

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: 12/18/24 **ONSITE SEWAGE DISPOSAL SYSTEM** P 587902

APPROVAL DATE: 5/1/2025 **PERMIT: NEW CONSTRUCTION** A _____

PROPERTY ADDRESS: 4264 Maisel Farm Road

SUBDIVISION: _____ LOT: _____ TAX ID: _____

CONTRACTOR: Hatfields Equipment EMAIL: Ken@hatfieldsequipment.com

CONTRACTOR ADDRESS: P.O. Box 514 Annapolis, Junction MD 20701 PHONE: 301-290-4289

PROPERTY OWNER: Thomas Price III EMAIL: _____

OWNER ADDRESS: 4264 Maisel Farm Road, Ellicott City, MD 21042 PHONE: _____

SEPTIC TANK SIZE (GALLONS): 2000 TANK MANUFACTURER: Back River Pre Cast

PUMP MODEL: Zoeller Model 294 PUMP SIZE 1.5HP PUMP TANK CAPACITY: 2000 Gal

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

TRENCHES:	LINEAR FEET REQUIRED: <u>106 (2@53')</u>	INLET DEPTH: <u>2</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 TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Pump check, alarm check, and electrical required ***Make sure force main is on opposite side of Forest Con. Easement***	

ISSUED BY: Zack Silvast ISSUE DATE: 12/18/24 EXPIRATION DATE: 12-18-25

- 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 DOWNGRADE 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 24006924
- 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

4/30/25 Pump and alarm test failed. Audible alarm not working. Contractor to replace. Water going to d-box. Visual alarm good. Pump and alarm on separate breakers. (MB/RR)

5/1/25 Audible alarm fixed. Confirmed that the pump floats were correctly placed. PTA passed. (MB)

See Separate Sheet for AS-Built

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH 3' INLET 2' BOTTOM 8'
NUMBER OF TRENCHES 2
TOTAL LENGTH 109'
ABSORPTION AREA 327 ft²
DISTRIBUTION BOX LEVEL
DISTRIBUTION BOX BAFFLE yes
DISTRIBUTION BOX PORT yes

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL yes
MANUFACTURER Bzbylon
CAPACITY 2000 GAL
SEAM LOC Top
TANK LID DEPTH 1.5' - 2'
BAFFLES 6" Front & 9" back
BAFFLE FILTER
MANHOLE LOC Top
6" PORT LOC
WATERTIGHT TEST
SLOTTED yes
DATE ON LID 12/17/2024

PUMP/SEPTIC TANK LEVEL

yes
MANUFACTURER BZM river
CAPACITY 2000 GAL
SEAM LOC Top
TANK LID DEPTH 3' - 2'
BAFFLES
BAFFLE FILTER
MANHOLE LOC Front & back
6" PORT LOC
WATERTIGHT TEST
SLOTTED
DATE ON LID 11/22/2024

SEPTIC CONTRACTOR ONSITE INSTALLING SYTEM: Todd Tracey
SEPTIC CONTRACTOR ONSITE LICENSED WITH THE STATE OF MD: YES/NO

PRE-CONSTRUCTION NOTES:

4/30/25 Met with contractor on site. SDA, trench locations, and tank locations are per plan.

Tanks will be installed per separate sheet and trenches are on contour. Contractor plans to start at the end of next week. (MB/RR)

INSTALLATION NOTES:

11/23/24 - installer made for inspection. Both trenches finished, inlet @ 2', length @ 56' x 22'. OK to backfill trenches. (MB)
11/23/24 - water meter installed 260' up 2" E.M. 280' E.S. to backfill. (MB) 11/22/2025 - installer onsite for inspection. Both tanks set w/ 6" of cover. Floor slotted w/ 6" front & 9" back baffles. No seam water barrier, 5600 ga PVC used w/ 3" foam. (MB) 11/23/2025 - installer onsite for inspection. Saw 2 float pump (2000) level for 3 float' E.M. connected to pump tank, 12 3/4" vent under manhole (see critical). Well line coming E.M. spaced 90' OK to backfill. (MB) 11/29/2025 - E.M. connected to d-box OK to backfill.

CONTROL PANEL DATA

CONTROL PANEL HEIGHT 30"
(MIN 30")
INSPECTION DATE 5/1/25
INSPECTION: PASS/FAIL (CIRCLE ONE)

