



HOWARD COUNTY HEALTH DEPARTMENT

90268

CODES

DATE

11/12/25

☐ CASH

☒ CHECK

NO.

Received
From

For

Togles Septic Clean Tank

Repair Perc 12314 Bayson Branch

Two hundred sixty five — 00/100 Dollars

\$

265.00

Received By

[Signature]

RECEIPT

Howard County, MD
HOWARD COUNTY HEALTH DEPARTMENT
ASCEND ONE BUILDING
Columbia, MD 21045
8930 STANFORD BLVD

Application: WS-PT-25-03402
Application Type: EnvHealth/Well and Septic/Percolation Test/Application
Address: 12314 BENSON BRANCH RD, Ellicott City, 21042

Receipt No.	13978					
Payment Method	Ref Number	Amount Paid	Payment Date	Cashier ID	Received	Comments
Check	82264	\$265.00	11/13/2025	SMARTIN		

Owner Info.: HAUGH DARYL
12314 BENSON BRANCH RD
ELLCOTT CITY, MD 21043

Work Description:



Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

INFORMATION FORM - SEPTIC SYSTEM REPAIR/UPGRADE

Reason for Request:

- ☒ Failing System
- ☐ System relocation for proposed addition
- ☐ System upgrade for proposed addition
- ☐ Inadequate treatment zone
- ☐ Collapsed septic tank
- ☐ Collapsed drywell

Has the septic tank been pumped within the last month?

☐ Yes Date pumped: _____
☒ No

Was a visual inspection of the septic tank and/or drain fields conducted?

☒ Yes Explain observation: see attached septic inspection
☐ No

Existing system design

- ☒ Drywell
- ☐ Trench
- ☐ Mound
- ☐ Unknown
- ☐ Other: _____

Was a visual inspection of the sewage line conducted?

☐ Yes
☒ No

Blockage Leading to the field

☐ Yes Explain _____
☒ No

Is discharge surfacing on the ground?

☐ Yes
☒ No

Additional Comments:

house has two septic systems - see attached septic inspection report

*For REPAIRS, are the owners proposing, or do they plan to add in the future any additions or modifications to the property, i.e. pools, living space additions, garages, etc? This information must be disclosed at the time of this application. The Health Department will not be able to accommodate requests in the field for property modifications unrelated to the repair request. Such requests may require an additional fee, testing, and submittal of a Percolation Certification Plan, if the property does not meet current Code and Regulations.

Septic Contractor: Fogle's Septic Clean, Inc.

Contractor's Phone: 410-795-5670

Contractor's Address: 580 Obrecht Rd Sykesville, MD 21784

Property Address: 12314 Benson Branch Rd

County File: 03-282422

Subdivision: Woodmark

Lot: 46 Year Built: 1972

Owner's Name: Larry Kraemer

Existing bedrooms: 3

Name of previous owners: Daryl Haugh

Existing bedrooms: _____

Patrick Dougal | Michael Hannon

Proposed bedrooms: _____

*A Sanitarian will be in contact within three business days, depending upon the urgency of the situation, to coordinate the scheduling/review of the repair or upgrade.

Prior to scheduling inspections, scaled plans should be submitted to clarify the nature of the addition.

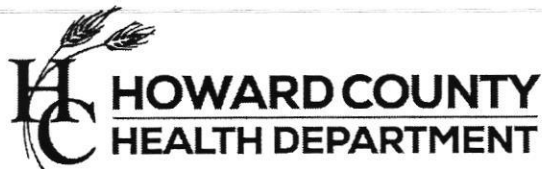
Print out a copy of Real Property Data via Dept. of Taxation website _____ Indexed file found _____

If soil/site conditions are limited and sewer and/or Metro District status is not conducive to connection, the Sanitarian may recommend pursuit of Emergency Sewer Extension or Emergency Metro District Inclusion. The Owner should contact the Bureau of Utilities for details.

No permit is to be issued nor inspection to be scheduled without prior fee collection at the office unless an emergency exists.

The contractor is to notify the office of the emergency as soon as possible.

2/2020



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8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

APPLICATION FOR PERCOLATION TESTING AND SITE EVALUATION

PROPERTY LOCATION

SUBDIVISION/PROPERTY NAME Woodmark

PROPERTY ADDRESS 12314 Benson Branch Rd Ellicott City 21042
STREET TOWN ZIP

TAX ACCOUNT # 03-282422 TAX MAP 22 GRID 12 PARCEL 187 LOT NO. 46 PROPOSED LOT
ZONING CATEGORY TIER SIZE (ACRES)

PROPERTY OWNER(S)

Larry Kraemer

DAYTIME PHONE 301-674-4943 CELL EMAIL lkeagle@yahoo.com

MAILING ADDRESS 12314 Benson Branch Rd Ellicott City, MD 21042
STREET CITY, STATE ZIP

APPLICANT

Fogle's Septic Clean, Inc. RELATIONSHIP TO OWNER: Septic Contractor

DAYTIME PHONE 410-795-5670 CELL EMAIL john@foglesinc.com

MAILING ADDRESS 580 Obrecht Rd Sykesville, MD 21784
STREET CITY, STATE ZIP

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

PROPERTY:

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

BUILDING:

- ☒ RESIDENTIAL WITH 3 EXISTING OR PROPOSED BEDROOMS IN THE COMPLETED STRUCTURE
- ☐ COMMERCIAL (PROVIDE DETAIL OF TYPE OF USE AND NUMBERS OF EMPLOYEES/CUSTOMERS ON ACCOMPANYING PLAN)

IS THE PROPERTY WITHIN 2500 FEET OF ANY RESERVOIR?

- ☐ YES
- ☒ NO

AS APPLICANT, I UNDERSTAND THE FOLLOWING:

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

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

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

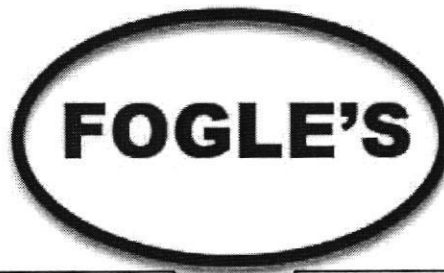
[Signature]
SIGNATURE OF APPLICANT

11/12/2025

DATE

Fogle's Septic Clean, Inc.

580 Obrecht Rd
 Sykesville, MD 21784
 Phone 410-795-5670



Proposal

Proposal # 71780
 Proposal Date 11/3/2025

Proposal Submitted To		Job Location	
LARRY KRAEMER 12314 BENSON BRANCH RD ELLICOTT CITY, MD 21042		LARRY KRAEMER 12314 BENSON BRANCH RD ELLICOTT CITY, MD 21042	
Phone	301-674-4843	Total Cost:	\$2,000.00
E-mail	TORIHOGAN@NORTHROPREALTY.COM	Deposit Due:	Signature Only
Description of proposed work:			
Cost for a permit & perc test is \$2,000.00 which includes: Howard County Septic Perc & Repair Permits Perc Test for existing 3 bedroom house Moving equipment on-site Meeting Howard County sanitarian to conduct perc test to design replacement septic system Perc holes to be backfilled to a rough grade - some mounding of dirt should be expecting as holes will settle Revised proposal will be sent once we have received a design from the county for the replacement system. Revised proposal will include the cost of the perc test. If replacement system will require outside engineering to design, Fogle's will send an invoice for the above cost of the perc test. If the homeowner/contractor/builder decide to use another company to complete the septic installation Fogle's will send an invoice for the above cost of the perc test. A signature is required prior to starting work **** Additional exclusions and work NOT included with this proposal; work to be done by others **** 1) Settling will likely occur, no return trips to address settling included with this proposal 2) Equipment and vehicles require a minimum of 10 ft clearance through any fence, homeowner/builder responsible to provide access to work site. If Fogle's Septic takes down a fence for access, Fogle's Septic is not responsible for putting fence back in place once work is completed.			
<u>Customer signature and deposit are required prior to starting any work</u>			
Exclusions (unless noted above): rock removal, clearing, final grading, seed and straw, damage to driveway or shrubbery due to the use of heavy equipment and trucks, extra dirt for settling at a later date. Fogle's is not responsible for damage to private utility lines, we will call Ms. Utility to mark public utility lines but the homeowner is responsible to mark any private utility lines. We are not responsible for the working conditions of the septic system. System design and installation are approved by local Health Department/County Inspectors.			
Payment to be made as follows: Payment is due within 30 days from the date of invoice. A finance charge of 1.5% per month (18% A.P.R.) to be applied on all balances over 30 days. If account is overdue & goes into collection, you will be responsible for collection fees, court costs and attorney fees 25%			
All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed upon verbal or written order, and will become an extra charge over and above the estimate. All agreements are contingent upon strikes, accidents or delays beyond our control. Owner is to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workman's Compensation Insurance.			
Acceptance of Proposal: The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.		Authorized Signature: John Hieatzman John Hieatzman (john@foglesinc.com)	
Signature: <i>Larry Kraemer</i>		Date: 11/3/2025	
Signature of Individual Responsible		If proposal accepted by Business or Corporation	
Notice: This proposal may be withdrawn if not accepted within 15 days			

REMARKS Ex. P.W. proposed, satisfactory No surface discharge.

SANITARIAN K. Wolf BACKHOE Janie Denny OTHERS _____

TEST HOLES USED IN SDA 3 AVG. PERC TIME 3-5 mi SQ. FT/BR 1.2 gal / ft²

TRENCH WIDTH 2 INLET DEPTH 2' MAX. BOT DEPTH 7' EFFECTIVE S/W _____

3 BR = 450 gal



YSON E RANCH RD

BENS

12318

47

48

430

43

440



Real Property Data Search ()
Search Result for HOWARD COUNTY

View Map No Ground Rent Redemption on File No Ground Rent Registration on File

Special Tax Recapture: None

Account Number: District - 03 Account Identifier - 282422

Owner Information

Owner Name: HAUGH DARYL J TR Use: RESIDENTIAL
 HAUGH DEANNA M TR Principal Residence: YES
Mailing Address: 12314 BENSON BRANCH RD Deed Reference: /21032/ 00422
 ELLICOTT CITY MD 21043

Location & Structure Information

Premises Address: 12314 BENSON BRANCH RD Legal Description: LOT 46 BL B
 ELLICOTT CITY 21042-0000 12314 BENSON BRANCH RD
 WOODMARK

Map: Grid: Parcel: Neighborhood: Subdivision: Section: Block: Lot: Assessment Year: Plat No:
0022 0012 0187 3020203.14 2035 46 2025 Plat Ref:

Town: None

Primary Structure Built Above Grade Living Area Finished Basement Area Property Land Area County Use
1972 2,511 SF 1176 SF 42,645 SF

StoriesBasementType ExteriorQualityFull/Half BathGarage Last Notice of Major Improvements
1 1/2 YES STANDARD UNITSIDING/5 4 full/ 1 half 1 Attached2015

Value Information

	Base Value	Value	Phase-in Assessments	
		As of	As of	As of
		01/01/2025	07/01/2025	07/01/2026
Land:	220,800	350,800		
Improvements	466,100	520,200		
Total:	686,900	871,000	748,267	809,633
Preferential Land:	0	0		

Transfer Information

Seller: HAUGH DARYL	Date: 10/20/2021	Price: \$0
Type: NON-ARMS LENGTH OTHER	Deed1: /21032/ 00422	Deed2:
Seller: DOUGAL PATRICK J	Date: 06/30/2010	Price: \$575,000
Type: NON-ARMS LENGTH OTHER	Deed1: /12544/ 00206	Deed2:
Seller: HANNON MICHAEL	Date: 07/25/2001	Price: \$429,500
Type: ARMS LENGTH IMPROVED	Deed1: /05592/ 00362	Deed2:

Exemption Information

Partial Exempt Assessments: Class	07/01/2025	07/01/2026
County:	000	0.00
State:	000	0.00
Municipal:	000	0.00 0.00

Special Tax Recapture: None

Homestead Application Information

Homestead Application Status: Approved 08/17/2010

Homeowners' Tax Credit Application Information

Homeowners' Tax Credit Application Status: No Application Date:



SEPTIC EVALUATION

☒ Buyer / ☐ Seller	Date: 10/27/2025 Time: 2:00	Occupied? ☒ Yes / ☐ No
Client: LARRY KRAEMER	Ordered By: JORI HOGAN	If vacant, how long?
Property Address: 12314 BENSON BRANCH RD	Phone: 410-868-6180	Last pumped: 7
ELLICOTT CITY, MD 21042	email: TOBIHOGAN@NORTHBOPREALTY.COM	Property age: 1972 # Bedrooms: 3
Weather: COM	County Records: ☒ Requested ☐ Not Received	Confirmed: ☐ Yes ☒ Left Message
Ground Conditions:		

Liquid level: ☐ Above Normal / ☒ Normal / ☐ Below normal	Depth of tank: Front 35' rear
Maintenance Appears: ☒ Good / ☐ Fair / ☐ Poor	Access to tank: 6" on each
Effluent Filter present? ☐ Yes / ☒ No	Pump system: ☐ Yes / ☒ No

Type of Tank	Tank Composition & Size	Type of Absorption System
☒ Septic Tank (1 tank) 2 tanks	☐ Metal ☒ Concrete ☐ Unknown	☐ Drainfield
☐ Cesspool	Tank Size: 1000g each	☒ Drywell on each
☐ Aeration System	Baffles intact? ☒ Yes / ☐ No	☐ Sandmound
☐ Other:		☐ Other:

Inspected System Appears:	Inspector's Comments	Sketch of System
☐ Functional ☐ Marginal ☒ Unsatisfactory	Regr septic consists of a tank and drywell which are in good working order. Rear drywell has a least 2' liquid depth remaining. The front septic consists of a tank and drywell. The drywell is overfull. We recommend contacting HCHD to confirm and design a replacement. Approx cost \$8000 - \$10,000	
Inspector:		
Signature: K Russell		
Inspection Fee: \$335		
Locate/Hand Digging Fee:		
Water Test: ☐ U&O ☐ Lead ☐ Nitrite		
Water Test Other:		
Amount Due:		
Check #		

IMPORTANT:

- This is a subjective and visual inspection only, based upon many unknown and unseen factors.
- The condition of the Sewage Disposal system is reported as of the above date.
- This report does not WARRANT nor GUARANTEE continued functional Sewage Disposal System operations.
- If house has been unoccupied, this report may not be accurate. Little or no use of the septic system could have allowed the problems to temporarily clear themselves.
- If a larger family is moving in than is presently occupying the house, the septic system may be subject to failure.
- If the general ground condition is wet, this report may not be accurate, as ground moisture may cover or hide actual septic effluent on the surface.
- In the above cases, it is strongly suggested that the septic system be re-certified in 3 to 6 months.
- If the system is rated below as marginal or unsatisfactory, it is suggested that the local health department be contacted to inspect and confirm the findings.
- This report addresses the functionality of the system. It does not warrant or guarantee sizing for permitting code or regulation now or in the future.

