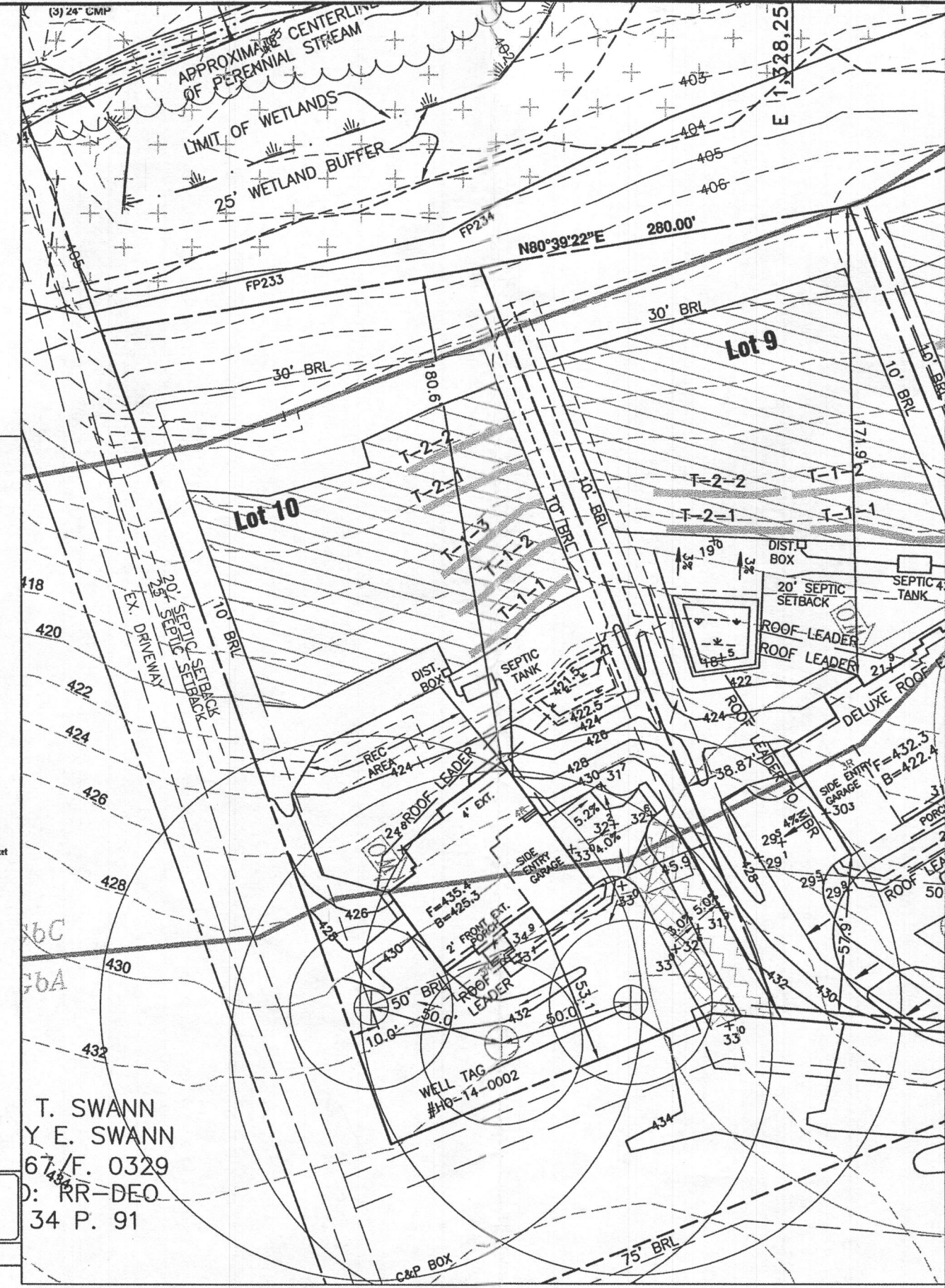
COPY TO: _____
RECEIVED BY: [Signature]

SIGNED: [Signature]

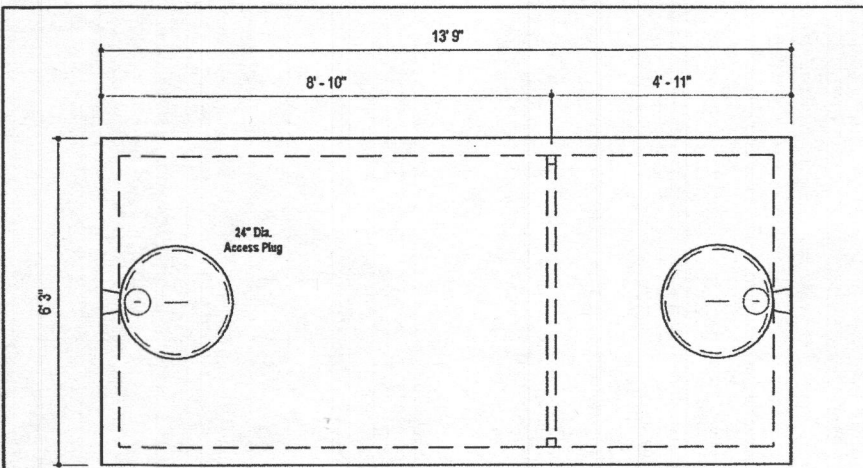
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LEGEND

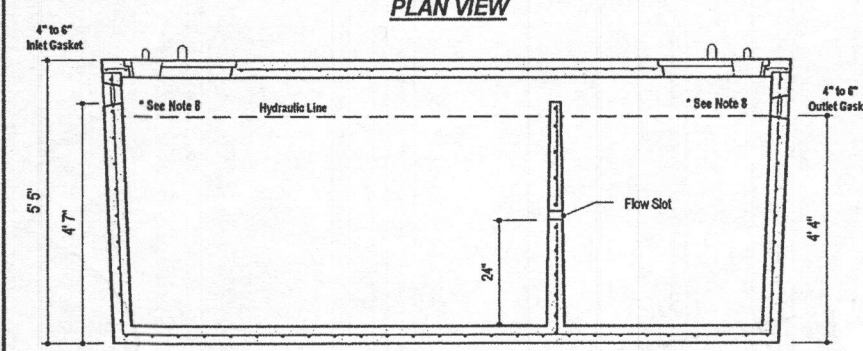
- SOILS CLASSIFICATION *ChB2*
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA



- BUILDING PERMIT PLAN NOTES:**
1. THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR REGAN PROPERTY, PLAT Nos. 23063-23074. REFER TO THE PLATS FOR LOT DIMENSIONS, LOT AREAS, ALL EASEMENTS AND CONDITIONS.
 2. SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER A GRADING PLAN AND MODIFIED FOR THIS SPECIFIC HOUSE.
 3. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND TOPOGRAPHIC INFORMATION PROVIDED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT JANUARY, 2012.
 4. ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 5. ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS EXCEPT AS WAIVED.
 6. THE EXISTING WELL SHOWN ON THIS PLAN, HO-14-0002, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
 7. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
 8. ANY CHANGES TO A PRIVATE SEWAGE DISPOSAL AREA OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 9. STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED AND PROVIDED BY ONE MICRO-BIORETENTION FACILITY (MDE M-6), DRY WELL FACILITY (MDE M-5) AND ONE NON-ROOFTOP DISCONNECTION (MDE N-2).
 10. MICRO-BIORETENTION SHALL HAVE EITHER A 4" OR 6" ROOF LEADER DEPENDING ON ROOF-TOP AREA.



PLAN VIEW



SECTION A-A

- DESIGN DATA & GENERAL NOTES**
- [1] Concrete strength Fc=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 260-96 & C 494-92.
 - [4] Reinforcing per ASTM A198. Min. 1-1/2" cover.
 - [5] Top slab sealed with butyl rope mastic.
 - [6] 4" wall, 4" base, & 8" top thickness.
 - [7] Max 3' of cover.
 - [8] Depending on use of tank, Inlet & Outlet baffles 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

T. SWANN
 Y. E. SWANN
 671/F. 0329
 D: RR-DEO
 34 P. 91

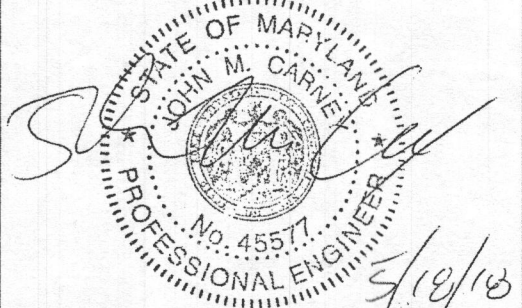
PLAN VIEW
 1" = 50'

**THIS PLAN IS FOR
 SEPTIC DESIGN ONLY**

SEE MANUFACTURERS SPECIFICATIONS FOR DETAILS.
 WWW.MAYERPRECAST.COM
 EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.

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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. 45577, Expiration Date: 06-08-2020.



OWNER/BUILDER:
 MB HIGHLAND RESERVE, LLC
 1686 EAST GUDE DRIVE
 ROCKVILLE, MD 20850
 301-762-9511

BENCHMARK
 ENGINEERS LAND SURVEYORS PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE SUITE 315
 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BEI-CMLENGINEERING.COM