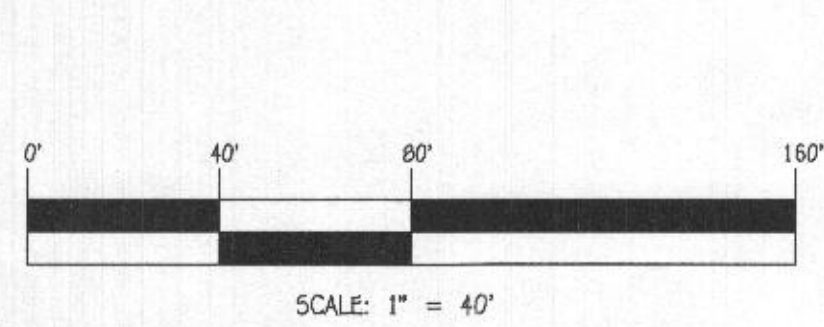
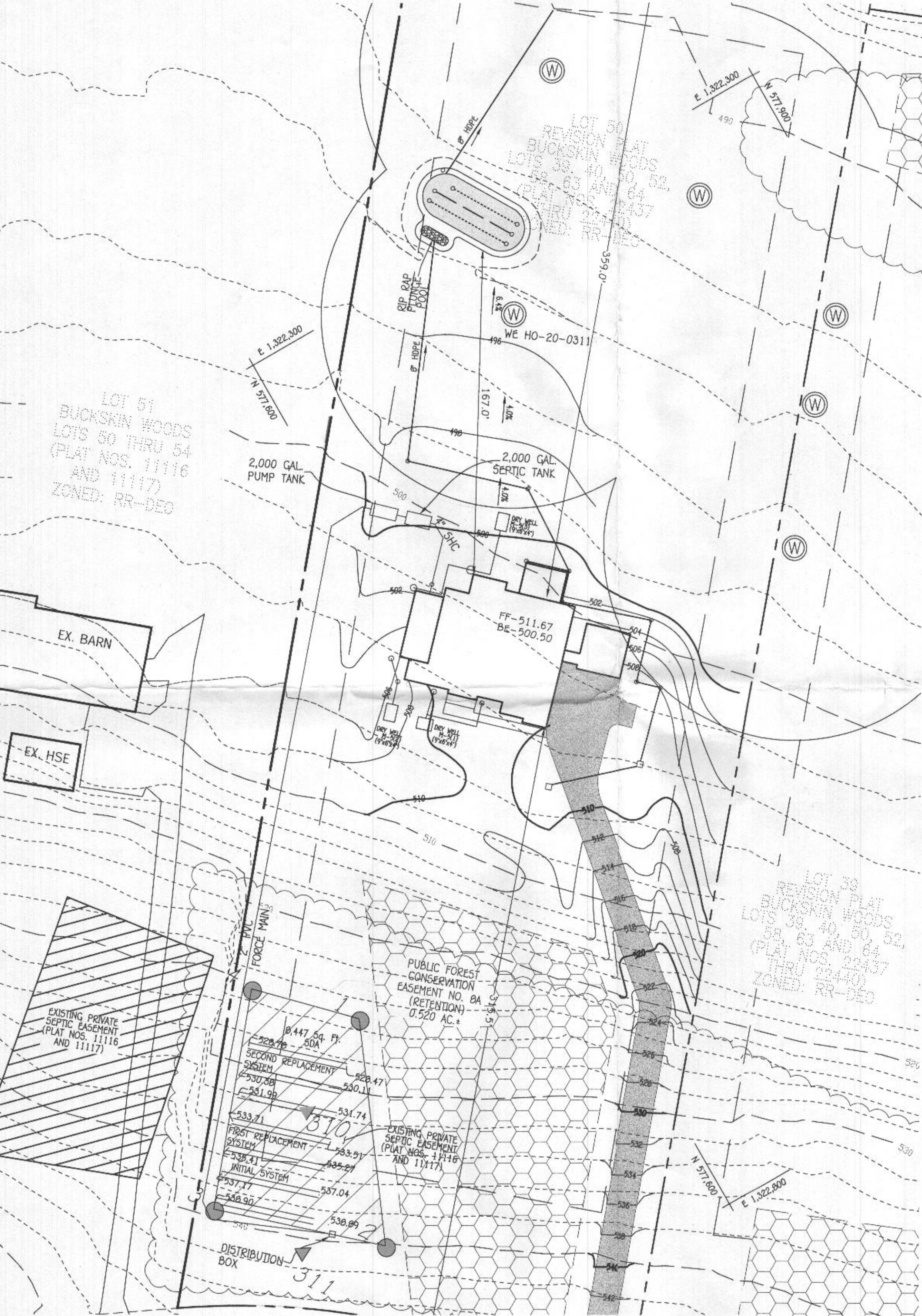
FINAL INSPECTOR

M. Burns

DATE OF APPROVAL

5/1/25

1. 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.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL HO-20-0311 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. 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.
6. THE ENGINEER IS REGISTERED WITH MDE TO PROVIDE ON-SITE WASTEWATER SERVICE IN MARYLAND.
7. BASEMENT SERVICE REQUIRES THE USE OF AN EJECTOR PUMP.
8. CONTRACTOR TO PERFORM CONSTRUCTION PER O.S.H.A. STANDARDS.



PLAN
SCALE: 1" = 40'

OWNER
WEI WEI
XU FENG
4248 MAISEL FARM LANE
ELLCOTT CITY, MARYLAND 21042



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED UNDER MY SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/26.

