



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: 10.19.22 **ONSITE SEWAGE DISPOSAL SYSTEM** P 572664

APPROVAL DATE: 11/20/23 **PERMIT: CONSTRUCTION** A _____

PROPERTY ADDRESS: 14740 McCann Farm Road

SUBDIVISION: McCann Estates - East LOT: 1 TAX ID: _____

CONTRACTOR: Hatfield EMAIL: _____

CONTRACTOR ADDRESS: _____ PHONE: _____

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: MDE MANUFACTURER: Norweco

PROPERTY OWNER: Nicholas Lilly EMAIL: _____

OWNER ADDRESS: 14830 Old Frederick Rd PHONE: _____

BAT UNIT MODEL: Norweco 7NTLP 1000 PUMP SIZE: WE03M PUMP TANK CAPACITY: 2,000

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 10/24/2022 DATE RECORDED: 10/24/2022

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 6 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>168.75'</u>	INLET DEPTH: <u>42'</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'</u>

LOCATION: PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.

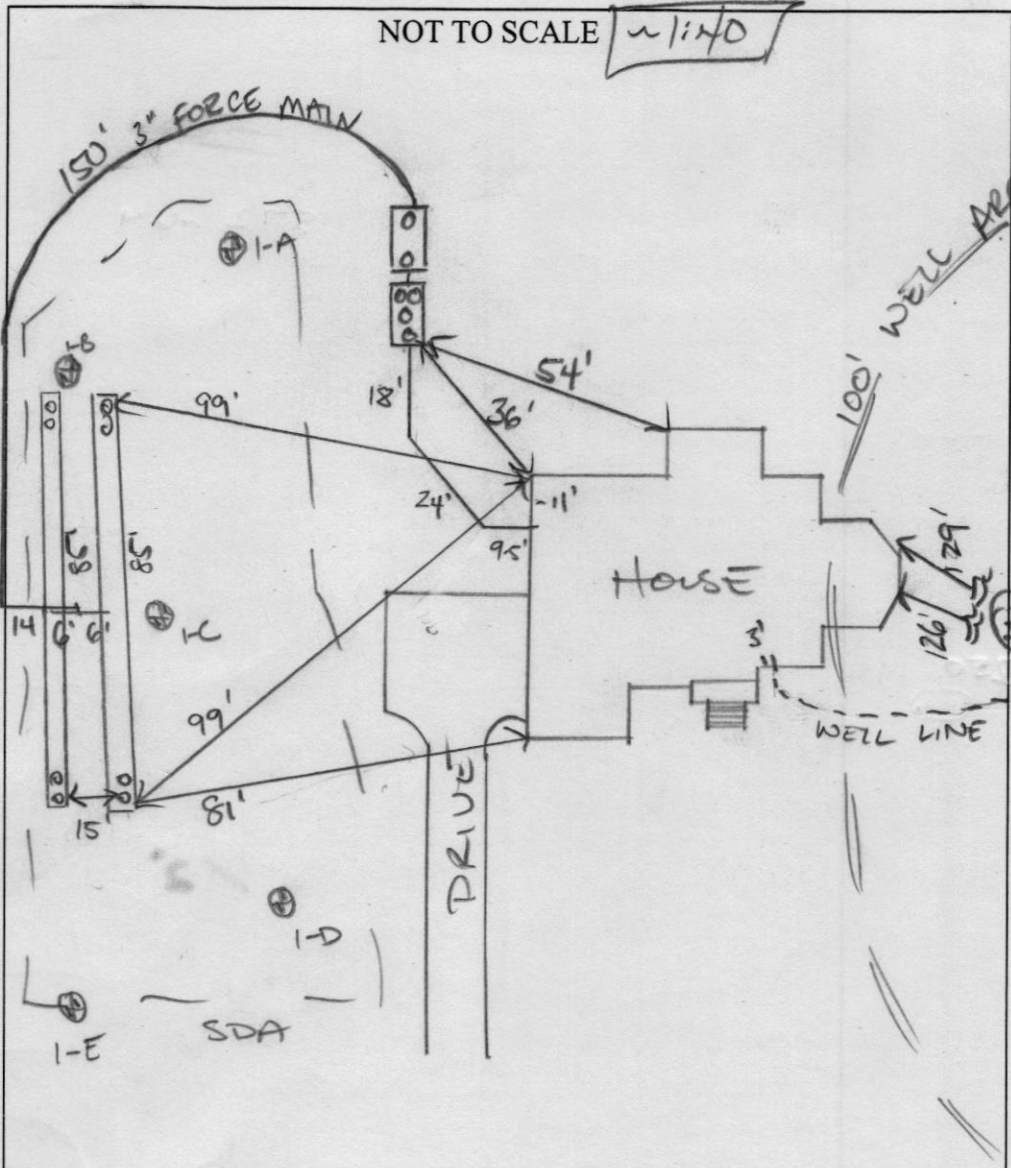
NOTES: SEE BAT + LPD Design Plan

ISSUED BY: Hank Oswald ISSUE DATE: _____ EXPIRATION DATE: _____

- 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 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 22 005611
- 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.

NOT TO SCALE ~1/4" = 1'-0"



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	2'	8'
NUMBER OF TRENCHES		2 (4 LAT.)
TOTAL LENGTH		170 F
ABSORPTION AREA		510 SF + 4' SIDE WALL
DISTRIBUTION BOX LEVEL		LPD
DISTRIBUTION BOX BAFFLE		MAMF.
DISTRIBUTION BOX PORT		—

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	YES
MANUFACTURER	BACKLIVER
CAPACITY	INTUP 150 GAL
SEAM LOC	TOP
TANK LID DEPTH	2'
BAFFLES	BAT
BAFFLE FILTER	BAT
MANHOLE LOC	FRONT/MID/BACK
6" PORT LOC	—
WATERTIGHT TEST	—
SLOTTED	BAT
DATE ON LID	12/03/2022
PUMP/SEPTIC TANK LEVEL	—
MANUFACTURER	BACKLIVER
CAPACITY	— GAL
SEAM LOC	—
TANK LID DEPTH	2'
BAFFLES	—
BAFFLE FILTER	—
MANHOLE LOC	—
6" PORT LOC	—
WATERTIGHT TEST	—
SLOTTED	—
DATE ON LID	—

ROAD NAME

14740 McCANN FARM ROAD

PRE-CONSTRUCTION:

10/28/2022 CONFIRMED CONT + SPEC OF TR AND SYSTEM.

INSTALLATION:

11/04/2022 TRENCHES INSTALLED. INSPECTED MATERIALS ✓
 11/07/2022 TANKS SET. ✓ 11/08/2022 F MAIN COMPLETE ✓
 1/20/2023 - P & A SUCCESSFUL. DETAIL HELDS WERE 2.5'-3'. CIRCUIT FOR PUMP 212mm
 ON PANEL OUTSIDE OF SEPTIC TANK. SEPTIC & BAT SWITCH LABELED INSIDE OF HOUSE
 CIRCUIT. (SP)

FINAL INSPECTOR

Shepsura Puse

DATE OF APPROVAL

11/20/2023



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

NORWECO CERTIFICATION

PROPERTY OWNER: WILLIAMSBURG GROUP	INSTALLATION COMPANY: HATFIELD
ADDRESS: 14740 McCANN FARM RD	CERTIFIED INSTALLER: TODD TRACEY
CITY, ZIPCODE & COUNTY: WOODBINE, 21797, HOWARD	PERMIT#
SIZE OF SYSTEM INSTALLED:	DATE INSTALLED: 11-07-22
750 GPD CONCRETE	START-UP DATE: 01-13-23
NUMBER OF BEDROOMS:	DATE OF FINAL INSPECTION:
TYPE OF INSTALLATION: NEW	DATE OF ELECTRICAL INSPECTION:
ELECTRICAL WIRING PER ELECTRICAL INSTRUCTIONS: YES	TANK LEVEL: YES
HT. OF CONTROL PANEL ABOVE FINAL GRADE: 36"	BURIAL DEPTH OF TANK: 14"
SYSTEM WIRED ON A 15-AMP DEDICATED CIRCUIT WITH STD. BREAKER: YES	RISERS 4" - 6" ABOVE GRADE: YES
LENGTH(S) OF UF WIRE PAST LAST AERATION RISER(S): 18"	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 Singulair TNT Wastewater Treatment System was installed according to the manufacture's specifications.

Matthew Geckle

January 13,2023

Signature of BRP Representative

Vice-President

Date

Mashid Tringa

From: Bruce Harvey <BruceHarvey@williamsburgllc.com>
Sent: Friday, April 1, 2022 1:14 PM
To: Samer Alomer; Mashid Tringa; Maya Mildenberg
Cc: Chris Wine
Subject: FW: B21004405 and B21004406_McCann Farm Road

Please see below from Hank Oswald about new OSDS plans for Lot 1 East and Lot 2 West at McCann Estates. Please let us know how quickly these can be completed.