PROJECT: **REGAN PROPERTY
 LOT 10**

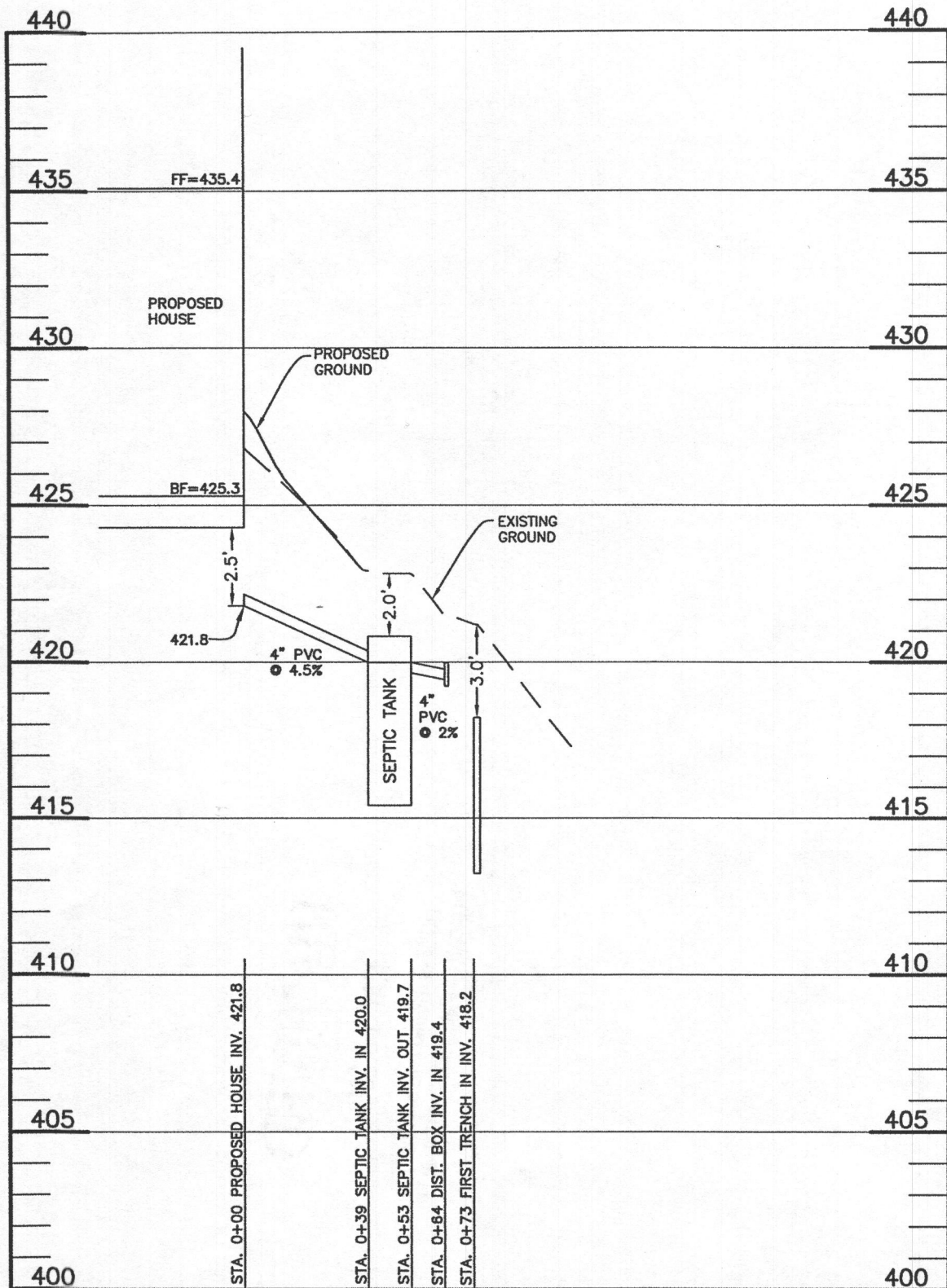
LOCATION: 12333 POINT RIDGE DRIVE
 HIGHLAND, MD 20777
 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200
 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443

TITLE: **ONSITE SEWAGE DISPOSAL
 SYSTEM DESIGN PLAN**

HOUSE TYPE: **ASHBROOKE - ELEVATION A**

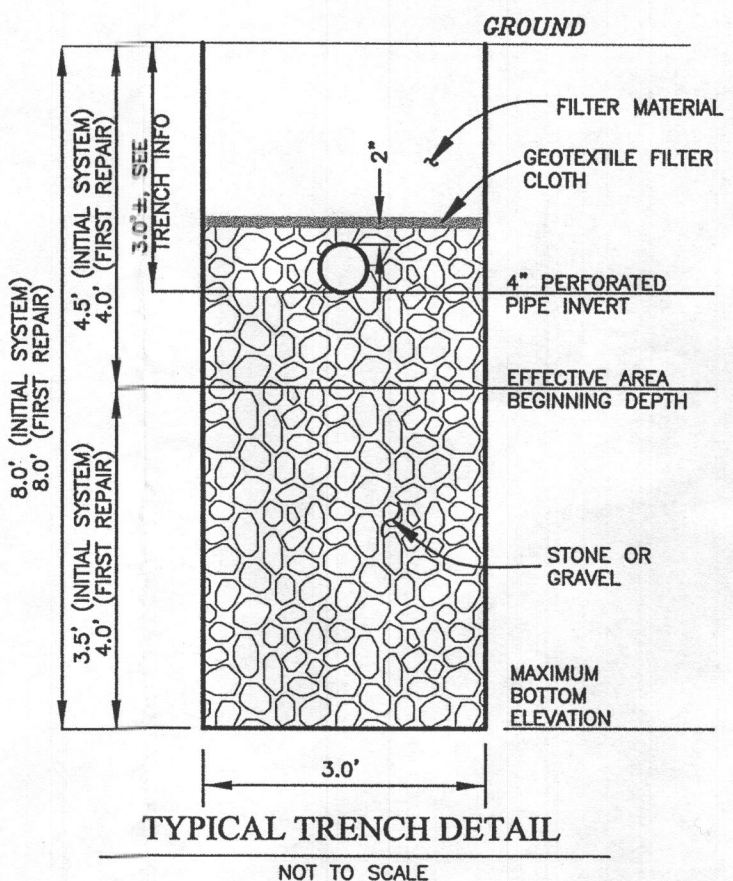
DATE: MAY, 2018 PROJECT NO. 2171

SCALE: AS SHOWN DRAWING 1 OF 2



Lot 10 Septic
SCALE: 1"=50' HORIZ., 1"=5' VERT.

INV. OUT OF HOUSE	421.8
INV. IN SEPTIC TANK	420.0
INV. OUT SEPTIC TANK	419.6
TOP OF SEPTIC TANK	420.9
GROUND OVER SEPTIC TANK	422.9
INV. IN DIST. BOX	419.4
INV. OUT DIST. BOX	419.3
TOP OF DIST. BOX	420.0
GROUND OVER DIST. BOX	421.6



TRENCH INFORMATION			
INITIAL SYSTEM		FIRST REPAIR	
TRENCH T-1-1		TRENCH T-1-1	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	421.2	GROUND ELEVATION	414.4
INVERT ELEVATION	418.2	INVERT ELEVATION	411.4
MAX. BOTTOM ELEV.	413.2	MAX. BOTTOM ELEV.	406.4
TRENCH T-1-2		TRENCH T-1-2	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	419.2	GROUND ELEVATION	412.5
INVERT ELEVATION	416.2	INVERT ELEVATION	409.5
MAX. BOTTOM ELEV.	411.2	MAX. BOTTOM ELEV.	404.5
TRENCH T-1-3		TRENCH T-1-3	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	417.3	GROUND ELEVATION	412.5
INVERT ELEVATION	414.3	INVERT ELEVATION	409.5
MAX. BOTTOM ELEV.	409.3	MAX. BOTTOM ELEV.	404.5

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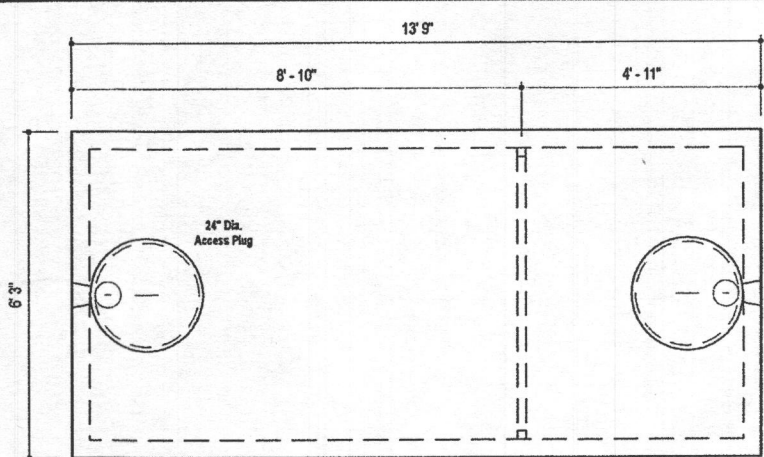


INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	4.5	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.45	
Trench width	3	
Effective Area Depth	3.5	
Linear Length of trench Required	142	lf
1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	4	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	625	sf
Sidewall reduction credit	0.42	
Trench width	3	
Effective Area Depth	4	
Linear Length of trench Required	87	lf

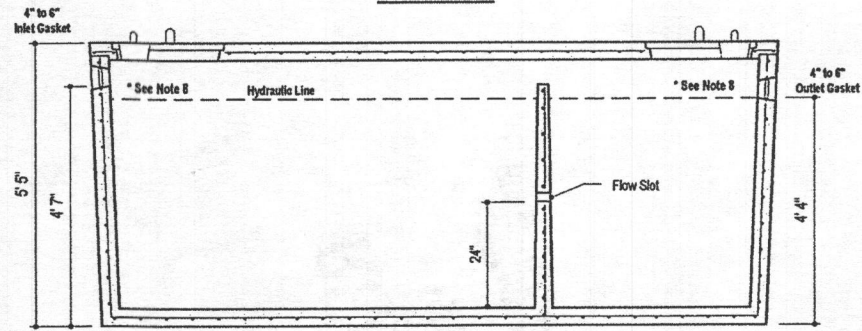
OWNER/BUILDER:	BENCHMARK ENGINEERING, INC. ENGINEERS LAND SURVEYORS PLANNERS 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLCOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CVLENGINEERING.COM	
PROJECT:	REGAN PROPERTY LOT 10	
LOCATION:	12333 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443	
TITLE:	ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING 2 OF 2

LEGEND

- SOILS CLASSIFICATION **ChB2**
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA



PLAN VIEW



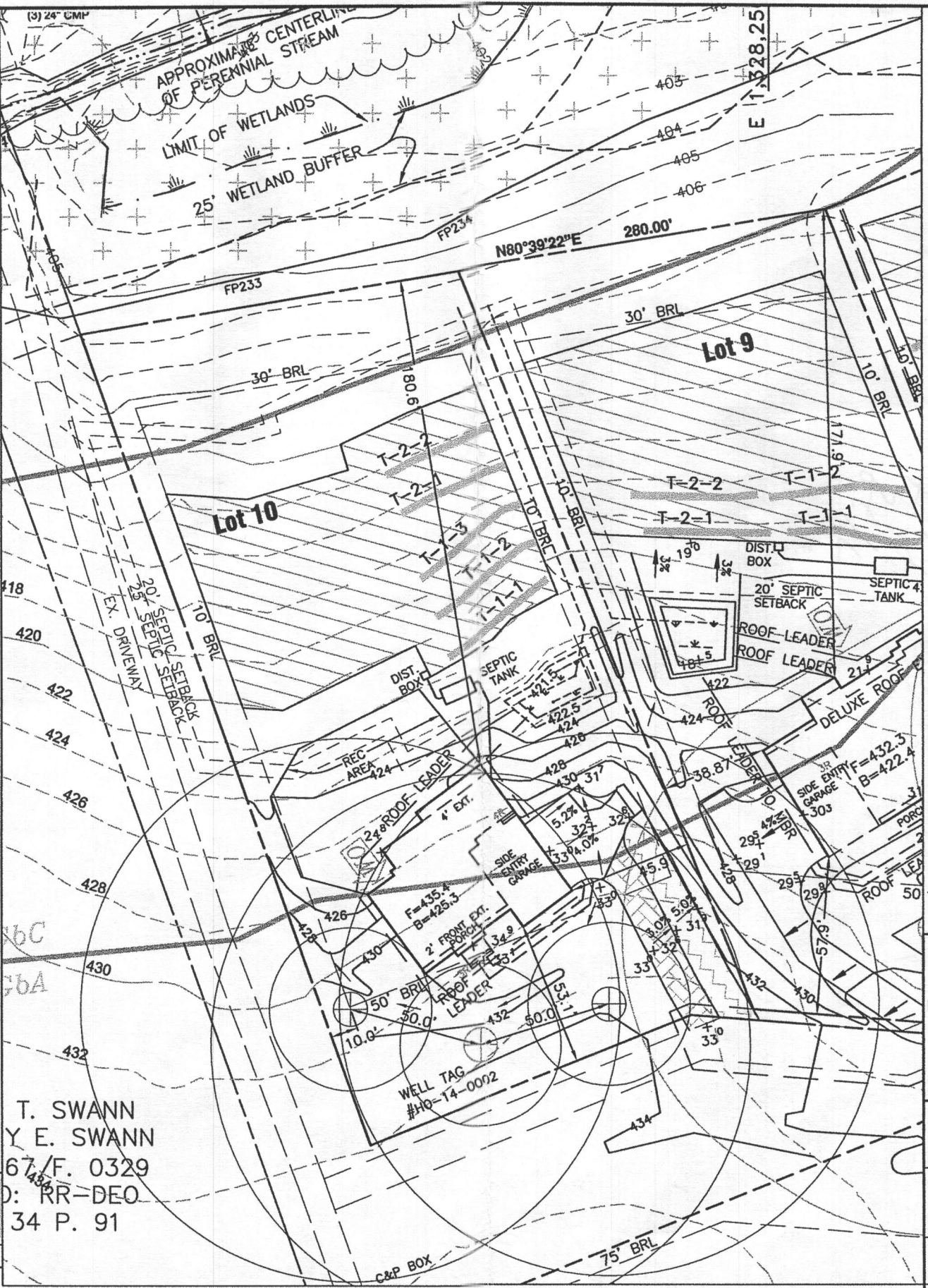
SECTION A-A

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 266-96 & C 494-92.
- [4] Reinforcing per ASTM A193. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, 4" base, & 8" top thickness.
- [7] Max 3" of cover.
- [8] Depending on use of tank, inlet & outlet baffle may be required by code.

**2,000 GALLON SEPTIC TANK
2-Compartment**
Stock Item [Approx. 19,900 lbs]
Dwg. No. 2000-2C No Scale Aug 11, 2008

T. SWANN
Y. E. SWANN
67/F. 0329
D: RR-DEO
34 P. 91



PLAN VIEW
1" = 50'

BUILDING PERMIT PLAN NOTES:

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9. STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED AND PROVIDED BY ONE MICRO-BIORETENTION FACILITY (MDE M-6), DRY WELL FACILITY (MDE M-5) AND ONE NON-ROOFTOP DISCONNECTION (MDE N-2).
10. MICRO-BIORETENTION SHALL HAVE EITHER A 4" OR 6" ROOF LEADER DEPENDING ON ROOF-TOP AREA.



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1686 EAST GUDE DRIVE
ROCKVILLE, MD 20850
301-762-9511

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ELLCOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
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PROJECT: **REGAN PROPERTY LOT 10**

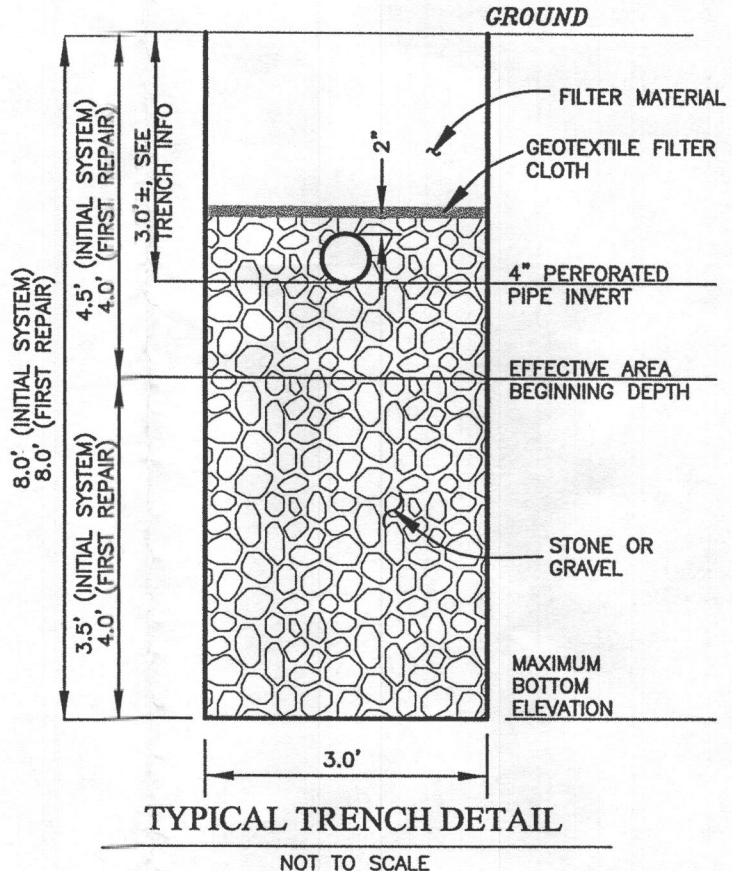
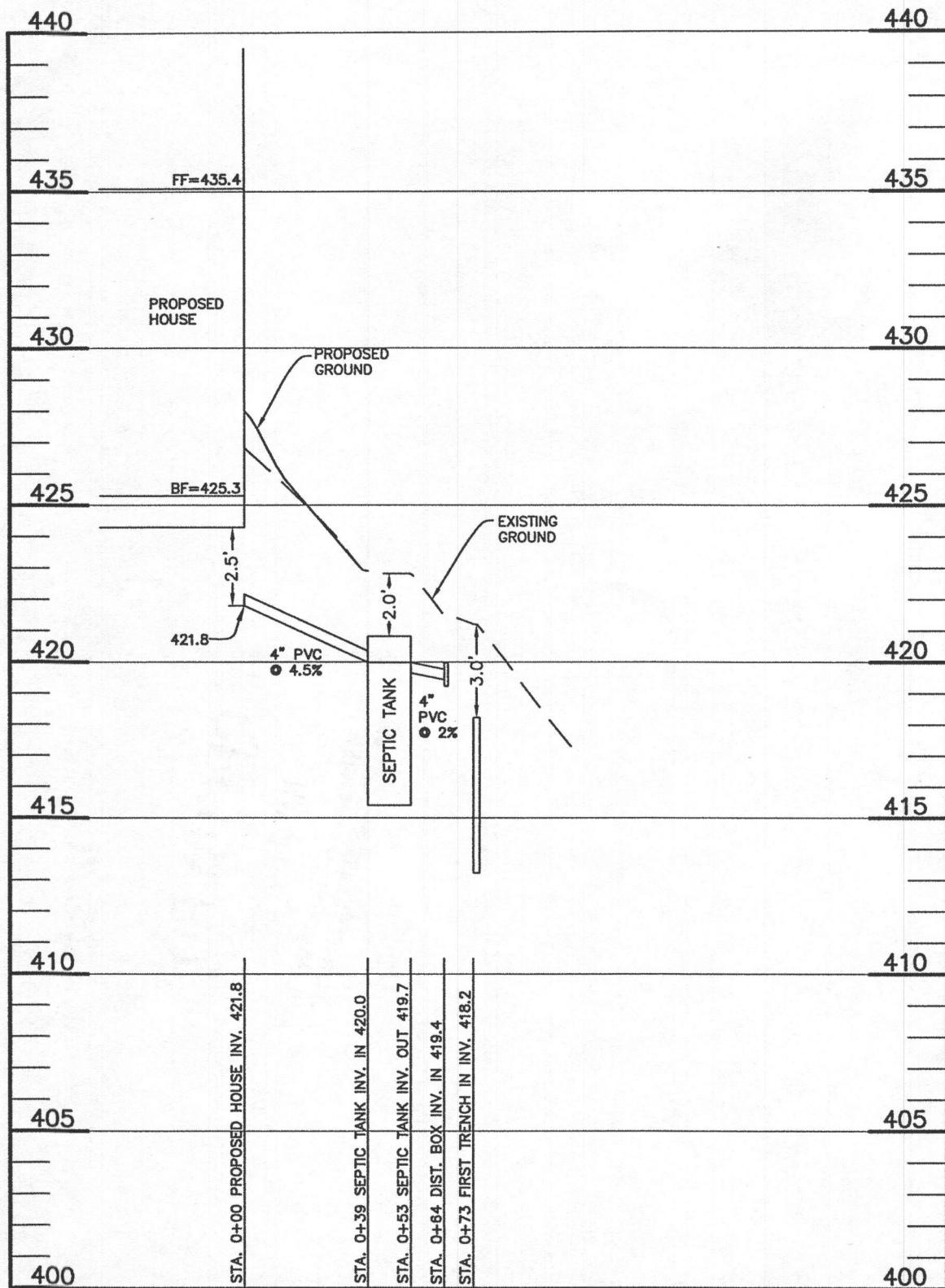
LOCATION: 12333 POINT RIDGE DRIVE
HIGHLAND, MD 20777
TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200
5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443

TITLE: **ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN**

HOUSE TYPE: **ASHBROOKE - ELEVATION A**

DATE: **MAY, 2018** PROJECT NO. **2171**

SCALE: **AS SHOWN** DRAWING **1** OF **2**



TRENCH INFORMATION			
INITIAL SYSTEM		FIRST REPAIR	
TRENCH T-1-1		TRENCH T-1-1	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	421.2	GROUND ELEVATION	414.4
INVERT ELEVATION	418.2	INVERT ELEVATION	411.4
MAX. BOTTOM ELEV.	413.2	MAX. BOTTOM ELEV.	406.4
TRENCH T-1-2		TRENCH T-1-2	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	419.2	GROUND ELEVATION	412.5
INVERT ELEVATION	416.2	INVERT ELEVATION	409.5
MAX. BOTTOM ELEV.	411.2	MAX. BOTTOM ELEV.	404.5
TRENCH T-1-3			
TRENCH LENGTH	47 LF		
GROUND ELEVATION	417.3		
INVERT ELEVATION	414.3		
MAX. BOTTOM ELEV.	409.3		

INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	4.5	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.45	
Trench width	3	
Effective Area Depth	3.5	
Linear Length of trench Required	142	lf
1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	4	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	625	sf
Sidewall reduction credit	0.42	
Trench width	3	
Effective Area Depth	4	
Linear Length of trench Required	87	lf

Lot 10 Septic
SCALE: 1"=50' HORIZ., 1"=5' VERT.

