

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

RECEIPT DATE: 07/09/2021 **ONSITE SEWAGE DISPOSAL SYSTEM** P 569597
 APPROVAL DATE: 1/26/2022 **PERMIT: CONSTRUCTION** A _____
 PROPERTY ADDRESS: 6521 MARE COURT, DAYTON, MD 21036
 SUBDIVISION: WILLOWSHIRE LOT: 9 TAX ID: 03-602997
 CONTRACTOR: CHAVIS ENTERPRISES & SEPTIC SERVICES EMAIL: Ryan@chavisenterprisesllc.com
 CONTRACTOR ADDRESS: 23 EAST ELLENDALE, BEL AIR, MD 21014 PHONE: (410)838-3007
 PROPERTY OWNER: TOLL MID-ATLANTIC LP COMPANY, INC EMAIL: Sriley1@tollbrothers.com
 OWNER ADDRESS: 250 GIBRALTER ROAD, HORSHAM, PA 19044 PHONE: (410)872-9165
 SEPTIC TANK SIZE (GALLONS): 2000 TANK MANUFACTURER: Back River Pre-Cast, LLC
 PUMP MODEL: ME3H-11P PUMP SIZE 0.3 Hp PUMP TANK CAPACITY: 2000

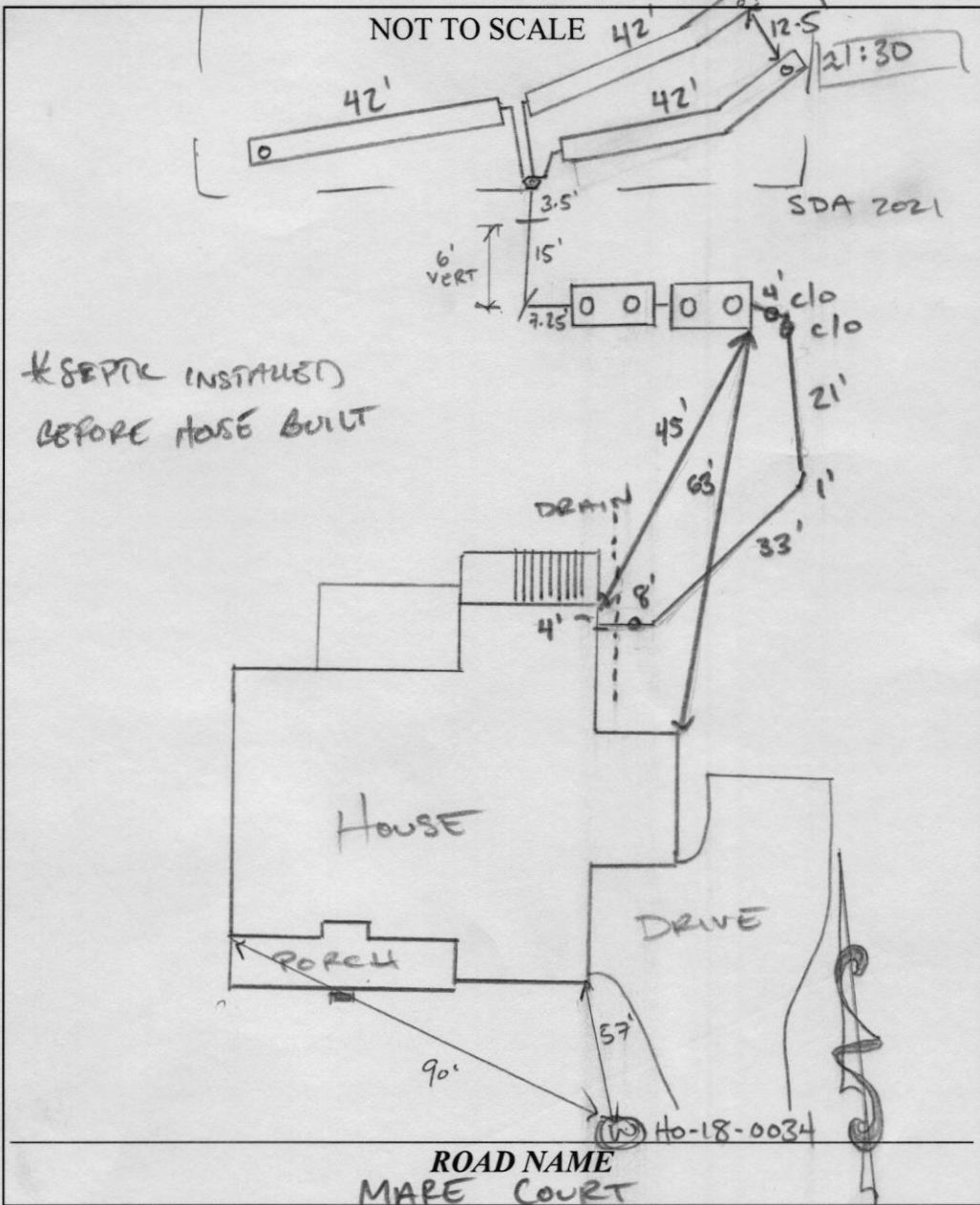
DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 6 APPLICATION RATE: 1.2

| | | |
|-----------|---|--|
| TRENCHES: | LINEAR FEET REQUIRED: <u>126</u> | INLET DEPTH: <u>3.0</u> |
| | TRENCH WIDTH: <u>3</u> | MAXIMUM BOTTOM DEPTH: <u>8.0</u> |
| | MINIMUM SPACE BETWEEN TRENCHES: <u>10</u> | EFFECTIVE AREA BEGINNING DEPTH: <u>5.0</u> |
| LOCATION: | PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION. | |
| NOTES: | INSTALL CLEANOUTS IN SHC AS ILLUSTRATED. THE SYSTEM MUST PASS A PUMP AND ALARM TEST BEFORE FINAL APPROVAL IS GRANTED FOR THE INSTALLATION. | |

ISSUED BY: R BRICKER ISSUE DATE: 07/12/2021 EXPIRATION DATE: 07/12/2027

- 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 21004948
- 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.



