



Howard County
Health Department

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

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

RECEIPT DATE: 8.12.22 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 572138

APPROVAL DATE: 2/13/23 **PERMIT: CONSTRUCTION**

A _____

PROPERTY ADDRESS: 13609 NOBLE WAY, HIGHLAND, MD 20777

SUBDIVISION: THE ESTATES AT RIVER HILL LOT: 7 TAX ID: 05-601935

CONTRACTOR: Freedom Septic EMAIL: Christy@freedomseptic.com

CONTRACTOR ADDRESS: 2809 Liberty Rd. Sykesville, MD 21784 PHONE: 410-795-2947

PROPERTY OWNER: ESTATES AT RIVER HILL LLC EMAIL: tkeane@trinityhomes.com

OWNER ADDRESS: 3675 PARK AVE., SUITE 301, ELLICOTT CITY, MD 21043 PHONE: (443)324-9806

SEPTIC TANK SIZE (GALLONS): 1500 TANK MANUFACTURER: MAYER BROS., INC.

PUMP MODEL: GOULDS PUMP SIZE: 0.3 HP PUMP TANK CAPACITY: 1500

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>84</u>	INLET DEPTH: <u>2.0</u>
	TRENCH WIDTH: <u>2</u>	MAXIMUM BOTTOM DEPTH: <u>8.0</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>15</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>2.0</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. <i>Install 2 trenches of 42'</i>	

ISSUED BY: R BRICKER H.O. ISSUE DATE: 8.15.22 EXPIRATION DATE: 8.15.23

- 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 22004848
- 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 Separate
sheet for
As Built

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
2'	2'	8'
NUMBER OF TRENCHES		2
TOTAL LENGTH		84'
ABSORPTION AREA		168 sqft + sidewall
DISTRIBUTION BOX LEVEL		yes
DISTRIBUTION BOX BAFFLE		yes
DISTRIBUTION BOX PORT		yes

SEPTIC TANK DATA

SEPTIC TANK I LEVEL yes
 MANUFACTURER Babylon
 CAPACITY 1500 GAL
 SEAM LOC top
 TANK LID DEPTH 3'
 BAFFLES front 6" / back 4"
 BAFFLE FILTER -
 MANHOLE LOC front / back
 6" PORT LOC -
 WATERTIGHT TEST -
 SLOTTED yes
 DATE ON LID 9/22/22

PUMP/SEPTIC TANK LEVEL yes
 MANUFACTURER Babylon
 CAPACITY 1500 GAL
 SEAM LOC top
 TANK LID DEPTH 3'
 BAFFLES -
 BAFFLE FILTER -
 MANHOLE LOC back
 6" PORT LOC -
 WATERTIGHT TEST -
 SLOTTED -
 DATE ON LID 8/25/22

PRE-CONSTRUCTION:

10/07/2022 SDA, TKS, TANK STAKED. CONFIRMED CONTOUR. *[Signature]*

INSTALLATION:

10/27/22 - site insp, contractor onsite, site made, sewer line, tanks + fm installed, OK to continue. @ 10/28/22 - trenches + d box installed, stone ok, geotextile fabric in place, no labelers on d box due to fm, ok to backfill, reinspect for p: a. *[Signature]*
 2/13/2023 - Contractor onsite for P + A. Alarm heard from outside house. Heard water running into D-box for Pump, P + A switch on circuit panel inside house. Alarm on separate circuit inside house. *[Signature]*

FINAL INSPECTOR

Shepsura + Page

DATE OF APPROVAL

2/13/2023

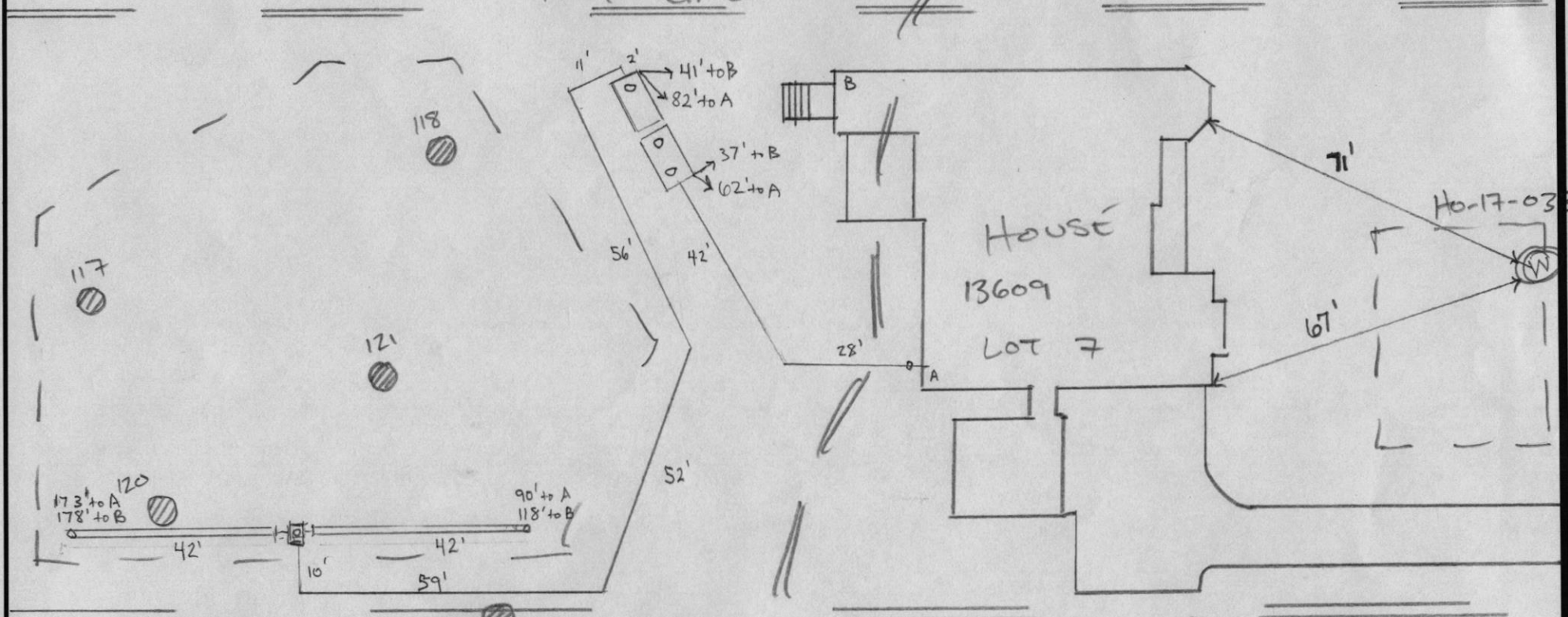
NOT TO SCALE

1"=30'