Payment for this inspection signifies understanding and acceptance of above clauses.



Howard County
Health Department

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: 7/16/2026

ONSITE SEWAGE DISPOSAL SYSTEM

P 591107

APPROVAL DATE: 7/13/2026 SP

PERMIT: BRF REPAIR

A Repair

PROPERTY ADDRESS: 12314 Benson Branch Road

SUBDIVISION: Woodmark

LOT: 46

TAX ID: 03-282422

CONTRACTOR: Fogle's

EMAIL: Jeff@foglesinc.com

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville 21784

PHONE: 410-795-5670

PROPERTY OWNER: Larry Kraemer

EMAIL: lkeagle@yahoo.com

OWNER ADDRESS: Same as above

PHONE: 301-674-4943

SEPTIC TANK SIZE: Norweco tntlp500

PUMP SIZE: EP45

PUMP TANK CAPACITY: 1500

DISTRIBUTION SYSTEM: ☐ GRAVITY

☒ LPD

BEDROOMS: 3

APPLICATION RATE: 1.2gpd/ft

TRENCHES:	LINEAR FEET REQUIRED: <u>70</u>	INLET DEPTH: <u>12"</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>7'</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>9'</u>	EFFECTIVE AREA BEGINNING DEPTH: <u></u>
	LOCATION: <u>SYSTEM STAKED BY INSTALLER/DESIGNER AND VERIFIED BY APPROVING AUTHORITY DURING PRE-CONSTRUCTION INSPECTION.</u>	
NOTES:	<u>Install system per approved design plans Penns Trail Environmental. Adam Browning</u>	

ISSUED BY: Kevin M. Wolf, L.E.H.S.

ISSUE DATE: 7/16/2026

EXPIRATION DATE: 7/16/2027

NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION

NOTE: CONTRACTOR REGISTERED WITH THE STATE OF MD ON-SITE WASTEWATER PROFESSIONALS BOARD: CONFIRMED ☒

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 SEPTIC 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 26003645

NOTE: THE HCHD DOES NOT WARRANTY ANY SYSTEM AND CANNOT GUARANTEE THE PERFORMANCE OF THIS SYSTEM AS DESIGNED. BY ACCEPTING THIS PERMIT, THE OWNER AND/OR APPLICANT ACKNOWLEDGE THAT THE SPECIFICATIONS DETAILED IN THIS DESIGN ARE ONE POSSIBLE OPTION AND THAT THE HCHD WILL REVIEW OTHER PROPOSALS. YOU HAVE THE OPTION TO SEEK THE ADVICE OF A QUALIFIED DESIGN CONSULTANT OR PROFESSIONAL ENGINEER FOR FURTHER GUIDANCE.

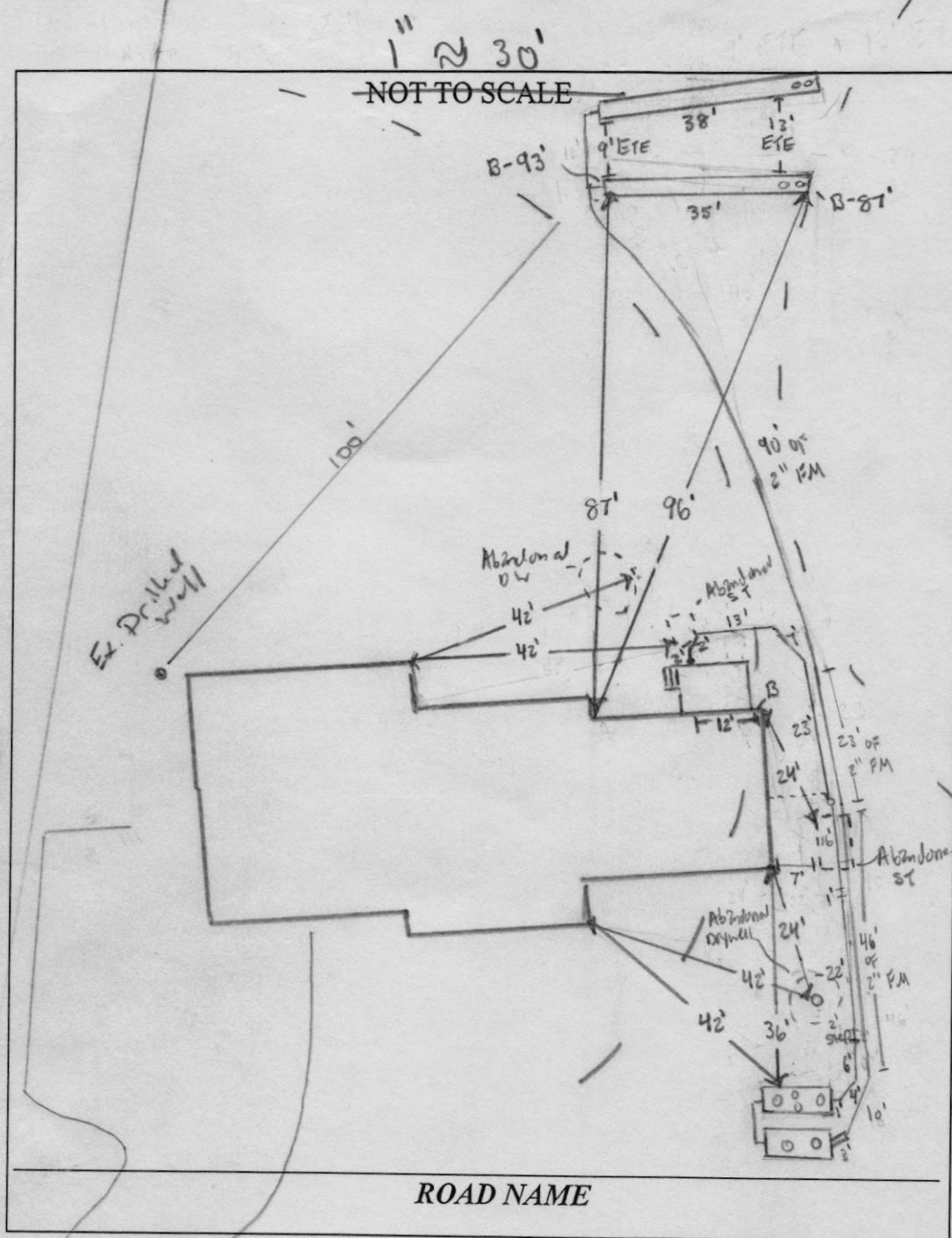
NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.

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.



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	12"	7'
NUMBER OF TRENCHES	2	
TOTAL LENGTH	73'	
ABSORPTION AREA	219 ft ² + SW	
DISTRIBUTION BOX LEVEL	N/A	
DISTRIBUTION BOX BAFFLE	N/A	
DISTRIBUTION BOX PORT	N/A	

BAT SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	yes
MANUFACTURER	Beck river, Norweco
CAPACITY	600 GAL
SEAM LOC	Top
TANK LID DEPTH	1.5' - 1'
BAFFLES	N/A
BAFFLE FILTER	N/A
MANHOLE LOC	Front, middle, back
6" PORT LOC	N/A
WATERTIGHT TEST	N/A
SLOTTED	N/A
DATE ON LID	6/26/2026

PUMP/SEPTIC TANK LEVEL

MANUFACTURER	Babylon
CAPACITY	1500 GAL
SEAM LOC	Top
TANK LID DEPTH	1' - 0.5'
BAFFLES	N/A
BAFFLE FILTER	N/A
MANHOLE LOC	Front & Back
6" PORT LOC	N/A
WATERTIGHT TEST	N/A
SLOTTED	N/A
DATE ON LID	6/12/2026

SEPTIC CONTRACTOR ONSITE INSTALLING SYTEM: Mike Hooper
SEPTIC CONTRACTOR ONSITE LICENSED WITH THE STATE OF MD: YES/NO

PRE-CONSTRUCTION NOTES:

3/25/2026 Design plan approved (Kew)

CONTROL PANEL DATA

CONTROL PANEL HEIGHT	64"
(MIN 30")	
INSPECTION DATE	7/30/2026
INSPECTION: PASS/FAIL (CIRCLE ONE)	PASS

INSTALLATION NOTES:

7/22/2026 - Installer using crush & run @ bottom of tank. Norweco P1 set while onsite. Norweco 600 gal & < 3' cover, P1 1500 gal & < 3' cover (SP)
7/23/2026 - Installer onsite for inspection. DW & 12R abandoned while onsite. Part of P1 outlet & BAT inlet installed. Last 10' of 4" into BAT has < 1/4" fall per plan. All of 4" has fall (SP)
7/24/2026 - Installer onsite. ST & DW in back abandoned while onsite. FM to manifold installed, 2" SCH 40
7/24/2026 - Installer onsite. ST & DW in back abandoned while onsite. FM to manifold installed, 280 PSI used. (SP) 7/27/2026 - Installer onsite. Trenching finished upon 2nd visit. Trenches moved in closer to manifold than plan.
FINAL INSPECTOR S. Pese DATE OF APPROVAL 7/31/2026
- Still has excessive trench & lateral lengths. OK to backfill. (SP) 7/28/2026 - seed & straw over entire system. (SP)
7/30/2026 - P1 & A OK. Trench B has 5' of hole & A has 3'. WAP installed outside house good, 2nd hole & visual good (SP)
7/31/2026 - Received BAT start up. (SP)



BACK RIVER PRE-CAST, LLC
PO BOX 329
GLYNDON, MD 21071
PH# 410-833-3394

NORWECO CERTIFICATION

PROPERTY OWNER: LAWRENCE KRAEMER	INSTALLATION COMPANY: FOGLES
ADDRESS: 12314 BENSON BRANCH RD	CERTIFIED INSTALLER: MIKE HOOPER
CITY, ZIPCODE & COUNTY: ELLICOTT CITY, 21042, HOWARD	PERMIT#
SIZE OF SYSTEM INSTALLED:	DATE INSTALLED: 7-26-26
600 GPD CONCRETE	START-UP DATE: 7-30-26
NUMBER OF BEDROOMS:	DATE OF FINAL INSPECTION:
TYPE OF INSTALLATION: FAILING	DATE OF ELECTRICAL INSPECTION:
ELECTRICAL WIRING PER ELECTRICAL INSTRUCTIONS: YES	TANK LEVEL: YES
HT. OF CONTROL PANEL ABOVE FINAL GRADE: 38"	BURIAL DEPTH OF TANK: 20"
SYSTEM WIRED ON A 15-AMP DEDICATED CIRCUIT WITH STD. BREAKER: YES	RISERS 4" - 6" ABOVE GRADE: NO
LENGTH(S) OF UF WIRE PAST LAST AERATION RISER(S): 36"	VENTED LID(S) ON AERATION CHAMBER(S): YES
FEMALE PLUG(S) WIRED TO UF WIRE: YES	ANY GROUND SETTLING AROUND TANK:
CONDUIT(S) ENTERING AERATION RISER MADE WITH A WATERTIGHT CONNECTION: YES	NO
ISTHE INSIDE OF THE CONDUIT ENTERING THE CONTROL PANEL(S) AND AERATION RISER(S) SEALED WITH DUCT SEAL: YES	

ON 2ND PAGE MAKE A ROUGH SKETCH OF THE HOUSE ,WHERE THE SYSTEM IS LOCATED, WHERE THE CONTROL PANEL IS LOCATED , WHERE THE FRONT OF THE IS AND DIRECTIONS TO THE PROPERTY.

DIRECTIONS CAN START A FEW STREETS AWAY

EXAMPLE: RT. X LEFT ONTO XX STREET RIGHT ONTO PRIVATE DRIVEWAY 5TH HOUSE OF THE LEFT.