Bruce A. Harvey
President
Williamsburg Homes
410-997-8800 (o)
443-398-4358 (c)
Email: bruceharvey@williamsburgllc.com

From: Chris Wine <ChrisWine@williamsburgllc.com>
Sent: Friday, April 1, 2022 9:20 AM
To: Bruce Harvey <BruceHarvey@williamsburgllc.com>; Samer Alomer <salomer@mba-eng.com>
Subject: Fw: B21004405 and B21004406_McCann Farm Road

See below on the McCann permits

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Friday, April 1, 2022 8:49 AM
To: Chris Wine <ChrisWine@williamsburgllc.com>
Subject: B21004405 and B21004406_McCann Farm Road

Hi Chris:

Good morning. This office will need a revised Onsite Sewage Disposal System (OSDS) plan for building permits B21004405 (14775 McCann Farm Road) and B21004406 (14740 McCann Farm Road).

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

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Well & Septic Program
410.313.1786
hoswald@howardcountymd.gov

Oswald, Hank

From: Oswald, Hank
Sent: Monday, September 27, 2021 8:15 AM
To: Maya Mildenberg (maya@mba-eng.com)
Subject: BAT Plan_14740 McCann Farm Road

Hi Maya:

I reviewed the BAT plan for 14740 McCann Farm Road, and the charts don't reflect the new #s i.e. trench & lateral lengths. Also, I overlooked the swale graded over the proposed tank, and the drywells don't meet setbacks to the well (100 ft) or septic tank (25 ft).

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

Respectfully,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Well and Septic Program
410.313.1786
hoswald@howardcountymd.gov

Oswald, Hank

From: Oswald, Hank
Sent: Wednesday, September 8, 2021 10:10 AM
To: Maya Mildenberg (maya@mba-eng.com)
Subject: BAT Plan Review Comments_14740 McCann Farm Road_ McCann Estates - East Lot 1

Hi Maya:

I found a couple of things on the revised BAT plan for 14740 McCann Farm Road_ McCann Estates - East Lot 1:

- 1.) Trench Length = # of orifices x perforation spacing = $8 \times 5.5 = 44$ feet which aligns with the total length of trench (88 feet) being proposed in the schematic.
- 2.) Lateral Length = Trench Length – half a perforation spacing = $44 - 2.75 = 41.25$ feet
- 3.) Trench Flow Rate = 13.04 (not 13.4 as shown on chart)
- 4.) 2nd replacement system effective depth begins at 4 per septic specs (not 5 as shown on chart)
- 5.) The setback distance from a pond (MB-1) to the well box is 100 feet. If it has an impermeable lining, then the setback is 50 feet. Please clarify on plan.

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Bureau of Environmental Health
Well & Septic Program
8930 Stanford Boulevard
Columbia, MD 21045
(410) 313 - 1786
hoswald@howardcountymd.gov

MEMORANDUM

TO: Benchmark Engineering
8480 Baltimore National Pike
Ellicott city, MD 21043

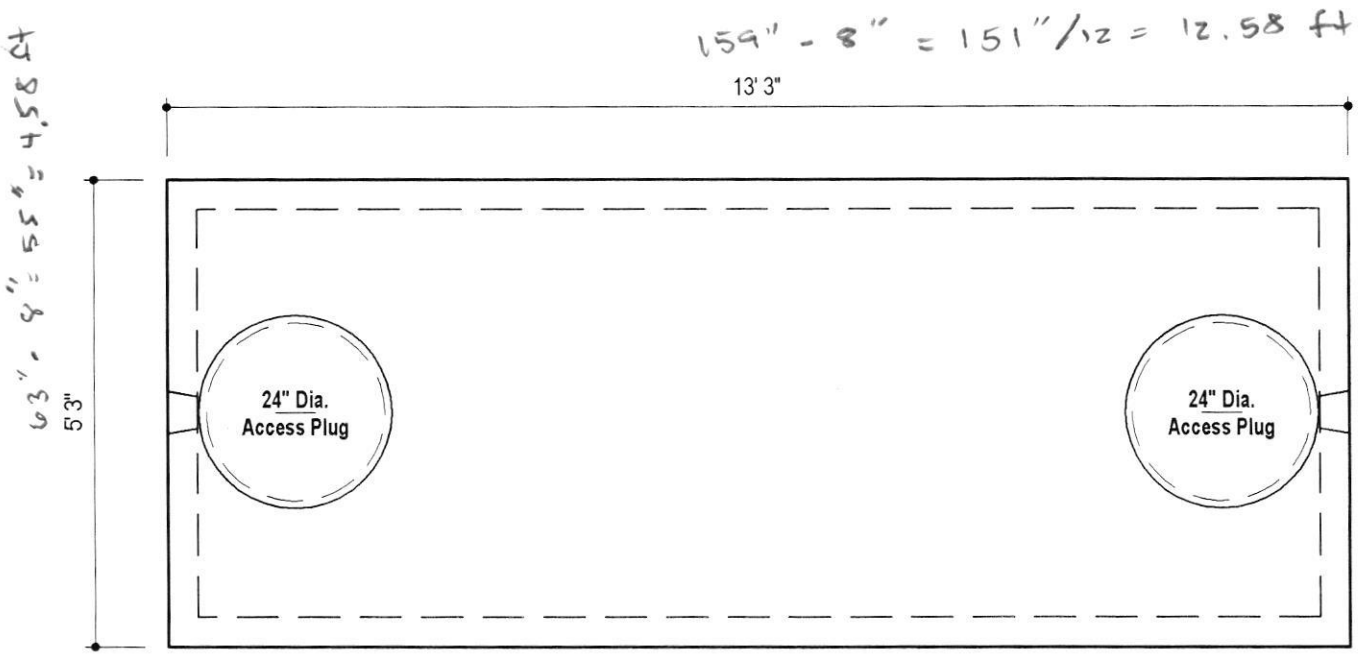
FROM: Hank Oswald, L.E.H.S.
Well & Septic Program

RE: BAT Site Plan
McCann Estates - East (Lot 1)

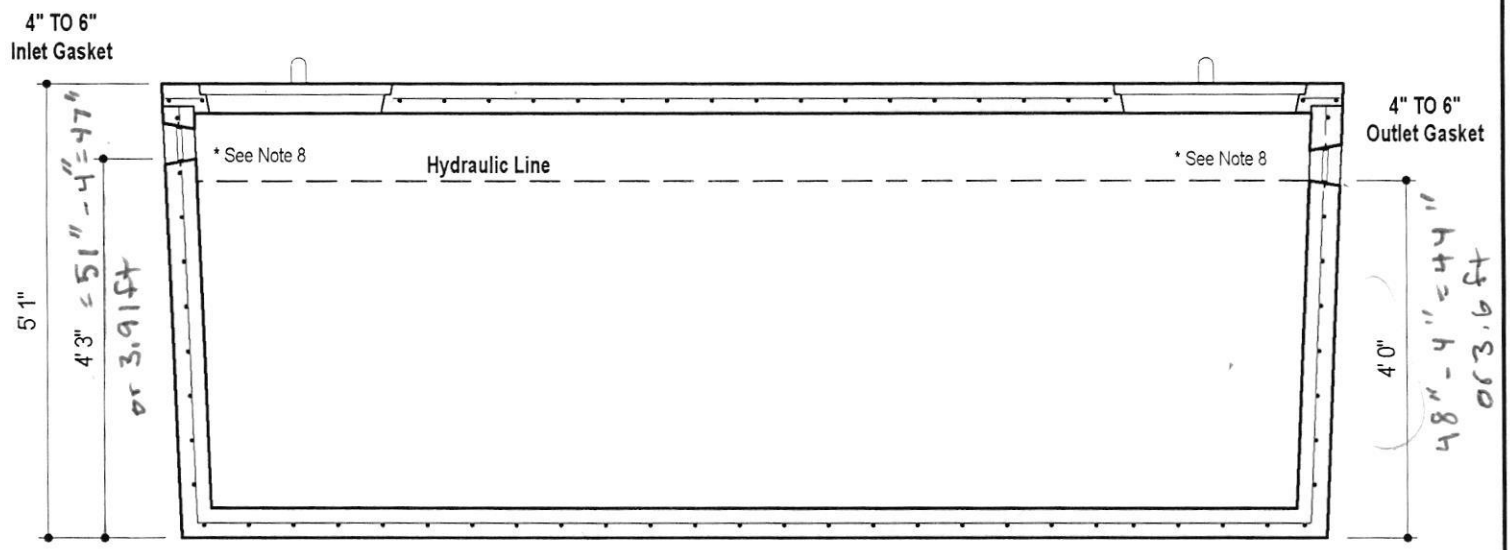
Date: 8/23/2021

The following comments pertain to the review of the BAT Site Plan for **McCann Estates - East (Lot 1)**:

- ✓ 1. Change title to, Site Plan for BAT Installation.
2. Make trenches more on contour particularly initial system and trench near hole 1-A.
- ✓ 3. Add emergency storage calculation to plan. (The pump chamber must have the capacity to accommodate a pump positioned on a six-inch riser, one dose volume, and one days design flow storage capacity above the high-water alarm.)
4. The length of trench shown on the *center feed trench layout* on plan is 80 feet (not 85 feet).
5. Make trench inverts the same depths (2 - 3 feet) and all inverts the same depths and head to simplify design (if possible).
6. Keep 2 trenches at required length, but separate them out into 4 trenches and 4 laterals with the following labels - 1A1, 1A2, 1B1, 1B2 (Please see attached LPD/Trench charts)
7. Add LPD chart to plan (see attached chart).
8. Min dose calc typo. Change 53.8 to 59.14.