PAUL G. Cavanaugh
Date: 11-4-2024

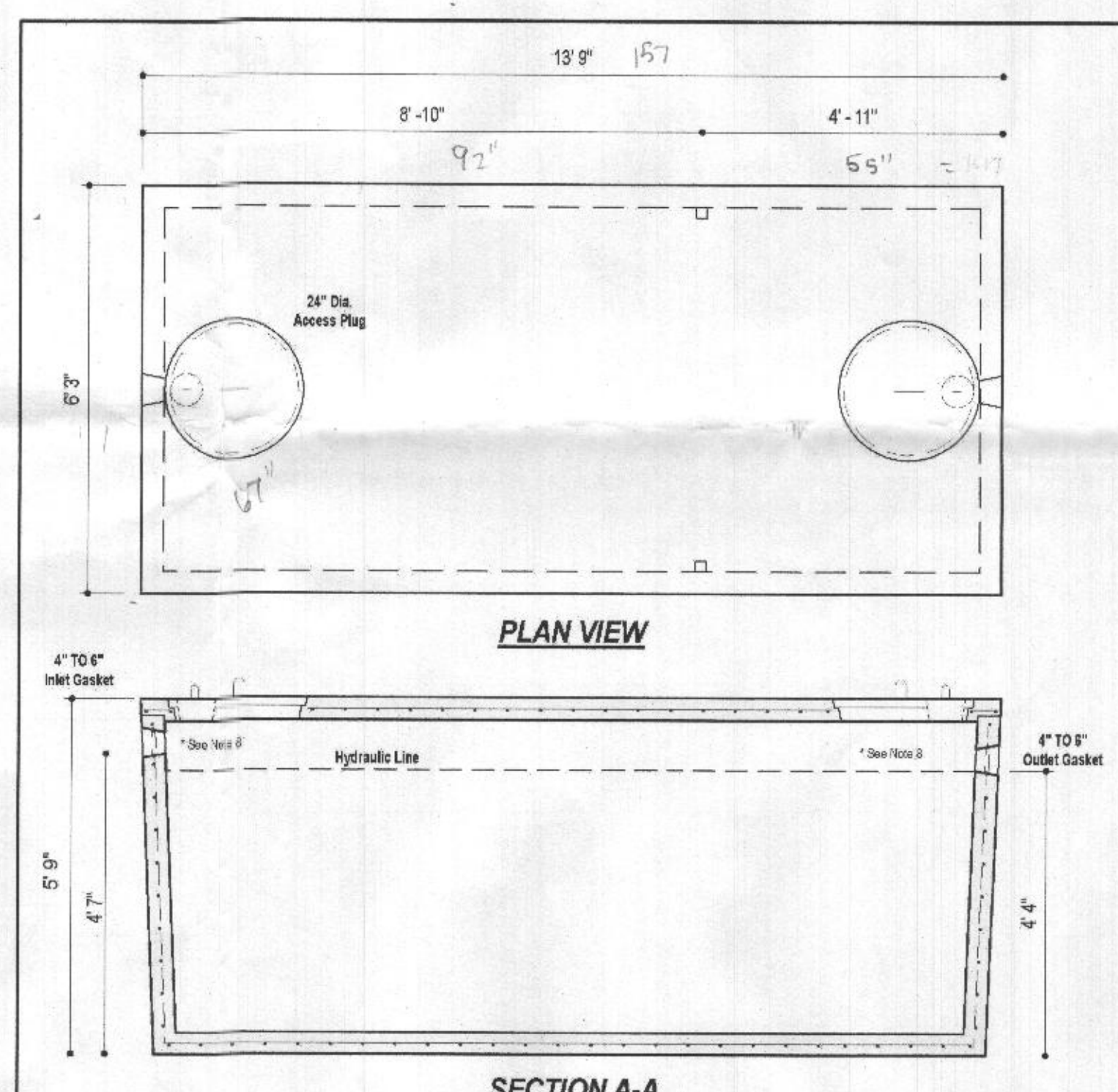
DAILY STABILIZATION NOTE:
CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. STABILIZATION SHALL BE AS FOLLOWS:
1. FOR AREAS TO BE PAVED, THAT APPLICATION OF STONE BASE.
2. FOR AREAS TO BE VEGETATIVELY STABILIZED.
A. PERMANENT SEED AND SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES.
B. PERMANENT SEED AND MULCH FOR ALL OTHER AREAS.
ANY AREAS WHICH CAN NOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWN SLOPE SIDE.

DESIGN DATA & GENERAL NOTES
[1] Concrete strength Fc=4,000 p.s.i. @ 28 days. Density = 150 pcf.
[2] Cement - Portland Type III per ASTM C 150-82.
[3] Aggregates & plasticizers per ASTM C 260-98 & C 494-82.
[4] Reinforcing per ASTM A108. Min. 1/2" cover.
[5] Top slab sealed with butyl rope mastic.
[6] 4" wall, 4" base, & 8" top thickness.
[7] Max 3" of slope.
[8] Depending on use of tank, Inlet & Outlet bells may be required by code.

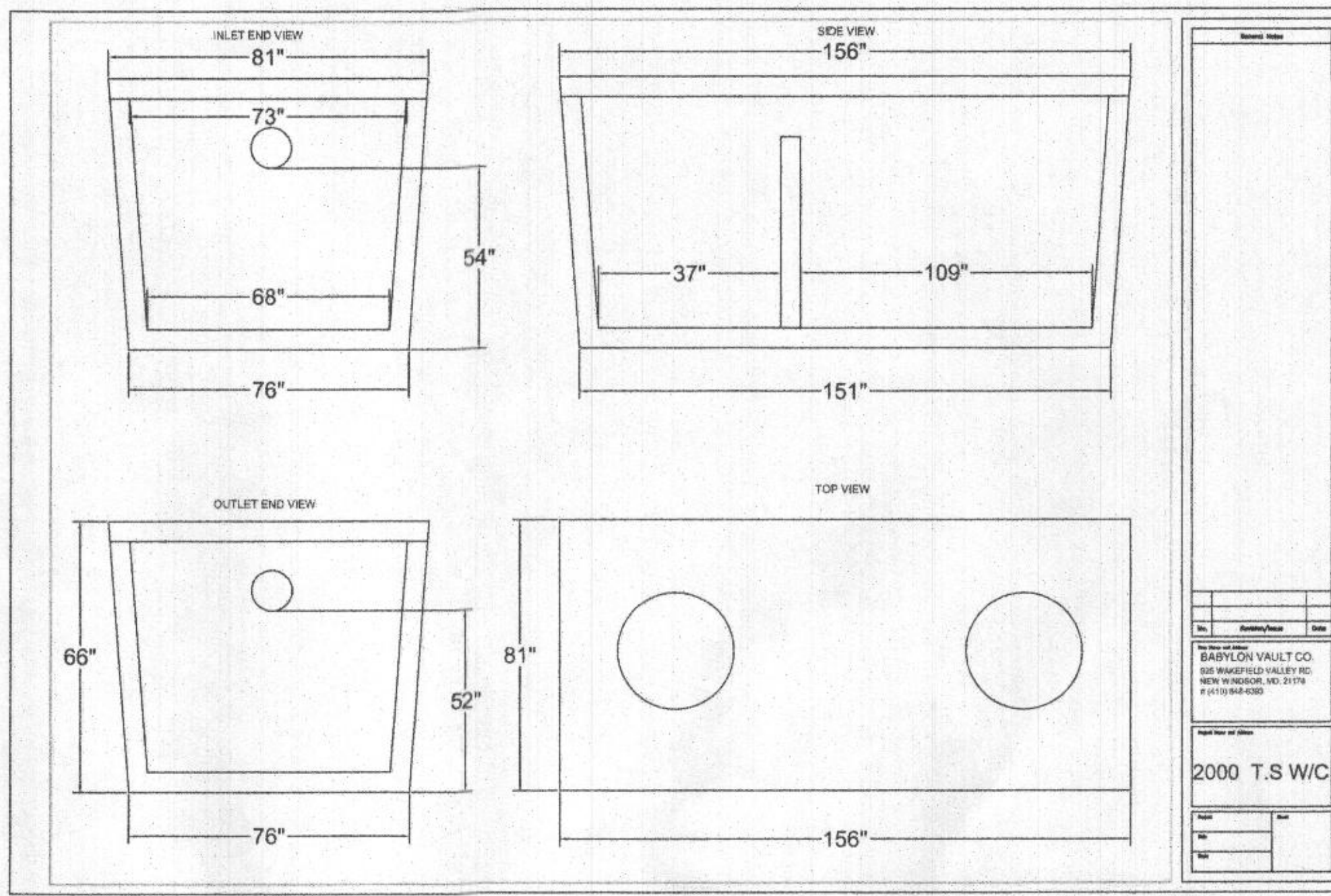
BACK RIVER PRE-CAST, LLC
P.O. Box 328
Glyndon, MD 21071
410-833-2394 office
410-833-4116 fax
www.backriverprecast.com