I certify that the Norweco Singlair TNT Wastewater Treatment System was installed according to the manufacture's specifications.

Matthew Geckle

July 30, 2026

Signature of BRP Representative

Vice-President

Date



4/15/2026

Lawrence Kraemer, Jr
12314 Benson Branch Rd
Ellicott City, MD 21042

RE: FY 2026 Howard County Bay Restoration Fund OSDS Upgrade Program

Dear Mr. Kraemer,

Thank you for your application to participate in the Howard County Bay Restoration Fund OSDS Upgrade Program. The Howard County Health Department has verified that your septic system at 12314 Benson Branch Rd is failing and in need of an upgrade. Based on your income taxes, you are eligible to receive funding to cover 50% of the cost to upgrade your system to one of the MDE approved best available technology units listed below. The approved price of up to **\$14,450** only includes the cost of the unit, installation of the unit, and 2 years of operation and maintenance. The award does not include the cost of permits, electrical upgrades, drainfields, sand mounds, etc.

<u>System</u>	<u>Vendor</u>	<u>Contact</u>	<u>Phone</u>
Advantex	Atlantic Solutions	Bob Johnson	877-814-8426
BioMicrobics	Dwayne C. Jones	Dwayne C. Jones	410-692-6900
Fuji Clean	Dwayne C. Jones	Dwayne C. Jones	410-692-6900
Hoot	Mayer Bros.	Nancy Mayer	410-796-1434
Hydroaction	Oak Hill Construction	Terry Conrad	301-421-4155
Norweco	Back River Pre-Cast	Matt Geckle	410-833-3394
Septitech	Dwayne C. Jones	Dwayne C. Jones	410-692-6900

In order to receive your OSDS upgrade, **you MUST follow these steps:**

1. **Sign this letter** on the bottom of page 2 **and return it** to the email or address below within **2 weeks of the date of this letter**.
2. If not done already, file a septic repair permit application with the Howard County Health Department **within 2 weeks of the date of this letter**.
3. If not done already, sign the Agreement and Easement for Installation of Best Available Technology Systems with Bay Restoration Funds (available through the Howard County Health Department), have it signed by a Howard County Health Department Sanitarian or Designee, then take it to the Circuit Court and have it recorded in Land Records **within 2 weeks of the date of this letter**.
4. Prepare your property and schedule installation of the system. The system must be installed **within 6 weeks of the date the Agreement and Easement is recorded**.

If assistance is needed in completing any of the steps listed above, please contact us at bayrestorationfund@canaanvi.org.

166 5th Street #1 | Davis, WV 26260
www.canaanvi.org 304.704.3340

The system vendor will provide a contractor to install your BAT unit. If you choose a contractor other than the ones provided by the vendor, they must be willing to install the unit for the fixed price approved by MDE. The vendor may also require proof of insurance from your contractor. **CVI will send payment directly to the manufacturer for the system and installation costs.**

If your system is not installed within the 8-week timeframe listed in the steps on page 1, the funds may be released and used elsewhere. If you are unable to complete installation in the timeframe listed, please contact us to discuss an extension. Please note that no extensions can be granted beyond June 27, 2026.

For more information on septic repair permitting, contact:

Jeff Williams
Bureau of Environmental Health
Howard County Health Department
410-313-4261
jewilliams@howardcountymd.gov

Please sign and return this original letter and keep a copy for your records. If you have any questions, you may contact us at bayrestorationfund@canaanvi.org.

Sincerely,



Gail Berrigan, Executive Director

I have read and agree to the conditions of this Agreement Letter.

Accepted by: [Name], Property Owner

4/22/2026



Signature

Date

APPROVAL BLOCK:

THE PLANS AS REVIEWED ARE CONDITIONALLY APPROVED PENDING A SATISFACTORY PRECONSTRUCTION MEETING, SYSTEM STAKEOUT, AND SOIL MOISTURE CHECK. INSTALLATION OF THE SYSTEM SHALL NOT COMMENCE UNTIL AN OSDS PERMIT IS SECURED BY A LICENSED INSTALLER. IF APPLICABLE, ELECTRICAL COMPONENTS OF THE SYSTEM SHALL BE PERMITTED, INSPECTED, AND APPROVED. FINAL APPROVAL OF THE SYSTEM IS CONTINGENT UPON SUCCESSFUL INSTALLATION ACCORDING TO THE APPROVED PLANS AND SATISFACTORY INSPECTION MADE BY THIS DEPARTMENT, AS INDICATED BY FINAL SIGNATURE ON THE OSDS PERMIT.

APPROVING AUTHORITY:

APPROVING INDIVIDUAL (PRINT):

SIGNATURE: DATE:

MARYLAND DEPARTMENT OF THE ENVIRONMENT REGIONAL OFFICER:

SIGNATURE: DATE:

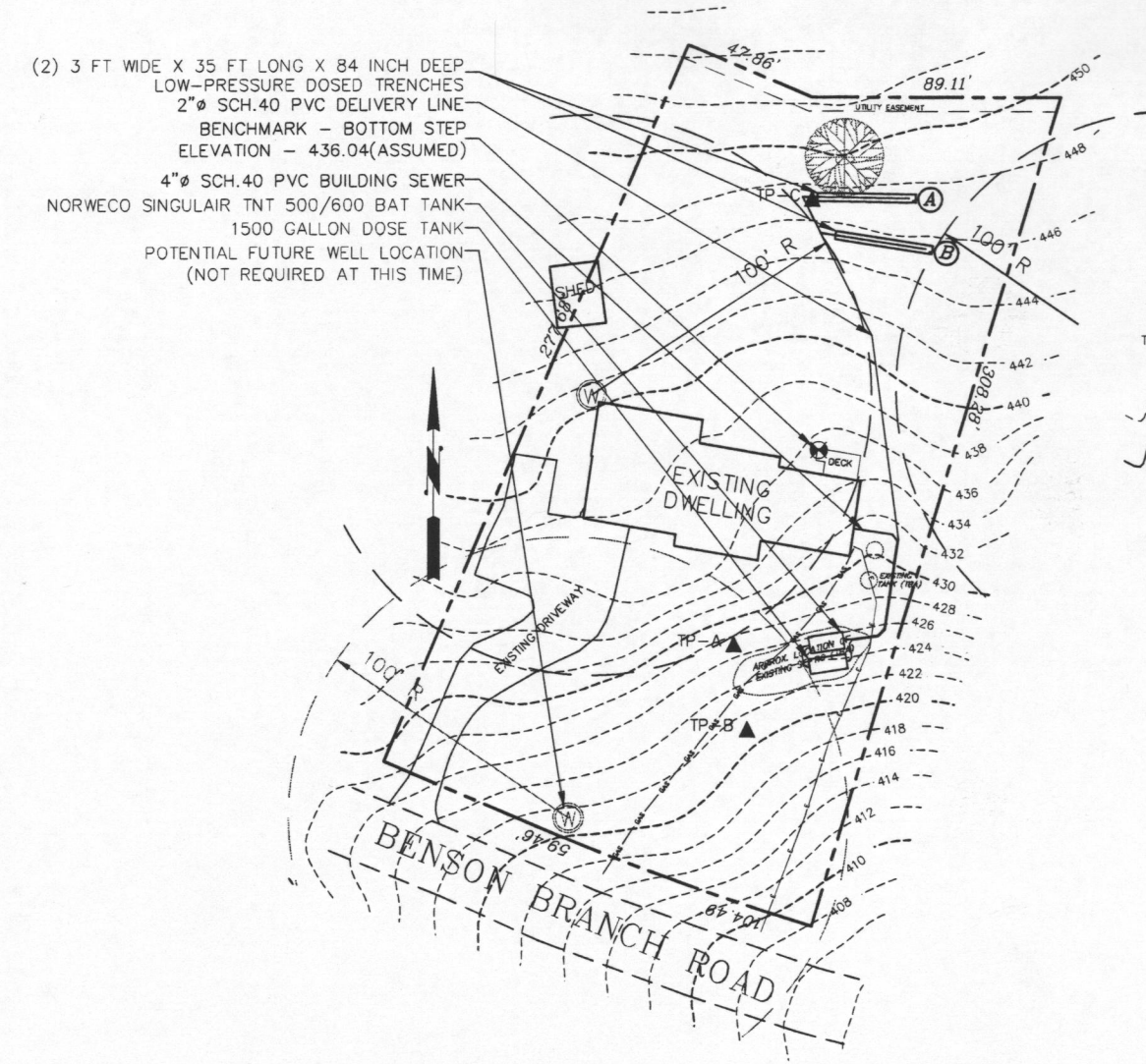
PROJECT NARRATIVE:

PLANS AND SPECIFICATIONS HEREIN ARE INTENDED FOR THE REPLACEMENT OF AN UNSUITABLE SEPTIC SYSTEM TO SERVE A (3) BEDROOM ASSISTED LIVING FACILITY. THE PEAK DAILY FLOW IS 450 GPD. THE AVERAGE DAILY FLOW OF 270 GPD. WASTE STRENGTH IS CONSISTENT WITH RESIDENTIAL WASTEWATER.

PROPOSAL CONSISTS OF AN EXISTING NORWECO SINGLAIR TNT 500/600 AEROBIC TREATMENT TANK; 1500 GALLON DOSE TANK; WITH TIME-DOSING TO (2) 3 FT X 35 FT SUBSURFACE AGGREGATE TRENCHES. MINIMUM TOPSOIL COVER IS 12 INCHES. DENSE VEGETATION SHALL BE ESTABLISHED ON DISPOSAL AREA AND ANY DISTURBED AREAS IMMEDIATELY FOLLOWING SYSTEM INSTALLATION.



ABSORPTION AREA PUMP PERFORMANCE CURVE
ASHLAND PUMP MODEL E145



LEGEND:

- TP XX = TEST EXCAVATIONS
- = EXISTING CONTOUR
- - - = PROPOSED CONTOUR
- ⊗ = BENCHMARK LOCATION
- ⊙ = PERMEAMETER TEST LOCATION

SITE PLAN & DATA

SCALE: 1" = 30'

AREA = +/- 0.9789 AC.

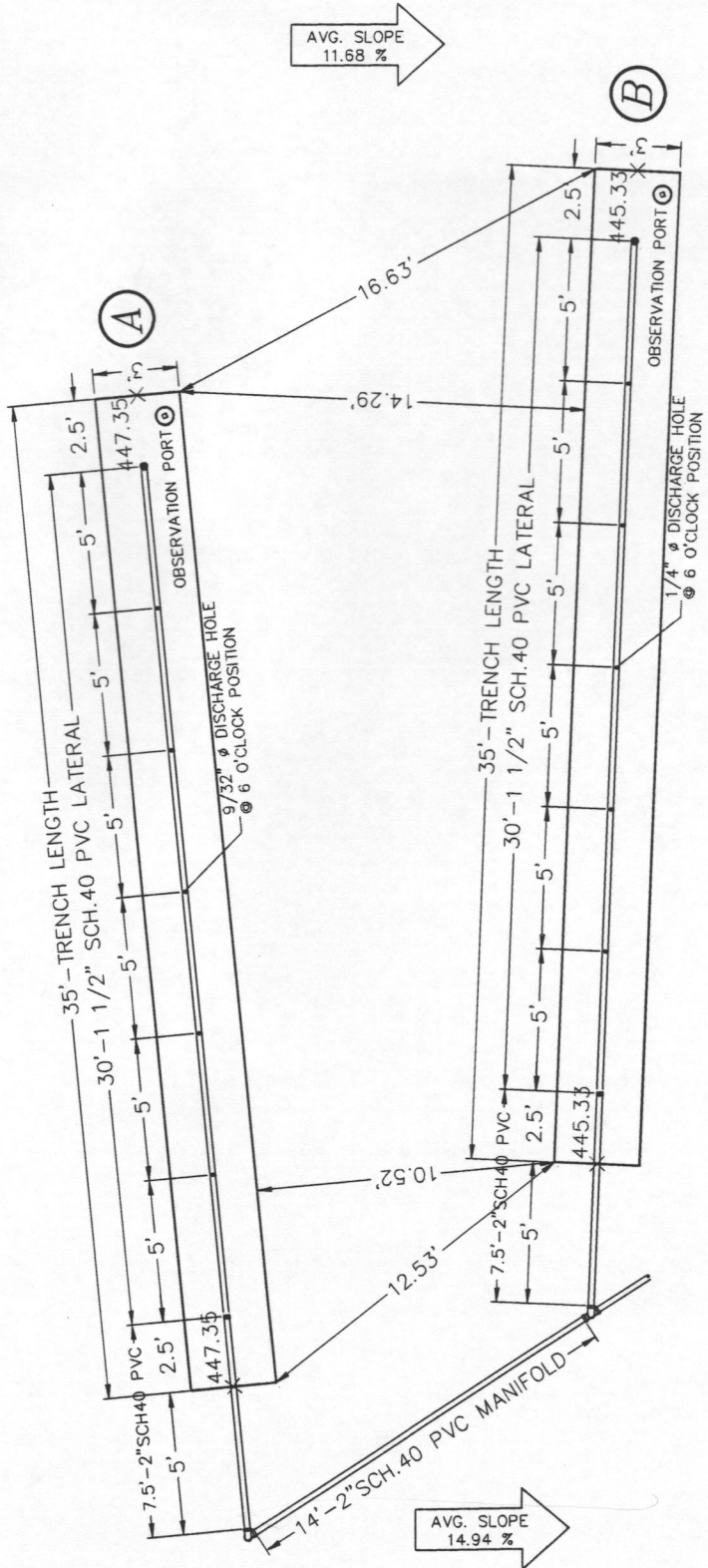
ELECTION DISTRICT: 03

ACCOUNT NUMBER: 282422

TMP #0022, 2212, 0187 (MAP, GRID, PARCEL)

**ALL EXISTING SEPTIC COMPONENTS ARE TO BE ABANDONED IN A MANNER ACCEPTABLE TO THE HOWARD COUNTY HEALTH DEPARTMENT.

**BOUNDARY AND EXISTING FEATURES SHOWN HEREON ARE FROM THE LEGAL DESCRIPTION, COUNTY GIS AND FIELD RECORDED MEASUREMENTS. TOPOGRAPHY DERIVED FROM COUNTY LIDAR. PLAN IS FOR USE IN SEPTIC SYSTEM INSTALLATION ONLY.