PLAN VIEW



SECTION A-A

DESIGN DATA & GENERAL NOTES

- [1] Concrete strength $f_c=4,000$ p.s.i. @ 28 days. Density = 150 pcf.
- [2] Cement - Portland Type I/II per ASTM C 150-92.
- [3] Admixtures & plasticizers per ASTM C 260-86 & C 494-92.
- [4] Reinforcing per ASTM A185. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, base, & top thickness.
- [7] Max 3' of cover
- [8] Depending on use of tank, Inlet & Outlet baffle may be required by code.

$$L \quad W \quad H$$

$$12.58 \times 4.58 \times 3.6 = 207.4 \text{ ft}^3$$

$$\times 7.48 = \boxed{1551.5 \text{ gal}}$$

WEIGHT = 16,000 lbs.



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

1,500 GALLON SEPTIC/PUMP TANK		
1-Compartment		
NON-TRAFFIC MAX 3 ft. OF COVER		
Dwg. No. 1500-1C	No Scale	Aug. 11, 2008

Hill, Amanda

From: Oswald, Hank
Sent: Monday, June 13, 2022 11:52 AM
To: Hill, Amanda
Subject: Floor Plan Request_B21004406_14740 McCann Farm Road

Hi Amanda:

Would you be able to forward the most recent set of floor plans for building permit # B21004406. The address is 14740 McCann Farm Road. The engineer stated that the most recent change occurred in May 2022.

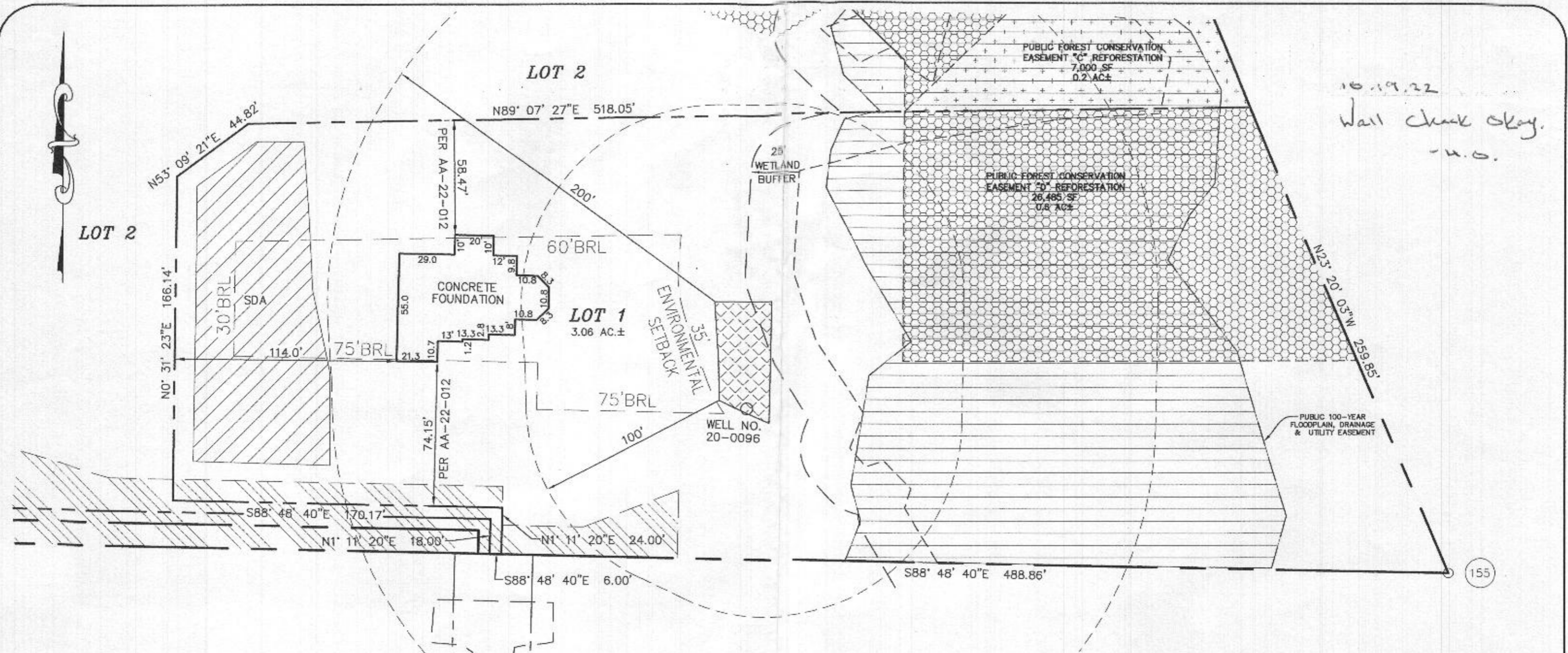
Thanks in advance,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Well & Septic Program
410.313.1786
hoswald@howardcountymd.gov

COPY

M:\2021\21-026 McCann Estates\DWG\WALLCHECK 1E.dwg, 10/13/2022 10:44:34 AM, IR-ADV C3725



10-19-22
Wall check okay.
-u.s.

1. THIS IS NOT A BOUNDARY SURVEY.
2. THIS DRAWING WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT
2. BEARINGS SHOWN HEREON ARE BASED ON NAD83 DATUM.
3. DIMENSION SHOWN FROM THE BUILDINGS TO THE PROPERTY LINE ARE AT AN ACCURACY OF 1.0' (PLUS OR MINUS)
4. THE INFORMATION SHOWN HAS BEEN ESTABLISHED BY CURRENT ACCEPTABLE SURVEY PROCEDURES AND FROM AVAILABLE RECORD INFORMATION. THIS DRAWING IS TO BE USED FOR TITLE TRANSFER FINANCING, OR REFINANCING ONLY AND IS NOT TO BE USED FOR THE ESTABLISHMENT OF PROPERTY LINES, LOCATION OF FENCES, GARAGES, BUILDINGS, OR OTHER EXISTING OR FUTURE IMPROVEMENTS.
5. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 574, EXPIRATION DATE: 03/21/23.

Gary E. Lane
GARY E. LANE
PROP. LINE SURVEYOR MARYLAND No. 574
10-13-22
DATE



ADDRESS: 14740 McCann Farm Road
DEED REF.: 21540 / 353
TOP OF WALL ELEV. = 630.1 ±
FIRST FLOOR ELEV. = N/A
(DRAWING SIZE = 11" x 17")

LOT 1
McCann Estates-East
PLAT No. 25916
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

**MILDENBERG
BOENDER, & ASSOC., INC.**
Engineers Planners Surveyors
8318 Forrest Street, Suite 300, Beltsville City, MD 21043

FOUNDATION	DATE: 08/13/22	FINAL LOCATION	DATE: N/A
DRAWN BY: GEL	CHECKED BY: GEL	SCALE: 1" = 50'	
PROJECT NO.: 21-026		LOCATION DRAWING	