*SEPTIC INSTALLED BEFORE HOSE BUILT

| TRENCH/DRAINFIELD DATA | | |
|-------------------------|-------|-----------------------|
| WIDTH | INLET | BOTTOM |
| 3' | 3' | 8' |
| NUMBER OF TRENCHES | | 3 |
| TOTAL LENGTH | | 126 F |
| ABSORPTION AREA | | 378 SF + 3' SIDE WALL |
| DISTRIBUTION BOX LEVEL | | PUMP |
| DISTRIBUTION BOX BAFFLE | | YES |
| DISTRIBUTION BOX PORT | | YES |

| SEPTIC TANK DATA | |
|------------------------|----------------|
| SEPTIC TANK I LEVEL | YES |
| MANUFACTURER | BACKRIVER |
| CAPACITY | 2000 GAL |
| SEAM LOC | TOP |
| TANK LID DEPTH | 3.5' - 3' |
| BAFFLES | inlet + outlet |
| BAFFLE FILTER | - |
| MANHOLE LOC | FRONT/BACK |
| 6" PORT LOC | - |
| WATERTIGHT TEST | - |
| SLOTTED | YES |
| DATE ON LID | 02/15/2021 |
| PUMP/SEPTIC TANK LEVEL | YES |
| MANUFACTURER | BACKRIVER |
| CAPACITY | 2000 GAL |
| SEAM LOC | TOP |
| TANK LID DEPTH | 3.5' - 3' |
| BAFFLES | - |
| BAFFLE FILTER | - |
| MANHOLE LOC | FRONT/BACK |
| 6" PORT LOC | - |
| WATERTIGHT TEST | - |
| SLOTTED | - |
| DATE ON LID | 05/25/2021 |

PRE-CONSTRUCTION:

07/12/2021 CONFIRMED TRENCH CONTOUR. OK TO START

INSTALLATION:

07/22/2021 INSTALLED TANKS, FORCE MAIN, D BOX, AND TRENCHES EITHER MON OR TUES W/O NOTIFICATION. SYSTEM MAY BE UNCOVERED IF PUMP TEST FAILS. OBS PORTS ARE ~3-6' FROM TRENCH ENDS. OK. 10/17/2021 SL INSTALLED; CALLED TO CONFIRM INLET BAFF. 10/14/21 Inlet baffle installed 12/29/2021 ELECTRICAL NOT INSTALLED.

REINSPECTION:

1/6/2021 (FOR J. Cabany) P/A test working properly. Noticed panel mounted next to hose bib. Asked builder to confirm location based on any electrical codes (none) 1/26/22 Builder confirmed location is OK but he will re-locate for owner. OK to final approve.

FINAL INSPECTOR

DATE OF APPROVAL

1/26/22

Bricker, Robert

From: Michael Boyce <MBOYCE@eseconsultants.com>
Sent: Wednesday, July 14, 2021 2:20 PM
To: Bricker, Robert
Cc: Williams, Jeffrey; George Chahal; Ryan Ketner
Subject: Re: Willowcreek lots 9,10 & 11 OSDS issue

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

I am fine with you red lining the plan for this.

Get [Outlook for Android](#)

From: Bricker, Robert <RBricker@howardcountymd.gov>
Sent: Wednesday, July 14, 2021 2:18:25 PM
To: Michael Boyce <MBOYCE@eseconsultants.com>
Cc: Williams, Jeffrey <jewilliams@howardcountymd.gov>; George Chahal <gchahal@tollbrothers.com>; Ryan Ketner <rketner@eseconsultants.com>
Subject: RE: Willowcreek lots 9,10 & 11 OSDS issue

EXTERNAL EMAIL : Use caution with links and attachments

Hello Mike,
We could require a revision of these plans, but we would rather red-line an edit.
Do I have your permission to 'X' the Traffic-Bearing label and to write 'Not Traffic-bearing' next to it?
Robert Bricker, REHS/RS, L.E.H.S.

From: Ryan Ketner <rketner@eseconsultants.com>
Sent: Wednesday, July 14, 2021 12:22 PM
To: Bricker, Robert <RBricker@howardcountymd.gov>
Cc: Williams, Jeffrey <jewilliams@howardcountymd.gov>; George Chahal <gchahal@tollbrothers.com>; Michael Boyce <MBOYCE@eseconsultants.com>
Subject: FW: Willowcreek lots 9,10 & 11 OSDS issue

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Robert,

Please see the below request from the PM for the Willowshire project. Can they use a non-traffic bearing tank instead of the tanks shown? These took awhile to get approved as it is, please let us know if they can make that change without a revision or if a revision is needed etc.

Thanks,

Ryan Ketner
Designer III – ESE, Survey

ESE Consultants, Inc.

7164 Columbia Gateway Drive, Suite 230, Columbia, MD 21046
P: 410-381-3052 C: 443-889-4429 Fax: 410-872-9141
rketner@eseconsultants.com www.eseconsultants.com

From: George Chahalis <gchahalis@tollbrothers.com>

Sent: Wednesday, July 14, 2021 12:15 PM

To: Ryan Ketner <rketner@eseconsultants.com>; Michael Boyce <MBOYCE@eseconsultants.com>