PLAN VIEW - ABSORPTION AREA

SCALE: 1" = 3'

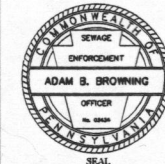
PENN'S TRAIL ENVIRONMENTAL, LLC



327 E. RIDGEVILLE BOULEVARD - #141
MOUNT AIRY, MARYLAND 21771
ph. (301) 829-5022
email: staff@pennstrail.com

LOW-PRESSURE DOSED BED SYSTEM
PREPARED FOR

12314 BENSON BRANCH ROAD TRACT
ELLICOTT CITY, 3RD ELECTION DISTRICT,
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 17, 2026
SCALE: AS NOTED



MARYLAND ON-SITE WASTEWATER
SERVICE LICENSE #0100
PTE#7939
SHEET 1 OF 2

LATERAL	LATERAL ELEVATION	DISCHARGE HOLE SIZE	NUMBER OF HOLES	EQUIVALENT LENGTH PRECEEDING	EQUIVALENT LENGTH TOTAL	FRICTION LOSS	RESIDUAL HEAD REQUIRED	TOTAL POST LATERAL HEAD	DISCHARGE PER HOLE	DISCHARGE PER LATERAL	TRENCH AREA	APPLICATION RATE
A	445.02	3/32	7	33.50	0	0	5.00	1.00	1.62	11.34	125	0.107961245
B	443.30	1/4	7	25.10	18.50	9.09	5.62	5.11	1.67	11.66	180	0.111324569
WEEPHOLE	PUMP INVERT ELEVATION	DISCHARGE HOLE SIZE	NUMBER OF HOLES	EQUIVALENT LENGTH PRECEEDING	EQUIVALENT LENGTH TOTAL	FRICTION LOSS	RESIDUAL HEAD REQUIRED	TOTAL POST LATERAL HEAD	WEEPHOLE DISCHARGE			
	419.59	2/4	1	82.35	225.94	2.14	25.26	27.40		3.87		
									TOTAL DISCHARGE	26.89	DISCHARGE VARIATION	

COEFFICIENT	1.48
MANIFOLD I.D.	1.000
GROUND ELEV.@TANK	424.85
DELIVERY LINE LENGTH	134.00
OUTLET ELEV.	422.76

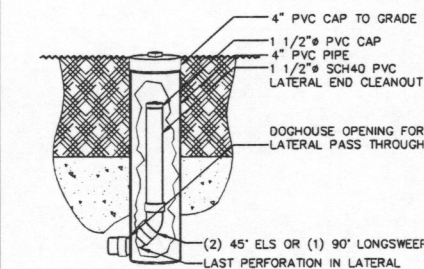
BEDROOMS	3	QUAN.	TEST PIT	DEPTH	LIMITING ZONE
PEAK GALLONS PER DAY	450	GPD	A	60"	>50% COURSE FRAG
HYDRAULIC LINEAR LOAD (MAX.)	-	GPD/LF	B	36"	>50% COURSE FRAG
BASAL LOADING RATE (MAX.)	1.20	GPD/SQ.FT.	C	144"	BOP
LANDSCAPE LOADING RATE (PEAK)	-	GPD/LF			
PROP. AGGREGATE WIDTH	3	FEET	TEST PIT (PERC)	DEPTH	RATE
MINIMUM TRENCH LENGTH (NO SIDEWALL)	125.00	FEET	A	48"	NO TEST
SIDEWALL DEPTH	2.50	FEET	B	-	NO TEST
MINIMUM TRENCH LENGTH (SIDEWALL)	69.44	FEET	C		3-5 MPI
PROPOSED TRENCH LENGTH	70.00	FEET			
PROPOSED EFFECTIVE AREA	210	SQ.FT.			
MAXIMUM TRENCH DEPTH (TYP.)	84	INCHES	24-2 HORIZON FOR SIDEWALL	54" THROUGH 84"	
DEPTH OF AGGREGATE (TYP.)	60	INCHES			

TRENCH CENTER ELEVATIONS		EXCAV. DEPTH		TRENCH DATA	
				TRENCH WIDTH (TYP.)	3.00 FT
				NUMBER OF TRENCHES	2.00 QUAN.
<u>TRENCH (A)</u>				<u>TRENCH (A)</u>	
447.35	84.00	INCHES		TRENCH LENGTH	35.00 FT
447.35	84.00	INCHES		TRENCH BOTTOM ELEVATION	440.35 ELEV
				LATERAL INV. ELEVATION	445.02 ELEV
				TOP OF AGGR. (OVER LATERAL)	445.35 ELEV
				TOP OF SOIL (MIN. OVER LATERAL)	446.35 ELEV
<u>TRENCH (B)</u>				<u>TRENCH (B)</u>	
445.33	84.00	INCHES		TRENCH LENGTH	35.00 FT
445.33	84.00	INCHES		TRENCH BOTTOM ELEVATION	438.33 ELEV
				LATERAL INV. ELEVATION	443.00 ELEV
				TOP OF AGGR. (OVER LATERAL)	443.33 ELEV
				TOP OF SOIL (MIN. OVER LATERAL)	444.33 ELEV

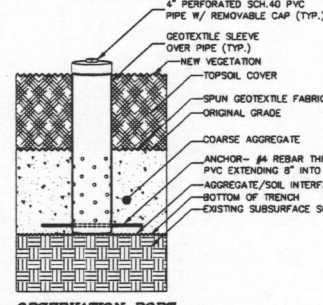
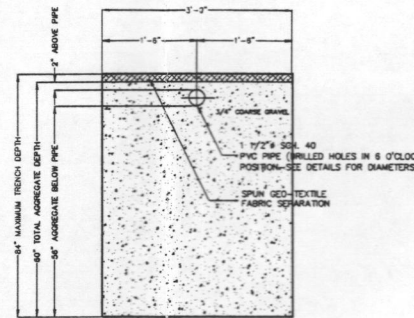
TREATMENT REQUIRED	450	GPD	PUMP TANK PROVIDED	1500	GAL.
TREATMENT PROVIDED	500/600	GPD	PUMP TANK TYPE	MONOLITHIC CONCRETE	
TANK TYPE	BEST AVAILABLE TECHNOLOGY		DOSE TANK PER IN. CAPACITY	35-95	GAL.
TANK MANUFACTURER	NORWECO		MANUFACTURER	BACK RIVER PRECAST	
TANK MODEL	SINGULAR TNT 500/600		CONTROL PANEL MANUF.	NORWECO	
DISTRIBUTOR	BACK RIVER PRECAST		MODEL	WASP 11T	

SYSTEM CAPACITY			HEAD LOSSES		
DELIVERY LINE DIA.	2	INCH	FRICTION LOSSES		
TOTAL DELIVERY LINE LENGTH	117.17	FEET			
*TOTAL DELIVERY LINE INCLUDES PUMP TO OUTLET LENGTH			MANIFOLD & FITTINGS-EQUIV. LENGTH	58.60	FT.
DELIVERY LINE CAPACITY	20.41	GAL.	MANIFOLD FITTING LIST	QUANTITY	
MANIFOLD DIAMETER	2.0	INCHES	90 DEGREE EL	3	
MANIFOLD LENGTH	31.00	FEET	45 DEGREE EL	2	
MANIFOLD CAPACITY	5.40	GAL.	1.5" X 2" REDUCER	1	
LATERAL DIAMETER	1.50	INCHES	TEE		
TOTAL LATERAL LENGTH	60.00	FEET			
LATERAL CAPACITY	6.34	GAL.	DELIVERY LINE LENGTH	117.17	FT.
TOTAL CAPACITY	32.15	GAL.	DELIVERY LINE FITTINGS		
MINIMUM DOSE	57.52	GAL.	90 DEGREE EL	3	16.50 FT.
DISCHARGE HOLE DIA. (LATERAL A)	9/32	INCH	45 DEGREE EL	8	20.00 FT.
DISCHARGE HOLE DIA. (LATERAL B)	1/4	INCH	COUPLING	5	6.75 FT.
			TEE	0	0.00 FT.
DISCHARGE HOLES PER LATERAL (A)	7.00	QUAN.	QUICK DISCONNECT	1	4.00 FT.
DISCHARGE HOLES PER LATERAL (B)	7.00	QUAN.	GLOBE/GATE VALVE (OPEN)	1	55.00 FT.
			FITTINGS EQUIVALENT LENGTH		102.25 FT.
DISCHARGE PER HOLE (LATERAL A)	1.62	GPM	TOTAL EQUIVALENT LENGTH		278.02 FT.
DISCHARGE PER HOLE (LATERAL B)	1.67	GPM	DESIGN FLOW	26.89	GPM
			FRICTION LOSS	1.264	FT./100 FT.
DISCHARGE VARIATION	2.98%		FRICTION LOSS	0.0126	PER FT.
TOTAL DISCHARGE RATE	26.89	GPM	EQUIVALENT FRICTION LOSS	3.514531	FT.
*INCLUDES ADDITIONAL 1/4 INCH WEEPHOLE FOR BACKDRAIN			STATIC HEAD	25.42	FT.
PROPOSED DOSE	58.00	GAL.			

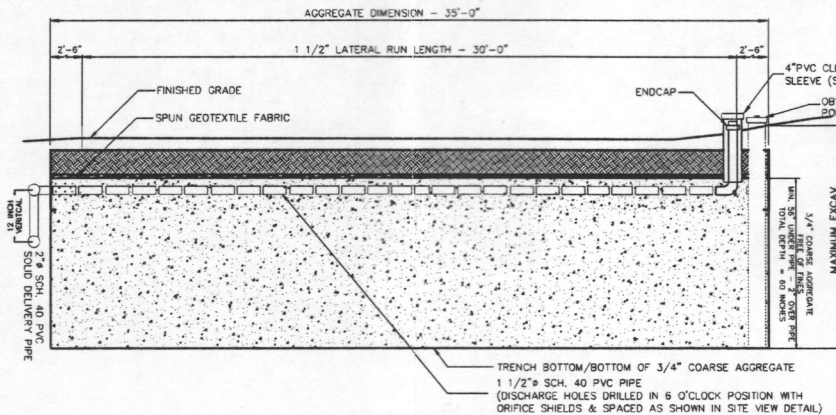
DELIVERS	26.89	GPM	31-94 FT.
MANUFACTURER	ASHLAND	MODEL	EP45
TIME-DOSING CALCULATIONS			
PEAK DAILY FLOW	450.00	CPD	
AVERAGE DAILY FLOW	270.00	CPD	
PROPOSED DOSES (PER DAY)	4.66	QUAN.	
MINIMUM DOSE (GX INTERVAL VOL.)	83.81	GAL.	(INCLUDES DRAINBACK VOLUME)
PROPOSED DOSE VOLUME	58.00	GAL.	(ACTUAL VOLUME DELIVERED TO TRENCHES)
PUMP RUN TIME PER DOSE	3.12	MIN.	(03 MIN; 08 SEC)
DAILY PUMP RUN TIME	14.51	MIN.	CLEANOUT TO BE PROVIDED AT EACH LOCATION (EITHER LOCATION)
DAILY PUMP REST TIME	1425.49	MIN.	
PUMP REST PER CYCLE	306.22	MIN.	(05 HRS; 06 MIN; 13 SEC)



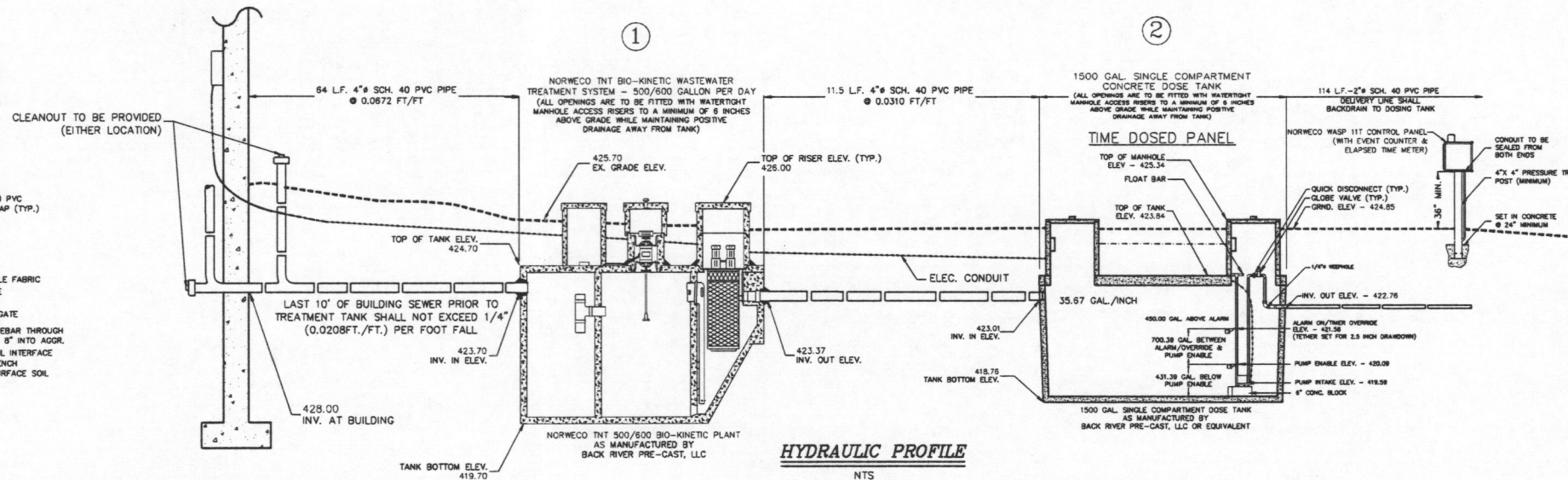
CLEANOUT SLEEVE

OBSERVATION PORT

TRENCH CROSS SECTION (TYP.)