LOT 6

PROP LINE

1"=30'
WELL
ARC
100'



dbox - 130' to A
142' to B

119/123

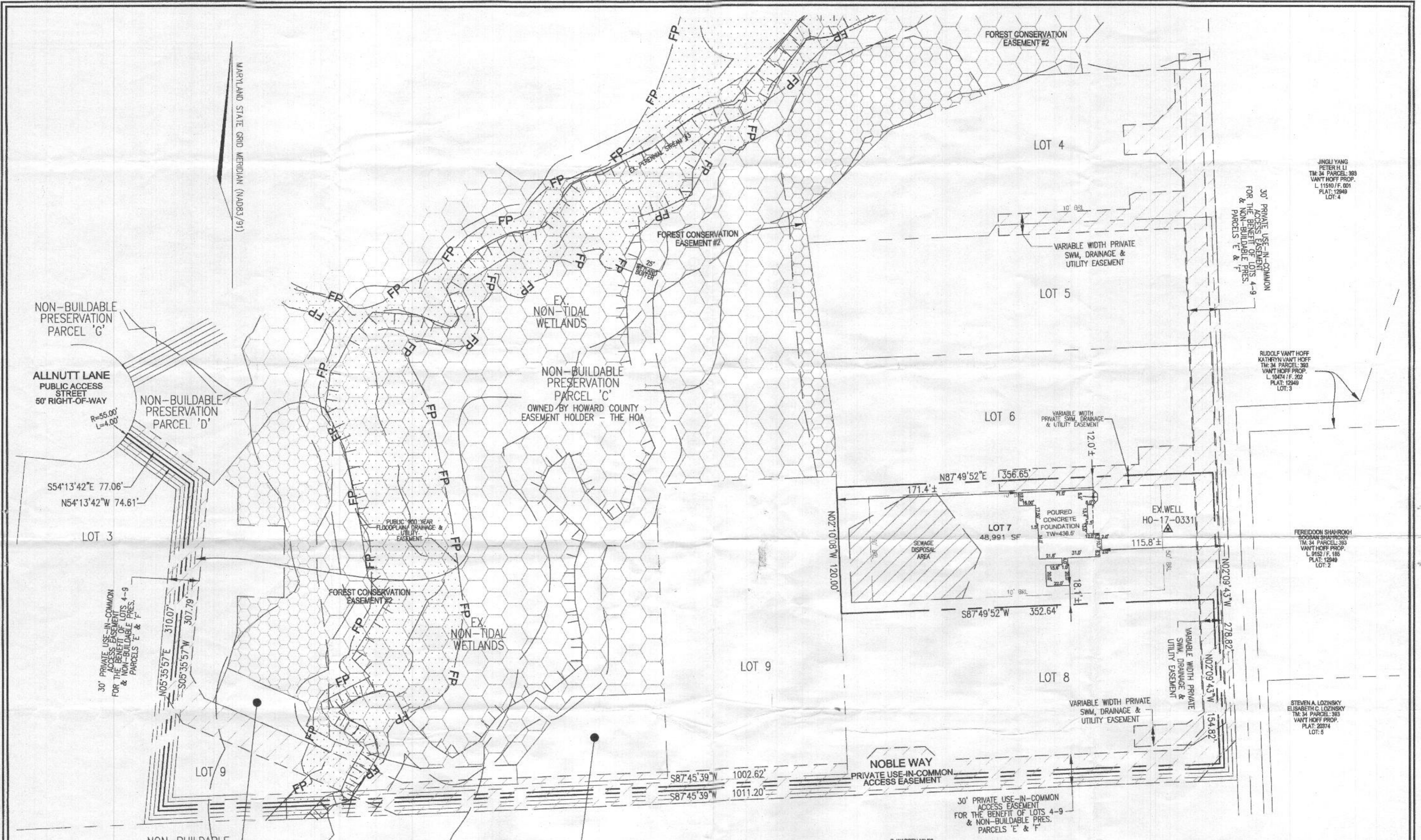
PROP LINE

100'
WELL
ARC

LOT 8

NOBLE WAY

HO-17-0331



JINGLI YANG
PETER H. LI
TM: 34 PARCEL: 383
VANT HOFF PROP.
L. 11510 / F. 001
PLAT: 12949
LOT: 4

30' PRIVATE USE-IN-COMMON
ACCESS EASEMENT
FOR THE BENEFIT OF LOTS 4-9
& NON-BUILDABLE PRES.
PARCELS E & F

RUDOLF VANT HOFF
KATHRYN VANT HOFF
TM: 34 PARCEL: 383
VANT HOFF PROP.
L. 10474 / F. 202
PLAT: 12949
LOT: 3

FEREEDOON SHAHROOH
SOOBAN SHAHROOH
TM: 34 PARCEL: 383
VANT HOFF PROP.
L. 9152 / F. 185
PLAT: 12949
LOT: 2

STEVEN A. LOZINSKY
ELISABETH C. LOZINSKY
TM: 34 PARCEL: 383
VANT HOFF PROP.
PLAT: 20374
LOT: 5

G. WARREN MILES
MARIE I. MILES
TM: 34 PARCEL: 282
L. 1285 / F. 393

WALL CHECK DRAWING
THE ESTATES AT RIVER HILL
LOT 7
 13609 NOBLE WAY
 HIGHLAND, MD 20777

PLAT NO. 25085-25094
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 60' APRIL 14, 2022

GRAPHIC SCALE
 1 INCH = 60 FEET

COMPILED BY:	W.O. NO.:	SHEET
S.D.A.	15-39	1
E.D.S.		of 1

VOGEL ENGINEERING

TIMMONS GROUP
 3300 NORTH REDGE ROAD, SUITE 110, BELLCOTT CITY, MD 21103
 P: 410.461.7666 F: 410.461.9581 www.timmons.com

THIS WALL CHECK DRAWING CONTAINS A HORIZONTAL TOLERANCE IN ACCURACY OF 0.1' AND A VERTICAL TOLERANCE IN ACCURACY OF 0.2'

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THE IMPROVEMENTS ARE LOCATED AS SHOWN AND THAT THERE ARE NO ENCROACHMENTS EXCEPT AS SHOWN; THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND.