Cc: Ryan Frick <ryan@chavisenterprisesllc.com>

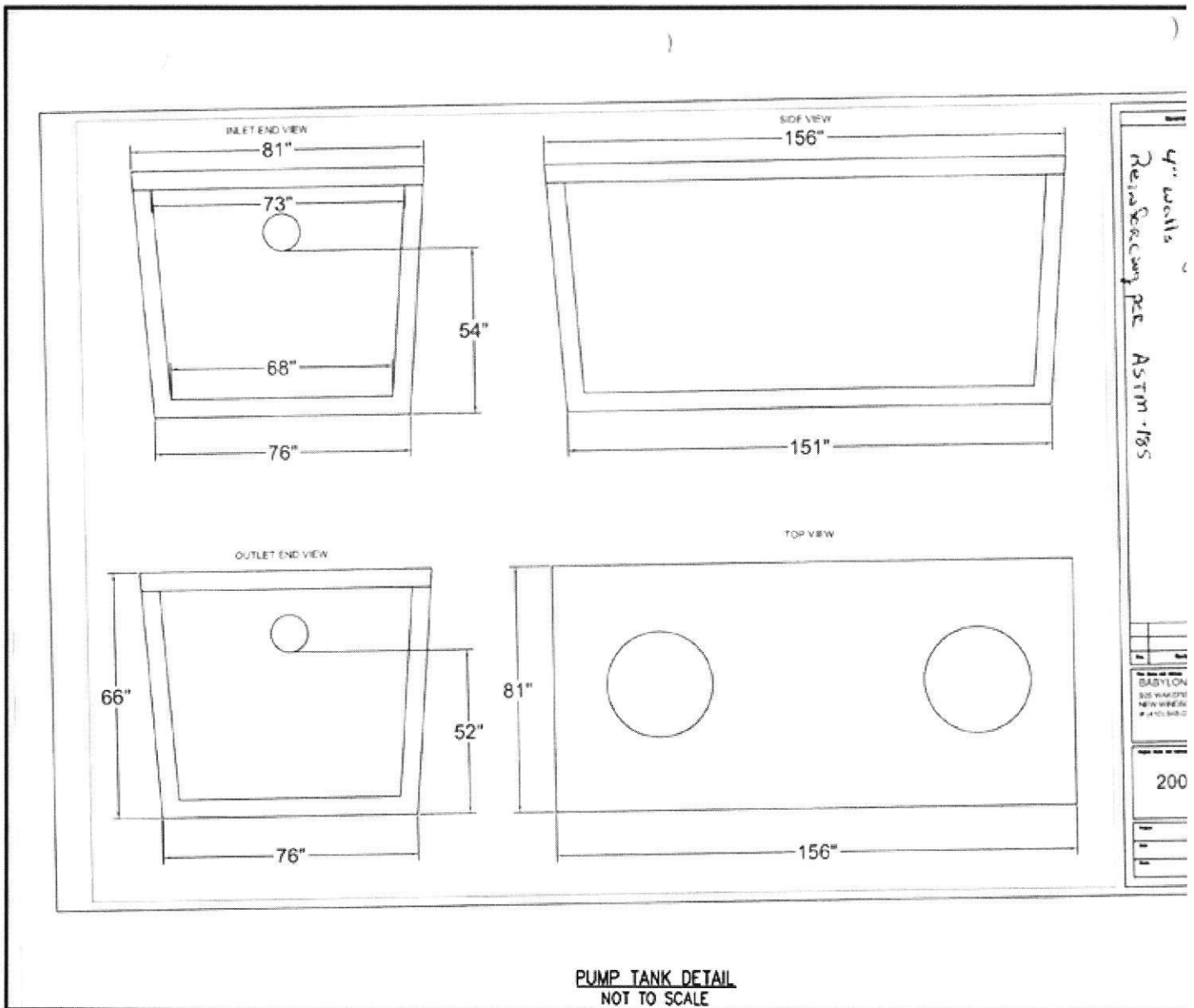
Subject: Willowcreek lots 9,10 & 11 OSDS issue

Afternoon gents, All three of these lots show the Pump Tank Detail as Traffic Bearing(see attached OSDs and below screenshot). Can we please get verbal approval to use non-Traffic Bearing pump tanks and submit for revision? We have the standard materials and equipment on site and would like to proceed with the installs tomorrow.

Thank you(Chavis is copied)