155

SEPTIC TRENCH SIZING

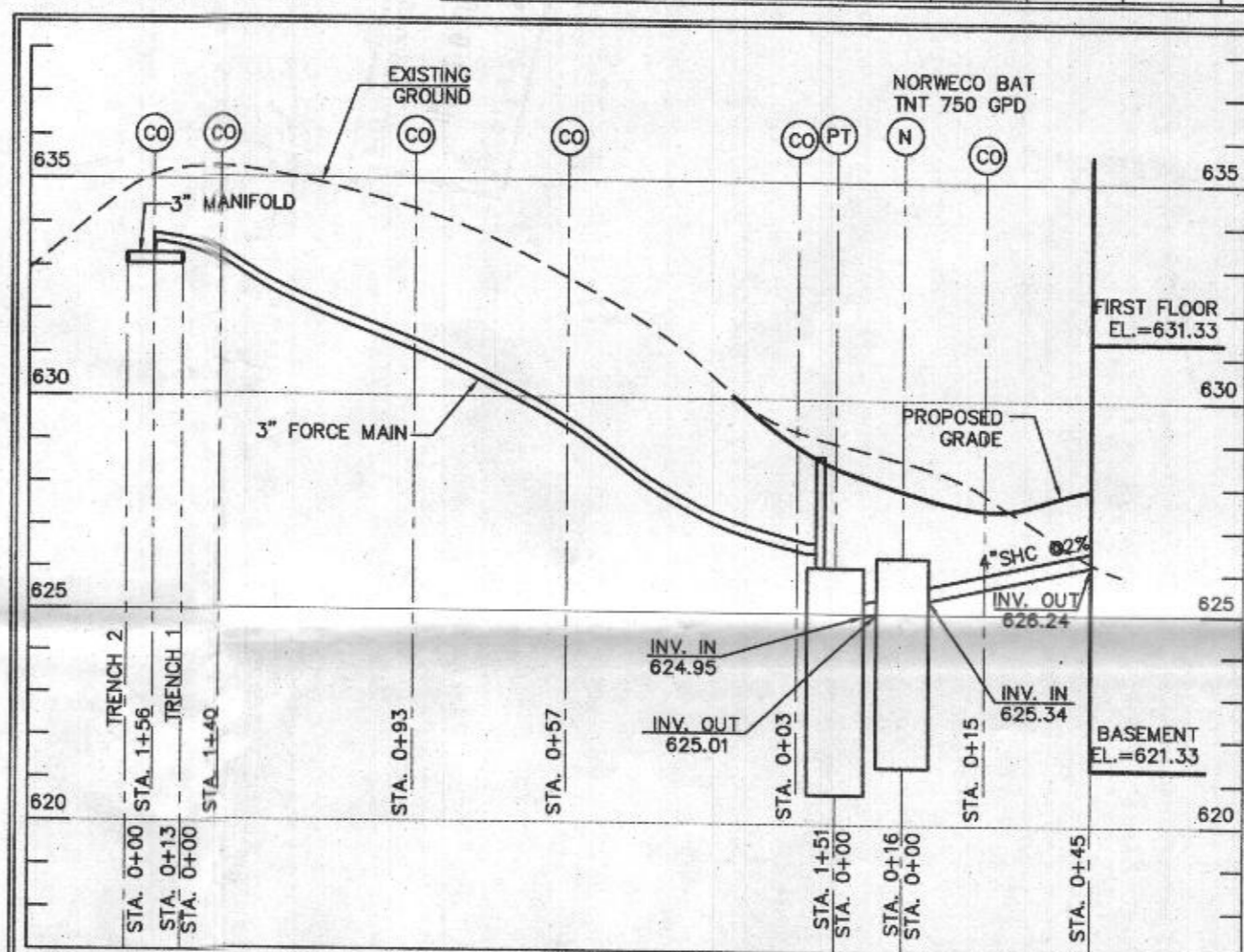
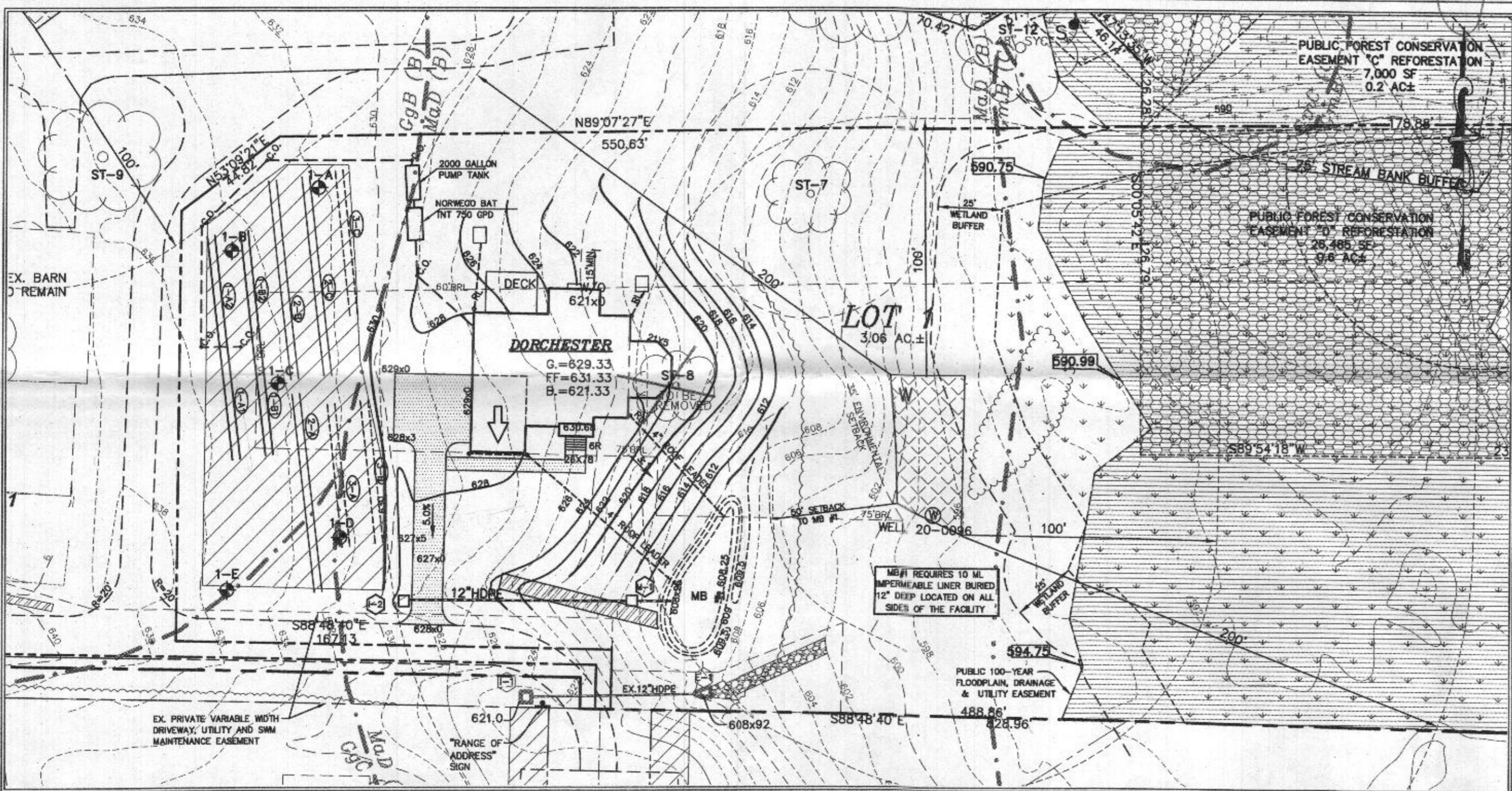
SYSTEM	APPLICATION RATE (GPD / SF)	MAXIMUM FLOW RATE (GPD)	AREA OF TRENCH (SF)	TRENCH WIDTH (FT)	LENGTH OF TRENCH (LF)	EFFECTIVE DEPTH BEGINS (FT)	TRENCH BOTTOM DEPTH (FT)	TRENCH REDUCTION FACTOR**	ADJUSTED LENGTH OF REQUIRED TRENCH (LF)	MINIMUM TRENCH SPACING (FT)	NUMBER OF TRENCHES	REQUIRED TRENCH LENGTH (FT)
INITIAL	0.8	900	1,125	3	375	4.0	8.0	0.45	168.75	10.0'	4	42.19
1 REPLACEMENT	0.8	900	1,125	3	375	5.0	7.0	0.62	232.5	10.0'	3	77.50
2 REPLACEMENT	0.8	900	1,125	3	375	4.0	8.0	0.45	168.75	10.0'	3	56.25

LOW PRESSURE DOSING SYSTEM CHART

TRENCH NUMBER	GROUND ELEV.	PIPE INVERT ELEV.	TRENCH LENGTH	1.5" LATERAL LENGTH	PERFORATION DIAMETER	HEAD	PERFORATION SPACING	# OF ORIFICES	TRENCH FLOW RATE (GPM)	FLOW PER LF. TRENCH
1A1	635.3	633.3	44.0'	41.25'	5/16"	2.0'	5.5'	8	13.04	0.35
1A2	635.0	633.3	44.0'	41.25'	5/16"	2.0'	5.5'	8	13.04	0.35
2B1	634.5	632.5	44.0'	41.25'	5/16"	2.0'	5.5'	8	13.04	0.35
2B2	634.2	632.5	44.0'	41.25'	5/16"	2.0'	5.5'	8	13.04	0.35