INV. OUT OF HOUSE	421.8
INV. IN SEPTIC TANK	420.0
INV. OUT SEPTIC TANK	419.6
TOP OF SEPTIC TANK	420.9
GROUND OVER SEPTIC TANK	422.9
INV. IN DIST. BOX	419.4
INV. OUT DIST. BOX	419.3
TOP OF DIST. BOX	420.0
GROUND OVER DIST. BOX	421.6

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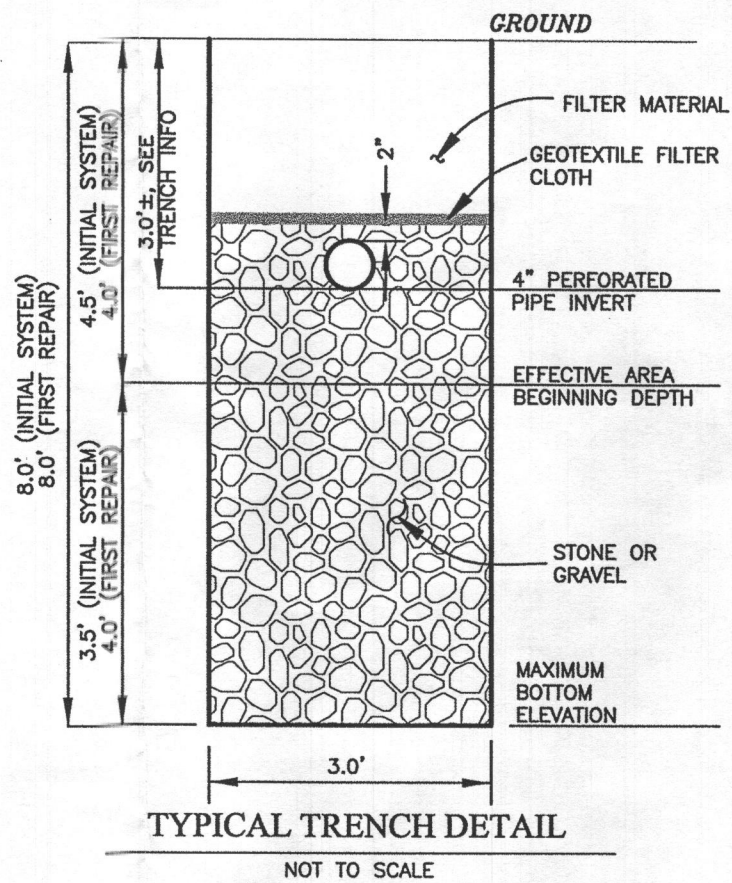
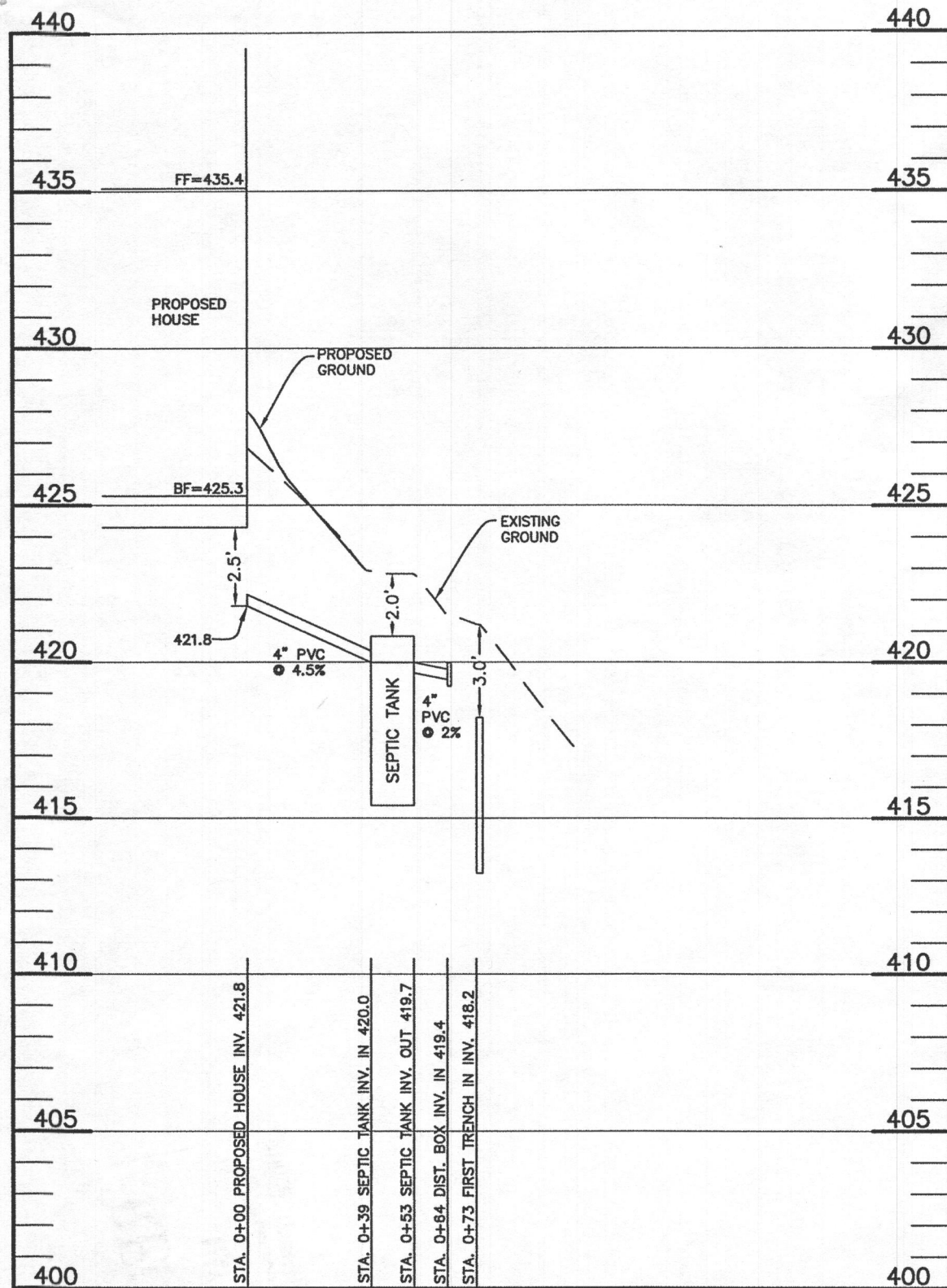
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PROJECT:	REGAN PROPERTY LOT 10	
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TITLE:	ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING 2 OF 2

5/10/18



TRENCH INFORMATION			
INITIAL SYSTEM		FIRST REPAIR	
TRENCH T-1-1		TRENCH T-1-1	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	421.2	GROUND ELEVATION	414.4
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TRENCH T-1-2		TRENCH T-1-2	
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MAX. BOTTOM ELEV.	411.2	MAX. BOTTOM ELEV.	404.5
TRENCH T-1-3		TRENCH T-1-3	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	417.3	GROUND ELEVATION	412.5
INVERT ELEVATION	414.3	INVERT ELEVATION	409.5
MAX. BOTTOM ELEV.	409.3	MAX. BOTTOM ELEV.	404.5

INITIAL SYSTEM		
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Application Rate	1.2	gpd/sf
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Lot 10 Septic
SCALE: 1"=50' HORIZ., 1"=5' VERT.

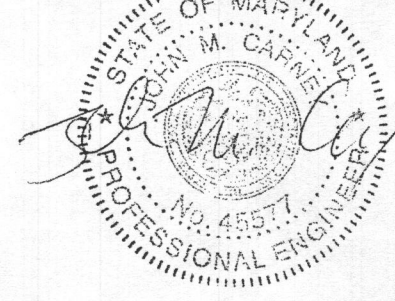
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TOP OF SEPTIC TANK	420.9
GROUND OVER SEPTIC TANK	422.9
INV. IN DIST. BOX	419.4
INV. OUT DIST. BOX	419.3
TOP OF DIST. BOX	420.0
GROUND OVER DIST. BOX	421.6

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OWNER/BUILDER:	BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 & (F) 410-465-6644 WWW.BEI-CVLENGINEERING.COM	
PROJECT:	REGAN PROPERTY LOT 10	
LOCATION:	12333 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443	
TITLE:	ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING <u>2</u> OF <u>2</u>

5/10/18

LEGEND

- SOILS CLASSIFICATION *ChB2*
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA



THIS PLAN IS FOR SEPTIC DESIGN ONLY

SEE MANUFACTURERS SPECIFICATIONS FOR DETAILS. WWW.MAYERPRECAST.COM EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.

