

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: 11/12/19 **ONSITE SEWAGE DISPOSAL SYSTEM** P 566452B

APPROVAL DATE: 06/26/2020 **PERMIT: CONSTRUCTION** A _____

PROPERTY ADDRESS: 12171 Fulton Estates Court Highland, MD 20777

SUBDIVISION: Fulton Manor Valley LOT: 4 TAX ID: 05597667

CONTRACTOR: _____ EMAIL: _____

CONTRACTOR ADDRESS: _____ PHONE: _____

PROPERTY OWNER: Estates of River Hill, LLC EMAIL: _____

OWNER ADDRESS: 3676 Park Ave., Suite 2C Ellicott City, Md 21043 PHONE: 410-480-0023

SEPTIC TANK SIZE (GALLONS): 1500 TANK MANUFACTURER: Mayor Bros

PUMP MODEL: Goulds WE03L PUMP SIZE 1500 0.22 HP PUMP TANK CAPACITY: 1500

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: .8

TRENCHES:	LINEAR FEET REQUIRED: <u>195</u>	INLET DEPTH: <u>2</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>4</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>2</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:		

ISSUED BY: Robert Freemon ISSUE DATE: 11-12-19 EXPIRATION DATE: 11-12-20

- 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 20000251
- 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

SEE ATTACHED
AS BUILT

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	2'	4'
NUMBER OF TRENCHES		3
TOTAL LENGTH		195 F
ABSORPTION AREA		585 SF
DISTRIBUTION BOX LEVEL		N/A
DISTRIBUTION BOX BAFFLE		N/A
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL

MANUFACTURER Babylon

CAPACITY 1500 GAL

SEAM LOC TOP

TANK LID DEPTH ~2'

BAFFLES YES

BAFFLE FILTER No

MANHOLE LOC FRONT/BACK

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED YES

DATE ON LID 10-4-19

PUMP/SEPTIC TANK LEVEL

MANUFACTURER Babylon

CAPACITY 1500 GAL

SEAM LOC TOP

TANK LID DEPTH ~2'

BAFFLES -

BAFFLE FILTER -

MANHOLE LOC FRONT/BACK

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED -

DATE ON LID 11-12-19

PRE-CONSTRUCTION:

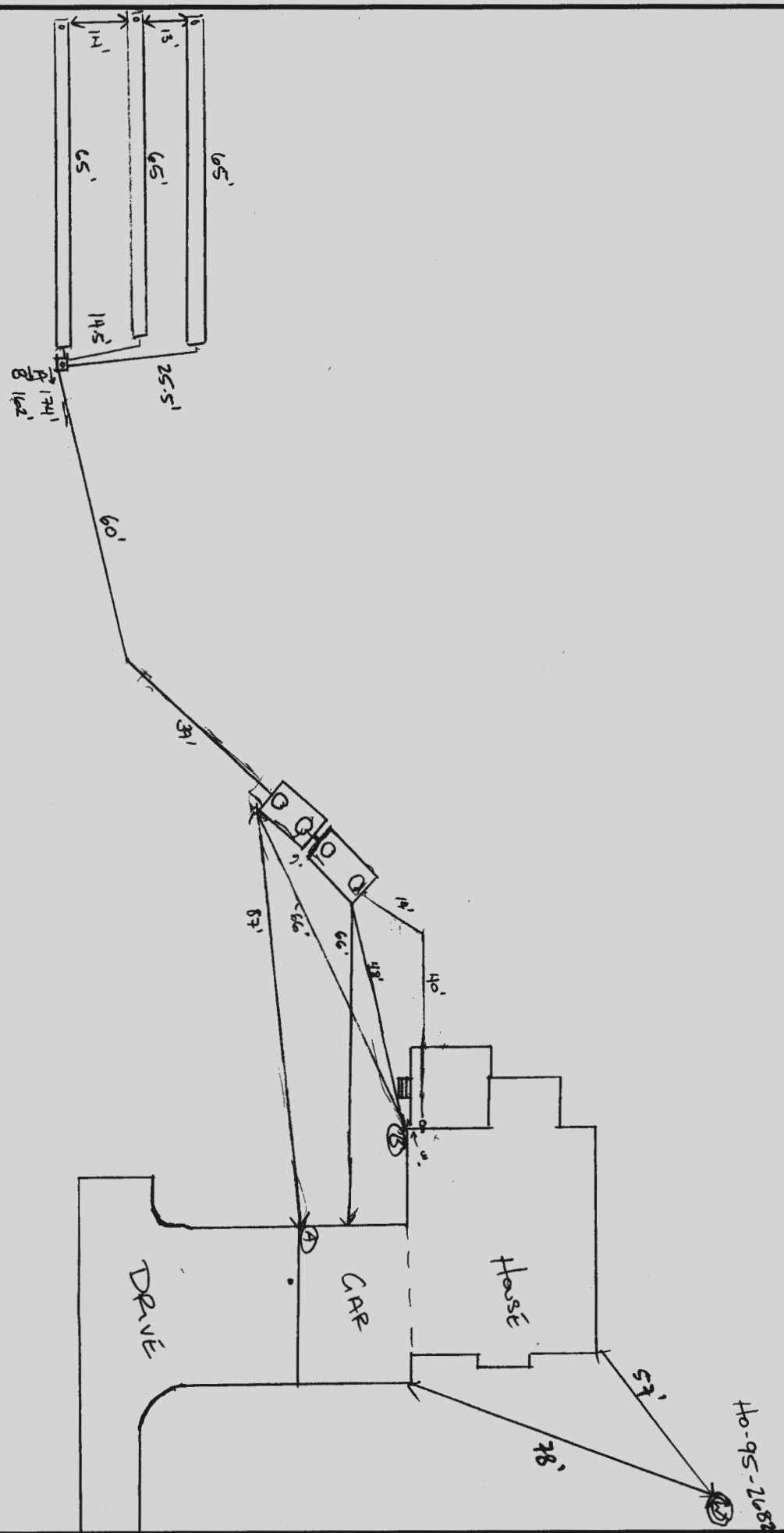
12/6/2019 TANK + SDA STAKED. TRENCHES STAKED. CONFIRMED
CONTOUR. TANK IN SWALE. CAN WAIT FOR GRADING
OK INSTALL PER CUT AND GRADE AROUND TANK. (h)