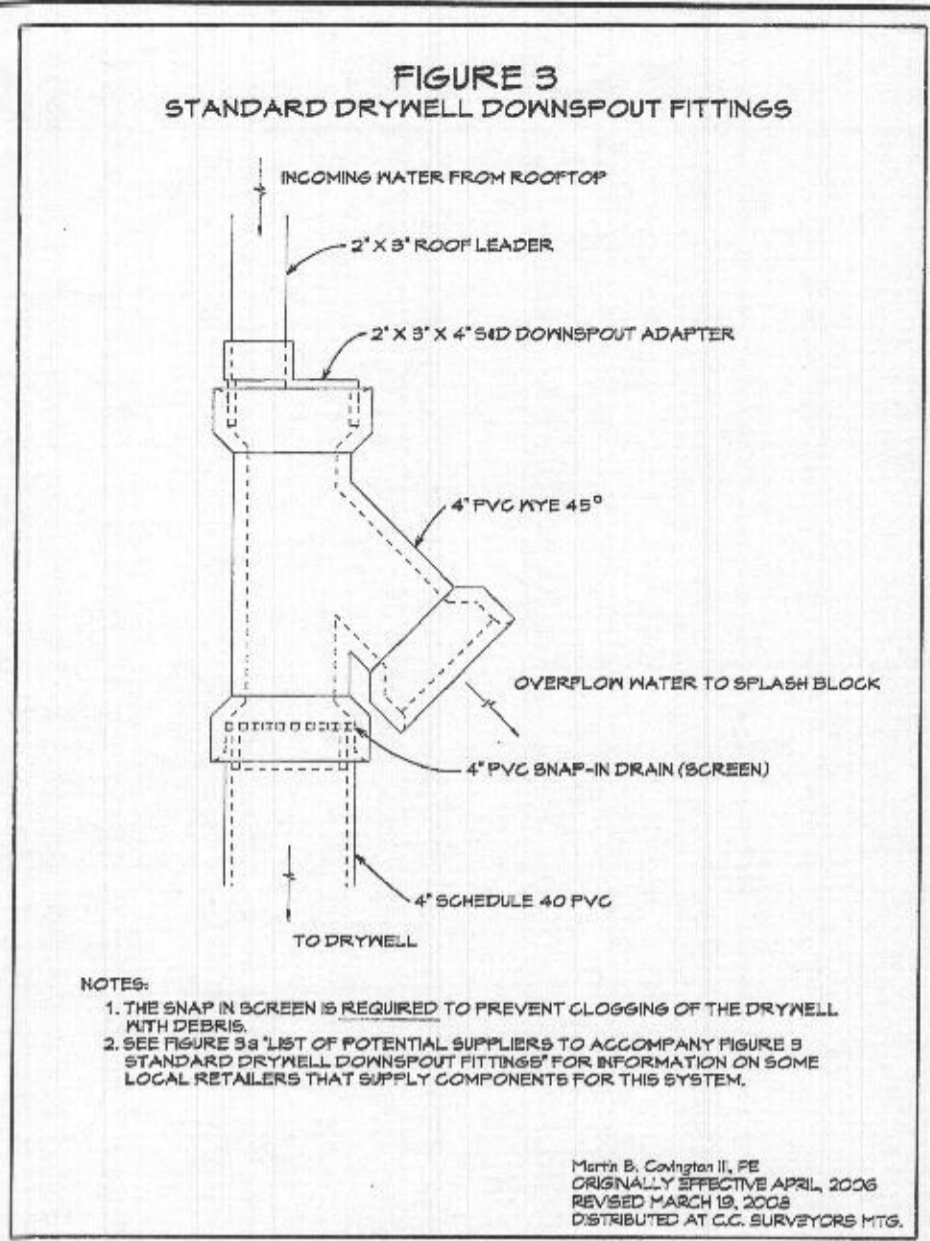
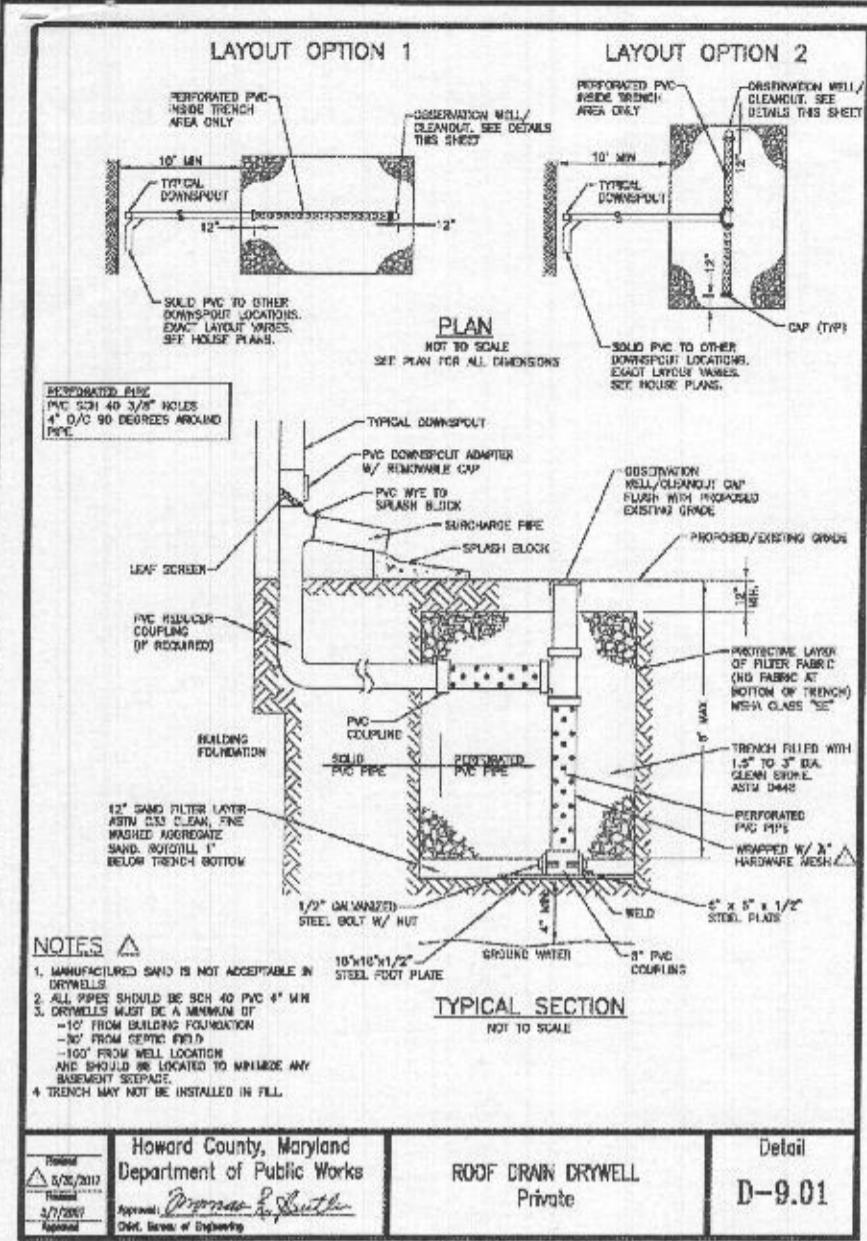
Eric D. Salmi
 ERIC D. SALMI
 PROFESSIONAL LAND SURVEYOR
 LICENSE NO. 21639
 EXP. DATE: JANUARY 3, 2024

DATE: *4/14/22*



*Wall check
 4/14/22
 H.O.*

WS-SR-APP-22-00208



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1) AND DRY WELLS (M-5)

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS, AND AFTER EVERY LARGE STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED, SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

N-2. DISCONNECTION OF NON-ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:

THE FOLLOWING SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH NON-ROOFTOP DISCONNECTIONS:

- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN AREAS DESIGNATED FOR NON-ROOFTOP DISCONNECTIONS.
- SITE DISTURBANCE: TO MINIMIZE DISTURBANCE AND COMPACTION, CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:

A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT ADEQUATE TREATMENT AREAS AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1) AND DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

1. MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

OWNER
ESTATES AT RIVER HILL, LLC
MICHAEL PFAU, MEMBER
3675 PARK AVENUE, SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARY LAND, LLC
3675 PARK AVENUE, SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

DRYWELL SIZE CHART

DW#	LOT	DRAINAGE AREA	VOLUME REQUIRED	PROPOSED DIMENSIONS	VOLUME PROVIDED
16A	7	1,091 SF	432 CF	9.3'x9.3'x5'	432 CF
16B	7	1,091 SF	432 CF	9.3'x9.3'x5'	432 CF
16C	7	1,066 SF	423 CF	17'x5'x5'	423 CF
16D	7	1,101 SF	435 CF	9.4'x9.3'x5'	437 CF

DRYWELL #16A
 $ESD_v = (0.95)(2.0)(1,091)/12 = 173 \text{ CF}$
 $173/0.4 = 432 \text{ CF (REQ.)}$
 $9.3'x9.3'x5' = 432 \text{ CF (PROV.)}$