INITIAL SYSTEM TRENCH DESIG

TRENCH NUMBER	GROUND ELEV.	TOP STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF STONE	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH BEGINS	EFFECTIVE DEPTH	WIDTH OF TRENCH	TRENCH SACING	TRENCH LENGTH
1A1	635.3	634.0	633.3	1.3'	6.7'	627.3	4.0'	8.0'	3.0'	10.0'	44.0'
1A2	635.0	634.0	633.3	1.0'	7.0'	627.0	4.0'	8.0'	3.0'	10.0'	44.0'
2B1	634.5	633.2	632.5	1.3'	6.7'	626.5	4.0'	8.0'	3.0'	10.0'	44.0'
2B2	634.2	633.2	632.5	1.0'	7.0'	626.2	4.0'	8.0'	3.0'	10.0'	44.0'

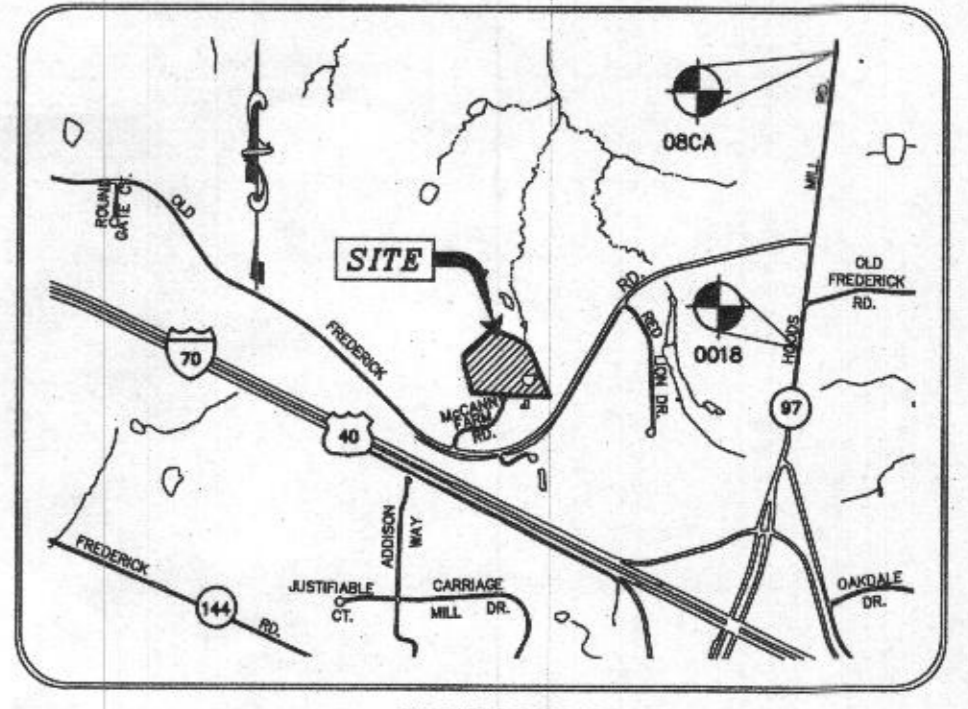


ON-SITE SEWAGE DISPOSAL SYSTEM:

RESIDENTIAL SYSTEM DESIGN - NORWECO-750 6 BEDROOM HOUSE
 150 GALLONS PER DAY OF BEDROOMS = VOLUME OF WASTEWATER / DAY
 120 X 6 = 720 GPD (PER MDE 3/10/2015 MEMO TO HEALTH DEPARTMENT)
 TRENCH DESIGN PER 150 GPD
 PERC RATE = 6 - 15 MINUTES/INCH
 APPLICATION RATE = 0.8 GPD/SQ.FT.
 DESIGN FLOW + APPLICATION RATE = SQ.FT. OF TRENCH REQUIRED
 900 + 0.8 = 1,125 SQ.FT.
 SQ.FT. REQUIRED + WIDTH OF TRENCH = LENGTH OF TRENCH
 1,125 + 3.0' = 375 FT

1ST REPLACEMENT
 USE 24" OF GRAVEL BELOW DRAIN PIPE
 375 X 0.45 = 168.75 FT
 USE THREE (3) TRENCHES 62.5'
 A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT.

2ND REPLACEMENT
 USE 24" OF GRAVEL BELOW DRAIN PIPE
 375 X 0.45 = 168.75 FT
 USE THREE (3) TRENCHES 56.25'
 A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT



GENERAL NOTES:

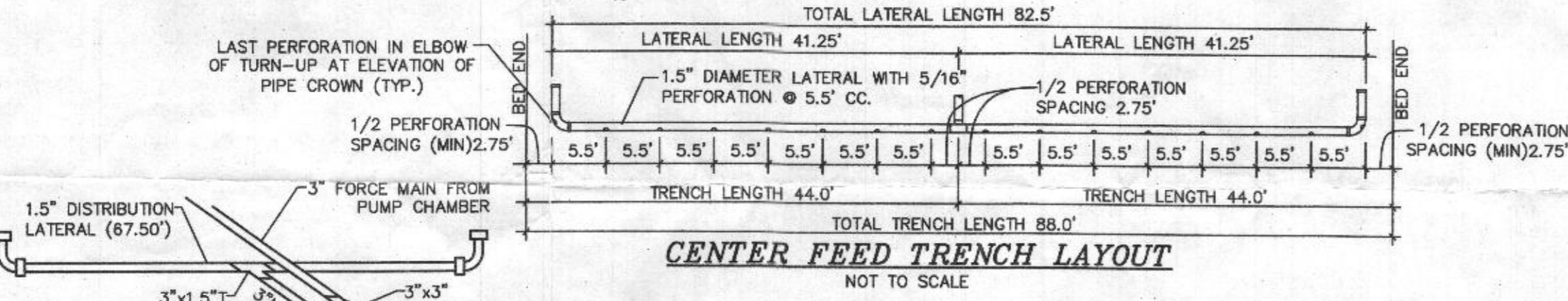
- THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- PARCEL BACKGROUND:
 TAX MAP: 8
 PARCEL: 27-A LOT: 1
 ELECTION DISTRICT: FOURTH
 ZONING: RC-DEO
 AREA: 3.08 AC.
 DPZ FILES: ECP-18-045, F-20-048, WP-20-006, WP-20-101
 ADDRESS: 14740 MCCANN FARM DR., WOODBINE, MD 21797
- TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON FIELD RUN SURVEY PERFORMED BY MILDENBERG, BOENDER & ASSOC., INC. ON OR ABOUT DECEMBER 2014.
- PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDED OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- ANY CHANGES TO THE LOCATION OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED PLAN MAY BE REQUIRED.
- THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- THE WELL TAG # HO-20-0096 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
- ANY WELLS OR SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELL AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

BEST AVAILABLE TECHNOLOGY SITE PLAN NOTES

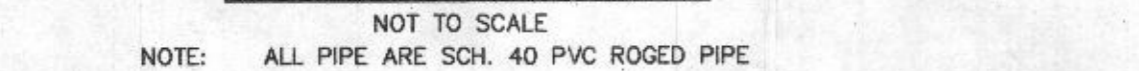
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3.0'
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- WITHIN ONE (1) MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
- HIGH WATER (HW) ALARM MUST BE ON A DEDICATED CIRCUIT
- ELECTRICAL PANEL, BLOWER MOTOR, AND ALARM TO BE LOCATED ADJACENT TO TMT-750 UNIT.

BAT SYSTEM CHART

DESCRIPTION	ELEVATION
FINISHED GRADE AT SEPTIC TANK	627.45
INVERT INTO TMT-750	625.34
INVERT OUT OF TMT-750	625.01
INVERT INTO PUMP TANK	624.95
EXTERIOR BOTTOM OF PUMP TANK	620.37
INTERIOR BOTTOM OF PUMP TANK	620.70
PUMP OFF	622.37
PUMP ON	622.65
HIGH WATER (HW) ALARM	623.04
900 GALLONS ABOVE HW ALARM	624.70
TOTAL DYNAMIC HEAD	16.61
DOSED VOLUME	150 GAL
PUMP RUNTIME	2.88 MIN.