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5/10/18

OWNER/BUILDER:
MB HIGHLAND RESERVE, LLC
1686 EAST GUDE DRIVE
ROCKVILLE, MD 20850
301-762-9511

BENCHMARK
ENGINEERS LAND SURVEYORS PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315
ELLCOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CMLENGINEERING.COM

PROJECT: **REGAN PROPERTY LOT 10**

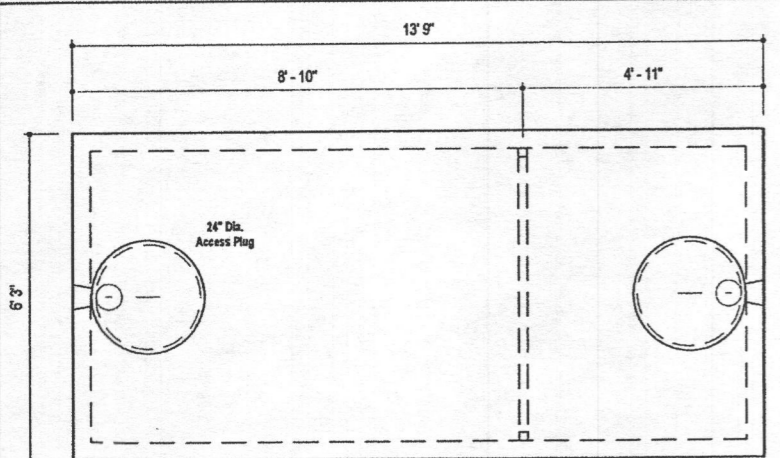
LOCATION: 12333 POINT RIDGE DRIVE
HIGHLAND, MD 20777
TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200
5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443

TITLE: **ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN**

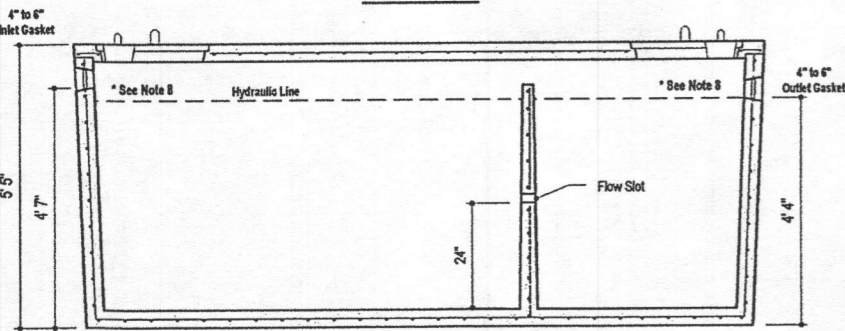
HOUSE TYPE: **ASHBROOKE - ELEVATION A**

DATE: MAY, 2018 PROJECT NO. 2171

SCALE: AS SHOWN DRAWING 1 OF 2



PLAN VIEW



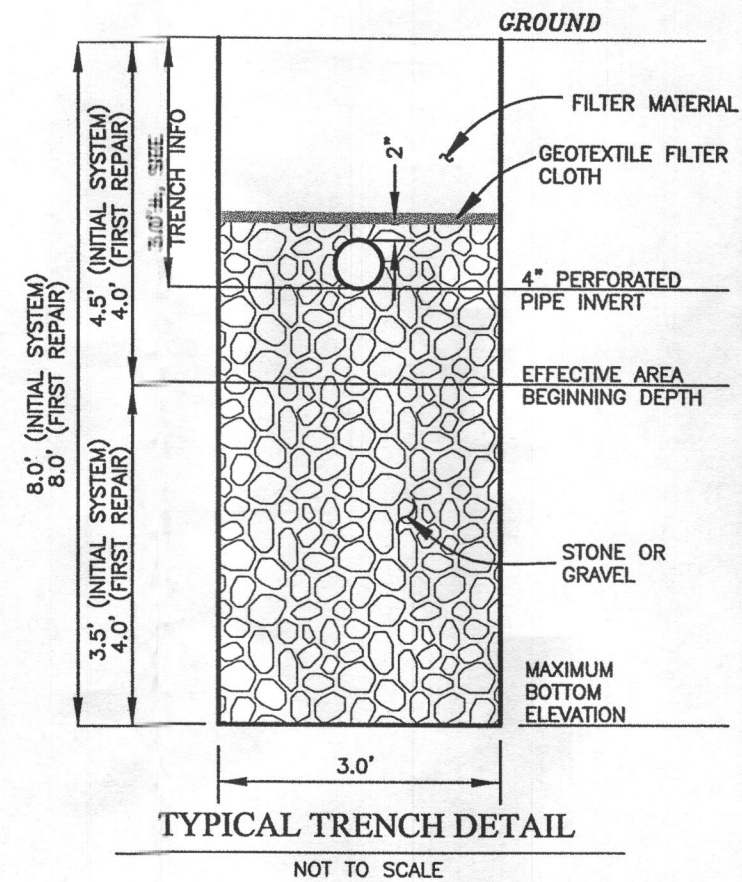
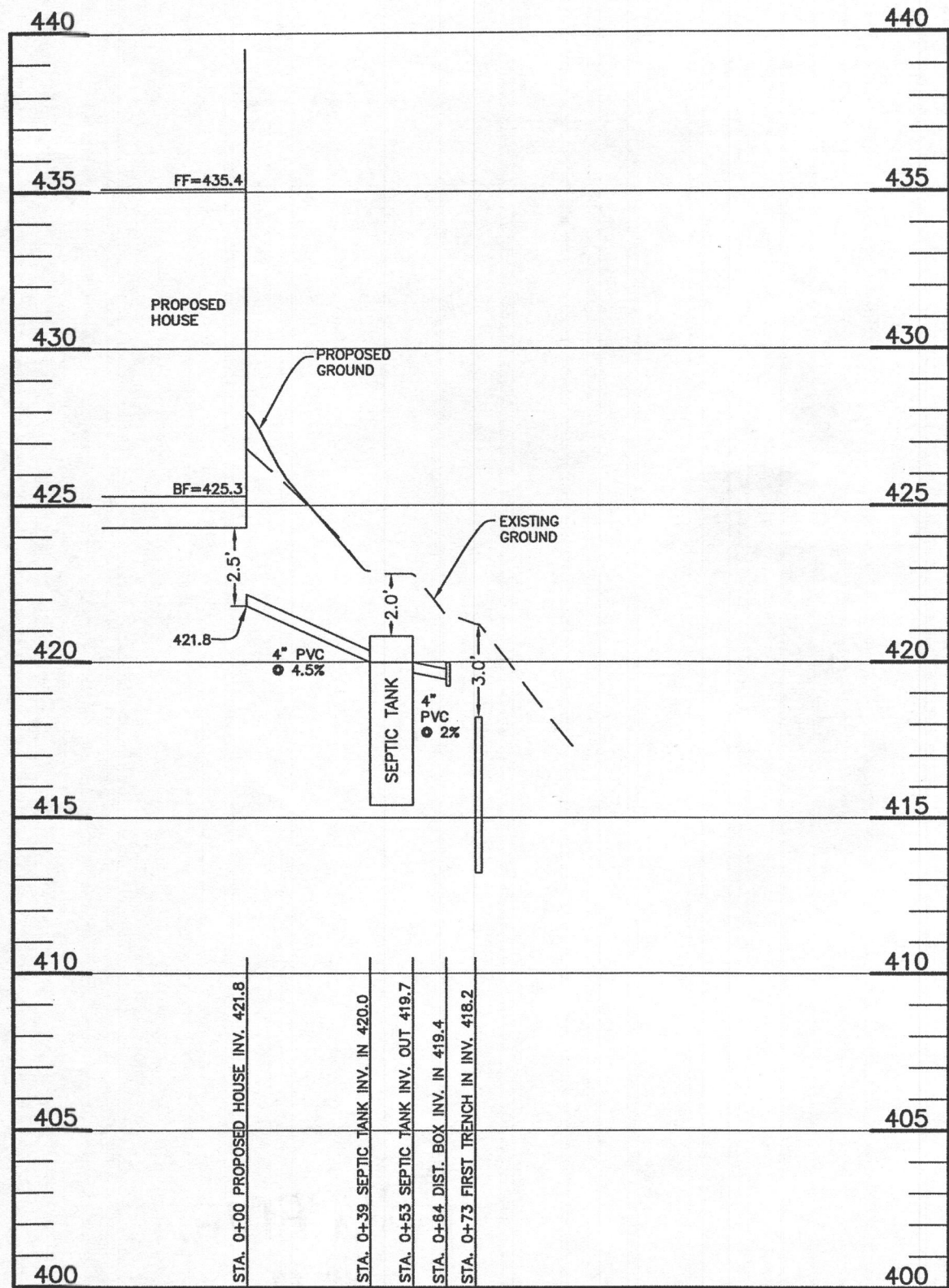
SECTION A-A

- 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 260-96 & C 494-92.
 - [4] Reinforcing per ASTM A 955. Min. 1-1/2" cover.
 - [5] Top slab sealed with butyl rope mastic.
 - [6] 4" wall, 4" base, & 8" top thickness.
 - [7] Max 3" of cover
 - [8] Depending on use of tank, inlet & outlet baffles may be required by code.

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

PLAN VIEW
1" = 50'



TRENCH INFORMATION			
INITIAL SYSTEM		FIRST REPAIR	
TRENCH T-1-1		TRENCH T-1-1	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	421.2	GROUND ELEVATION	414.4
INVERT ELEVATION	418.2	INVERT ELEVATION	411.4
MAX. BOTTOM ELEV.	413.2	MAX. BOTTOM ELEV.	406.4
TRENCH T-1-2		TRENCH T-1-2	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	419.2	GROUND ELEVATION	412.5
INVERT ELEVATION	416.2	INVERT ELEVATION	409.5
MAX. BOTTOM ELEV.	411.2	MAX. BOTTOM ELEV.	404.5
TRENCH T-1-3			
TRENCH LENGTH	47 LF		
GROUND ELEVATION	417.3		
INVERT ELEVATION	414.3		
MAX. BOTTOM ELEV.	409.3		

INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	4.5	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.45	
Trench width	3	
Effective Area Depth	3.5	
Linear Length of trench Required	142	lf

1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	4	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	625	sf
Sidewall reduction credit	0.42	
Trench width	3	
Effective Area Depth	4	
Linear Length of trench Required	87	lf

Lot 10 Septic
SCALE: 1"=50' HORIZ., 1"=5' VERT.