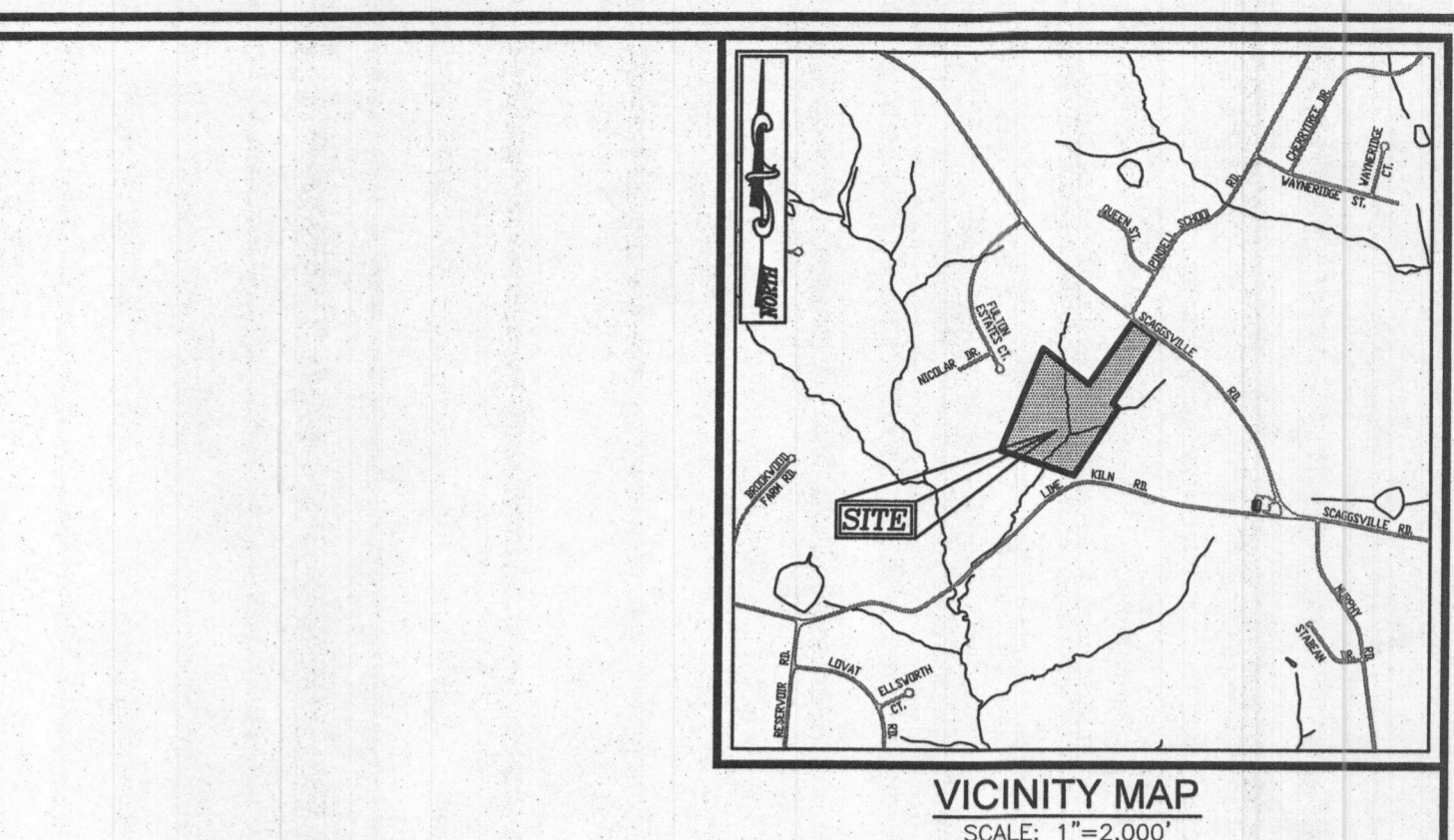