2,000 GALLON PUMP TANK
1-Compartment
Stock Item [Approx. 19,000 lbs]
Dwg. No. 2000-1C No Scale Aug. 11, 2008

WEIGHT = 19,000 lbs.

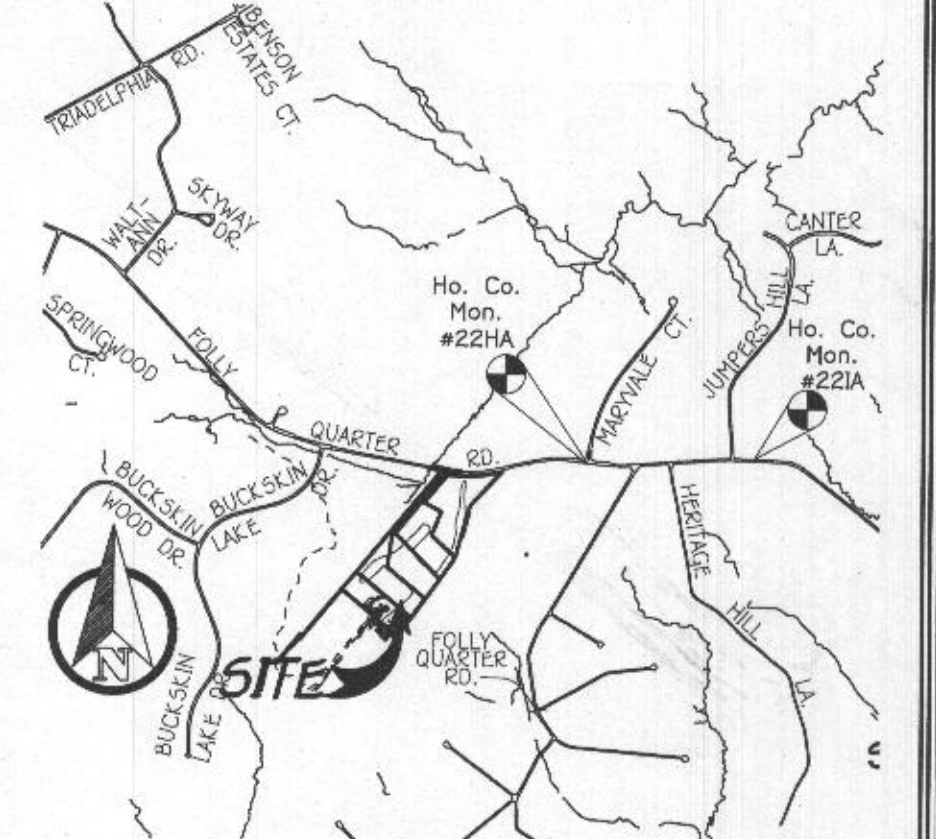


SECTION A-A

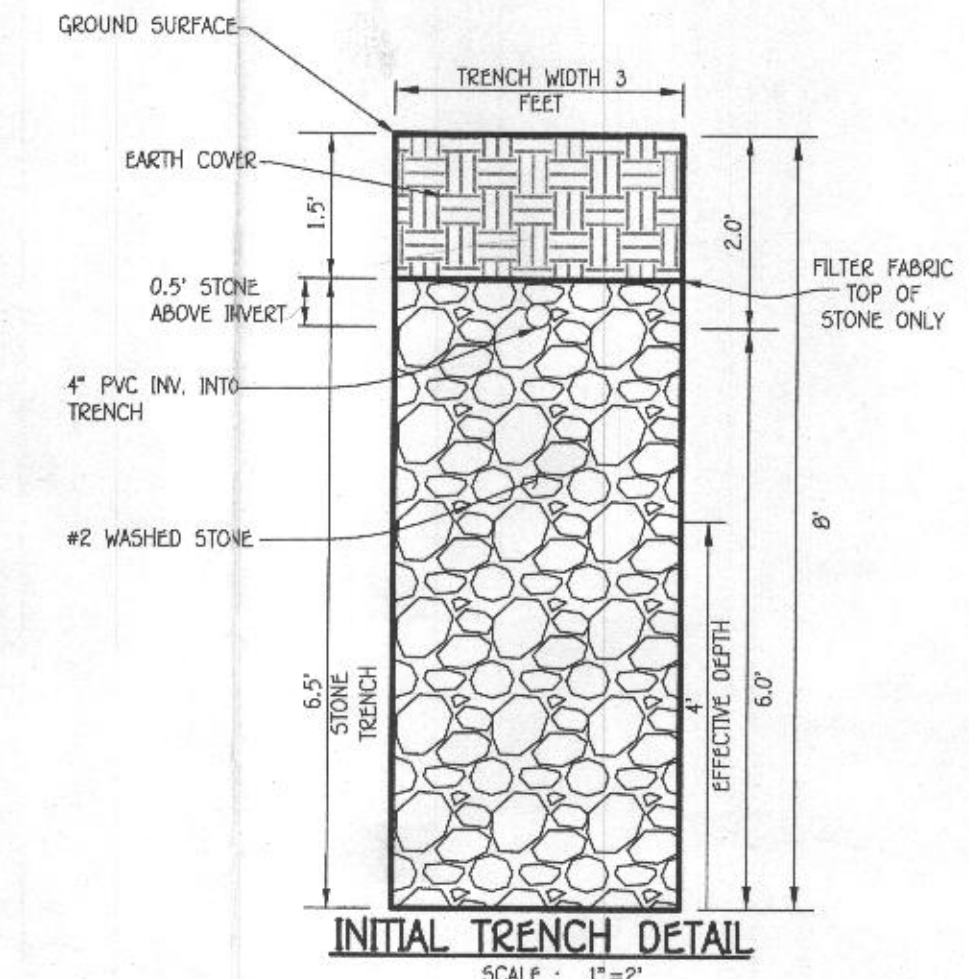


By	Checked/Revised	Date
BA	BA	11/26/24