-George

301-606-6241



Bricker, Robert

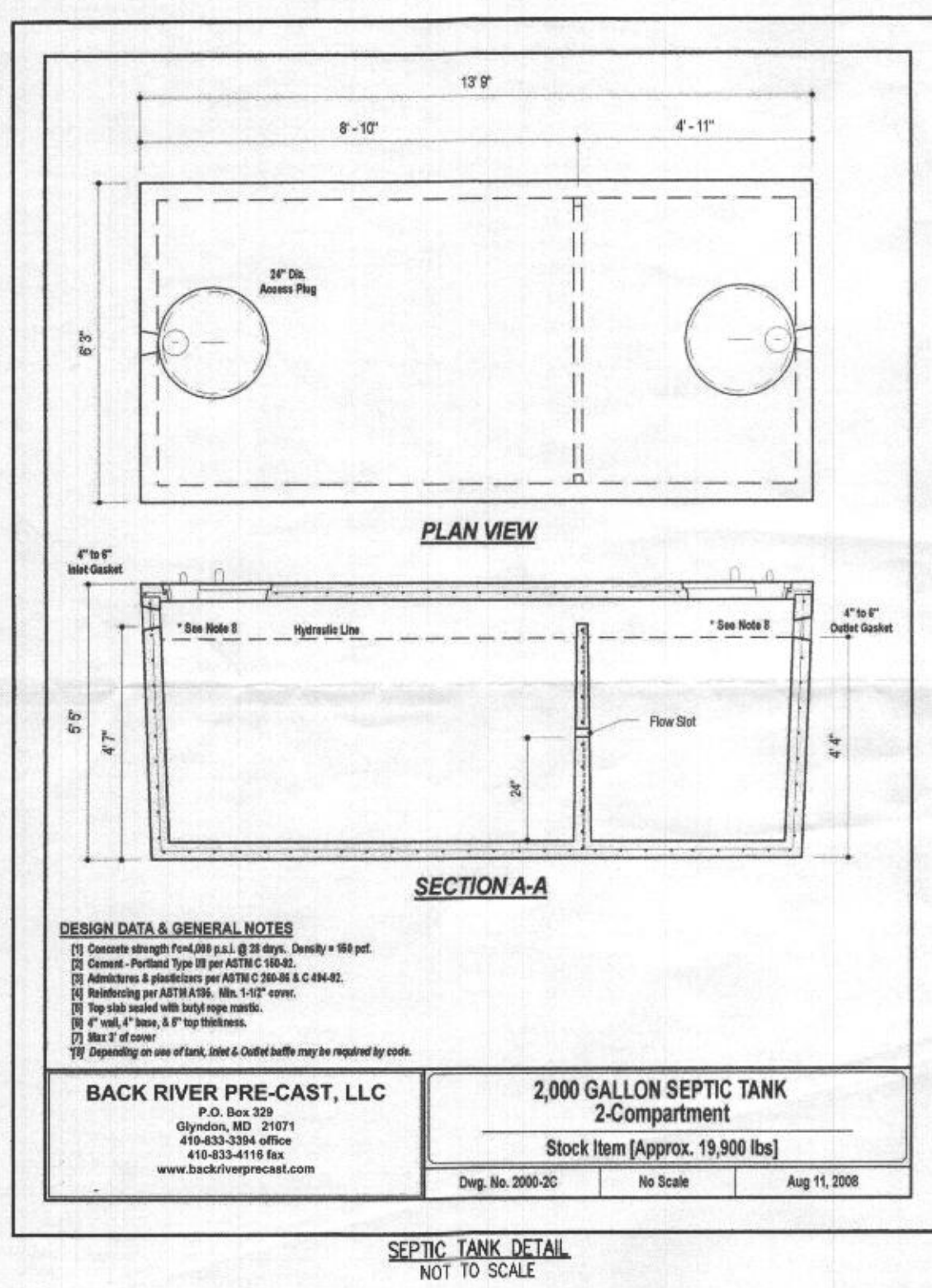
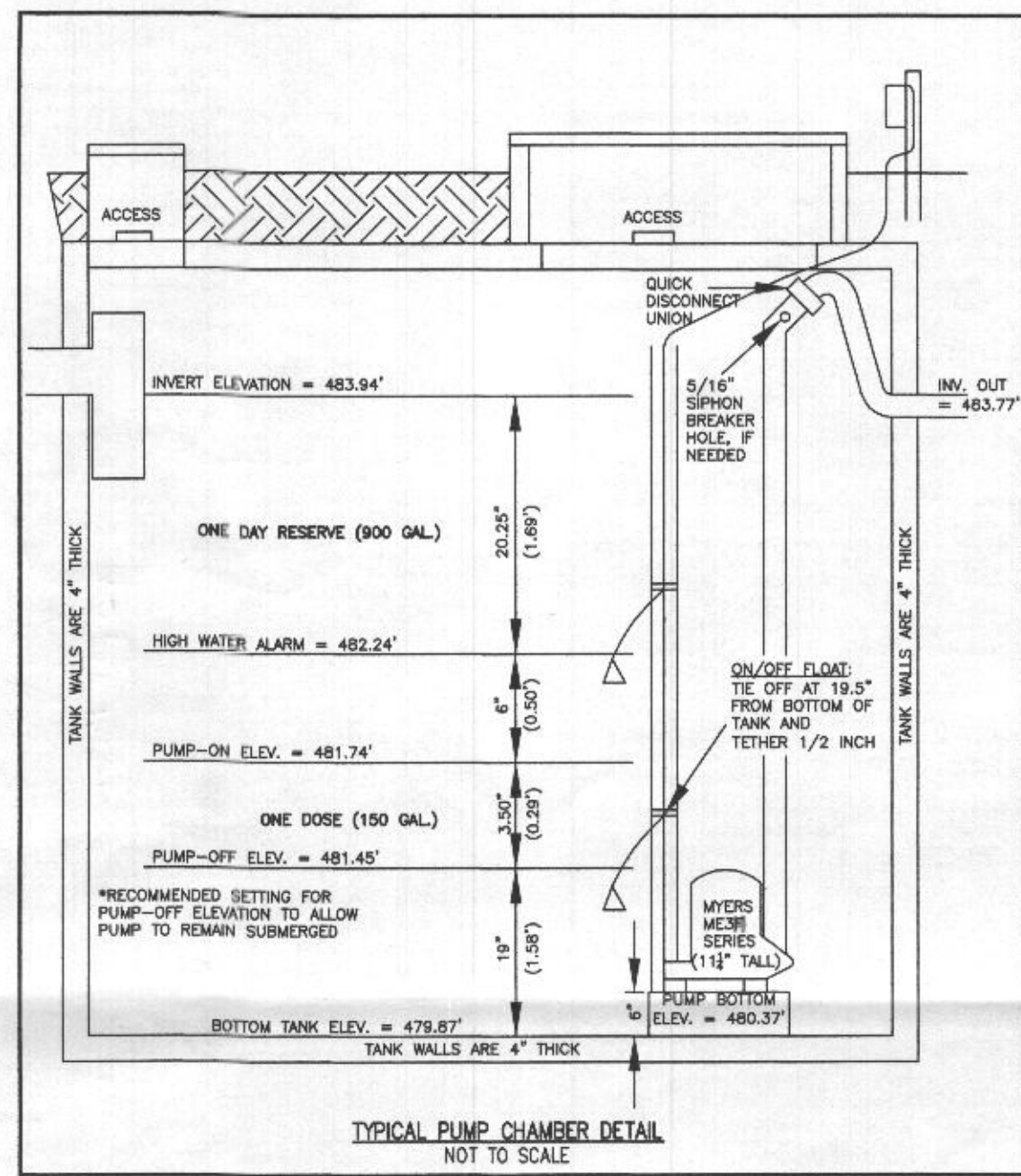
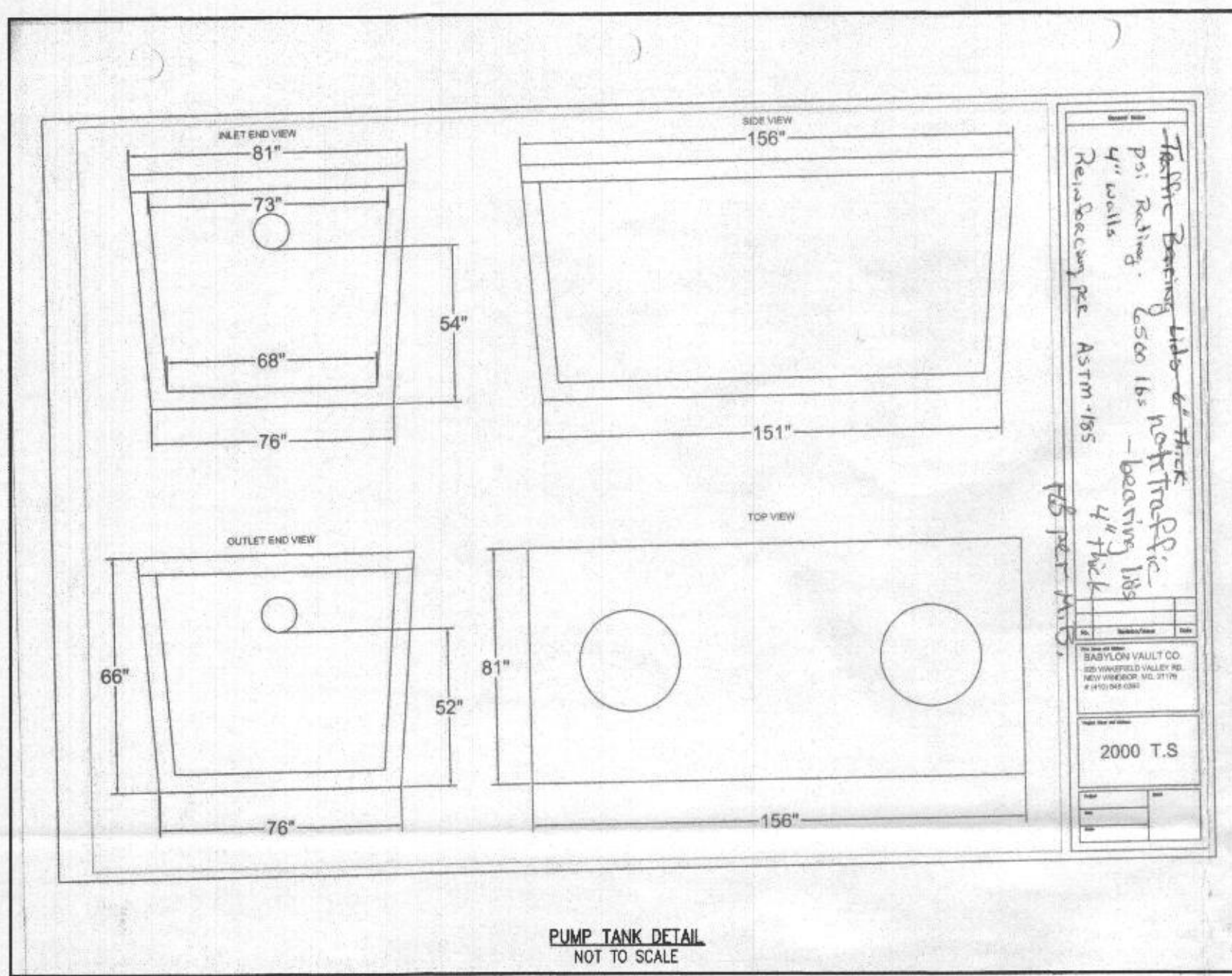
From: Bricker, Robert
Sent: Thursday, May 27, 2021 2:33 PM
To: Ryan Frick
Cc: Michael Boyce; Martin, Sharhonda
Subject: 6521 MARE CT_Willowshire Lot 9_Septic System permit