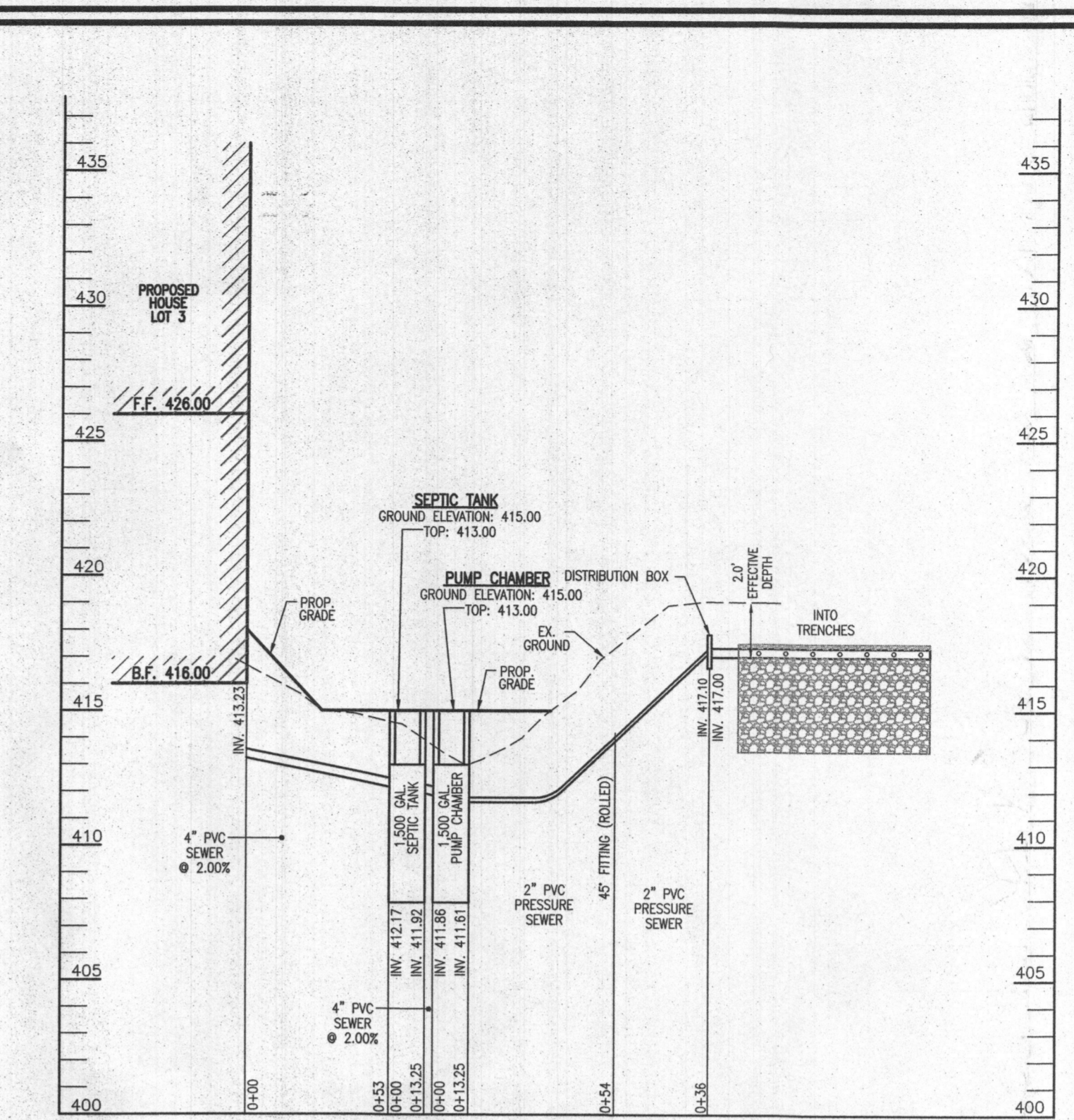