2000 T.S.W.C.		

- LEGEND**
- EXISTING 2' CONTOURS
 - EXISTING 10' CONTOURS
 - EXISTING TREE LINE
 - ⊙ DENOTES WELL LOCATION
 - DENOTES FAILED PERC
 - DENOTES PASSED PERC
 - ▨ DENOTES SEWAGE DISPOSAL AREA

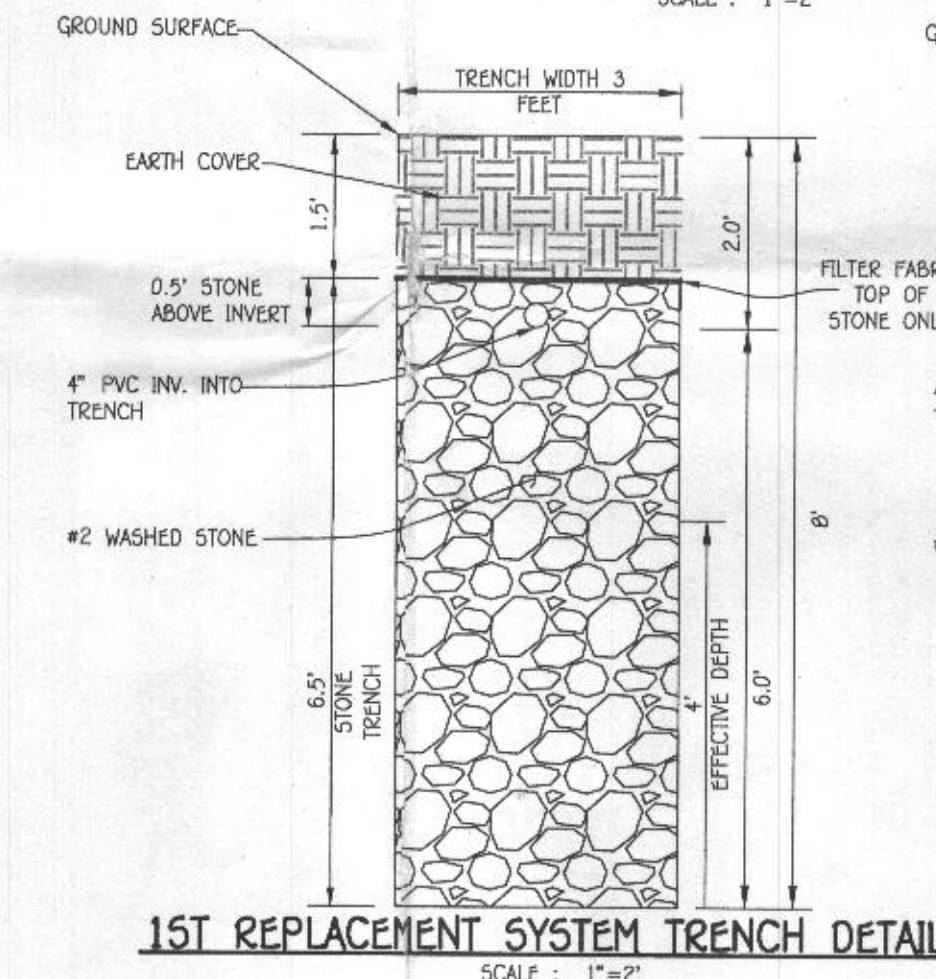


VICINITY MAP
SCALE: 1" = 2000'