DRYWELL #16B
 $ESD_v = (0.95)(2.0)(1,091)/12 = 173 \text{ CF}$
 $173/0.4 = 432 \text{ CF (REQ.)}$
 $9.3'x9.3'x5' = 432 \text{ CF (PROV.)}$

DRYWELL #16C
 $ESD_v = (0.95)(2.0)(1,066)/12 = 169 \text{ CF}$
 $169/0.4 = 423 \text{ CF (REQ.)}$
 $9.2'x9.2'x5' = 423 \text{ CF (PROV.)}$

DRYWELL #16D
 $ESD_v = (0.95)(2.0)(1,101)/12 = 174 \text{ CF}$
 $174/0.4 = 435 \text{ CF (REQ.)}$
 $9.4'x9.3'x5' = 437 \text{ CF (PROV.)}$

VOGEL ENGINEERING

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 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
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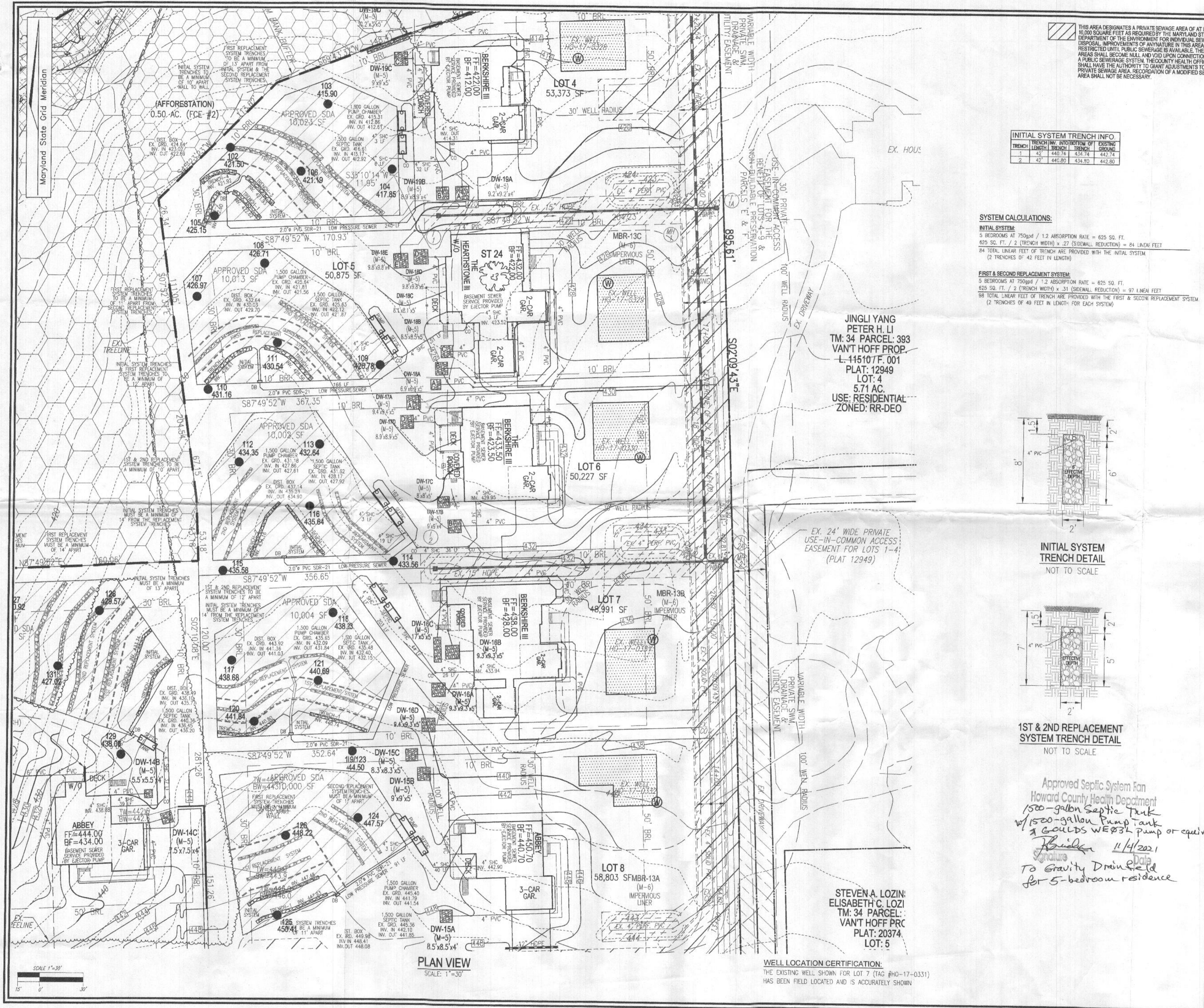
PLOT PLAN
THE ESTATES AT RIVER HILL - LOT 7

13609 NOBLE WAY
 HIGHLAND, MD 20777

SCALE AS SHOWN
 DRAWN BY JMR/KG
 CHECKED BY RHV
 DATE OCTOBER, 2021
 W. O. # 15-39
 SHEET# 2 OF 2

5TH ELECTION DISTRICT
 TAX MAP: 34 PARCEL: 389
 DPZ REF'S: ECP:16-064, WP-17-034,
 WP-17-128, SP-17-007, F-18-064

BLOCK: 23
 ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND



PLAN VIEW
SCALE: 1"=30'

WELL LOCATION CERTIFICATION:
THE EXISTING WELL SHOWN FOR LOT 7 (TAG #HO-17-0331) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN

JINGLI YANG
PETER H. LI
TM: 34 PARCEL 393
VANT HOFF PROP.
L-115107.F.001
PLAT: 12949
LOT: 4
5.71 AC.
USE: RESIDENTIAL
ZONED: RR-DEO

EX. 24' WIDE PRIVATE
USE-IN-COMMON ACCESS
EASEMENT FOR LOTS 1-4
(PLAT 12949)