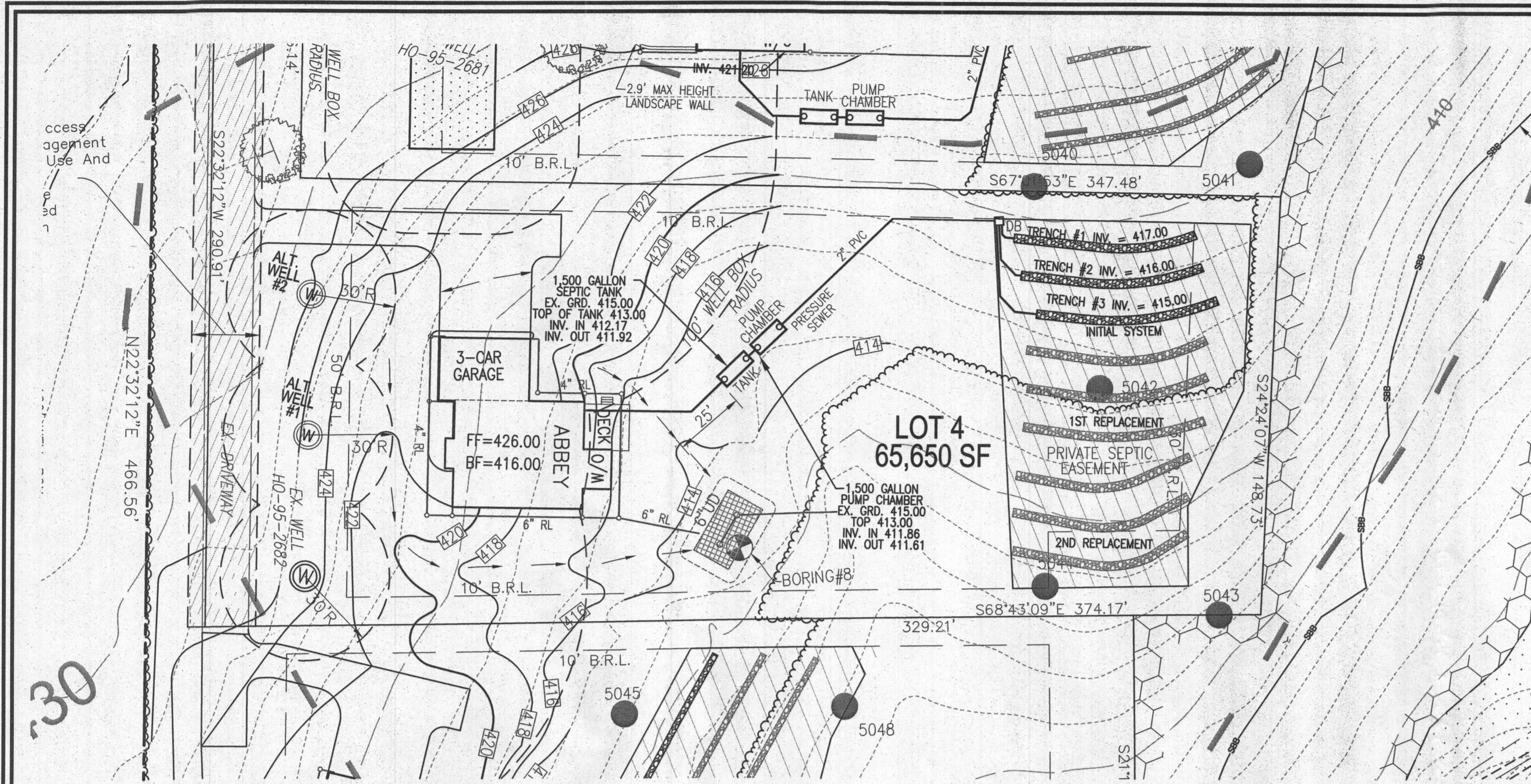
INSTALLATION:

1/2/2020 SHC set. Tanks delivered but truck got stuck in mud so tanks not set. (ST)
01/14/2020 TRENCHES INSTALLED. OK TO BACKFILL. 01/21/2020 TANKS SET AND FORCE
MAIN INSTALLED TO D BOX. (h) 01/22/2020 90° TURN DOWN INSTALLED
IN D BOX. REINSPECT P/A. (h) 06/26/2020 ALARM ON GEN IN SEP
ROOM FROM BREAKER. L PANEL 34 SEP ALARM L PANEL
36 SEPTIC PUMP. OBSERVED WATER PUMPED TO D BOX. OK TO
FINAL (D)

FINAL INSPECTOR [Signature] DATE OF APPROVAL 06/26/2020

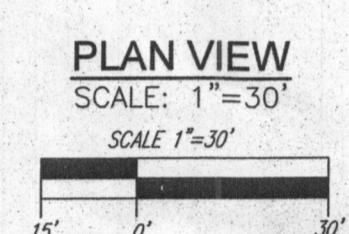
NOT TO SCALE





LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- EXISTING TREENLINE
- PROPOSED TREENLINE
- EXISTING WELL (FIELD LOCATED)
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- FAILED PERC. TEST
- PASSED PERC. TEST
- APPROVED SEPTIC AREA



GENERAL NOTES:

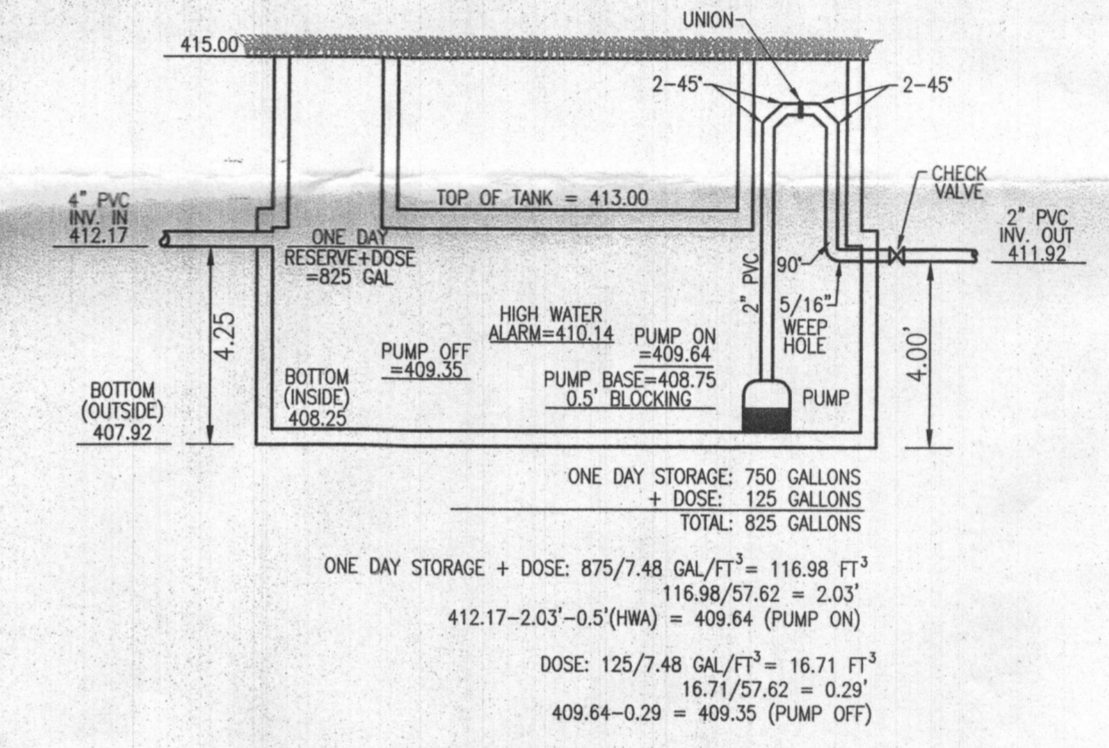
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- THE WELL (HO-95-2682) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
- ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

SEPTIC SYSTEM PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

OUTSIDE TO OUTSIDE DIM: 13.25' x 5.25'
INSIDE TO INSIDE DIM: 12.56' x 4.56'
INSIDE CROSS SECTION AREA: 57.62'