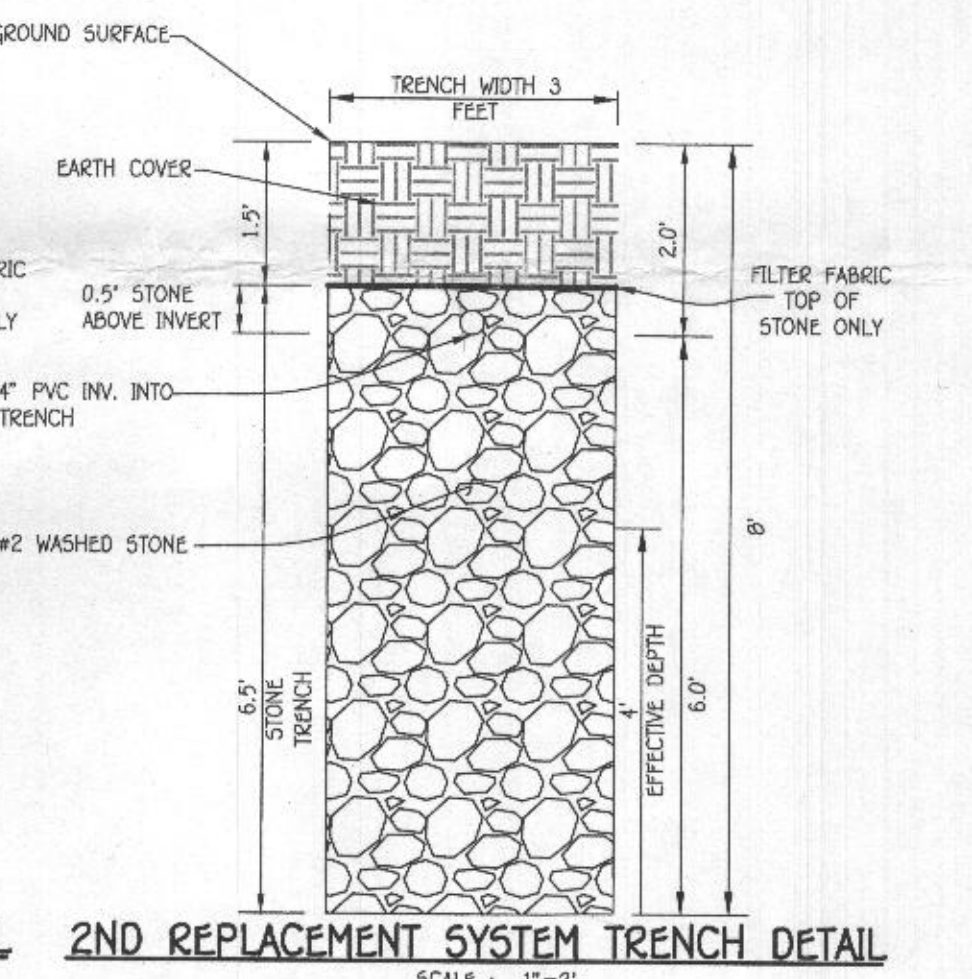


INITIAL TRENCH DETAIL
SCALE: 1" = 2'

TRENCH DATA:
TRENCH 1:
EX. GROUND ABOVE = 530.89
INV. IN = 536.89
BOTTOM TRENCH = 530.89
TRENCH 2:
EX. GROUND ABOVE = 537.11
INV. IN = 535.11
BOTTOM TRENCH = 529.11



1ST REPLACEMENT SYSTEM TRENCH DETAIL
SCALE: 1" = 2'



2ND REPLACEMENT SYSTEM TRENCH DETAIL
SCALE: 1" = 2'

INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 6 BEDROOMS
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD
APPLICATION RATE = 1.2
EFFECTIVE SIDEWALL BEGINS AT 4 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 4 FEET
SF OF DRAINFIELD = 900 GPD / 1.2 = 750 SF
COEFFICIENT OF REDUCTION IF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = 0.417
TRENCH LENGTH = 250 SF / 0.417 = 104.25 FEET (USE 2 TRENCHES AT 53 L.F.)
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

1ST REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 6 BEDROOMS
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD
APPLICATION RATE = 1.2
EFFECTIVE SIDEWALL BEGINS AT 4 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 4 FEET
SF OF DRAINFIELD = 900 GPD / 1.2 = 750 SF
COEFFICIENT OF REDUCTION IF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = 0.417
TRENCH LENGTH = 250 SF / 0.417 = 104.25 FEET (USE 2 TRENCHES AT 53 L.F.)
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