CENTER FEED MANIFOLD DISTRIBUTION NETWORK SCHEMATIC



LOW PRESSURE DOSING SYSTEM

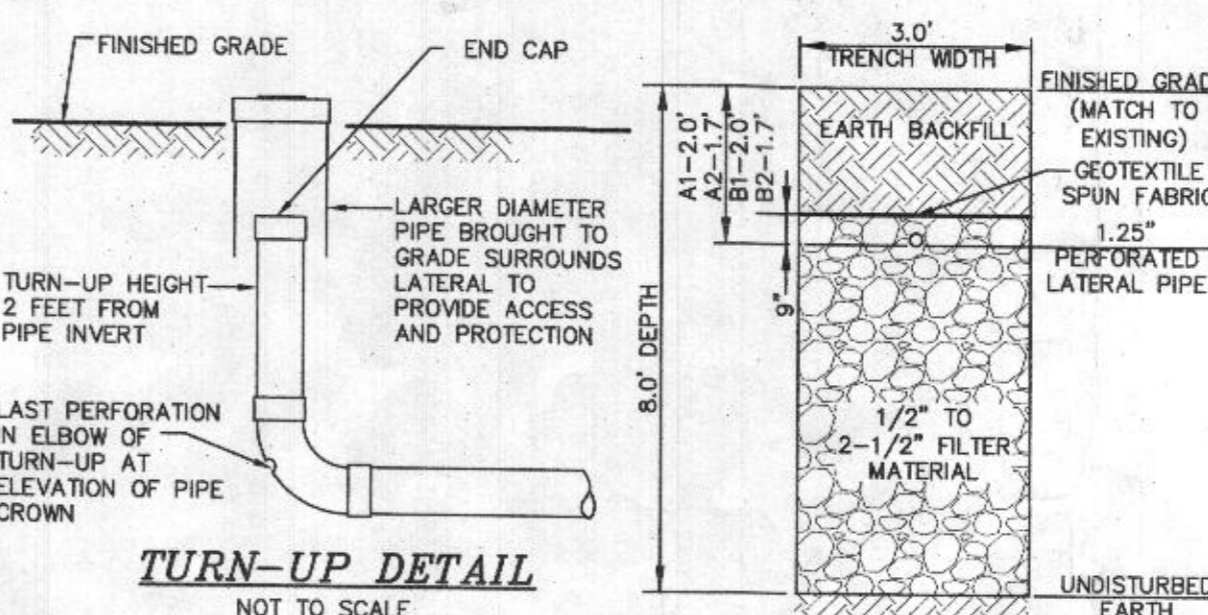
NO. OF BEDROOMS: 6
 NO. OF TRENCHES: 4
 TRENCH LENGTH: 44.0'
 FLOW METHOD: GRAVITY TO TANK
 MANIFOLD TYPE: CENTER FEED MANIFOLD
 HOLE DIAMETER: 5/16"
 HOLE SPACING: 5.5' (FIGURE 4.4)
 NO. OF LATERALS: 4
 LATERAL LENGTH: 41.25'
 HOLES NO./LATERAL: 8
 LATERAL DIAMETER: 1.5" (FIGURE 4.4)
 PRESSURE HEAD: 2.0'
 ORIFICE DISCHARGE: 1.63 GPM
 LATERAL DISCHARGE: 13.04 (NO. OF HOLES X ORIFICE DISCHARGE)

SYSTEM DISCHARGE: 52.16 GPM

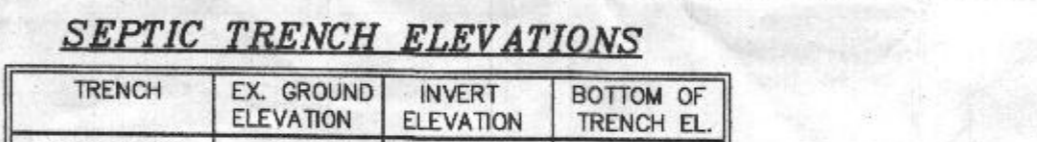
MINIMUM DOSE:
 MANIFOLD VOL + MANIFOLD VOL + FORCE MAIN VOL
 FORCE MAIN DIAMETER: 3" (TABLE 4.4)
 MANIFOLD DIAMETER: 3"
 LATERAL VOLUME: 3.24 GAL. (41.25' x (10.6")² / 100)
 MANIFOLD VOLUME: 3.24 GAL. (10.38' x 100)
 FORCE MAIN VOLUME: 57.98 GAL. (151.38' x 100)
 MINIMUM DOSE: 149.27 GAL. (5x17.49+3.54+57.98)

6 DISCHARGES PER DAY
 VOLUME PER DISCHARGE (900/6) 150 GAL > 149.27 GAL

TOTAL HEAD:
 DYNAMIC HEAD + STATIC HEAD + OPERATING HEAD
 F. M. FRICTION LOSS: 0.98 (TABLE 4.4)
 MANIFOLD FRICTION LOSS: 0.02 (TABLE 4.4)
 FITTINGS FRICTION LOSS: 1.13 (6x90° ELBOW, 10' PER FITTING=90° OF PIPE) + (6x90° TEE, 15' PER FITTING=90° OF PIPE) + (2x45° ELBOW, 6' PER FITTING=12' OF PIPE) (TABLE 4.4)
 LATERAL FRICTION FACTOR: 1.8'
 STATIC HEAD: 10.93'
 DISTAL HEAD: 2.0'
 TOTAL DYNAMIC HEAD: 16.61' (0.98+0.02+1.13+1.5+8.93+2.0)
 USE GULLDS PUMP WEO3M.

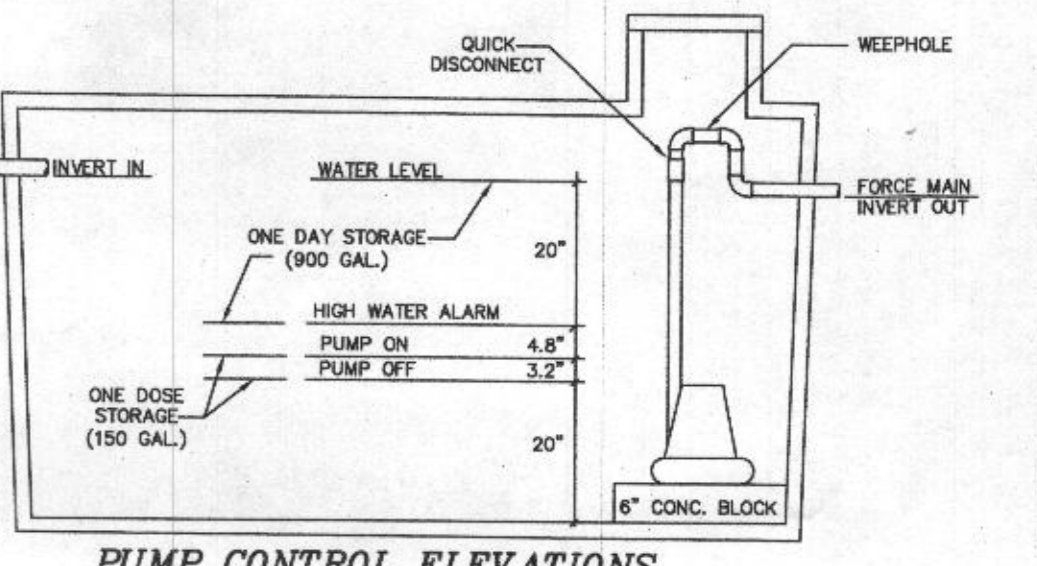


PRIMARY SYSTEM TRENCH DETAIL



SEPTIC TRENCH ELEVATIONS

TRENCH	EX. TRENCH ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
PRIMARY A1	635.3	633.3	627.3
PRIMARY A2	635.0	633.3	627.0
PRIMARY B1	634.5	632.5	626.5
PRIMARY B2	634.2	632.5	626.2
SECONDARY A	633.7	631.7	626.7
SECONDARY B	633.7	631.7	626.7
SECONDARY C	632.3	630.3	625.3
TERTIARY A	632.5	630.5	624.5
TERTIARY B	631.7	629.7	623.7
TERTIARY C	630.5	628.5	622.5



PUMP TANK STORAGE CALCULATIONS

TANK DIMENSIONS:
 WIDTH: 5.25'
 LENGTH: 12.75'
 HEIGHT TO WATER LEVEL: 4.00'

REQUIRED STORAGE ABOVE PUMP OFF: 150 GAL (20 C.F.)
 PROVIDED STORAGE: 180 GAL (21.6 C.F.) (6.25)(12.75)(0.27)
 REQUIRED STORAGE BELOW WATER LEVEL: 900 GAL (120 C.F.)
 PROVIDED STORAGE: 988 GAL (132 C.F.) (6.25)(12.75)(1.66)

Clouds Water Technology

Wastewater

APPLICATIONS
 Specifically designed for the following uses:
 • Homes, Farms, Trailer Courts, Motels, Schools, Hospitals, Industry, Effluent Systems

SPECIFICATIONS
 • 1/2 HP and larger units have lead acid ends.
 • Class 1 overload protection must be provided in separately enclosed motor unit.
 • STCW power cords all have lead acid ends.
 • Designed for Continuous Operation. Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
 • Bearings: Upper and lower heavy duty ball bearing construction.
 • Power Cable: Several duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of water jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.
 • Casing: Assures positive sealing against certain acids and oil leakage.