LONGITUDINAL SECTION



HYDRAULIC PROFILE

1. ALL CONTRACTORS MUST BE LICENSED BY THE STATE OF MARYLAND AND BY THE COUNTY AGENCY.
2. ALL CONTRACTORS PROVIDING CONSTRUCTION SERVICES AT THIS SITE (OR SITE RELATED CONSTRUCTION) SHALL BE CERTIFIED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT IN THE CONSTRUCTION OF ON SITE SEWAGE DISPOSAL SYSTEMS AND THE INSTALLATION OF AN AEROBIC TREATMENT PLANT (WHERE APPLICABLE). CONTRACTOR MUST ALSO BE RESPONSIBLE FOR CONFORMANCE WITH APPLICABLE OSHA (OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION) STANDARDS AND REGULATIONS. PENN'S TRAIL ENVIRONMENTAL, LLC WILL NOT BE RESPONSIBLE FOR ANY DAMAGES OR LIABILITY ARISING FROM THE FAILURE OF ANY PARTY TO CONFORM TO APPLICABLE OSHA STANDARDS AND REGULATIONS.
3. A PRECONSTRUCTION MEETING WITH THE HEALTH DEPARTMENT, INSTALLER AND DESIGNER IS REQUIRED PRIOR TO SCHEDULING INSTALLATION. CONTRACTOR SHALL CONTACT THE LOCAL SANITARIAN NO LESS THAN 72 HOURS PRIOR TO COMMENCING WITH CONSTRUCTION.
4. ACCEPTABLE SOIL-MOISTURE LEVELS MUST BE CONFIRMED BY THE LOCAL SANITARIAN IMMEDIATELY PRECEDING COMMENCEMENT OF CONSTRUCTION. UNLESS AN EXCAVATION WAS ALREADY OBSERVED, A TEST PIT IS TO BE EXCAVATED AT THE LOCATION OF THE PUMP TANK. IF EVIDENCE OF A SEASONAL HIGH WATER TABLE EXISTS THAT COULD RESULT IN INFILTRATION OF GROUNDWATER INTO THE TANK(S), A DRAINAGE SYSTEM WILL BE REQUIRED IN ORDER TO DIVERTE GROUNDWATER FROM TANKS.
5. VEGETATION OR ORGANIC LITTER SHALL BE RAKED AND REMOVED FROM THE ABSORPTION AND BERM AREAS.
6. BEFORE AND AFTER INSTALLATION, EQUIPMENT AND VEHICLES SHALL BE KEPT OFF THE PROPOSED ABSORPTION AREA, INCLUDING THE DOWNSLOPE AREA, TO PREVENT UNDUE COMPACTION OF THE SOIL. CARE SHALL BE EXERCISED DURING CONSTRUCTION TO PREVENT UNDUE COMPACTION AND DAMAGE TO THE SYSTEM AND THE DOWNSLOPE AREA. EXCAVATION SHALL BE DONE FROM OUTSIDE THE ABSORPTION AREA OR DONE USING A ULTRA LOW IMPACT RUBBER-TRACK MACHINE.
7. IMMEDIATELY AFTER EXCAVATING, AGGREGATE SHALL BE PLACED OVER PREPARED ABSORPTION AREA TO THE DEPTH SPECIFIED WITHIN THE DESIGN DETAILS (MIN. 6 INCHES BELOW PIPE AND 2 INCHES ABOVE). STONE SHALL BE PLACED FROM OUTSIDE OF THE BED USING ONLY LIGHTWEIGHT EQUIPMENT.
8. COARSE AGGREGATE USED IN THE DISTRIBUTION SYSTEM SHALL "3/4 INCH COARSE" WASHED RIVER GRAVEL FREE OF FINES AND SHALL BE OF TYPE B QUALITY REQUIREMENTS (AASHTO #57 STONE IS ACCEPTABLE) AND MARYLAND MD#2 AGGREGATE. LIMESTONE AGGREGATE IS NOT ACCEPTABLE.
9. THE ABSORPTION AREA BOTTOM EXCAVATION AND AGGREGATE SHALL BE LEVEL TO A TOLERANCE OF ± 2 INCHES PER 100 FEET.
10. AGGREGATE SHALL BE COVERED BY A MINIMUM OF ONE FOOT OF TOPSOIL. WHERE FINISHED TOPSOIL ELEVATION EXTENDS ABOVE ORIGINAL GROUND SURFACE, THE TOPSOIL SHALL BE SUPPORTED BY A BERM OF TOPSOIL EXTENDED BEYOND THE LIMITS OF THE ABSORPTION AREA WITH A FINAL SLOPE NOT TO EXCEED A 3 TO 1 RATIO. TOPSOIL/MINERAL SOIL MUST CONTAIN LESS THAN 20% COARSE FRAGMENTS WITH NO COARSE FRAGMENTS GREATER THAN 4 INCHES IN DIAMETER, MORE STABLE AND LESS PERMEABLE THAN THE SAND, AND LIGHTLY COMPACTED DURING CONSTRUCTION TO CONTAIN AND PROTECT THE SYSTEM INTERIOR. NO WHERE MAY THE AGGREGATE EXTEND ABOVE ORIGINAL GRADE.
11. UPON COMPLETION, ALL DISTURBANCES SHALL BE SEEDED AND STRAWED (SOD IS ALSO ACCEPTABLE) TO ASSURE THE STABILITY OF THE TOPSOIL. THE COVER OVER THE AGGREGATE SHALL BE A MINIMUM OF 1 FOOT OF SOIL SUITABLE FOR THE GROWTH OF VEGETATION.
12. NO EQUIPMENT MAY BE PERMITTED ON THE DOWNSLOPE SIDE OF THE SYSTEM. TO THE GREATEST EXTENT POSSIBLE, AGGREGATE AND THE COVER MATERIAL SHALL BE PLACED FROM THE UPSLOPE SIDE OF THE SYSTEM OR ENDS OF THE ABSORPTION AREA.
13. THE AREA SURROUNDING THE SYSTEM AND THE COVER SOIL SHALL BE GRADED TO PROVIDE FOR DIVERSION OF SURFACE RUNOFF WATERS.
14. THE INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A PROFESSIONAL SERVICE RENDERED BY PENN'S TRAIL ENVIRONMENTAL, LLC. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE WRITTEN CONSENT OF PENN'S TRAIL ENVIRONMENTAL, LLC IS PROHIBITED. COPYRIGHT 2023 PENN'S TRAIL ENVIRONMENTAL, LLC. ALL RIGHTS RESERVED.
15. ANY VARIATIONS FOUND DURING INSTALLATION WHICH DIFFER FROM THE INFORMATION REPRESENTED HEREON, SHALL BE REPORTED TO PENN'S TRAIL ENVIRONMENTAL, LLC SO OUR RECOMMENDATIONS CAN BE REVIEWED AND REVISED IF REQUIRED.
16. THIS DESIGN INCORPORATES BY REFERENCE ALL APPLICABLE RULES, REGULATIONS AND REQUIREMENTS OF THE TOWNSHIP, COUNTY AND LOCAL AGENCIES WITH JURISDICTION. INSTALLER AND OWNER ARE RESPONSIBLE FOR ASSURING COMPLIANCE, BEFORE DURING AND AFTER CONSTRUCTION OF THE SYSTEM.
17. ALL MANUFACTURES MANUALS AND SPECIFICATIONS ARE INCORPORATED HEREIN BY REFERENCE. IN THE EVENT SUBSTITUTION IS MADE CONTRACTOR AND OWNER SHALL ASSURE THAT THE REPLACEMENT EQUIPMENT MEETS OR EXCEEDS THE ORIGINALLY SPECIFIED MATERIALS.
18. NOTHING CONTAINED ON THIS PLAN SET OR ACCOMPANYING DOCUMENTATION SHALL BE CONSTRUED AS A GUARANTEE OF FUNCTIONALITY OF THE SYSTEM. ALL DESIGN REQUIREMENTS HAVE BEEN MET AS REQUIRED BY THE PERMITTING AGENCY AS ARE IN EFFECT AT THE TIME OF PERMITTING.

[illegible]

LATERAL DISCHARGE CALCULATIONS

LATERAL	LATERAL ELEVATION	DISCHARGE HOLE SIZE	NUMBER OF HOLES	EQUIVALENT LENGTH PRECEEDING	EQUIVALENT LENGTH TOTAL	FRICTION LOSS	RESIDUAL HEAD REQUIRED	TOTAL POST LATERAL HEAD	DISCHARGE PER HOLE	DISCHARGE PER LATERAL	TRENCH AREA	APPLICATION RATE
A	445.02	9/32	7	33.50	0	0	3.00	3.00	1.62	11.34	105	0.107962245
B	443.00	1/4	7	25.10	33.50	0.09	5.02	5.11	1.67	11.68	105	0.111282559
WEEPHOLE	PUMP INVERT ELEVATION	DISCHARGE HOLE SIZE	NUMBER OF HOLES	EQUIVALENT LENGTH PRECEEDING	EQUIVALENT LENGTH TOTAL	FRICTION LOSS	RESIDUAL HEAD REQUIRED	TOTAL POST LATERAL HEAD	WEEPHOLE DISCHARGE			
	419.59	1/4	1	82.35	225.94	2.14	25.26	27.40		3.87		
TOTAL DISCHARGE										26.89	DISCHARGE VARIATION	2.98%

COEFFICIENT	150
MANIFOLD I.D.	2.067
GROUND ELEV.@TANK	424.85
DELIVERY LINE LENGTH	114.00
OUTLET ELEV.	422.76

DESIGN PARAMETERS

BEDROOMS	3	QUAN.	TEST PIT	DEPTH	LIMITING ZONE
PEAK GALLONS PER DAY	450	GPD	A	60"	>50% COURSE FRAG
HYDRAULIC LINEAR LOAD (MAX.)	--	GPD/LF	B	36"	>50% COURSE FRAG
BASAL LOADING RATE (MAX.)	1.20	GPD/SQ.FT.	C	144"	BOP
LANDSCAPE LOADING RATE (PEAK)	--	GPD/LF			
PROP. AGGREGATE WIDTH	3	FEET	TEST PIT (PERC)	DEPTH	RATE
MINIMUM TRENCH LENGTH (NO SIDEWALL)	125.00	FEET	A	--	NO TEST
SIDEWALL DEPTH	2.50	FEET	B	--	NO TEST
MINIMUM TRENCH LENGTH (SIDEWALL)	69.44	FEET	C	48"	3-5 MPI
PROPOSED TRENCH LENGTH	70.00	FEET			
PROPOSED EFFECTIVE AREA	210	SQ.FT.			
MAXIMUM TRENCH DEPTH (TYP.)	84	INCHES	24-2 HORIZON FOR SIDEWALL		54" THROUGH 84"
DEPTH OF AGGREGATE (TYP.)	60	INCHES			

CONSTRUCTION DATA

TRENCH CENTER ELEVATIONS	EXCAV. DEPTH	TRENCH DATA
TRENCH (A)		TRENCH WIDTH (TYP.) 3.00 FT
447.35	84.00 INCHES	NUMBER OF TRENCHES 2.00 QUAN.
447.35	84.00 INCHES	TRENCH (A)
		TRENCH LENGTH 35.00 FT
		TRENCH BOTTOM ELEVATION 440.35 ELEV
		LATERAL INV. ELEVATION 445.02 ELEV
		TOP OF AGGR. (OVER LATERAL) 445.35 ELEV
		TOP OF SOIL (MIN. OVER LATERAL) 446.35 ELEV
TRENCH (B)		TRENCH (B)
445.33	84.00 INCHES	TRENCH LENGTH 35.00 FT
445.33	84.00 INCHES	TRENCH BOTTOM ELEVATION 438.33 ELEV
		LATERAL INV. ELEVATION 443.00 ELEV
		TOP OF AGGR. (OVER LATERAL) 443.33 ELEV
		TOP OF SOIL (MIN. OVER LATERAL) 444.33 ELEV