Good afternoon Mr Frick,

The Septic System permit for Willowshire Lot 9 is prepared. You may arrange for the pre-construction meeting upon payment of the permit fee and receiving the permit.

You may arrange for pick up of the permit by calling the Well and Septic Program at (410)313-1771.

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



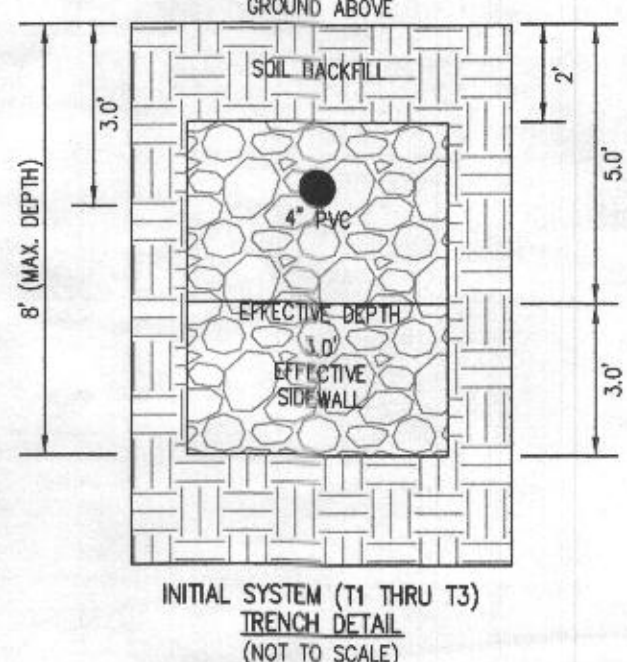
INITIAL TRENCH DATA

BOTTOM MAX. DEPTH (8')

TRENCH 1 (T1)- 41.75 L.F.
GROUND ABOVE = 491.50'
INV. IN = 488.90'
BOTTOM TRENCH = 483.90'

TRENCH 2 (T2)- 41.75 L.F.
GROUND ABOVE = 491.20'
INV. IN = 488.20'
BOTTOM TRENCH = 483.20'

TRENCH 3 (T3)- 41.75 L.F.
GROUND ABOVE = 491.20'
INV. IN = 488.20'
BOTTOM TRENCH = 483.20'