NO. BEDROOMS = 5
DESIGN FLOW = 5(150 GPD) = 750 GPD
DOSE: 1/8 DESIGN FLOW = 125 GPD
125 GALLONS/7.48 GAL. PER FT. = 16.71 FT
16.71 FT³/57.62 SF = 0.29'
ONE DAY RESERVE: 750 GALLONS/7.48 GAL. PER FT = 100.27 FT
100.27 FT³/57.62 = 1.74'
(FRICTION LOSS x QUANTITY)
FRICTION FITTINGS: UNION: 2' x 1' = 2'
45° ELBOW: 4' x 6' = 24'
90° ELBOW: 7' x 1' = 7'
TOTAL = 33'

LENGTH: 95 LF
TOTAL LENGTH: 128 LF
FRICTION LOSS (40 GPM): (2.62)(128)/100 = 3.35'
STATIC: 417.10 - 409.35 (PUMP OFF) = 7.75'
TDH: 7.75 + 3.35 = 11.1'
PUMP SIZING: (40 gpm)(11.1')(1.0)/(3.960)(0.5) = 0.22 HP MINIMUM
USE: SOLIDS WEEDER



Bureau of Environmental Health
8900 Stearns Road, Columbia, MD 21045
Main: 410-313-2340 | Fax: 410-313-2688
TDD: 410-313-2328 | Toll Free: 1-866-933-6800
www.hcdeh.org
Facebook: www.facebook.com/hcdeh
Twitter: @HowardCoHealthDep

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

SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

Address: _____ Subdivision: FMV Lot: 4

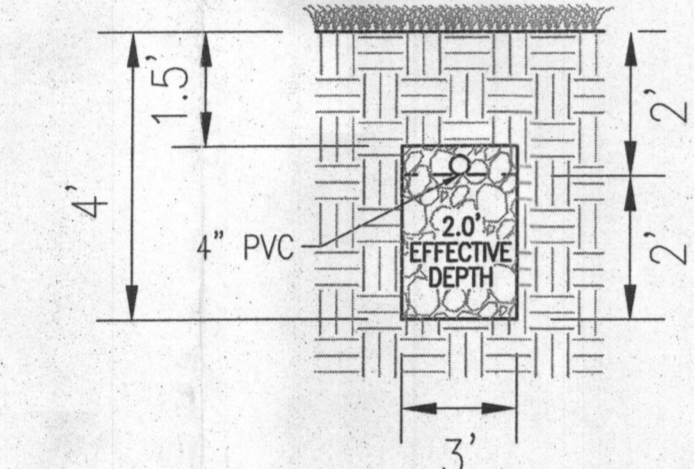
Initial system: Application rate: 0.8 Effective area beginning depth: 2 Bottom maximum depth: 4
1st Replacement: Application rate: 0.8 Effective area beginning depth: 2 Bottom maximum depth: 4
2nd Replacement: Application rate: _____ Effective area beginning depth: _____ Bottom maximum depth: _____

Design Flow = 150 gallons per day per bedroom
Design flow = application rate = square footage of drainfield required
Linear length of trench required = drainfield square footage x sidewall reduction percentage + trench width
Sidewall reduction credit formula:
 $W = 1 + 2D \times 100 =$ Percent of length of standard trench where W=trench width and D= depth between effective area beginning depth and trench bottom.

Standard design requirements:
• All trenches must be equal length unless low pressure dosed
• All trenches must be on contour
• Minimum trench spacing: 10' for all trenches utilizing sidewall reduction credit.
Additional spacing may be necessary for any trench using over 3.5' of effective sidewall. In those cases, the spacing formula is $2D + W$ up to a maximum spacing of 18'.
• Minimum trench spacing for trenches with no sidewall credit (bottom area only) is 6' for a 2' wide trench and 6' for a 3' wide trench (spacing is measured edge to edge)
• Maximum trench length is 100'
• Maximum pipe depth is 4'