AGENCY LISTINGS
 • See website for list of agencies and distributors.

PERFORMANCE RATINGS (gallons per minute)

Order No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170

COMPONENTS

Order No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

WEIGHT = 19,000 lbs.

2,000 GALLON SEPTIC TANK 1-Compartment
 Stock Item (Approx. 19,000 lbs)
 Dep. No. 3085-1C No Scale Aug. 11, 2009

Yylem
 Lawn Saver Water

2,000 GALLON SEPTIC TANK 1-Compartment
 Stock Item (Approx. 19,000 lbs)
 Dep. No. 3085-1C No Scale Aug. 11, 2009

Meyer Bros, Inc.
 4981 Glen View
 Design, Material 2103
 Phone: (410) 225-5555
 Fax: (410) 225-5555

NORWECO MODEL TNT-750 GPD

GENERAL NOTES:
 1. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.
 2. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.
 3. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.
 4. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.
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 7. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.
 8. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.
 9. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.
 10. SEPTIC TANK MUST BE TESTED AND ACCEPTED BY MDE.

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. 34627, EXP. DATE 07/16/2023.

DEVELOPER
 WILLIAMSBURG HOMES
 5485 HARPERS FARM ROAD
 COLUMBIA, MARYLAND 21044
 410-997-8800

MICHAEL G. KRETSCH, P.E.
 06/08/2022 DATE:

Project	21-026	date	JUNE, 2022
Illustration	MMM	engineering	MMM
Scale	1"=30'	approval	MMM
revision			

MCCANN ESTATES - EAST (LOT 1)
 14740 MCCANN FARM ROAD WOODBINE MARYLAND 21797
 TAX MAP: B, BLOCK: 10, PARCEL: 27-A, LOT: 1
 FOURTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
SITE PLAN FOR BAT INSTALLATION

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 8318 FOREST STREET, SUITE 300, ELLICOTT CITY, MD 21043
 (410) 997-0296 Tel. (410) 997-0298 Fax.

Approved Septic System Plan
 Howard County Health Department
 Hank Oswald
 Signature 6/14/22 Date

SOIL TABLE

SYMBOL	RATING	NAME	K FACTOR
GpB	(B)	GLENLEA LOAM, 3-8% SLOPES.	.20
GpC	(B)	GLENLEA LOAM, 8-15% SLOPES.	.20
GmB	(C)	GLENVILLE SILT LOAM, 3-8% SLOPES.	.37
GmC	(C)	GLENVILLE SILT LOAM, 8-15% SLOPES.	.49
MaD	(B)	MANOR LOAM, 15-25% SLOPES.	.32



May 5, 2022

Mr. Bob Frances
Chief, Licenses and Permits
Howard County, Maryland
3430 Court House Drive
Ellicott City, Maryland 21043

COPY

**REF: Building Permit No. B21004406, 14740 McCann Farm Road, Woodbine, MD 21797, GP -G21000264 remain active
Re-activate & Revise Building Permit
(03.24.2022)**

Dear Mr. Francis,

On November 12, 2021, I applied for this residential building permit for the construction of a "Dorchester IV" house type. The permit was cancelled on 1/25/22. Please re-activate this building permit. Fees and all paperwork required is attached.

Since that time, we have revised it to Elevation 4 and added 2' Extension Bsmt/1st Flr , MBRM & Kitchen, 4' Ext FRM, Finished Rec Room, Bath & Wet Bar Rough In, Added 20'x16' Deck with Steps to Grade. All changes reflected on Site Plan & Architecture attached.

We apologize for any inconvenience this has caused.

Should you have any questions or require additional information, please do not hesitate to contact me at 410/997-8800 Ext. 20.

Sincerely,

Chris Wine

Chris Wine
Administrator
THE WILLIAMSBURG GROUP L.L.C.

INV # 103879

CK# 15927

\$50.00

RECEIVED

MAY 09 2022

LICENSES & PERMITS
DIVISION

Maryland's Award-Winning Homebuilder.

5485 HARPERS FARM ROAD SUITE 200 COLUMBIA, MARYLAND 21044
410-997-8800 FAX 410-997-4358 www.WILLIAMSBURGLLC.COM MHBR # 155

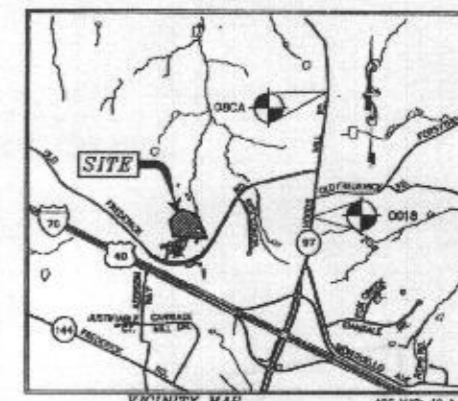
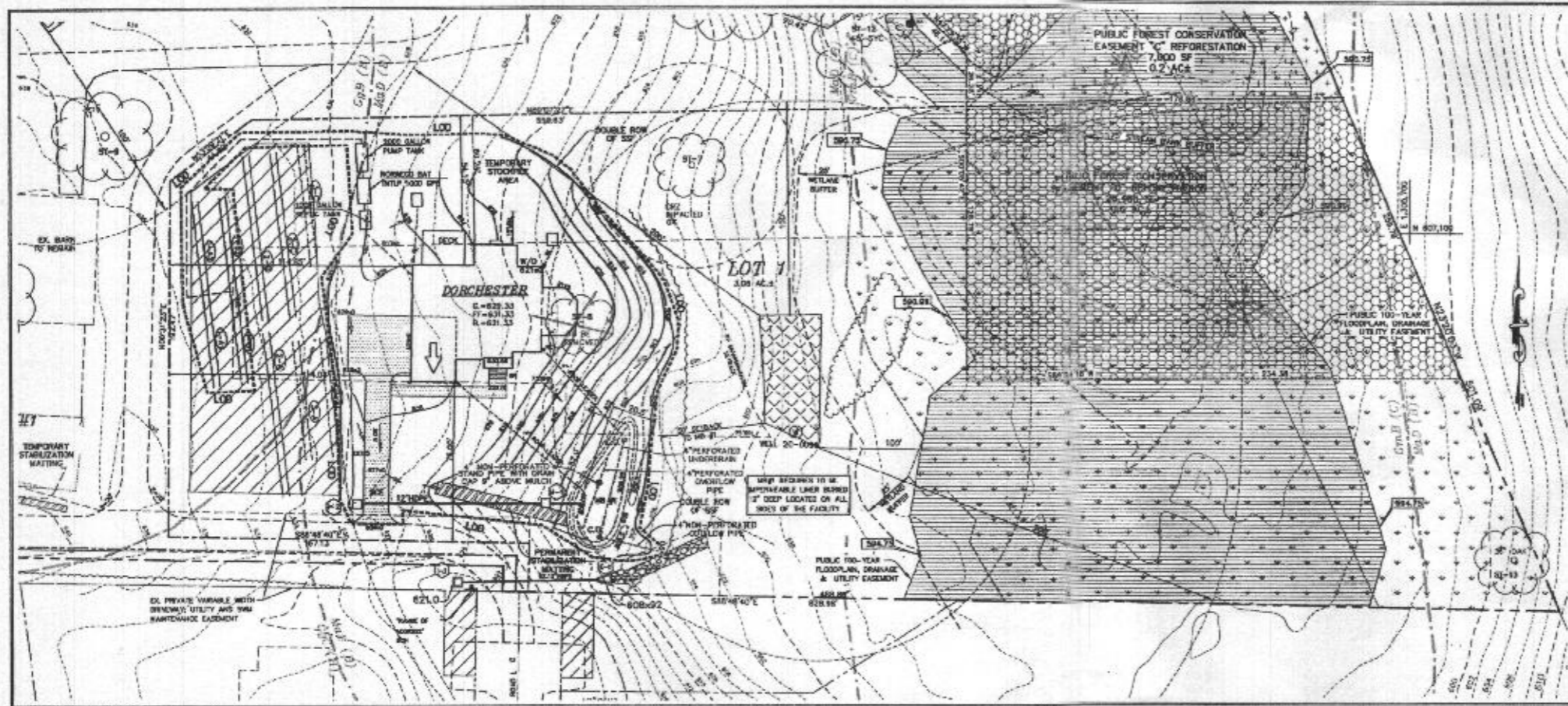