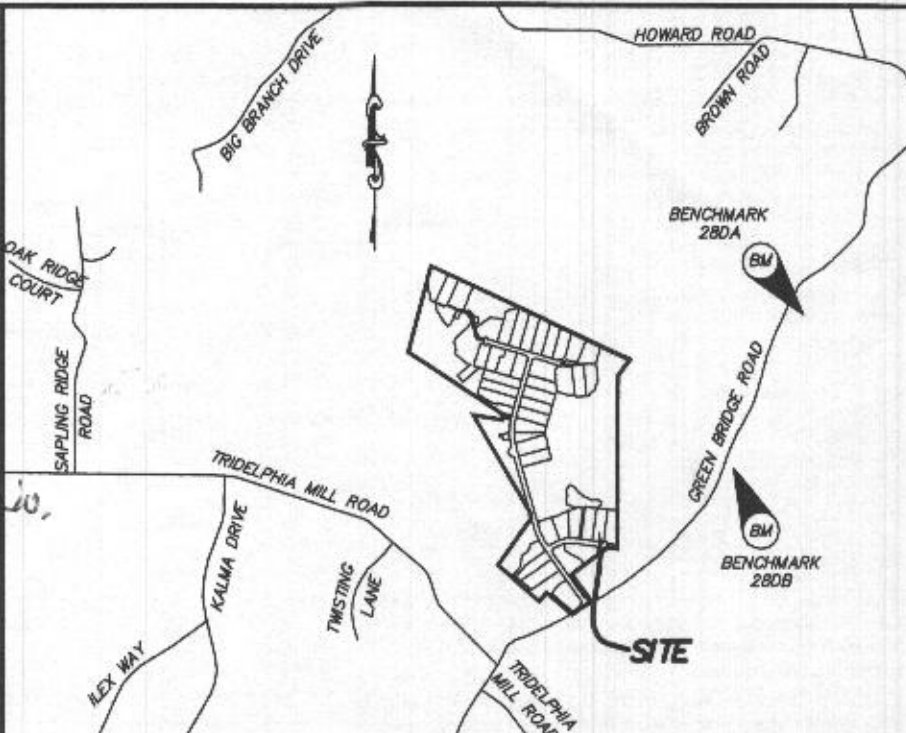
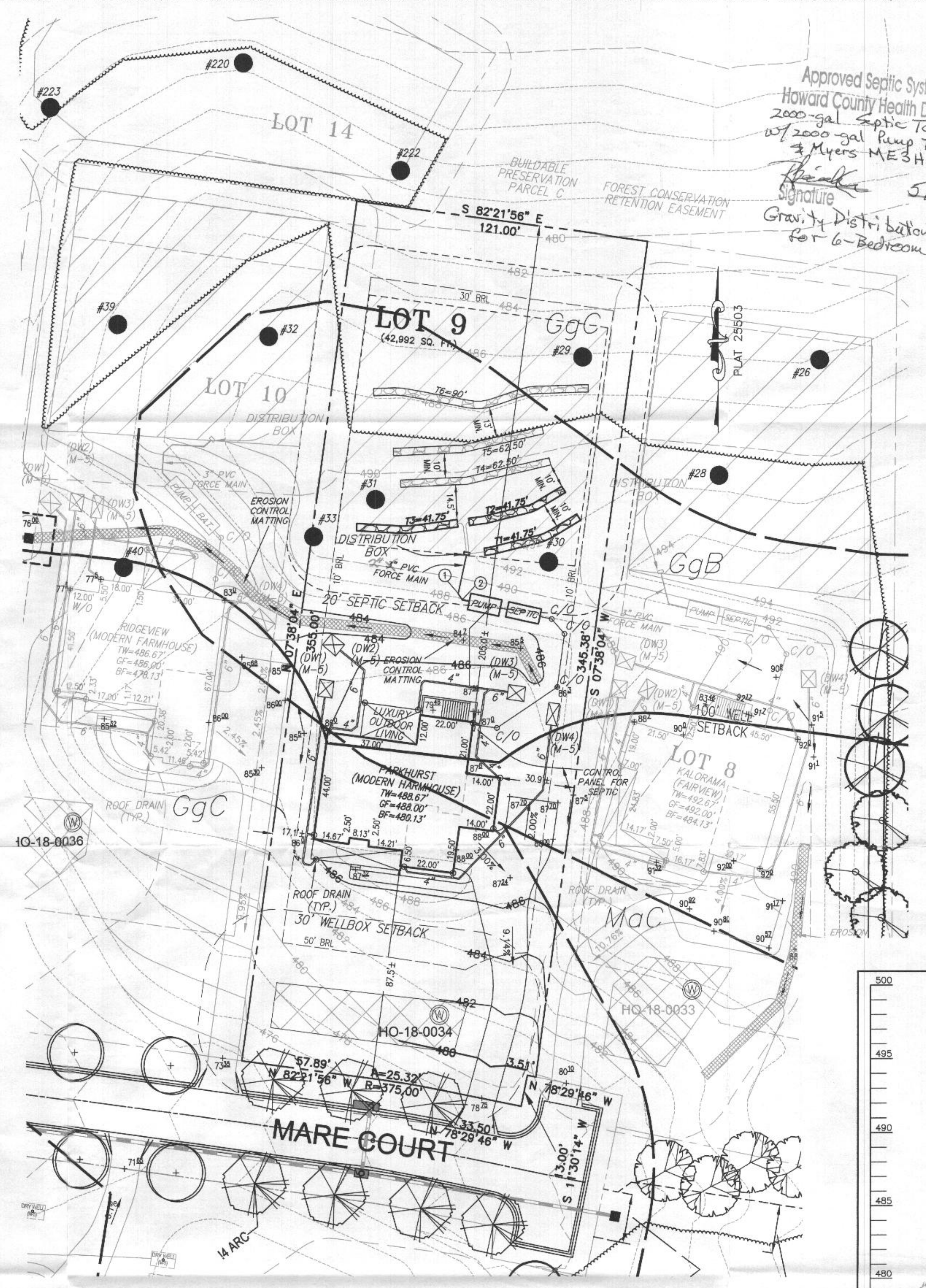
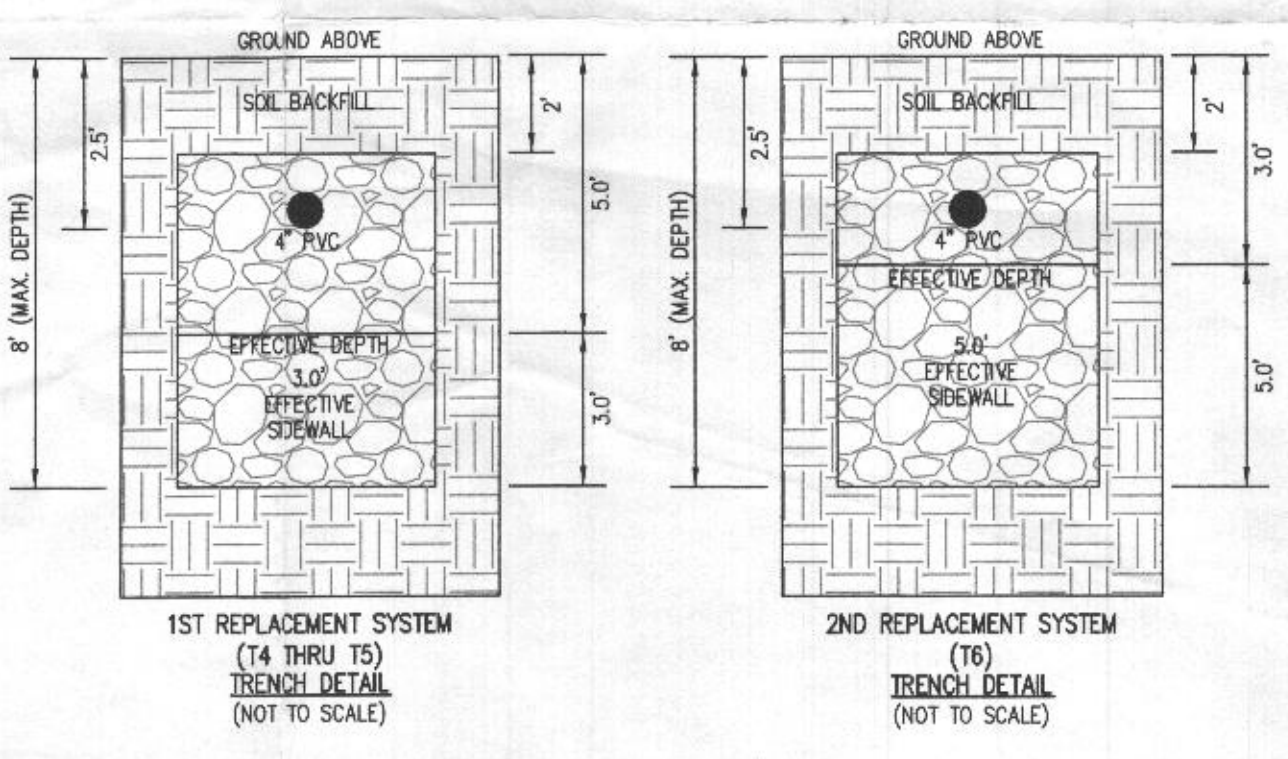