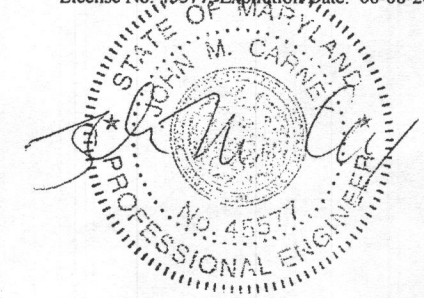
INV. OUT OF HOUSE	421.8
INV. IN SEPTIC TANK	420.0
INV. OUT SEPTIC TANK	419.6
TOP OF SEPTIC TANK	420.9
GROUND OVER SEPTIC TANK	422.9
INV. IN DIST. BOX	419.4
INV. OUT DIST. BOX	419.3
TOP OF DIST. BOX	420.0
GROUND OVER DIST. BOX	421.6

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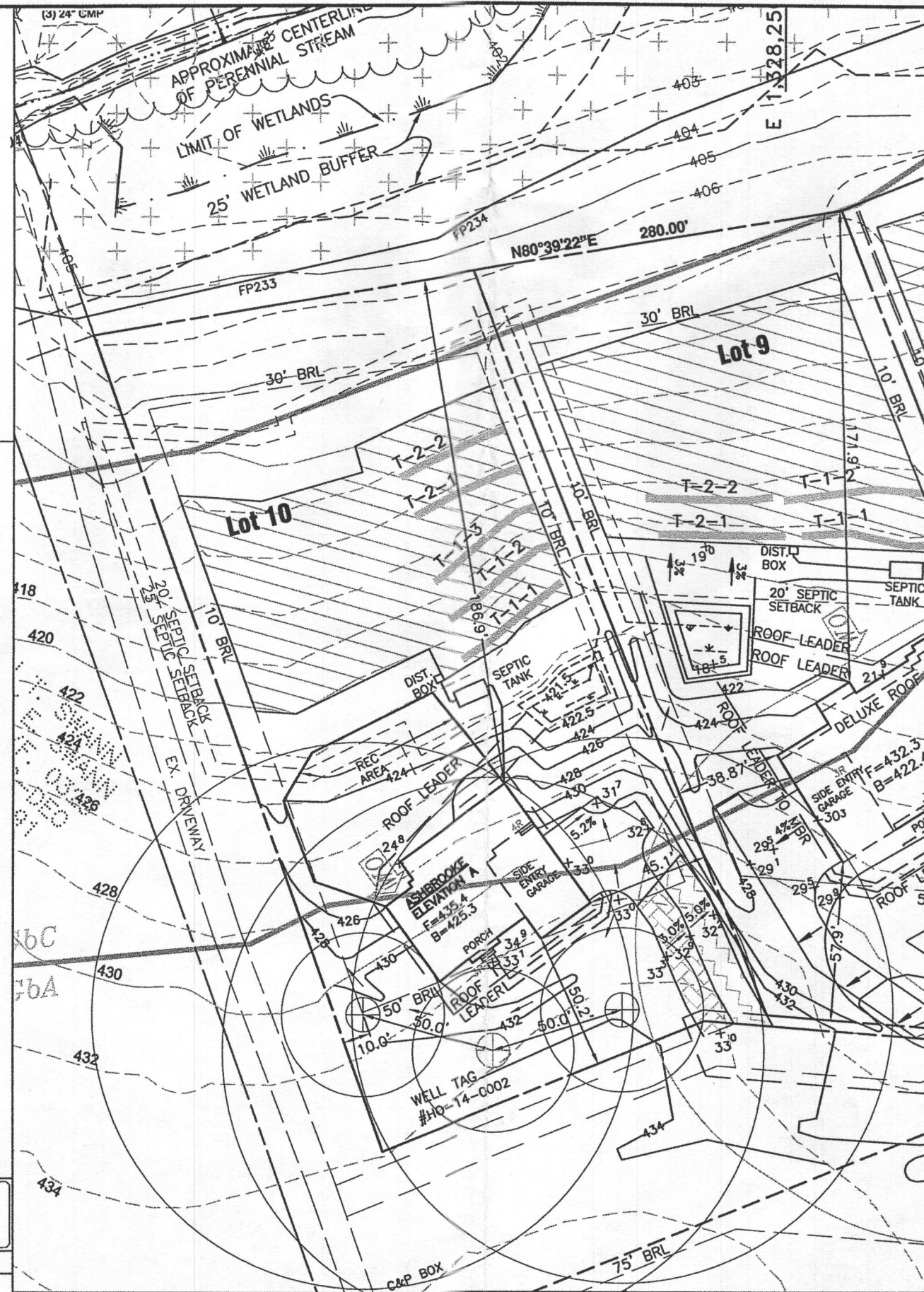


OWNER/BUILDER:	BENCHMARK ENGINEERS LAND SURVEYORS PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CVLENGINEERING.COM	
PROJECT:	REGAN PROPERTY LOT 10	
LOCATION:	12333 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443	
TITLE:	ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING 2 OF 2

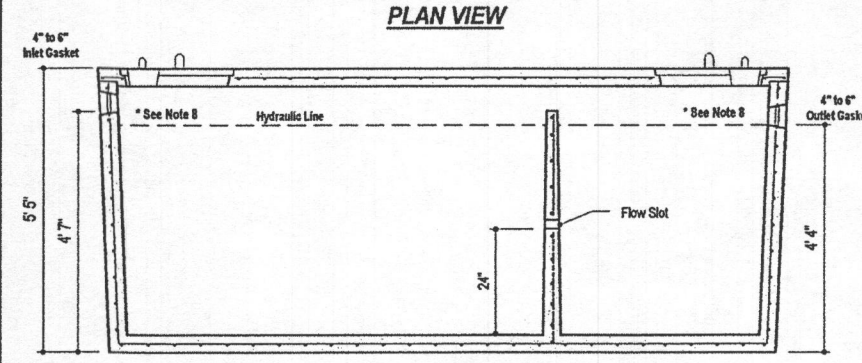
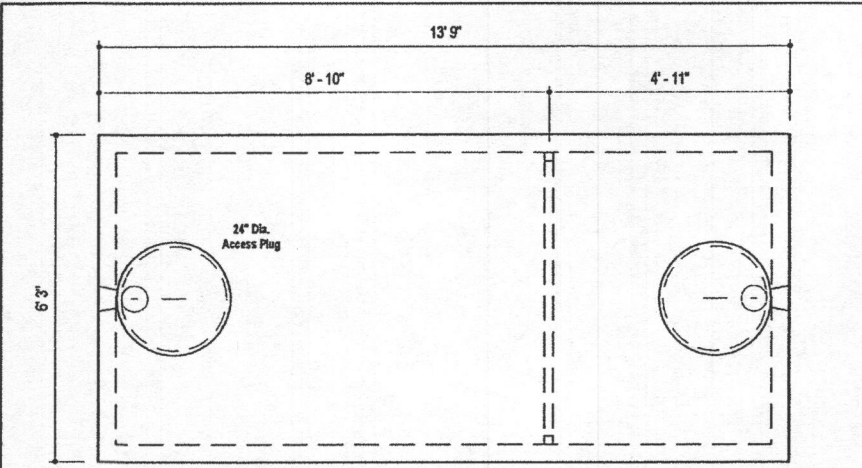
5/10/18

LEGEND

- SOILS CLASSIFICATION *ChB2*
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA



- BUILDING PERMIT PLAN NOTES:**
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 3. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND TOPOGRAPHIC INFORMATION PROVIDED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT JANUARY, 2012.
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 6. THE EXISTING WELL SHOWN ON THIS PLAN, HO-14-0002, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
 7. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
 8. ANY CHANGES TO A PRIVATE SEWAGE DISPOSAL AREA OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 9. STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED AND PROVIDED BY ONE MICRO-BIORETENTION FACILITY (MDE M-6), DRY WELL FACILITY (MDE M-5) AND ONE NON-ROOFTOP DISCONNECTION (MDE N-2).
 10. MICRO-BIORETENTION SHALL HAVE EITHER A 4" OR 6" ROOF LEADER DEPENDING ON ROOF-TOP AREA.



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 150-02.
- [3] Admixtures & plasticizers per ASTM C 260-96 & C 494-02.
- [4] Reinforcing per ASTM A 955. 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 baffles may be required by code.

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

PLAN VIEW
 1" = 50'

**THIS PLAN IS FOR
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 ROCKVILLE, MD 20850
 301-762-9511

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ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE SUITE 315
 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BEI-CMLENGINEERING.COM

PROJECT: **REGAN PROPERTY LOT 10**

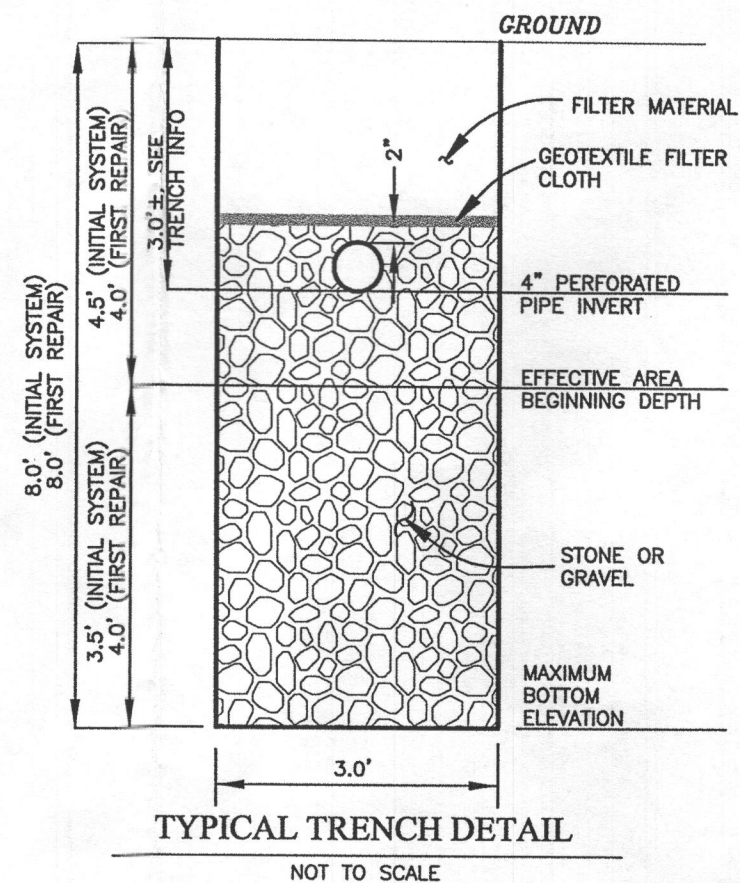
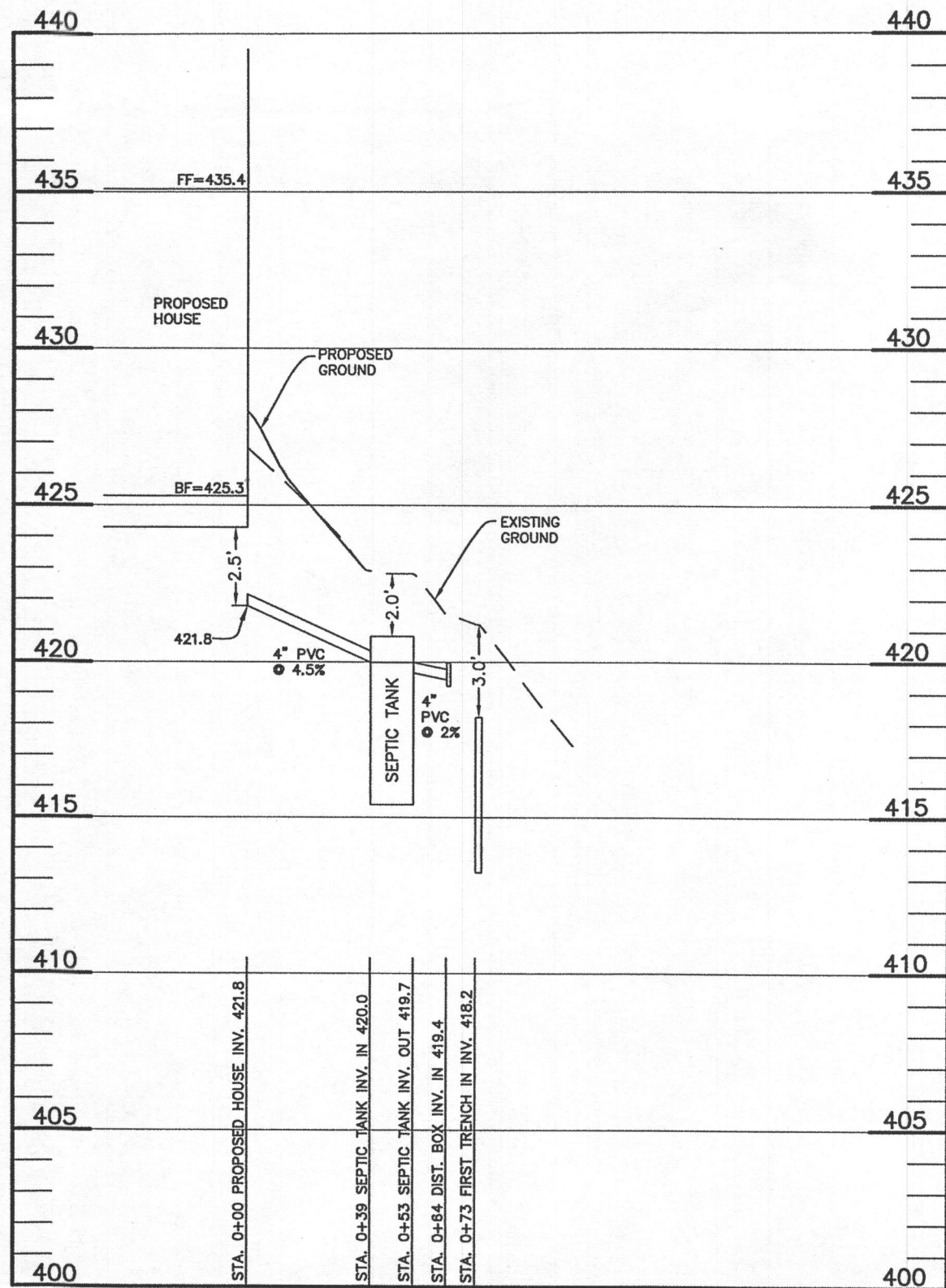
LOCATION: 12333 POINT RIDGE DRIVE
 HIGHLAND, MD 20777
 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200
 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443