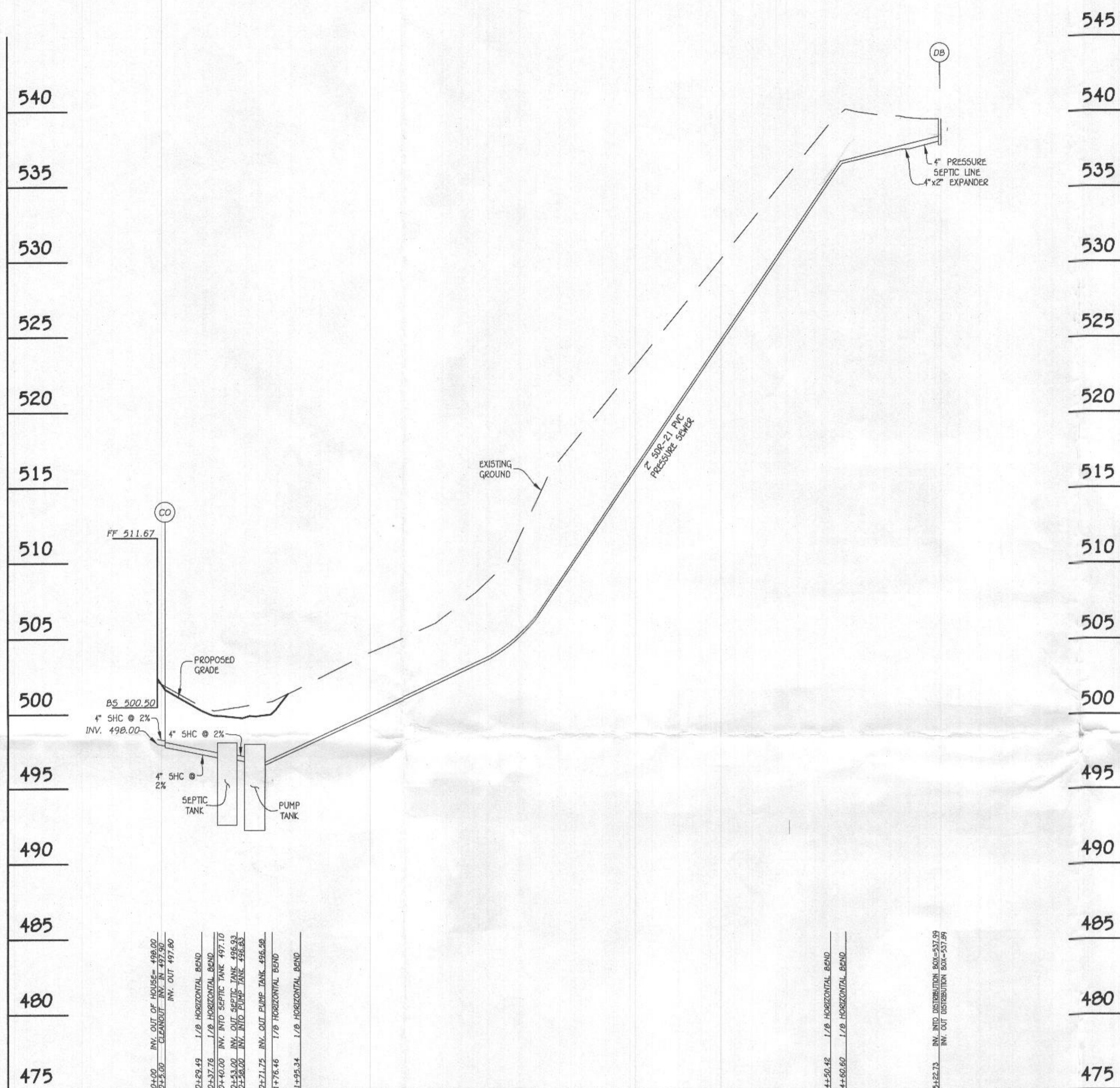
2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 6 BEDROOMS
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD
APPLICATION RATE = 1.2
EFFECTIVE SIDEWALL BEGINS AT 4 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 2 FEET
SF OF DRAINFIELD = 900 GPD / 1.2 = 750 SF
COEFFICIENT OF REDUCTION IF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x2)) = 0.625
TRENCH LENGTH = 250 SF x 0.625 = 156.25 FEET (USE 3 TRENCHES AT 53 L.F.)
TRENCH SPACING = 2D+W = ((2x2) + 3) = 7' USE 10'

Approved Septic System Plan
Howard County Health Department
Signature: [Signature] Date: 11/26/24
* New tank locations & larger pump (1.5HP).*

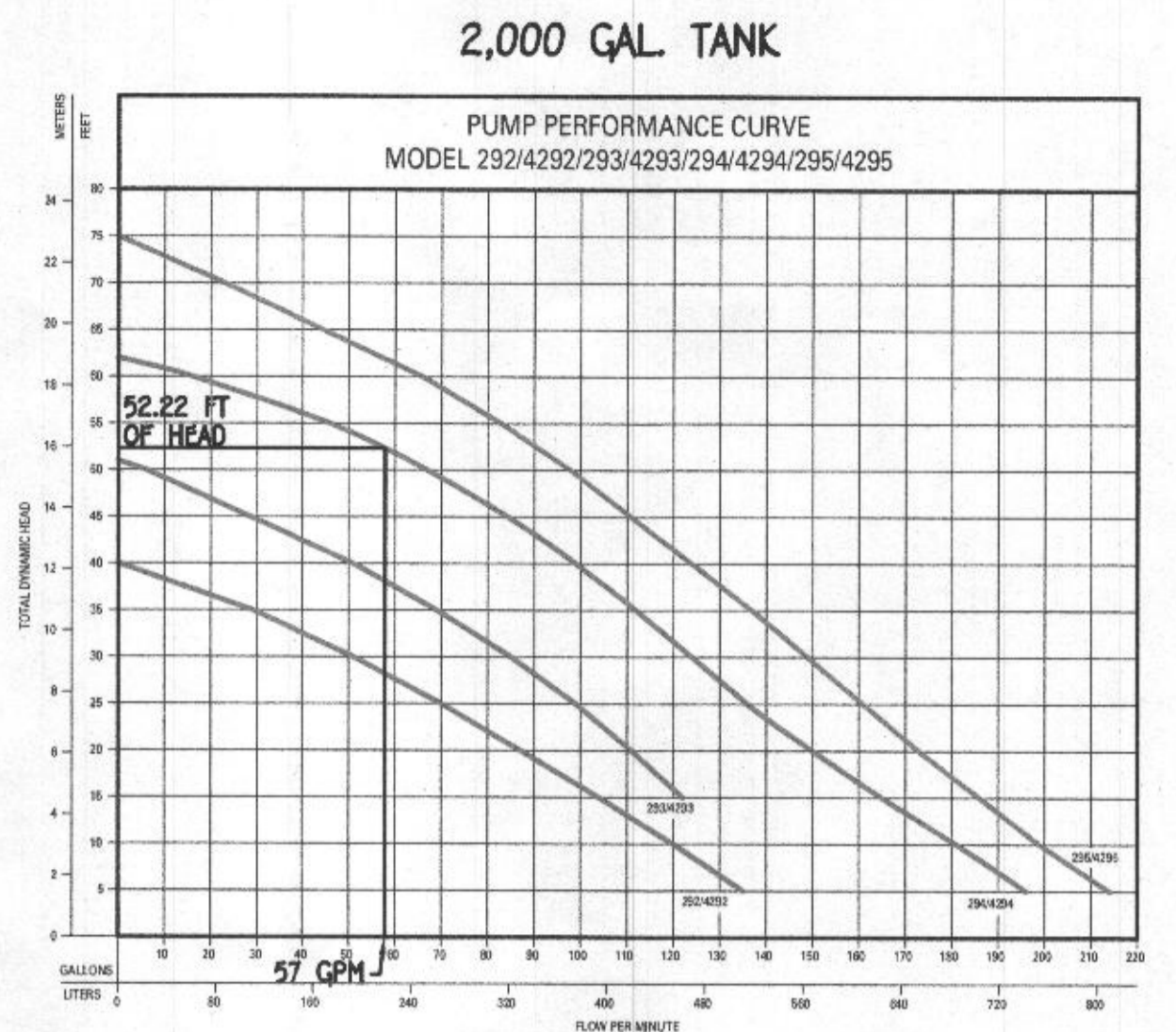
SEPTIC SYSTEM
INSTALLATION SITE PLAN
4264 MAISEL FARM LANE
LOT 50 ZONED: RR-DEO
TAX MAP NO.: 22 GRID NO.: 22 PARCEL NO.: 535
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER 5, 2024
SHEET 1 OF 2