STEVEN A. LOZIN
ELISABETH C. LOZI
TM: 34 PARCEL:
VANT HOFF PRO
PLAT: 20374
LOT: 5

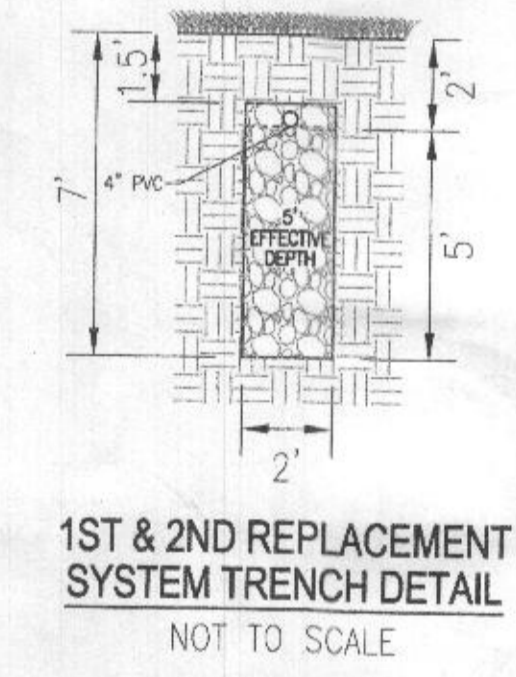
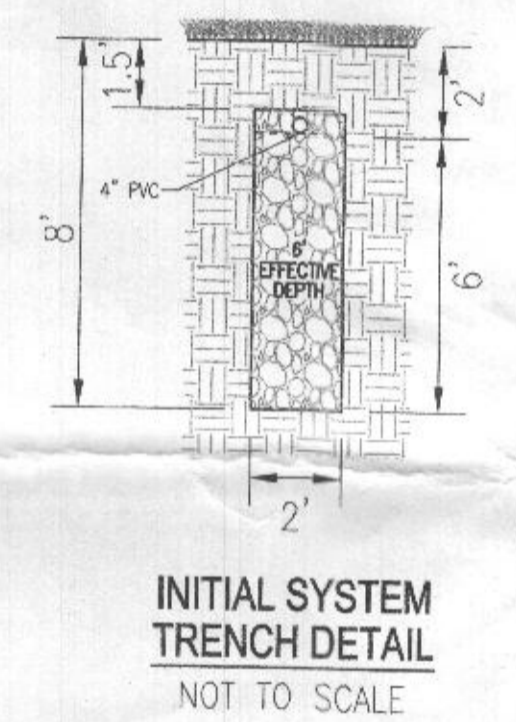
INITIAL SYSTEM TRENCH INFO.

TRENCH	LENGTH	TRENCH WIDTH	INTO BOTTOM OF EXISTING
1	42'	44.074'	434.74
2	42'	44.074'	434.74

SYSTEM CALCULATIONS:

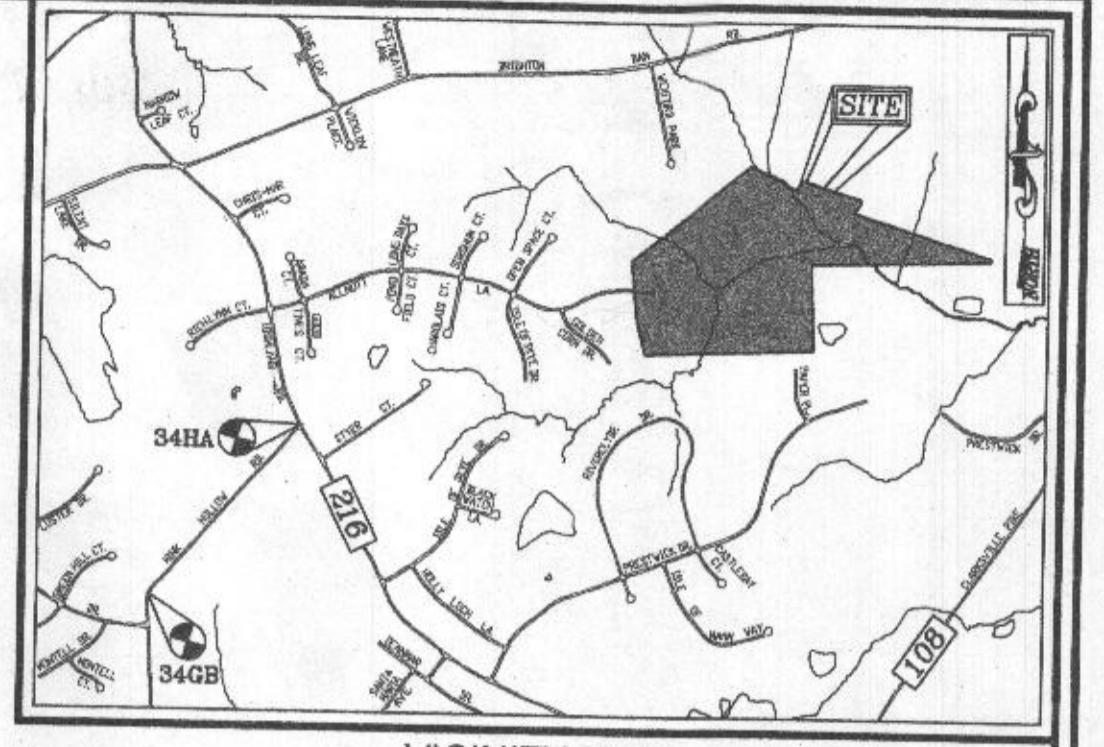
INITIAL SYSTEM:
5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.
625 SQ. FT. / 2 (TRENCH WIDTH) x .27 (SIDEWALL REDUCTION) = 84 LINEAR FEET
84 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE INITIAL SYSTEM
(2 TRENCHES OF 42 FEET IN LENGTH)

FIRST & SECOND REPLACEMENT SYSTEM:
5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.
625 SQ. FT. / 2 (TRENCH WIDTH) x .31 (SIDEWALL REDUCTION) = 97 LINEAR FEET
98 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE FIRST & SECOND REPLACEMENT SYSTEM
(2 TRENCHES OF 49 FEET IN LENGTH FOR EACH SYSTEM)



Approved Septic System Fan
Howard County Health Department
1500-gallon Septic Tank
w/ 1500-gallon Pump tank
3 Goulbs WEP3L pump or equiv.
11/4/2021
To Gravity Drains
for 5-bedroom residence

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 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 ADJUSTMENTS TO THE PRIVATE SEWAGE AREA. RECORDATION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.



VICINITY MAP
SCALE: 1"=2000'
ACC MAP: PAGE: 31 / GRID: B2, B3, & C2

BENCHMARKS
HOWARD COUNTY BENCHMARK 344B (CONC. MON.)
N 55366.73 E 1317752.53 ELEV. 505.18
LOCATION: MINK HOLLOW RD. 0.45 MI. SW OF HIGHLAND RD.
HOWARD COUNTY BENCHMARK 344A (CONC. MON.)
N 555780.15 E 1319355.57 ELEV. 535.23
LOCATION: CORNER OF HIGHLAND RD. & MINK HOLLOW RD.

- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING EDGE OF PAVING
 - EXISTING STREAM BUFFER
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - EXISTING SPECIMEN TREES
 - EXISTING WOOD FENCE
 - EX. PUBLIC 100-YEAR FLOOD PLAN
 - PROP. PRIVATE USE-IN-COMMON ACCESS EASEMENT
 - PROP. PRIVATE SWM, DRAINAGE & UTILITY EASEMENT
 - EXISTING 10' CONTOUR
 - EXISTING 2' CONTOUR
 - PROPOSED 10' CONTOUR
 - PROPOSED 2' CONTOUR
 - APPROVED SEWAGE DISPOSAL AREA (SDA)
 - APPROVED WELL AREA
 - EXISTING WELL
 - PASSED PERC. TEST
 - FAILED PERC. TEST

- 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-17-0331) 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.
 - ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 - THE EXISTING TOPOGRAPHY SHOWN HEREON IS TAKEN FROM HOWARD COUNTY GIS AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHICAL SURVEYS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MARCH AND MAY OF 2015.