HOUSE OPTIONS:

HOUSE TYPE: PARHURST (MODERN FARMHOUSE)

TWO CAR SIDE ENTRY GARAGE
FINISHED LOWER LEVEL
DAYLIGHT BASEMENT
OPTIONAL DROP ZONE
ADDITIONAL ONE CAR FRONT ENTRY GARAGE
LUXURY OUTDOOR LIVING SPACE
OPTIONAL BATH FOR FINISHED LOWER LEVEL
MEDIA ROOM FOR FINISHED LOWER LEVEL
NET BAR ROUGH-IN
DOUBLE WIDE DRIVEWAY TAIL

OPTION NO. 012
OPTION NO. 013
OPTION NO. 018
OPTION NO. 283081
OPTION NO. 283102
OPTION NO. 283185
OPTION NO. 383
OPTION NO. 562
OPTION NO. 90000901
OPTION NO. 90000902



APPROVED SEPTIC SYSTEM PLAN
Howard County Health Department
2000-gal Septic Tank
w/ 2000-gal Pump Tank
& Myers ME3 Series pump
Signature: [Signature]
Date: 5/26/2021
Gravity Distribution
for 6-Bedroom Residence

- GENERAL NOTES:**
- THESE AREAS DESIGNATE A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE AREAS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE AREA. RESTORATION OF MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.
 - EXISTING WELLS, SEPTIC SYSTEMS, AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWAGE DISPOSAL AREAS HAVE BEEN SHOWN.
 - ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 - BUILDING SETBACKS (B.R.L.) SHOWN HEREON PER SITE DEVELOPMENT PLAN. SETBACK DISTANCES SHOWN HEREON AS "±" HAVE AN ACCURACY OF ±0.1' FOOT.
 - ANY CHANGES TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 - THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 - THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH, AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
 - THE EXISTING TOPOGRAPHY SHOWN HEREON IS FROM HOWARD COUNTY GIS AND A TOPOGRAPHIC SURVEY PREPARED BY BOHLER ENGINEERING ON 08/25/15 AND REVISED ON 09/03/15.

SOILS LEGEND

| SOIL | NAME | CLASS | Kw |
|------|--------------------------------------|-------|----|
| GgB | GLENELG LOAM, 3 TO 8 PERCENT SLOPES | B | 28 |
| GgC | GLENELG LOAM, 8 TO 16 PERCENT SLOPES | B | 28 |
| MnC | MANOR LOAM, 8 TO 15 PERCENT SLOPES | B | 28 |

- LEGEND:**
- PASSED PERC TEST LOCATION
 - ⊕ FAILED PERC TEST LOCATION
 - ⊕ EXISTING WELL LOCATION
 - C/O CLEANOUT
 - TW TOP OF WALL
 - GF GARAGE FLOOR
 - BF BASEMENT FLOOR
 - BRL BUILDING RESTRICTION LINE
 - ▨ PRIVATE SEWAGE DISPOSAL AREA TO BE REMOVED
 - ⊙ PROPOSED TREE LOCATION
 - ⊙ EXISTING TREE LOCATION

SEWAGE DISPOSAL SYSTEM DATA (6 BDRM):

PROPOSED INVERT AT FOUNDATION WALL: 485.80'
1. EX. GRADE OVER SEPTIC TANK: 487.80'
PROPOSED GRADE OVER SEPTIC TANK: 487.80'
INVERT IN: 484.30' INVERT OUT: 484.00'

EX. GRADE OVER PUMP TANK: 487.80'
PROPOSED GRADE OVER PUMP TANK: 487.80'
INVERT IN: 483.94' INVERT OUT: 483.77'

2. DISTRIBUTION BOX
EXISTING GRADE OVER TANK: 491.70'
PROPOSED GRADE OVER TANK: 491.70'
INVERT IN: 488.30' INVERT OUT: 488.00'