SYSTEM COMPONENTS

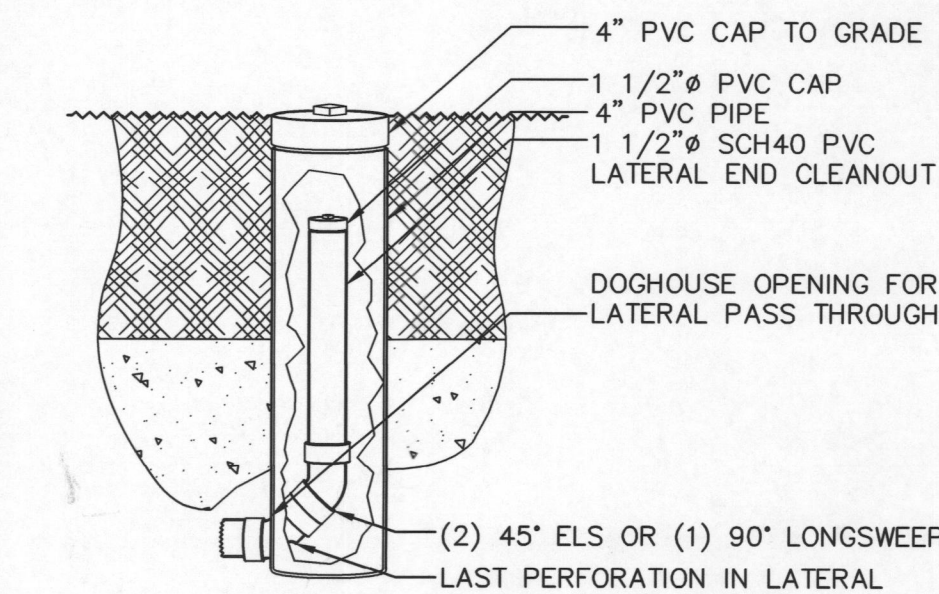
TREATMENT REQUIRED	450	GPD	PUMP TANK PROVIDED	1500	GAL.
TREATMENT PROVIDED	500/600	GPD	PUMP TANK TYPE	MONOLITHIC CONCRETE	
TANK TYPE	BEST AVAILABLE TECHNOLOGY		DOSE TANK PER IN. CAPACITY	35-95	GAL.
TANK MANUFACTURER	NORWECO		MANUFACTURER	BACK RIVER PRECAST	
TANK MODEL	SINGULAIR TNT 500/600		CONTROL PANEL MANUF.	NORWECO	
DISTRIBUTOR	BACK RIVER PRECAST		MODEL	WASP 11T	

HYDRAULIC CALCULATIONS

SYSTEM CAPACITY	HEAD LOSSES
DELIVERY LINE DIA.	2 INCH
TOTAL DELIVERY LINE LENGTH	117.17 FEET
*TOTAL DELIVERY LINE INCLUDES PUMP TO OUTLET LENGTH	
DELIVERY LINE CAPACITY	20.41 GAL.
MANIFOLD DIAMETER	2.0 INCHES
MANIFOLD LENGTH	31.00 FEET
MANIFOLD CAPACITY	5.40 GAL.
LATERAL DIAMETER	1.50 INCHES
TOTAL LATERAL LENGTH	60.00 FEET
LATERAL CAPACITY	6.34 GAL.
TOTAL CAPACITY	32.15 GAL.
MINIMUM DOSE	57.52 GAL.
DISCHARGE HOLE DIA. (LATERAL A)	9/32 INCH
DISCHARGE HOLE DIA. (LATERAL B)	1/4 INCH
DISCHARGE HOLES PER LATERAL (A)	7.00 QUAN.
DISCHARGE HOLES PER LATERAL (B)	7.00 QUAN.
DISCHARGE PER HOLE (LATERAL A)	1.62 GPM
DISCHARGE PER HOLE (LATERAL B)	1.67 GPM
DISCHARGE VARIATION	2.98%
TOTAL DISCHARGE RATE	26.89 GPM
*INCLUDES ADDITIONAL 1/4 INCH WEEPHOLE FOR BACKDRAIN	
PROPOSED DOSE	58.00 GAL.

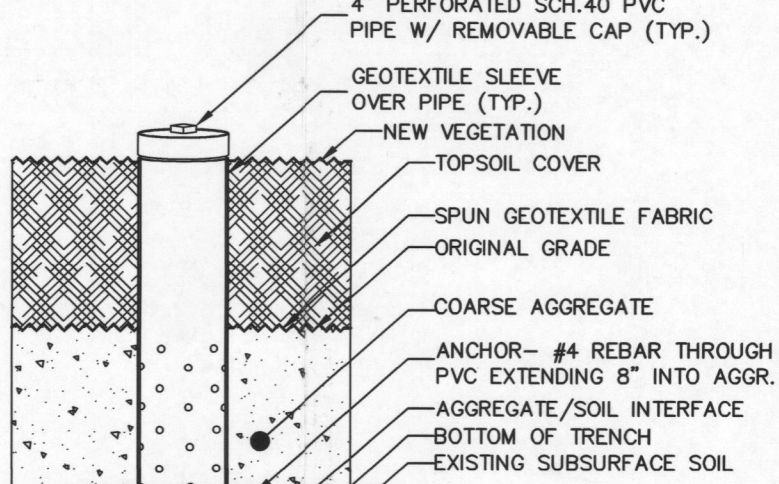
PUMP SPECIFIED

DELIVERS	26.89	GPM	31.94 FT.
MANUFACTURER	ASHLAND	MODEL	EP45
TIME-DOSING CALCULATIONS			
PEAK DAILY FLOW	450.00	GPD	
AVERAGE DAILY FLOW	270.00	GPD	
PROPOSED DOSES (PER DAY)	4.66	QUAN.	
MINIMUM DOSE (5X INTERNAL VOL.)	83.81	GAL.	(INCLUDES DRAINBACK VOLUME)
PROPOSED DOSE VOLUME	58.00	GAL.	(ACTUAL VOLUME DELIVERED TO TRENCHES)
PUMP RUN TIME PER DOSE	3.12	MIN.	(03 MIN; 08 SEC)
DAILY PUMP RUN TIME	14.51	MIN.	
DAILY PUMP REST TIME	1425.49	MIN.	
PUMP REST PER CYCLE	306.22	MIN.	(05 HRS; 06 MIN; 13 SEC)



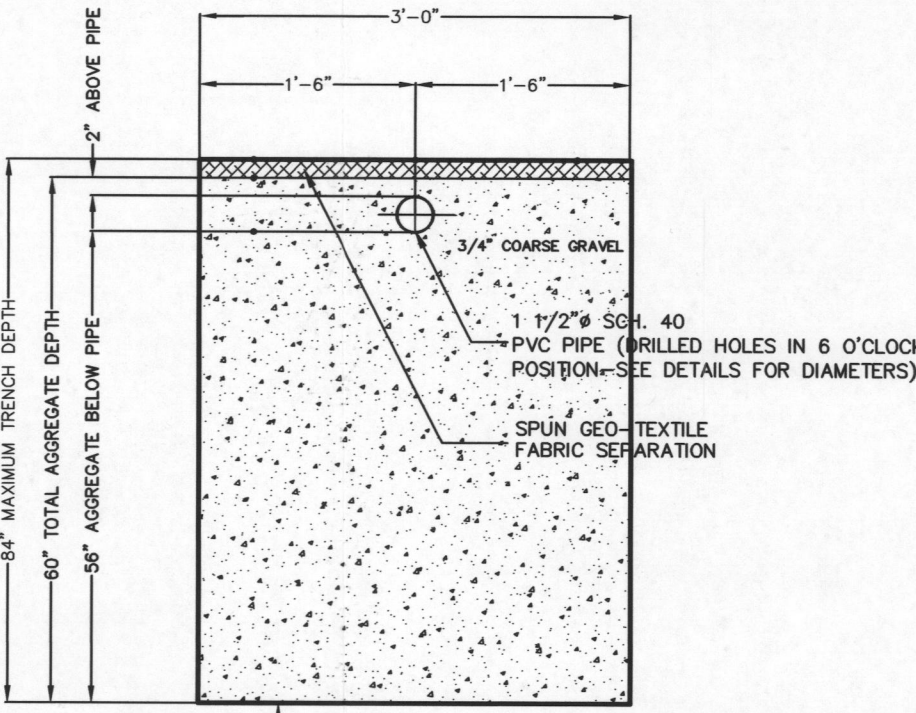
CLEANOUT SLEEVE

NTS



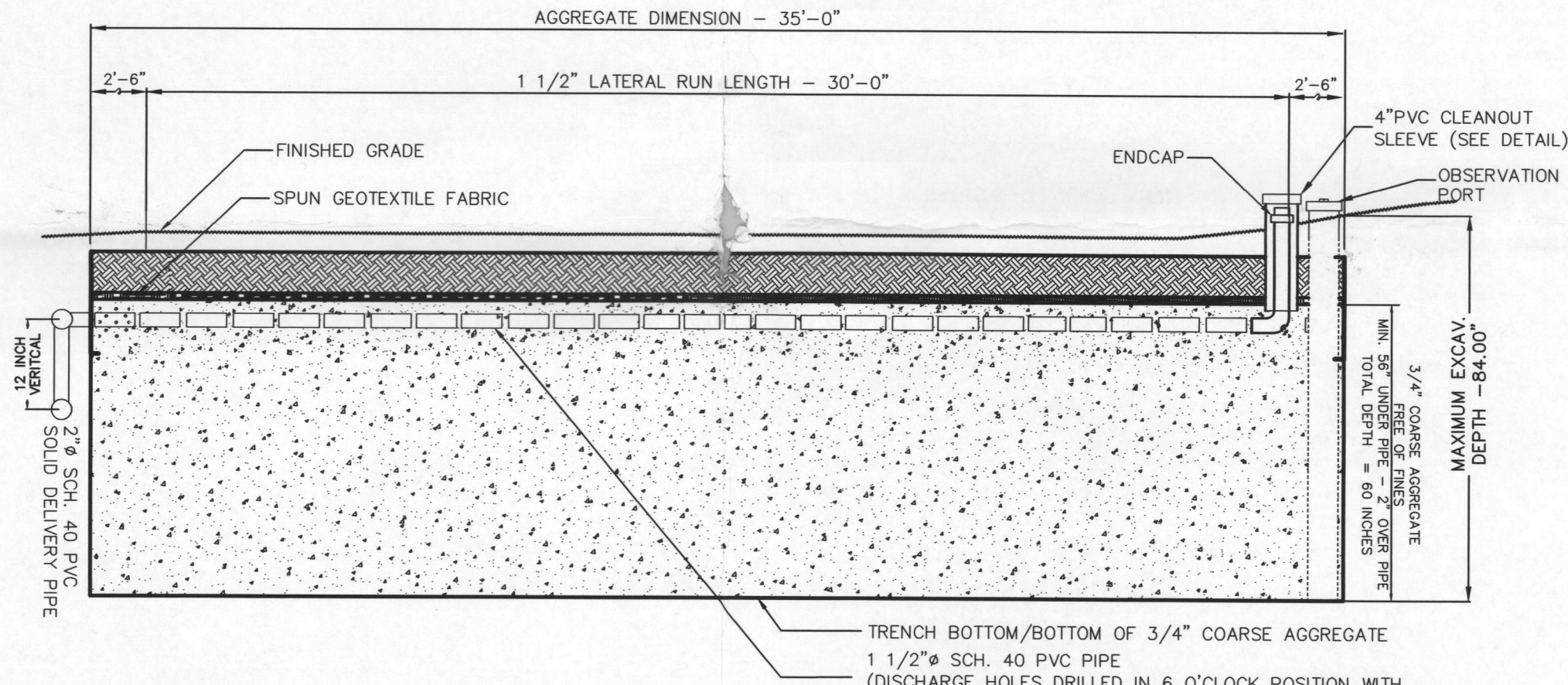
OBSERVATION PORT

NTS



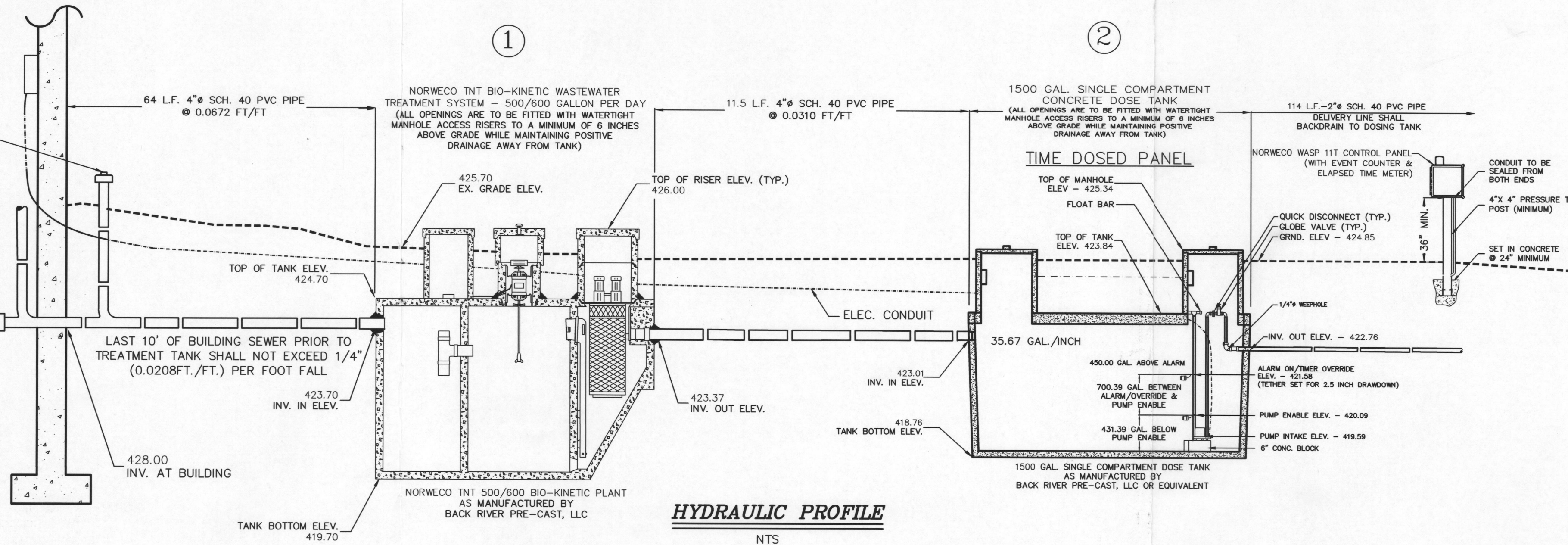
TRENCH CROSS SECTION (TYP.)