TITLE: **ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN**

HOUSE TYPE: **ASHBROOKE - ELEVATION A**

DATE: MAY, 2018 PROJECT NO. 2171

SCALE: AS SHOWN DRAWING 1 OF 2



TRENCH INFORMATION			
INITIAL SYSTEM		FIRST REPAIR	
TRENCH T-1-1		TRENCH T-1-1	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	421.2	GROUND ELEVATION	414.4
INVERT ELEVATION	418.2	INVERT ELEVATION	411.4
MAX. BOTTOM ELEV.	413.2	MAX. BOTTOM ELEV.	406.4
TRENCH T-1-2		TRENCH T-1-2	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	419.2	GROUND ELEVATION	412.5
INVERT ELEVATION	416.2	INVERT ELEVATION	409.5
MAX. BOTTOM ELEV.	411.2	MAX. BOTTOM ELEV.	404.5
TRENCH T-1-3		TRENCH T-1-3	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	417.3	GROUND ELEVATION	414.3
INVERT ELEVATION	414.3	INVERT ELEVATION	409.3
MAX. BOTTOM ELEV.	409.3		

INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	4.5	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.45	
Trench width	3	
Effective Area Depth	3.5	
Linear Length of trench Required	142	lf

1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	4	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	625	sf
Sidewall reduction credit	0.42	
Trench width	3	
Effective Area Depth	4	
Linear Length of trench Required	87	lf

Lot 10 Septic
SCALE: 1"=50' HORIZ., 1"=5' VERT.

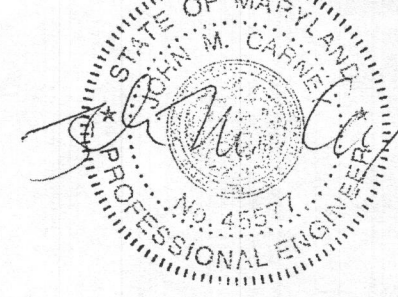
INV. OUT OF HOUSE	421.8
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INV. IN DIST. BOX	419.4
INV. OUT DIST. BOX	419.3
TOP OF DIST. BOX	420.0
GROUND OVER DIST. BOX	421.6

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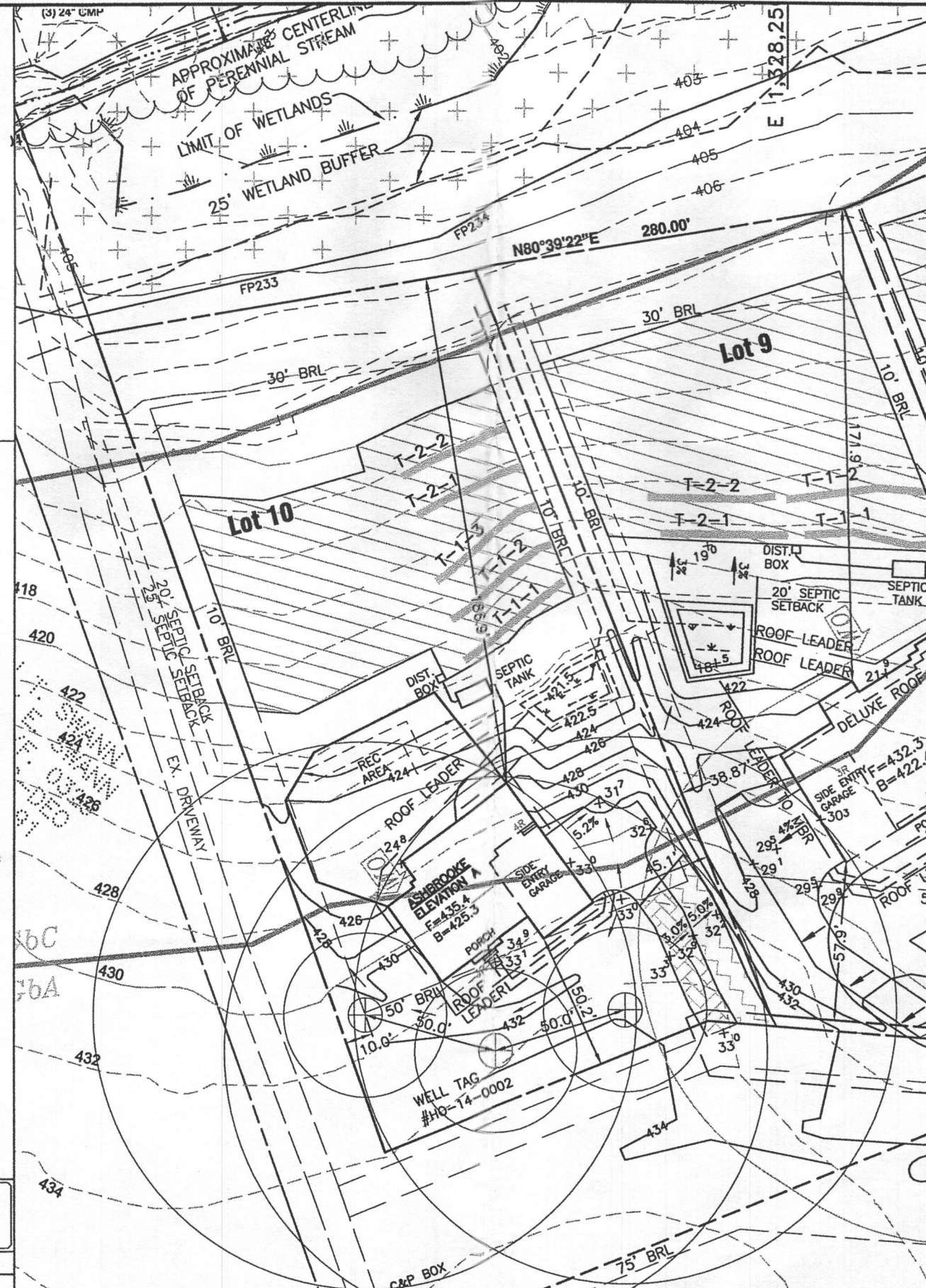


OWNER/BUILDER:	BENCHMARK ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS	
PROJECT:	REGAN PROPERTY LOT 10	
LOCATION:	12333 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443	
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HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING 2 OF 2

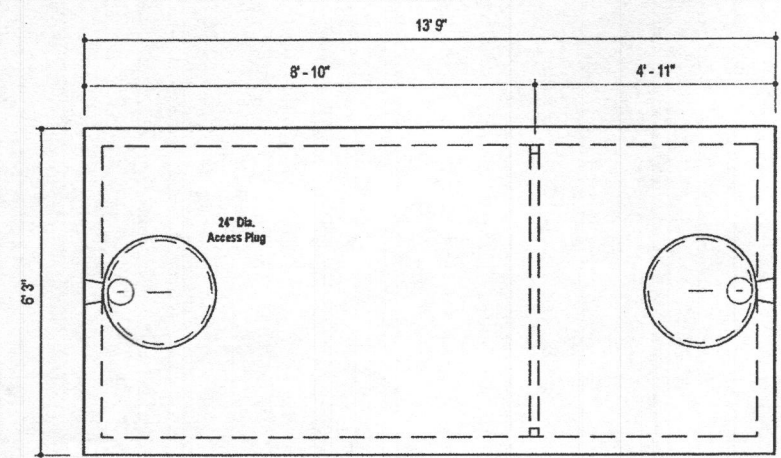
5/10/18

LEGEND

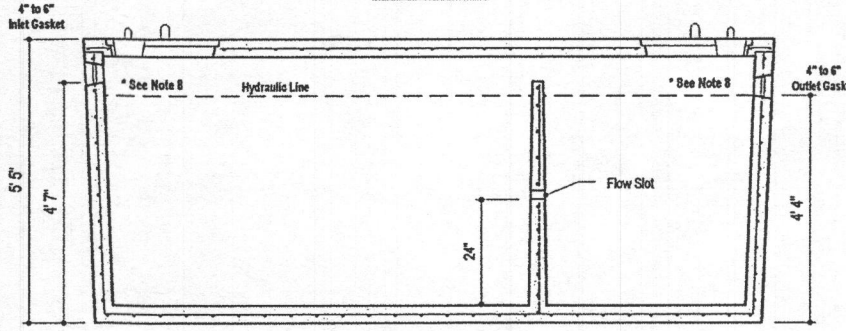
- SOILS CLASSIFICATION **ChB2**
- SOILS DELINEATION
- EXISTING CONTOURS 480, 478
- PROPOSED CONTOURS 999
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA



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PLAN VIEW



SECTION A-A

DESIGN DATA & GENERAL NOTES

- 1) Concrete strength $F_c=4000$ p.s.i. @ 28 days. Density = 150 pcf.
- 2) Cement - Portland Type III per ASTM C 150-02.
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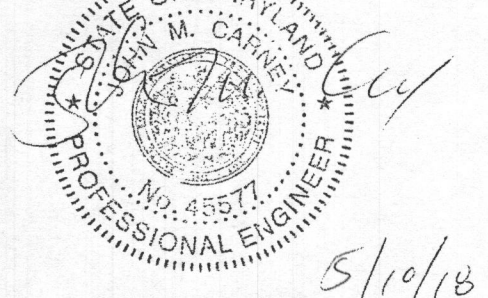
PLAN VIEW
1" = 50'

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PROJECT: **REGAN PROPERTY LOT 10**

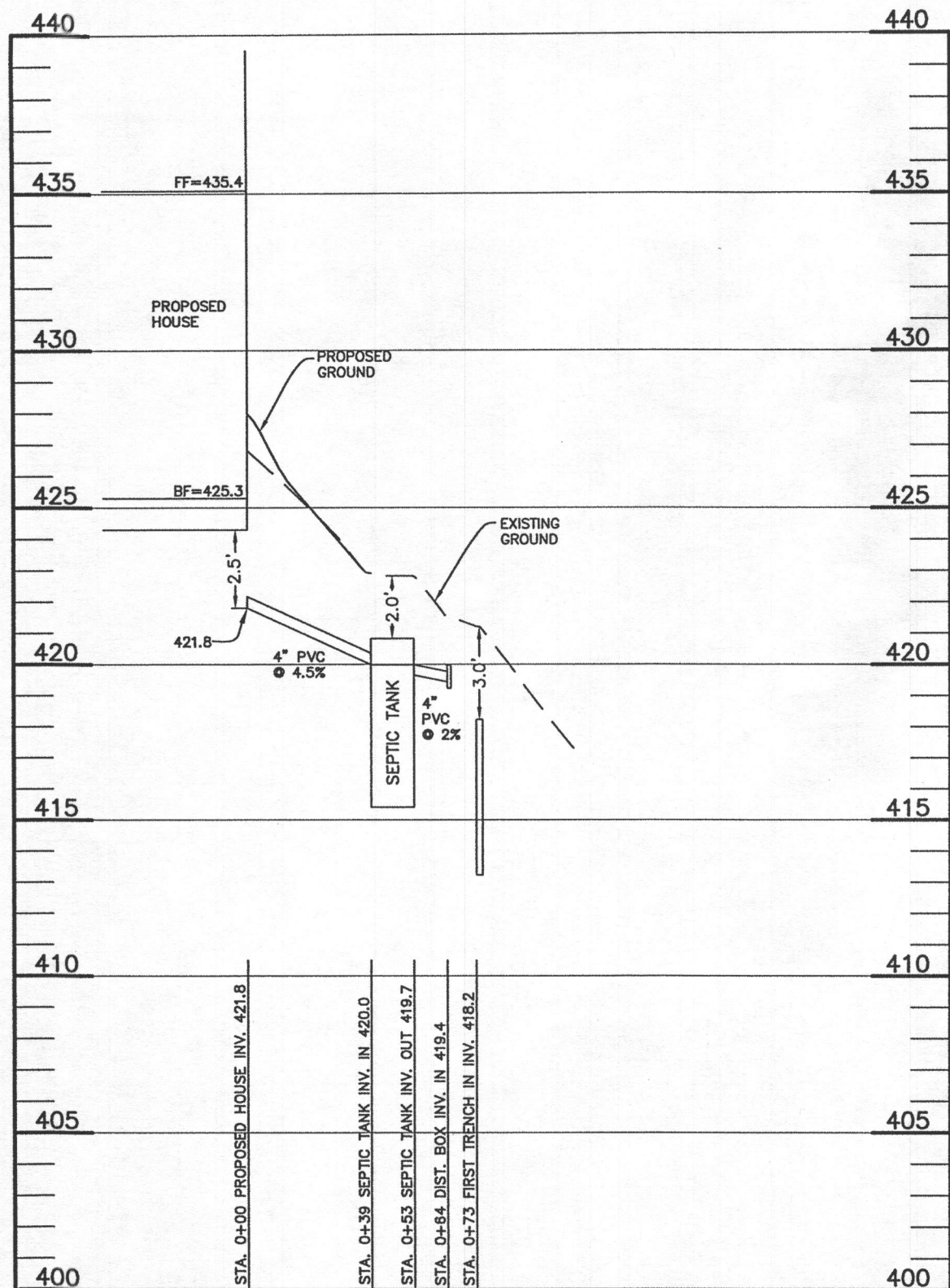
LOCATION: 12333 POINT RIDGE DRIVE
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TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200
5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443

TITLE: **ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN**

HOUSE TYPE: **ASHBROOKE - ELEVATION A**

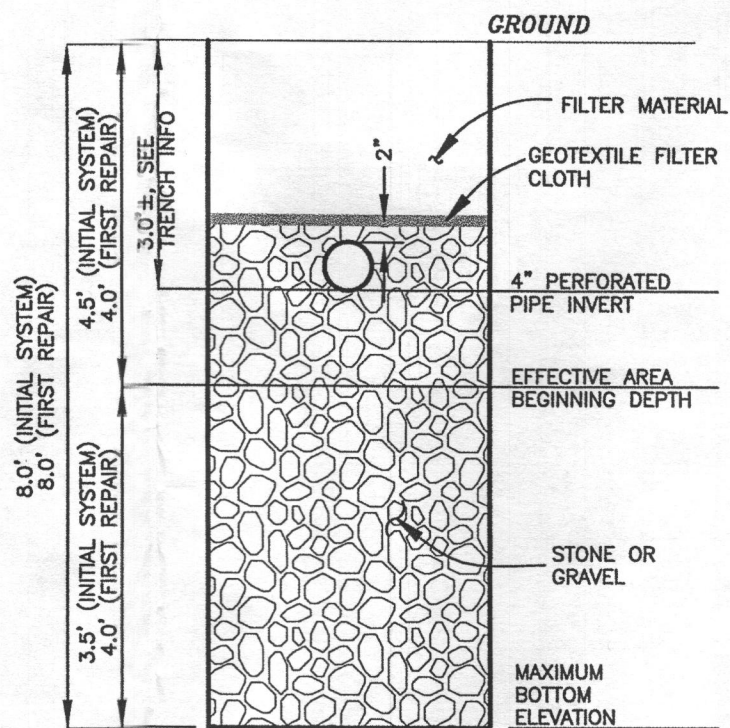
DATE: MAY, 2018 PROJECT NO. 2171

SCALE: AS SHOWN DRAWING 1 OF 2



Lot 10 Septic
SCALE: 1"=50' HORIZ., 1"=5' VERT.

INV. OUT OF HOUSE	421.8
INV. IN SEPTIC TANK	420.0
INV. OUT SEPTIC TANK	419.6
TOP OF SEPTIC TANK	420.9
GROUND OVER SEPTIC TANK	422.9
INV. IN DIST. BOX	419.4
INV. OUT DIST. BOX	419.3
TOP OF DIST. BOX	420.0
GROUND OVER DIST. BOX	421.6



TYPICAL TRENCH DETAIL
 NOT TO SCALE

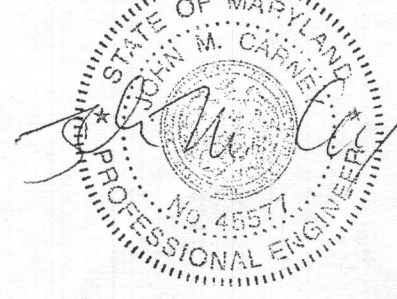
TRENCH INFORMATION		TRENCH INFORMATION	
INITIAL SYSTEM		FIRST REPAIR	
TRENCH T-1-1		TRENCH T-1-1	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	421.2	GROUND ELEVATION	414.4
INVERT ELEVATION	418.2	INVERT ELEVATION	411.4
MAX. BOTTOM ELEV.	413.2	MAX. BOTTOM ELEV.	406.4
TRENCH T-1-2		TRENCH T-1-2	
TRENCH LENGTH	47 LF	TRENCH LENGTH	43 LF
GROUND ELEVATION	419.2	GROUND ELEVATION	412.5
INVERT ELEVATION	416.2	INVERT ELEVATION	409.5
MAX. BOTTOM ELEV.	411.2	MAX. BOTTOM ELEV.	404.5
TRENCH T-1-3			
TRENCH LENGTH	47 LF		
GROUND ELEVATION	417.3		
INVERT ELEVATION	414.3		
MAX. BOTTOM ELEV.	409.3		

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SEE MANUFACTURES SPECIFICATIONS FOR DETAILS. EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.

SIGNATURE AND SEAL ARE FOR SEPTIC PROFILE AND CALCULATIONS ONLY, TANK, PUMP, AND DETAILS WERE NOT DESIGNED OR REVIEWED BY THE ENGINEER:

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. 45577, Expiration Date: 06-08-2020.



INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	4.5	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.45	
Trench width	3	
Effective Area Depth	3.5	
Linear Length of trench Required	142	lf
1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	4	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	625	sf
Sidewall reduction credit	0.42	
Trench width	3	
Effective Area Depth	4	
Linear Length of trench Required	87	lf

OWNER/BUILDER:	BENCHMARK ENGINEERS LAND SURVEYORS PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CMLENGINEERING.COM	
PROJECT:	REGAN PROPERTY LOT 10	
LOCATION:	12333 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597443	
TITLE:	ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:	ASHBROOKE - ELEVATION A	
DATE:	MAY, 2018	PROJECT NO. 2171
SCALE:	AS SHOWN	DRAWING 2 OF 2

5/10/18