OWNER: ESTATES AT RIVER HILL, LLC
MICHAEL PFALZ, MEMBER
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

DEVELOPER: TRINITY HOMES MARYLAND, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN

THE ESTATES AT RIVER HILL - LOT 7
13609 NOBLE WAY -
HIGHLAND, MD 20777

PARCEL: 389
TAX MAP: 34 GRID: 23
5TH ELECTION DISTRICT

ZONED: RR-DEO
L 18487 / F. 282
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
+
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

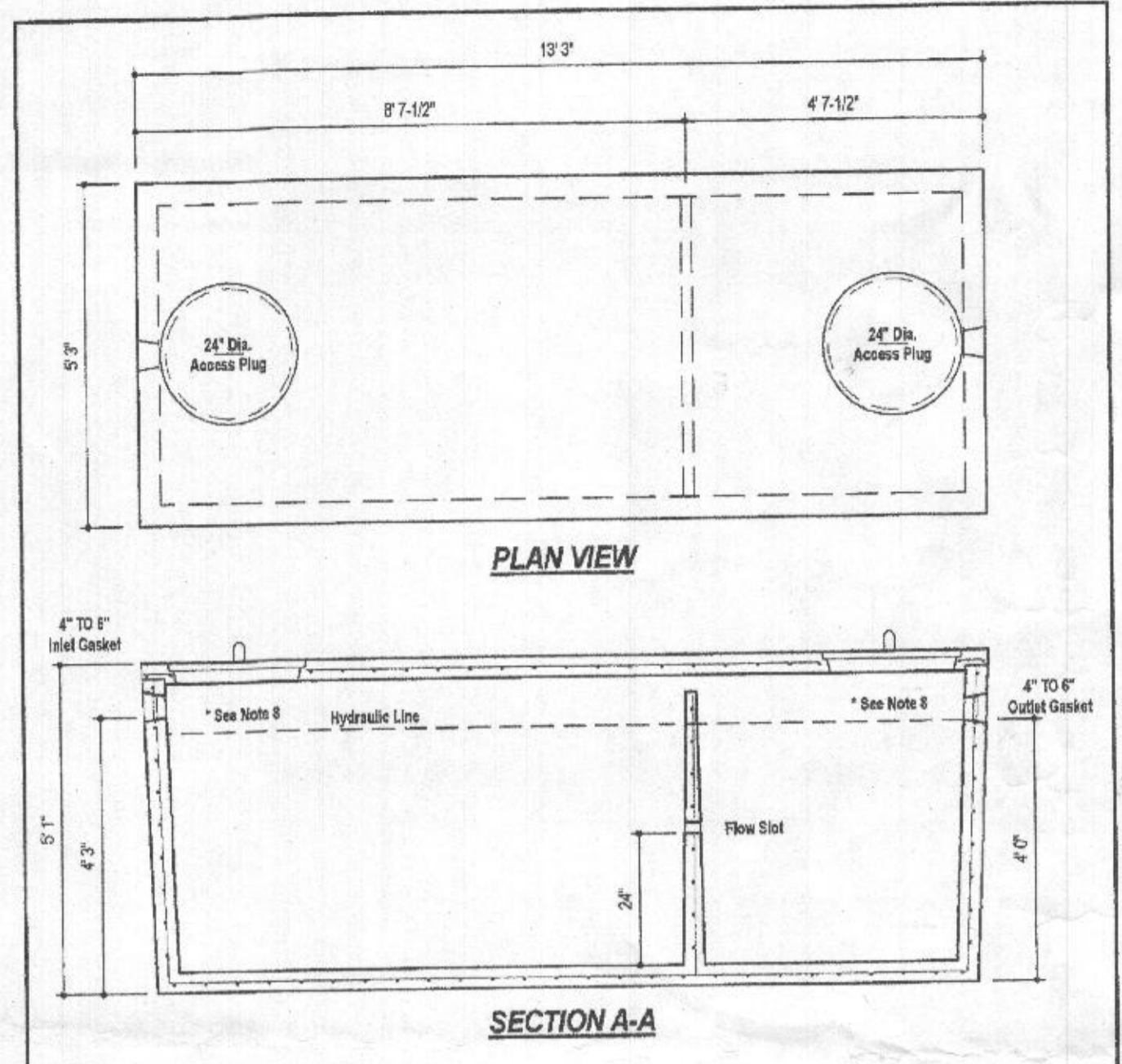
PROFESSIONAL CERTIFICATE

DESIGN BY: RHY
DRAWN BY: JMR/KG
CHECKED BY: RHY
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 13-39

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 116193 EXPIRATION DATE: 09-27-2022