Additional requirements: _____

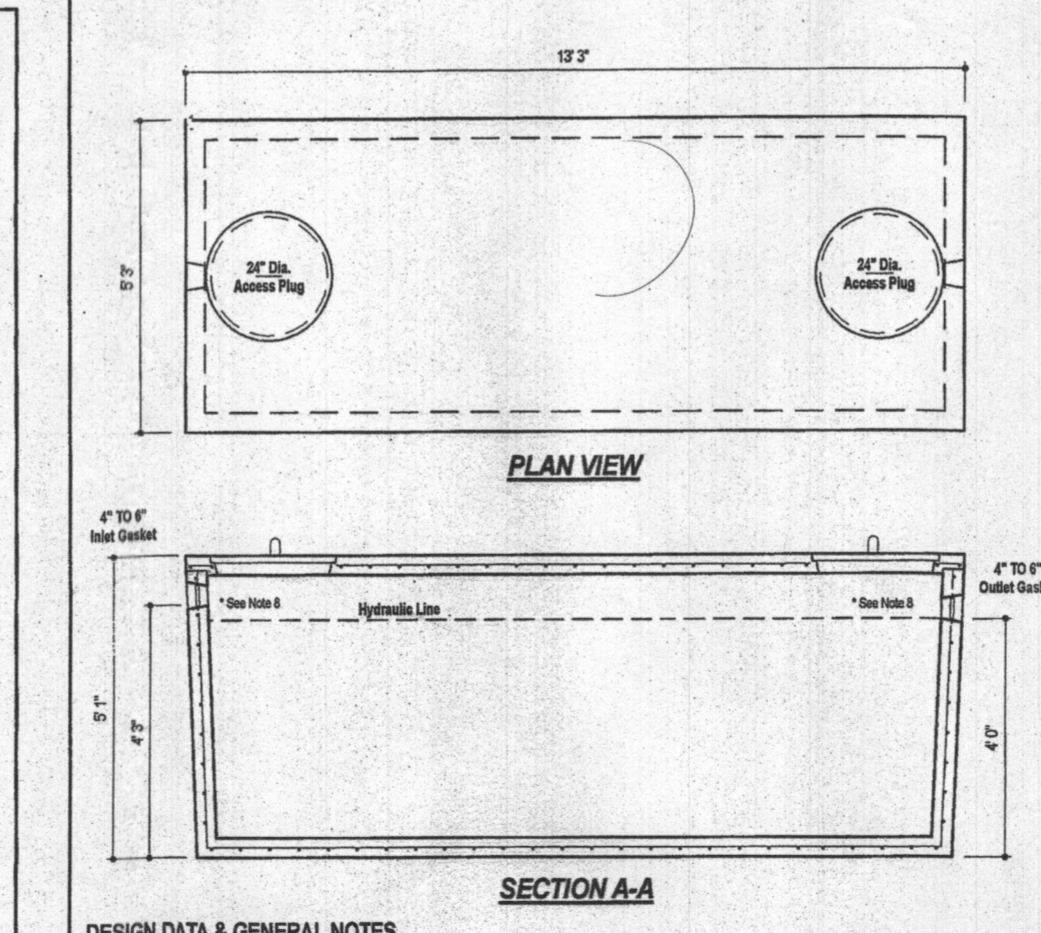
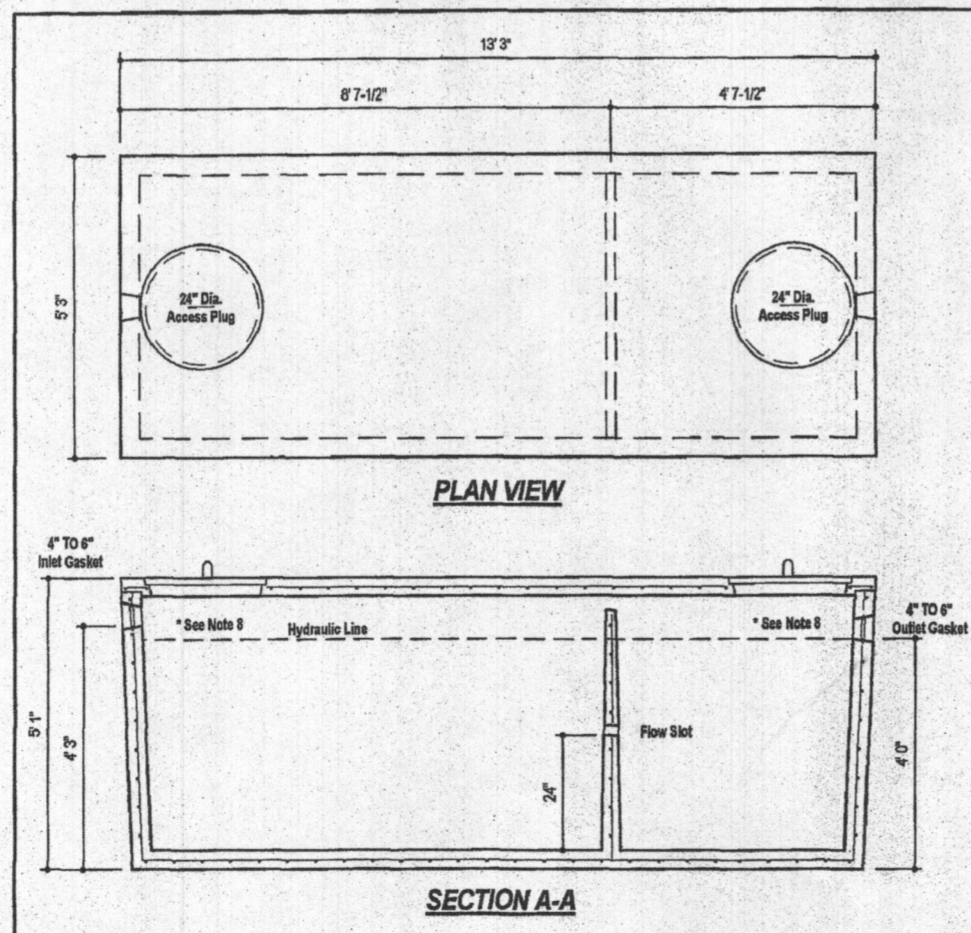
Approved: _____ Date: 4/17/15