3. INITIAL TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD x 1.2 APP. RATE = 750 SF
USE 3' WIDE TRENCH WITH 48" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
750 SF x 3' WIDTH = 250 LF x 0.50 (SIDEWALL REDUCTION) = 125 LF MIN.
USE 3 41.75' LONG TRENCHES = 125.25 LF

4. 1ST REPLACEMENT TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD x 1.2 APP. RATE = 750 SF
USE 3' WIDE TRENCH WITH 66" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
750 SF x 3' WIDTH = 250 LF x 0.50 (SIDEWALL REDUCTION) = 125 LF MIN.
USE 2 62.50' LONG TRENCHES = 125 LF

5. 2ND REPLACEMENT TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD x 1.2 APP. RATE = 750 SF
USE 3' WIDE TRENCH WITH 66" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
750 SF x 3' WIDTH = 250 LF x 0.36 (SIDEWALL REDUCTION) = 90 LF MIN.
USE 1 90' LONG TRENCHES = 90 LF

LOW PRESSURE DISTRIBUTION SYSTEM CALCULATIONS

FLOW = 50 GPM
TIMED DOSE = 50 GPM @ 3 MINUTE INTERVALS IS 150 GALLONS PER DOSE
TOTAL DOSE PER DAY = 150 GALLONS X 8 EVENTS PER DAY IS 900 GPD

TRENCH 1 (T1) INV. ELEV.=488.90' LENGTH=48.75'
TRENCH 2 (T2) INV. ELEV.=488.20' LENGTH=48.75'
TRENCH 3 (T3) INV. ELEV.=488.20' LENGTH=48.75'

FORCEMAIN LENGTH = 22.00' TYPE=SC40

MIN. SYSTEM DISCHARGE RATE = 50 GPM
MANIFOLD DIAMETER = 3 IN.
FORCE MAIN DIAMETER = 3 IN.
MINIMUM DOSE = 150 GAL

DESIGN FLOW = 900 GPD
PUMP OFF ELEV. = 481.45'
INV. OF PUMP TANK = 483.77'
PUMP BOTTOM ELEV. = 480.27'
PUMP SELECTED = 1/3 HP

VELOCITY = 2.17 FPS
FRICTION LOSS (TABLE 4.4) = 0.58

CALCULATE TOTAL DESIGN HEAD:
LENGTH OF FM FROM PUMP TANK TO DISTRIBUTION BOX = 22.00'
OF (45') BONDS IN FM = 2 (ADD 6' PER BOND) = 12.00'
OF (30') BONDS IN FM = N/A (ADD 10' PER BOND) = N/A
TOTAL LENGTHS = 22.00' TOTAL ADD'L LENGTHS = 12.00' TOTAL PIPE/FRIC LOSS = 34.00'
(50 GPM OF 3" PVC = 0.58 PER 100' PIPE; 0.58 / 100' = 0.0058 x 34.00' = 0.20')

FRICTION HEAD = 0.20' FT. (PER ABOVE CALCULATION)
STATIC HEAD = 8.00' FT. (HIGHEST POINT IN DISTRIBUTION SYSTEM - PUMP OFF FLOOR ELEVATION)
TOTAL DYNAMIC HEAD = 8.20' FT. (FRICTION HEAD + STATIC HEAD)

THEREFORE A PUMP CAPABLE OF DELIVERING AT LEAST 50 GPM AGAINST 8.20' OF HEAD IS REQUIRED.
ME3H1P, 1/3 HP, IS EFFICIENT

WELL LOCATION CERTIFICATION:

THE EXISTING WELL SHOWN FOR LOT 9 (TAG NO. HO-18-0034) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN HEREON.

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
LOT 9 WILLOWSHIRE
LIBER 18-479, FOLIO 296
PLAT NO. 25503
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND
ADDRESS: 6521 MARE COURT
DAYTON, MARYLAND 21036

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL

ESE Consultants, Inc.
7164 Columbia Gateway Drive • Suite 230 • Columbia, MD 21046
T: 410-872-9105

DATE: 05/04/2021 SCALE: 1"=30' FILE: OSDS LOT 9_rvt2
CHK'D: M.J.B. JOB NO: 4520 DRAWN: R.C.K.

EFFLUENT PUMPS MYERS' ME3 SERIES

The Myers ME3 series submersible effluent pumps are constructed of the most durable combination of materials to withstand the harshest environments. The ME3 is available with a recessed impeller for high-head applications or an enclosed impeller for high-flow installations. Available in tethered, automatic piggyback models or manual models for use with external controls.

APPLICATIONS:
Effluent removal, sump drainage, water transfer, flood control.

FEATURES:
Two Powerful Pumps: High head (ME3H), High flow (ME3F).
Maximum Head Handling: Durable, all-steel motor for continuous bearing lubrication and maximum head distribution.
PowerStart Starts: High-tech, no-wear switches or reeds to wear out.
Thermal Protection: Heat sensor provides protection with automatic reset when motor cools to a safe operating temperature.

OPERATION:
Larger-Setting Motor: Lower ball bearing assembly gives bearing wear and reduces motor wear.
Tethered automatic models can be controlled manually by untagging piggyback switch and triggering pump directly into outlet.

ME3H (High Head)
ME3F (High Flow)

PERFORMANCE:
Capacity (GPM per minute)

RECOMMENDATIONS:
Capacity (GPM per minute)

◆ PENTAIR

EFFLUENT PUMPS MYERS' ME3 SERIES

CLASSIFICATION:

| Model | HP | Volts | Phase/Cycle | Amperes | Discharge Size | Switch Type | Cord Length | Altitude |
|---------|-----|-------|-------------|---------|----------------|-------------|-------------|----------|
| ME3H-T1 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |
| ME3H-T2 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |
| ME3H-T3 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |
| ME3F-T1 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |
| ME3F-T2 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |
| ME3F-T3 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |
| ME3H-T4 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |
| ME3H-T5 | 1/2 | 115 | 1/2 | 1.2 | 1.5" | Automatic | 20' | 30' |

RECOMMENDATIONS:

ME3H (High Head)

PERFORMANCE:
Capacity (GPM per minute)

◆ PENTAIR