1 SHEET OF 2

ROBERT H. VOGEL, PE #618193



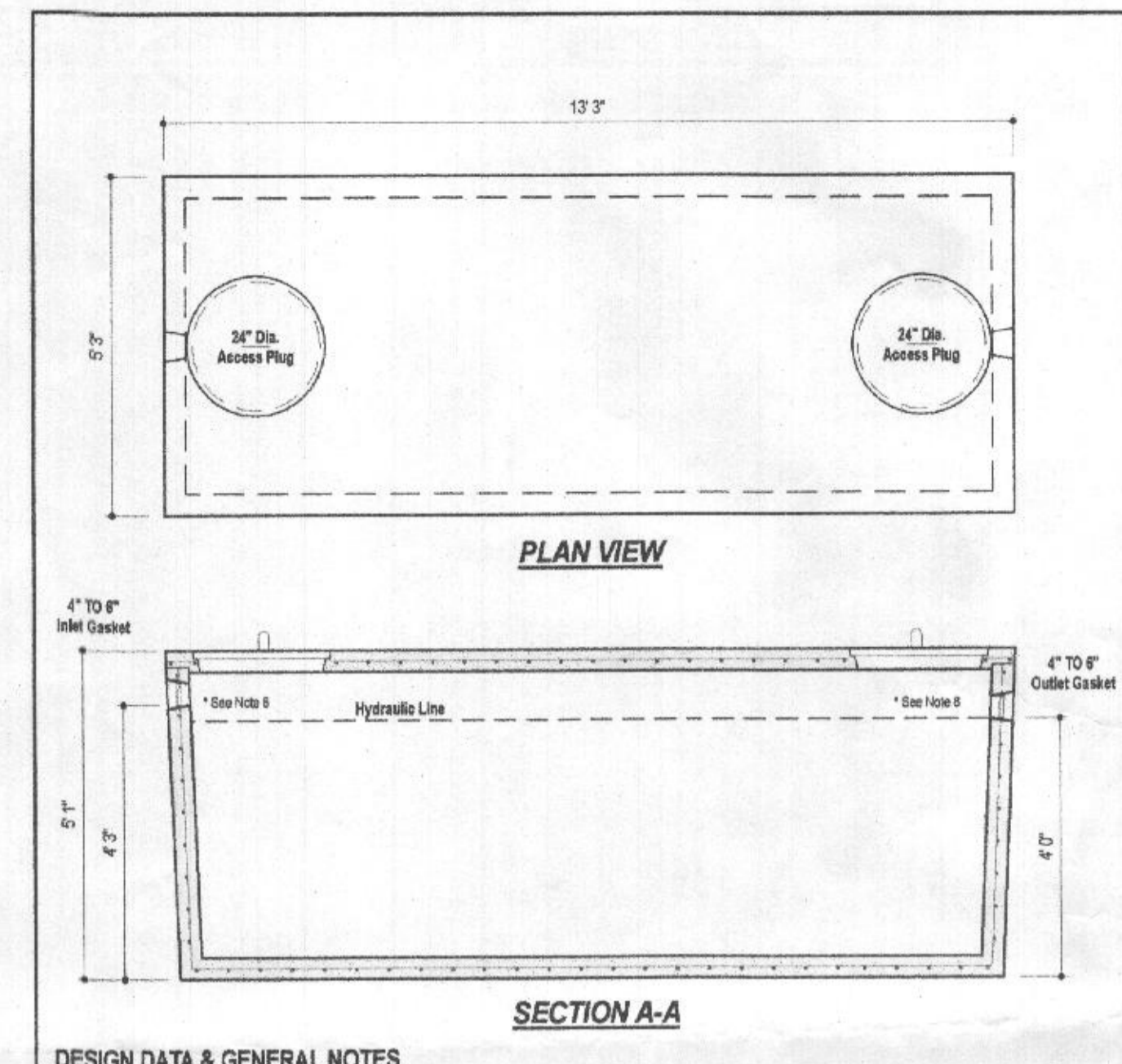
DESIGN DATA & GENERAL NOTES

- Concrete strength f'c=4,000 p.s.i. @ 28 days. Density = 150 pcf.
- Cement - Portland Type III per ASTM C 150-02.
- Admixtures & plasticizers per ASTM C 260-86 & C 494-02.
- Reinforcing per ASTM A196. Min. 1-1/2" cover.
- Top slabs sealed with butyl rope mastic.
- 4" wall base & top thickness.
- Max 3" of cover.
- Depending on use of tank, Inlet & Outlet baffles may be required by code.

WEIGHT = 16,750 lbs.

Mayer Bros., Inc.
 6264 Race Road
 Elkridge, Maryland 21075
 Tel: 410.796.1434
 Fax: 410.796.1438
 www.mayerbrosprecast.com

Dwg. No. 1600-2C	No Scale	Aug. 11, 2008
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DESIGN DATA & GENERAL NOTES

- Concrete strength f'c=4,000 p.s.i. @ 28 days. Density = 150 pcf.
- Cement - Portland Type III per ASTM C 150-02.
- Admixtures & plasticizers per ASTM C 260-86 & C 494-02.
- Reinforcing per ASTM A196. Min. 1-1/2" cover.
- Top slabs sealed with butyl rope mastic.
- 4" wall base & top thickness.
- Max 3" of cover.
- Depending on use of tank, Inlet & Outlet baffles may be required by code.

WEIGHT = 16,000 lbs.

Mayer Bros., Inc.
 6264 Race Road
 Elkridge, Maryland 21075
 Tel: 410.796.1434
 Fax: 410.796.1438
 www.mayerbrosprecast.com

Dwg. No. 1600-1C	No Scale	Aug. 11, 2008
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Goulds Water Technology

Wastewater

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

SPECIFICATIONS

Pump

- Solids handling capabilities: 3/4" maximum
- Discharge size: 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 numbers 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.

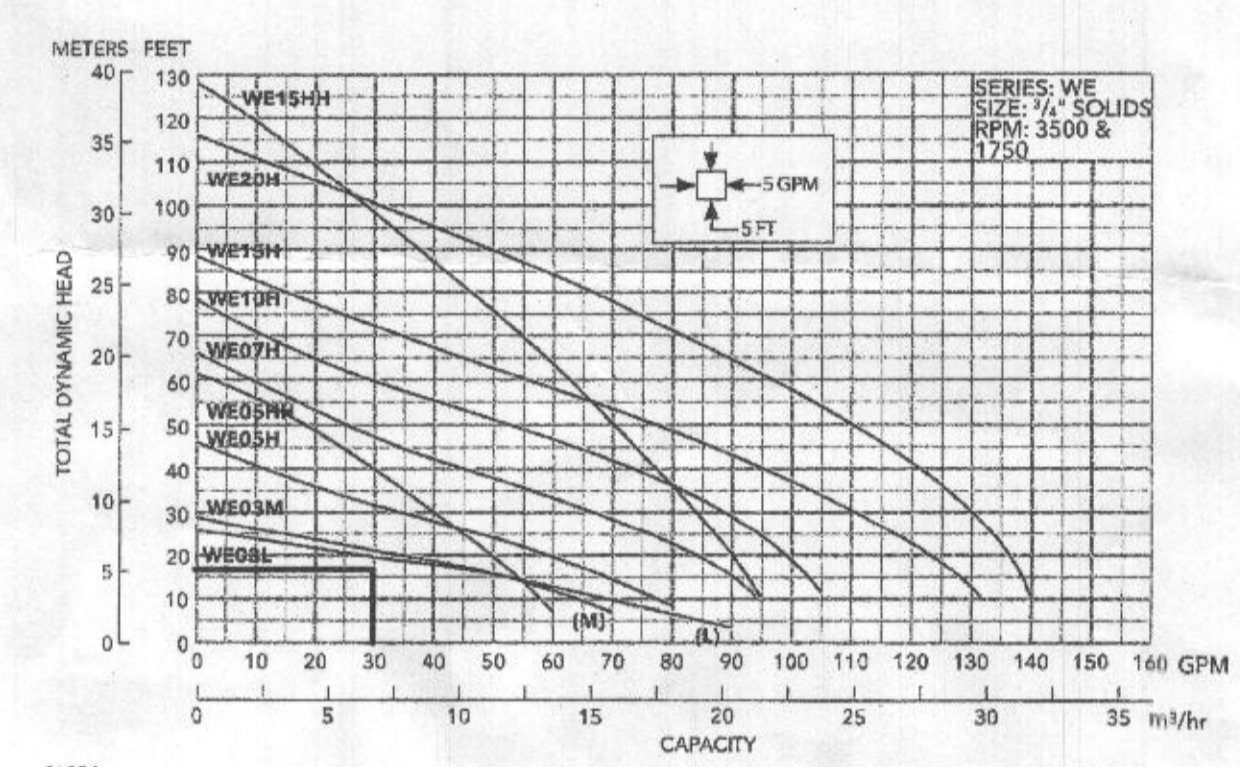
• S/TOW or STOW severe duty oil and water resistant power cords.
 • 1/2 - 1 HP models have NEMA three prong grounding plugs.
 • 1 1/2 HP and larger units have bare lead cord ends.

Three phase (60 Hz):