INITIAL SYSTEM AND 1ST REPLACEMENT TRENCH DETAIL
NOT TO SCALE

TRENCH INFO

TRENCH	TRENCH LENGTH	TRENCH TOP	TRENCH BOTTOM	EXISTING GROUND
1	65'	417.00	415.00	419.00
2	65'	416.00	414.00	418.00
3	65'	415.00	413.00	417.00



DESIGN DATA & GENERAL NOTES

- Concrete strength Form 100 p.s.i. @ 28 days. Density = 150 p.c.f.
- Concrete: Portland Type III per ASTM C-682.
- Reinforcing: #4 per ASTM A-631.
- Reinforcing per ASTM A-631. Min. 1.5" cover.
- Top side sealed with half non-toxic.
- 4" wall, min. & top thickness.
- Min 2" of cover.
- Depending on use of tank, inlet & outlet baffles may be required by code.

WEIGHT = 16,750 lbs.

MBI Mayer Bros., Inc. 4300 River Road, Ellicott City, Maryland 21043 Tel: 410.786.6666 Fax: 410.786.6668

DESIGN DATA & GENERAL NOTES

- Concrete strength Form 100 p.s.i. @ 28 days. Density = 150 p.c.f.
- Concrete: Portland Type III per ASTM C-682.
- Reinforcing: #4 per ASTM A-631.
- Reinforcing per ASTM A-631. Min. 1.5" cover.
- Top side sealed with half non-toxic.
- 4" wall, min. & top thickness.
- Min 2" of cover.
- Depending on use of tank, inlet & outlet baffles may be required by code.

WEIGHT = 16,000 lbs.

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Goulds Water Technology

Wastewater

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

SPECIFICATIONS
• Solids handling capabilities: 3" maximum.
• Discharge flow: 2" NPT.
• Capacities: up to 140 GPM.
• Total heads: up to 128 feet TDH.
• Temperature: 104°F (40°C) continuous, 140°F (60°C) intermittent.
• See order number on reverse side for specific HP, voltage, phase and RPM's available.

MOTORS
• Fully submerged in high grade turbine oil for lubrication and efficient heat transfer.
• Class B insulation on 1/2 - 1 1/2 HP models.
• Class F insulation on 2 HP models.

Single phase (60 Hz):
• Capacitor start motors for maximum starting torque.
• Built in overload with automatic reset.

AGENCY LISTINGS
Listed to UL 718 and CSA 22.2 108 Standards by Canadian Standards Association File #L23549

Approved Septic System Plan
Howard County Health Department
Signature: _____ Date: 3/22/2015

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN

FULTON MANOR VALLEY - LOT 4
12171 FULTON ESTATES COURT
HIGHLAND, MD 20777

BUILDING PERMIT

TAX MAP: 41 GRID: 19
5TH ELECTION DISTRICT

PARCELS: 78 & 456
ZONING: RR-100
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD
ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
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. 18193, EXPIRATION DATE: 09-27-2020

DESIGN BY: RHV
DRAWN BY: MDL
CHECKED BY: RHV
DATE: JANUARY 2015
SCALE: AS SHOWN
W.O. NO.: 14-24

1 SHEET OF 1

WELL LOCATION CERTIFICATION:
THE EXISTING WELL SHOWN ON THIS PLAN (TAG HO-95-2682) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.

THIS AREA DESIGNATES A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS 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 SEWAGE AREA. RECONSTRUCTION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.