NTS



LONGITUDINAL SECTION

NTS



HYDRAULIC PROFILE

NTS

GENERAL INSTALLATION NOTES:

- ALL CONTRACTORS MUST BE LICENSED BY THE STATE OF MARYLAND AND BY THE COUNTY AGENCY.
- ALL CONTRACTORS PROVIDING CONSTRUCTION SERVICES AT THIS SITE (OR SITE RELATED CONSTRUCTION) SHALL BE CERTIFIED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT IN THE CONSTRUCTION OF ON SITE SEWAGE DISPOSAL SYSTEMS AND THE INSTALLATION OF AN AEROBIC TREATMENT PLANT (WHERE APPLICABLE). CONTRACTOR MUST ALSO BE RESPONSIBLE FOR CONFORMANCE WITH APPLICABLE OSHA (OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION) STANDARDS AND REGULATIONS. PENN'S TRAIL ENVIRONMENTAL, LLC WILL NOT BE RESPONSIBLE FOR ANY DAMAGES OR LIABILITY ARISING FROM THE FAILURE OF ANY PARTY TO CONFORM TO APPLICABLE OSHA STANDARDS AND REGULATIONS.
- A PRECONSTRUCTION MEETING WITH THE HEALTH DEPARTMENT, INSTALLER AND DESIGNER IS REQUIRED PRIOR TO SCHEDULING INSTALLATION. CONTRACTOR SHALL CONTACT THE LOCAL SANITARIAN NO LESS THAN 72 HOURS PRIOR TO COMMENCING WITH CONSTRUCTION.
- ACCEPTABLE SOIL-MOISTURE LEVELS MUST BE CONFIRMED BY THE LOCAL SANITARIAN IMMEDIATELY PRECEDING COMMENCEMENT OF CONSTRUCTION. UNLESS AN EXCAVATION WAS ALREADY OBSERVED, A TEST PIT IS TO BE EXCAVATED AT THE LOCATION OF THE PUMP TANK. IF EVIDENCE OF A SEASONAL HIGH ATER TABLE EXISTS THAT COULD RESULT IN INFILTRATION OF GROUNDWATER INTO THE TANK(S), A DRAINAGE SYSTEM WILL BE REQUIRED IN ORDER TO DIVERATE GROUNDWATER FROM TANKS.
- VEGETATION OR ORGANIC LITTER SHALL BE RAKED AND REMOVED FROM THE ABSORPTION AND BERM AREAS.
- BEFORE AND AFTER INSTALLATION, EQUIPMENT AND VEHICLES SHALL BE KEPT OFF THE PROPOSED ABSORPTION AREA, INCLUDING THE DOWNSLOPE AREA, TO PREVENT UNDUE COMPACTION OF THE SOIL. CARE SHALL BE EXERCISED DURING CONSTRUCTION TO PREVENT UNDUE COMPACTION AND DAMAGE TO THE SYSTEM AND THE DOWNSLOPE AREA. EXCAVATION SHALL BE DONE FORM OUTSIDE THE ABSORPTION AREA OR DONE USING A ULTRA LOW IMPACT RUBBER-TRACK MACHINE.
- IMMEDIATELY AFTER EXCAVATING, AGGREGATE SHALL BE PLACED OVER PREPARED ABSORPTION AREA TO THE DEPTH SPECIFIED WITHIN THE DESIGN DETAILS (MIN. 6 INCHES BELOW PIPE AND 2 INCHES ABOVE). STONE SHALL BE PLACED FROM OUTSIDE OF THE BED USING ONLY LIGHTWEIGHT EQUIPMENT.
- COARSE AGGREGATE USED IN THE DISTRIBUTION SYSTEM SHALL "3/4 INCH COARSE" WASHED RIVER GRAVEL FREE OF FINES AND SHALL BE OF TYPE B QUALITY REQUIREMENTS (AASHTO #57 STONE IS ACCEPTABLE) AND MARYLAND MD#2 AGGREGATE. LIMESTONE AGGREGATE IS NOT ACCEPTABLE.
- THE ABSORPTION AREA BOTTOM EXCAVATION AND AGGREGATE SHALL BE LEVEL TO A TOLERANCE OF ±2 INCHES PER 100 FEET.
- AGGREGATE SHALL BE COVERED BY A MINIMUM OF ONE FOOT OF TOPSOIL. WHERE FINISHED TOPSOIL ELEVATION EXTENDS ABOVE ORIGINAL GROUND SURFACE, THE TOPSOIL SHALL BE SUPPORTED BY A BERM OF TOPSOIL EXTENDED BEYOND THE LIMITS OF THE ABSORPTION AREA WITH A FINAL SLOPE NOT TO EXCEED A 3 TO 1 RATIO. TOPSOIL/MINERAL SOIL MUST CONTAIN LESS THAN 20% COARSE FRAGMENTS WITH NO COARSE FRAGMENTS GREATER THAN 4 INCHES IN DIAMETER, MORE STABLE AND LESS PERMEABLE THAN THE SAND, AND LIGHTLY COMPACTED DURING CONSTRUCTION TO CONTAIN AND PROTECT THE SYSTEM INTERIOR. NO WHERE MAY THE AGGREGATE EXTEND ABOVE ORIGINAL GRADE.
- UPON COMPLETION, ALL DISTURBANCES SHALL BE SEEDED AND STRAWED (SOD IS ALSO ACCEPTABLE) TO ASSURE THE STABILITY OF THE TOPSOIL. THE COVER OVER THE AGGREGATE SHALL BE A MINIMUM OF 1 FOOT OF SOIL SUITABLE FOR THE GROWTH OF VEGETATION.
- NO EQUIPMENT MAY BE PERMITTED ON THE DOWNSLOPE SIDE OF THE SYSTEM. TO THE GREATEST EXTENT POSSIBLE, AGGREGATE AND THE COVER MATERIAL SHALL BE PLACED FROM THE UPSLOPE SIDE OF THE SYSTEM OR ENDS OF THE ABSORPTION AREA.
- THE AREA SURROUNDING THE SYSTEM AND THE COVER SOIL SHALL BE GRADED TO PROVIDE FOR DIVERSION OF SURFACE RUNOFF WATERS.
- THE INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A PROFESSIONAL SERVICE RENDERED BY PENN'S TRAIL ENVIRONMENTAL, LLC. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE WRITTEN CONSENT OF PENN'S TRAIL ENVIRONMENTAL, LLC IS PROHIBITED. COPYRIGHT 2023 PENN'S TRAIL ENVIRONMENTAL, LLC. ALL RIGHTS RESERVED.
- ANY VARIATIONS FOUND DURING INSTALLATION WHICH DIFFER FROM THE INFORMATION REPRESENTED HEREON, SHALL BE REPORTED TO PENN'S TRAIL ENVIRONMENTAL, LLC SO OUR RECOMMENDATIONS CAN BE REVIEWED AND REVISED IF REQUIRED.
- THIS DESIGN INCORPORATES BY REFERENCE ALL APPLICABLE RULES, REGULATIONS AND REQUIREMENTS OF THE TOWNSHIP, COUNTY AND LOCAL AGENCIES WITH JURISDICTION. INSTALLER AND OWNER ARE RESPONSIBLE FOR ASSURING COMPLIANCE, BEFORE DURING AND AFTER CONSTRUCTION OF THE SYSTEM.
- ALL MANUFACTURES MANUALS AND SPECIFICATIONS ARE INCORPORATED HEREIN BY REFERENCE. IN THE EVENT SUBSTITUTION IS MADE CONTRACTOR AND OWNER SHALL ASSURE THAT THE REPLACEMENT EQUIPMENT MEETS OR EXCEEDS THE ORIGINALLY SPECIFIED MATERIALS.
- NOTHING CONTAINED ON THIS PLAN SET OR ACCOMPANYING DOCUMENTATION SHALL BE CONSTRUED AS A GUARANTEE OF FUNCTIONALITY OF THE SYSTEM. ALL DESIGN REQUIREMENTS HAVE BEEN MET AS REQUIRED BY THE PERMITTING AGENCY AS ARE IN EFFECT AT THE TIME OF PERMITTING.

DATE

REVISIONS

NO.

CALL BEFORE YOU DIG!

1-800-257-7777

CONTRACTORS MUST OBTAIN LOCATIONS OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PERMITTING TO EXCAVATE OF TYPE B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

PENN'S TRAIL ENVIRONMENTAL, LLC

327 E. RIDGEVILLE BOULEVARD - #141

MOUNT AIRY, MARYLAND 21771

ph. (301) 829-5022

email: staff@pennstrail.com

LOW-PRESSURE DOSED BED SYSTEM

PREPARED FOR

12314 BENSON BRANCH ROAD TRACT

ELLICOTT CITY, 3RD ELECTION DISTRICT,

HOWARD COUNTY, MARYLAND

DATE: FEBRUARY 17, 2026

SCALE: AS NOTED

ADAM B. BROWNING

OFFICER

SEAL

MARYLAND ON-SITE WASTEWATER SERVICE LICENSE #0100

PTE#7939

SHEET 4 OF 2

APPROVAL BLOCK:

THE PLANS AS REVIEWED ARE CONDITIONALLY APPROVED PENDING A SATISFACTORY PRECONSTRUCTION MEETING, SYSTEM STAKEOUT, AND SOIL MOISTURE CHECK. INSTALLATION OF THE SYSTEM SHALL NOT COMMENCE UNTIL AN OSDS PERMIT IS SECURED BY A LICENSED INSTALLER. IF APPLICABLE, ELECTRICAL COMPONENTS OF THE SYSTEM SHALL BE PERMITTED, INSPECTED, AND APPROVED. FINAL APPROVAL OF THE SYSTEM IS CONTINGENT UPON SUCCESSFUL INSTALLATION ACCORDING TO THE APPROVED PLANS AND SATISFACTORY INSPECTION MADE BY THIS DEPARTMENT, AS INDICATED BY FINAL SIGNATURE ON THE OSDS PERMIT.