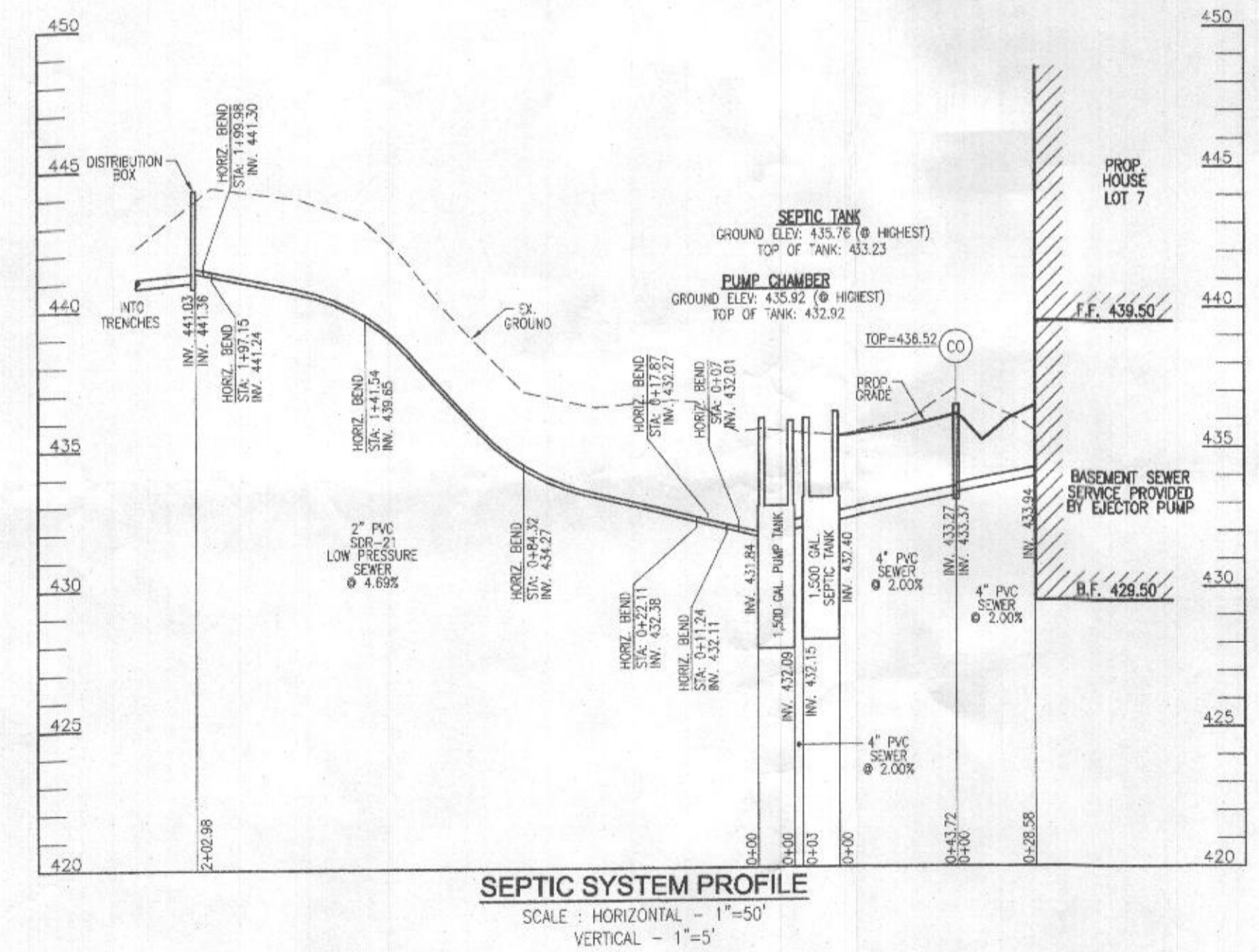
- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.
- Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
- Bearings: Upper and lower heavy duty ball bearing construction.
- Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.
- O-ring: Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS

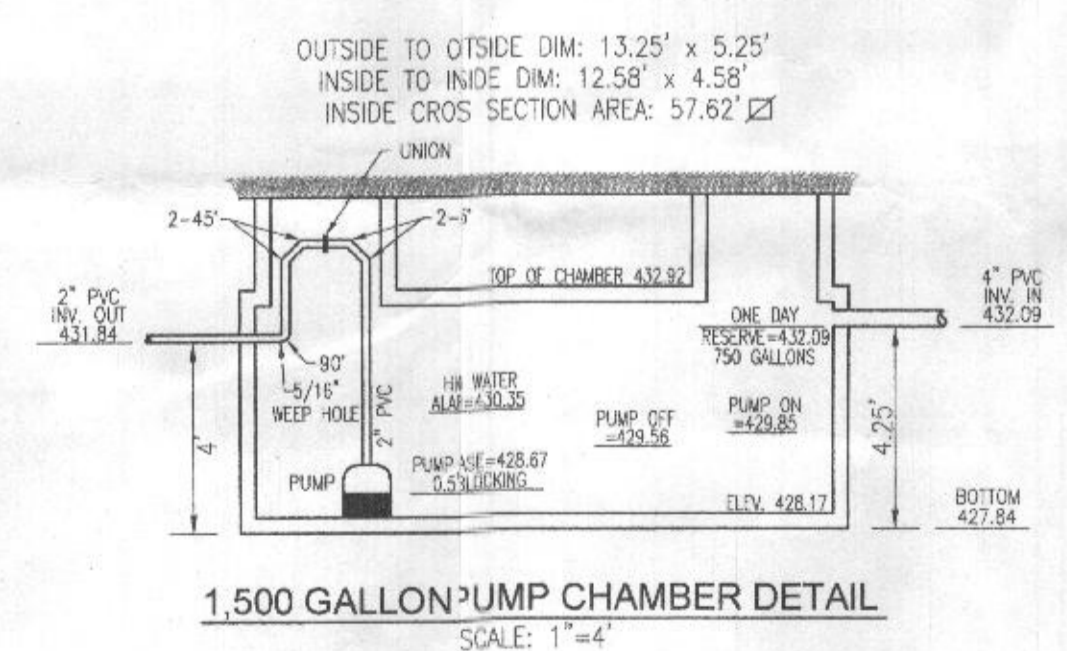
Tested to UL 778 and CSA 22.2 108 Standards
 By Canadian Standards Association File #LR28549



FLOW: 30 GPM
 H=16.54'
 USE GOULDS WE03 (OR EQUIVALENT)



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



1,500 GALLON PUMP CHAMBER DETAIL
 SCALE: 1"=4'

NO. BEDROOMS = 5
 DESIGN FLOW = 5(150 GPD) = 750 GPD
 DOSE: 1/8 DESIGN FLOW = 125 GPD
 125 GALLONS/7.48 FT³/GAL. = 16.71 FT³
 16.71 FT³/57.62 SF = 0.29'
 ONE DAY RESERVE: 750 GALLONS/7.48 FT³/GAL. = 100.27 FT³
 100.27 FT³/57.62 SF = 1.74 FT

TDH (FRICTION + STATIC)
 FRICTION FITTINGS: LINDSEY 1x2 = 2
 45° ELBOW (H+V): 12x8 = 96
 90° ELBOW: 1x7 = 7

FITTING CD. LENGTH: 105.0 LF
 PIPE LENGTH: 203.0 LF
 TOTAL LENGTH: 308.0 LF

FRICTION LOSS (30 GPM): (1.54)(308.0)/100 = 4.74'
 STATIC: 441.36 - 429.56 (PUMP CRT) = 11.80'
 TDH: 11.80 + 4.74 = 16.54'
 USE GOULDS WE03 (OR EQUIVALENT)

Approved Septic System Plan
 Howard County Health Department
 1500-gallon Septic Tank
 w/ 1500-gallon Pump Tank
 & Goulds WE03H Pump or equiv.
 Signature: [Signature] 11/4/21
 Date: 11/4/21
 To Gravity Drain Field
 for 5-bedroom residence

OWNER
 ESTATES AT RIVER HILL, LLC
 MICHAEL PFAU, MEMBER
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

DEVELOPER
 TRINITY HOMES MARYLAND, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN

THE ESTATES AT RIVER HILL - LOT 7
 13609 NOBLE WAY
 HIGHLAND, MD 20777

PARCEL: 388
 TAX MAP: 34 GRID: 23
 5TH ELECTION DISTRICT

ZONED: RR-DEO
 L 18487 / F. 282
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

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. 16193, EXPIRATION DATE: 08-27-2022

DESIGN BY: RHY
 DRAWN BY: JMR/KC
 CHECKED BY: RHY
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 15-39

2 SHEET OF 2