HEALTH

COPY

SOIL TABLE

SYMBOL	RATING	NAME	S FACTOR
ShC	30	SHALEY CLAY, 3-10% SLOPES	.20
ShD	30	SHALEY CLAY, 0-10% SLOPES	.20
ShE	30	SHALEY CLAY, 3-10% SLOPES	.20
ShF	30	SHALEY CLAY, 0-10% SLOPES	.20
ShG	30	SHALEY CLAY, 0-10% SLOPES	.20
ShH	30	SHALEY CLAY, 0-10% SLOPES	.20
ShI	30	SHALEY CLAY, 0-10% SLOPES	.20
ShJ	30	SHALEY CLAY, 0-10% SLOPES	.20
ShK	30	SHALEY CLAY, 0-10% SLOPES	.20
ShL	30	SHALEY CLAY, 0-10% SLOPES	.20
ShM	30	SHALEY CLAY, 0-10% SLOPES	.20
ShN	30	SHALEY CLAY, 0-10% SLOPES	.20
ShO	30	SHALEY CLAY, 0-10% SLOPES	.20
ShP	30	SHALEY CLAY, 0-10% SLOPES	.20
ShQ	30	SHALEY CLAY, 0-10% SLOPES	.20
ShR	30	SHALEY CLAY, 0-10% SLOPES	.20
ShS	30	SHALEY CLAY, 0-10% SLOPES	.20
ShT	30	SHALEY CLAY, 0-10% SLOPES	.20
ShU	30	SHALEY CLAY, 0-10% SLOPES	.20
ShV	30	SHALEY CLAY, 0-10% SLOPES	.20
ShW	30	SHALEY CLAY, 0-10% SLOPES	.20
ShX	30	SHALEY CLAY, 0-10% SLOPES	.20
ShY	30	SHALEY CLAY, 0-10% SLOPES	.20
ShZ	30	SHALEY CLAY, 0-10% SLOPES	.20



- GENERAL NOTES:**
- THE SUBJECT PROPERTY IS ZONED RC-000 FOR THE OCTOBER 6, 2003 COMPREHENSIVE ZONING PLAN.
 - PARCEL BACKGROUND: TAX MAP: B; PARCEL: 27-A; LOT: 1; ELECTION DISTRICT: FOURTH; ZONING: RC-000; AREA: 3.08 AC; DP7 FILED: ECP-18-045, F-23-046, W-23-006, W-20-101; ADDRESS: 14740 MCCANN FARM DR, WOODRIDGE, MD 21797.
 - 3' TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON FIELD RUN SURVEY PERFORMED BY MILDENBERG, BOENDER & ASSOC., INC. ON OR ABOUT OCTOBER 2014.
 - PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
 - THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 GPD AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNLESS PUBLIC SEWERAGE IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECONSTRUCTION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
 - ANY CHANGES TO THE LOCATION OR DEPTH TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED PLAN MAY BE REQUIRED.
 - THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 - THE WELL TAG # HD-23-036 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
 - ANY WELLS OR SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELL AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
 - COORDINATES BASED ON NAD 83 (HORIZONTAL) AND NAD 83 (VERTICAL) MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS. STA. No. 0018: N 807,897.308 E 1,320,424.302; ELEV. 828.824; STA. No. 0024: N 810,538.236 E 1,320,742.172; ELEV. 823.028.
 - THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAYOUT AND DEVELOPMENT REGULATIONS (COUNTY BILL 45-2003) DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SECTION AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN. MINOR PETITION OF BUILDING/CONV. PERM.
 - THERE ARE NO EXISTING STRUCTURES ON SITE.
 - LIMIT OF DISTURBANCE (LOD) IS LESS THAN 30,000 SF. (29,280 SF.) STANDARD EROSION AND SEDIMENT CONTROL TO BE UTILIZED. APPROVAL OF MSD IS NOT REQUIRED.

MICRO-BIORETENTION SCHEDULE

FACILITY	TOP E.L. (SURFACE)	VEGET. E.L. (TOP)	DEPTH (IN)	NO. IN	NO. OUT	SURFACE AREA	POURING AREA	POURING DEPTH	GRAVEL DEPTH (MIN. INCHES)
MB-1	808.08	806.50	805.50	804.50	803.50	700 S.F.	300 S.F.	1"	6"

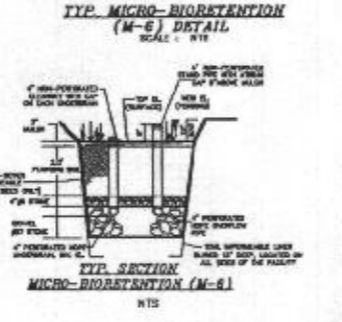
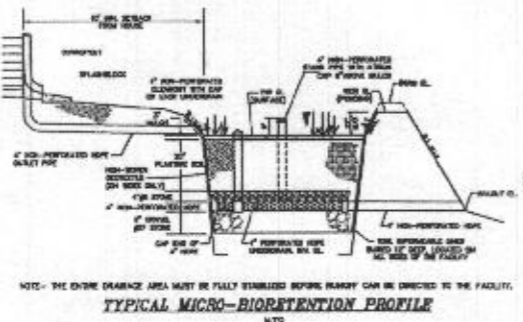


OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

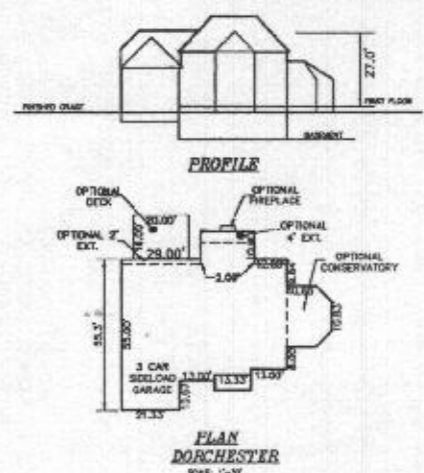
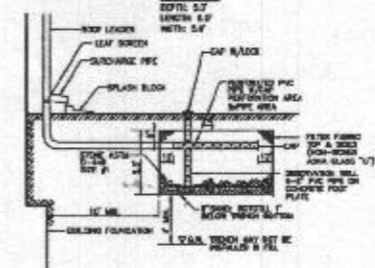
- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF PROBLEMS OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE INSPECTED FOR DISEASE AND INSECT INFESTATION AND REPLACEMENT PLANT MATERIALS OF SIMILAR KIND AND PLANTING ACCEPTABLE PERENNIALS SHALL BE LIMITED TO THE FOLLOWING: 3000 WAX-LEAF YEW, VOLUME 2, TABLE A.1.1 AND 2.
- THE OWNER SHALL PROVIDE A PLANT SPECIES IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE WINTER, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION (CONSIDERED BY WASH TREATMENT). REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. TRIM BRANCHED TREES AND BRUSH, AND REPLACE ALL DEFICIENT BRUSH AND TREES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PROPOSED MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

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

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND RECORD BUILD-UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE PROPER DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DOCUMENT THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN WITHIN A 72-HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO ENSURE COMPLIANCE WITH OPERATION AND MAINTENANCE ORDERS.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN MONITORED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



REVISED
Date: 5/9/2022
Comments: B21-4400



MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
409 PARKVIEW STREET, SUITE 300, ELICOTT CITY, MD 21043
(410) 897-0288 Fax

MCCANN ESTATES—EAST (LOT 1)
14740 MCCANN FARM ROAD WOODRIDGE MARYLAND 21797
TAX MAP: B, BLOCK 10, PARCEL: 27-A, LOT: 1
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PLOT PLAN (GRADING PLAN)

DATE: MAY 2022
PROJECT: 21-088
ELECTRICAL: NONE
NOISE: NONE
SCALE: 1"=30'

1 of 1

MILDENBERG, BOENDER & ASSOC., INC. ENGINEERS, PLANNERS, SURVEYORS 409 PARKVIEW STREET, SUITE 300, ELICOTT CITY, MD 21043 (410) 897-0288 FAX

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. 28859, EXP. DATE 08/08/23

DEVELOPER
WILLIAMSBURG HOMES
3420 HARRISBURG FARM ROAD
COLUMBIA, MARYLAND 21044
410-997-8800

DATE: 05/4/2022
SANEX A. ALONET, P.E.