APPROVING AUTHORITY:

APPROVING INDIVIDUAL (PRINT): *Kenn W. Wolf*

SIGNATURE: *[Signature]* DATE: *3/25/2026*

MARYLAND DEPARTMENT OF THE ENVIRONMENT REGIONAL OFFICER:

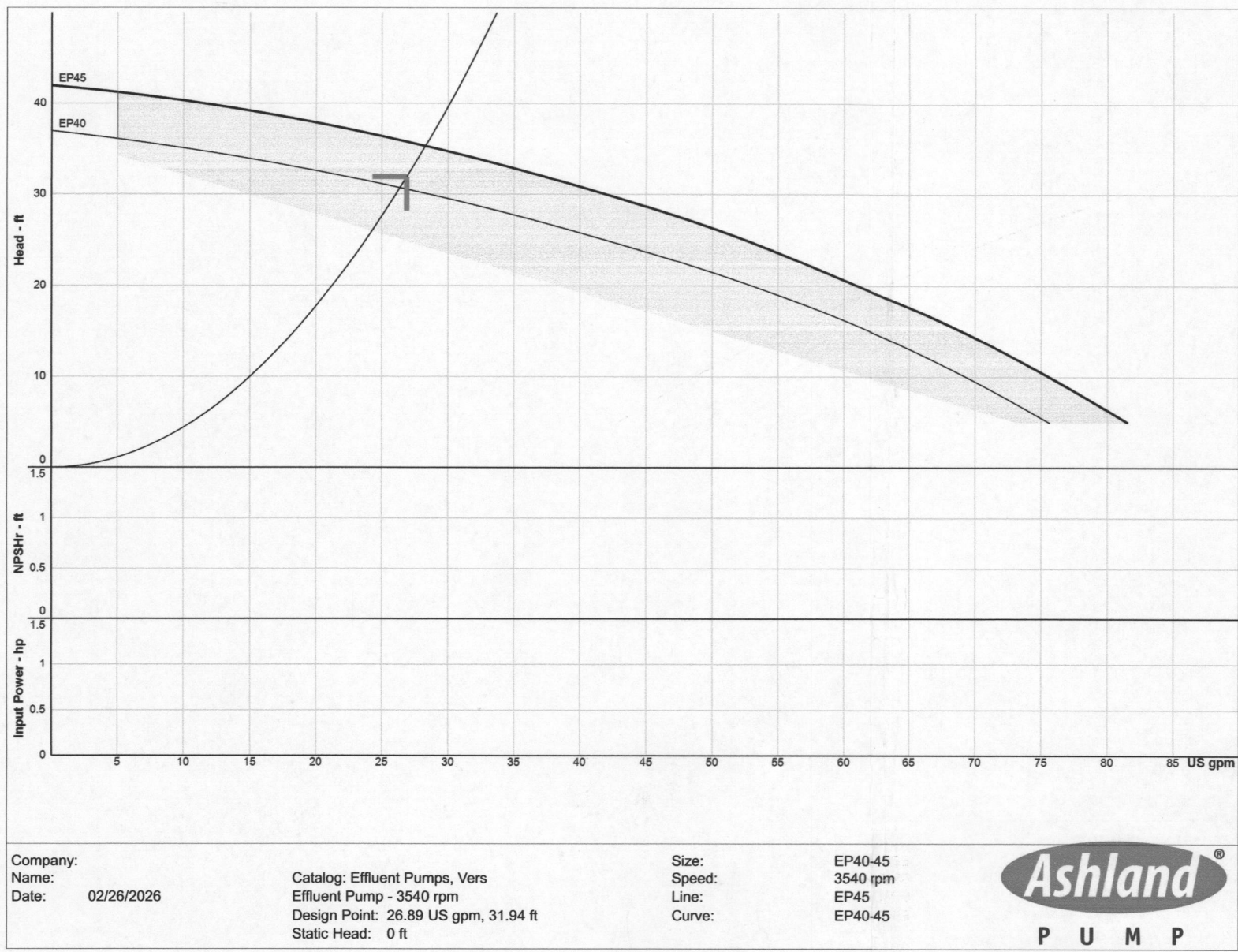
SIGNATURE: *Not Required*

SIGNATURE: *[Signature]* DATE:

PROJECT NARRATIVE:

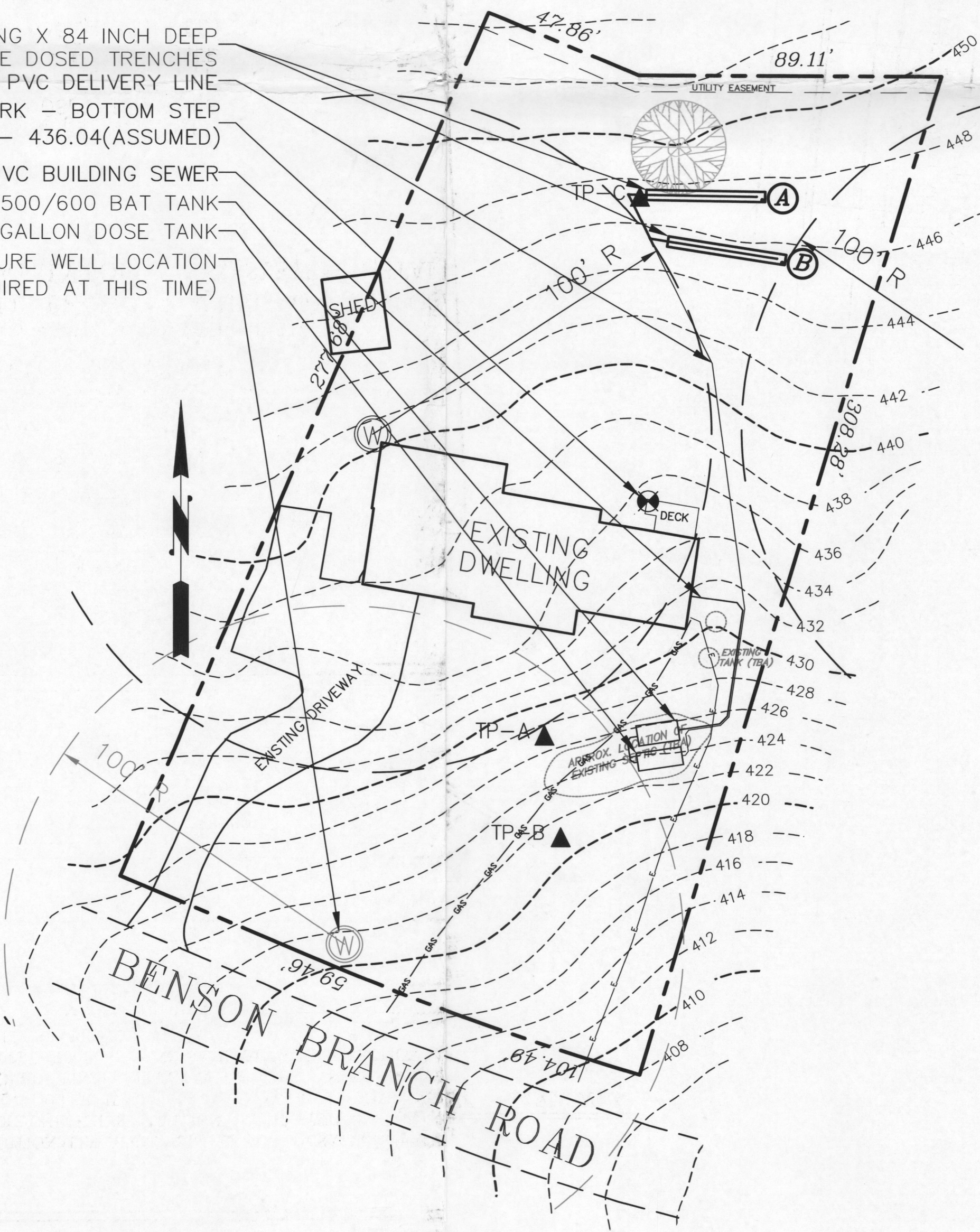
PLANS AND SPECIFICATIONS HEREIN ARE INTENDED FOR THE REPLACEMENT OF AN UNSUITABLE SEPTIC SYSTEM TO SERVE A (3) BEDROOM ASSISTED LIVING FACILITY. THE PEAK DAILY FLOW IS 450 GPD. THE AVERAGE DAILY FLOW OF 270 GPD. WASTE STRENGTH IS CONSISTENT WITH RESIDENTIAL WASTEWATER.

PROPOSAL CONSISTS OF AN EXISTING NORWECO SINGLAIR TNT 500/600 AEROBIC TREATMENT TANK; 1500 GALLON DOSE TANK; WITH TIME-DOSING TO (2) 3 FT X 35 FT SUBSURFACE AGGREGATE TRENCHES. MINIMUM TOPSOIL COVER IS 12 INCHES. DENSE VEGETATION SHALL BE ESTABLISHED ON DISPOSAL AREA AND ANY DISTURBED AREAS IMMEDIATELY FOLLOWING SYSTEM INSTALLATION.



ABSORPTION AREA PUMP PERFORMANCE CURVE
ASHLAND PUMP MODEL EP45

- (2) 3 FT WIDE X 35 FT LONG X 84 INCH DEEP LOW-PRESSURE DOSED TRENCHES
- 2" SCH.40 PVC DELIVERY LINE
- BENCHMARK - BOTTOM STEP ELEVATION - 436.04 (ASSUMED)
- 4" SCH.40 PVC BUILDING SEWER
- NORWECO SINGLAIR TNT 500/600 BAT TANK
- 1500 GALLON DOSE TANK
- POTENTIAL FUTURE WELL LOCATION (NOT REQUIRED AT THIS TIME)



- LEGEND:
- TP XX = TEST EXCAVATIONS
 - = EXISTING CONTOUR
 - - - = PROPOSED CONTOUR
 - ⊗ = BENCHMARK LOCATION
 - (E16) = PERMEAMETER TEST LOCATION

SITE PLAN & DATA

SCALE- 1"= 30'

AREA = +/- 0.9789 AC.

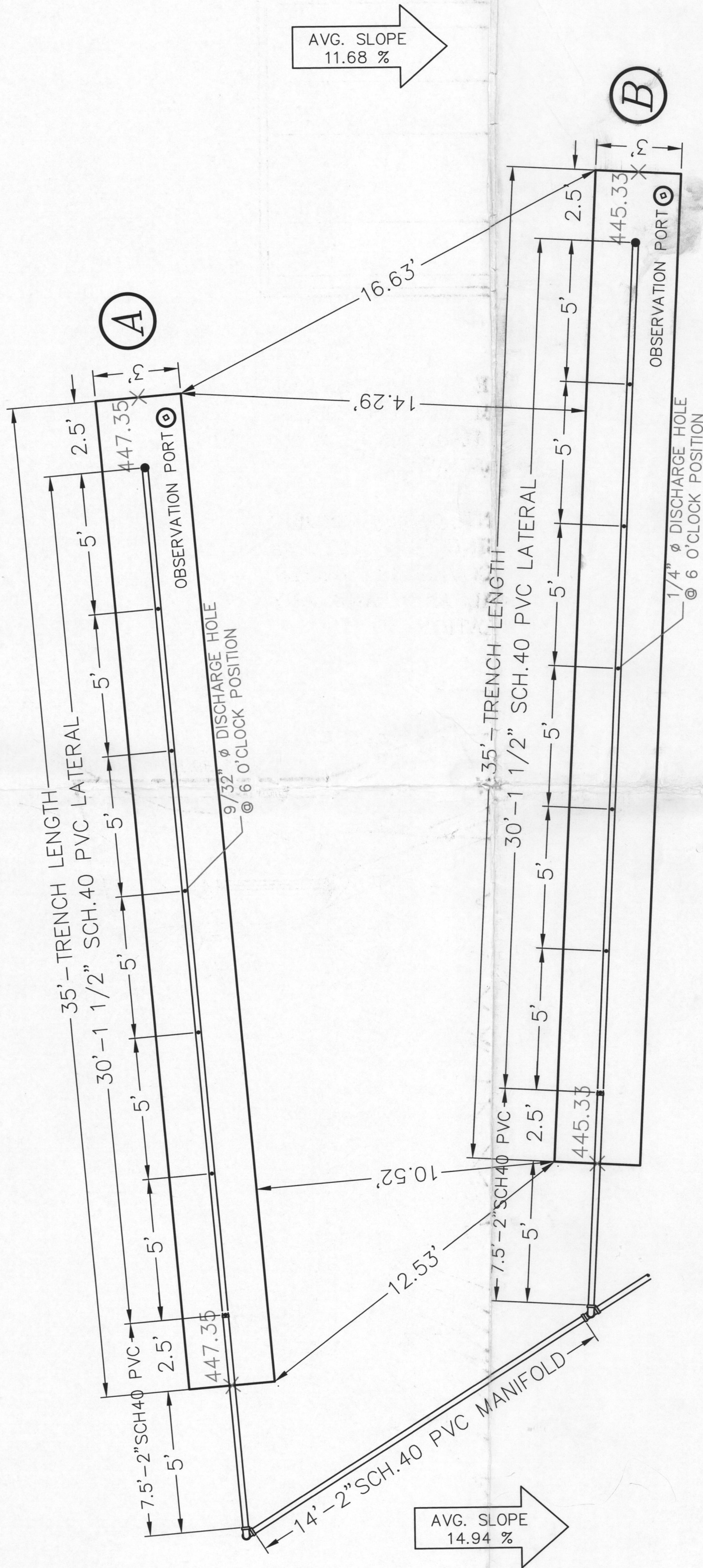
ELECTION DISTRICT: 03

ACCOUNT NUMBER: 282422

TMP #0022, 2212, 0187 (MAP,GRID,PARCEL)

**ALL EXISTING SEPTIC COMPONENTS ARE TO BE ABANDONED IN A MANNER ACCEPTABLE TO THE HOWARD COUNTY HEALTH DEPARTMENT.

**BOUNDARY AND EXISTING FEATURES SHOWN HEREON ARE FROM THE LEGAL DESCRIPTION, COUNTY GIS AND FIELD RECORDED MEASUREMENTS. TOPOGRAPHY DERIVED FROM COUNTY LIDAR. PLAN IS FOR USE IN SEPTIC SYSTEM INSTALLATION ONLY.



PLAN VIEW - ABSORPTION AREA

SCALE-1"=3'

LOW-PRESSURE DOSED BED SYSTEM

PREPARED FOR

12314 BENSON BRANCH ROAD TRACT

ELLICOTT CITY, 3RD ELECTION DISTRICT,

HOWARD COUNTY, MARYLAND

DATE: FEBRUARY 17, 2026

SCALE: AS NOTED

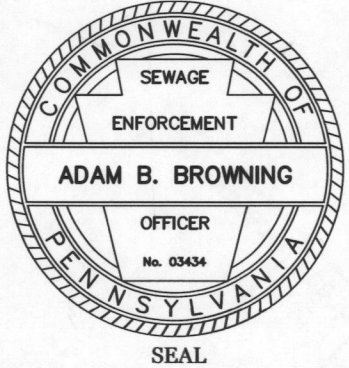
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SHEET 1 OF 2