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE, P.O. BOX 10272 BALTIMORE NATIONAL FIRE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2095



PROFILE SEPTIC LINE
SCALE HORZ. 1" = 50'
VERT. 1" = 5'

PLAN
SCALE: 1" = 30'



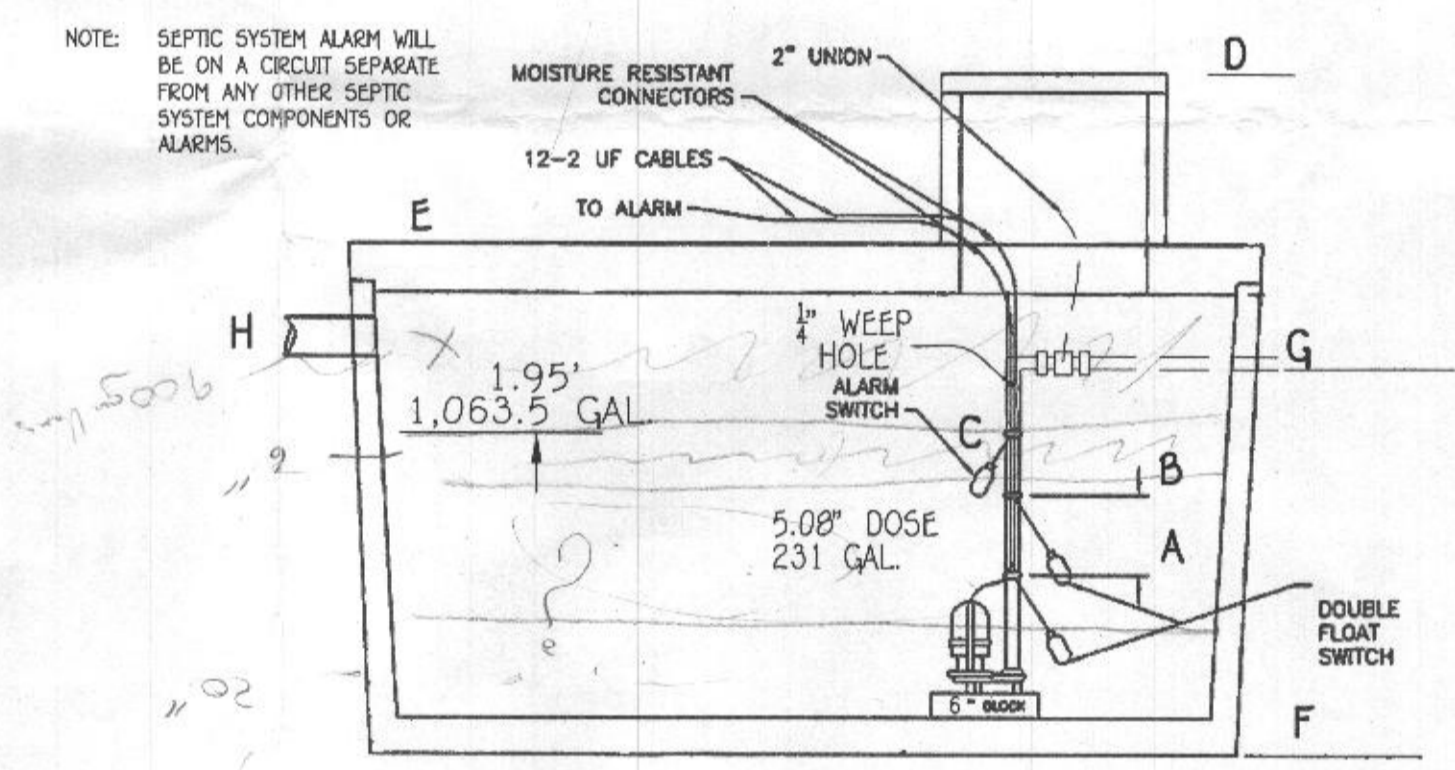
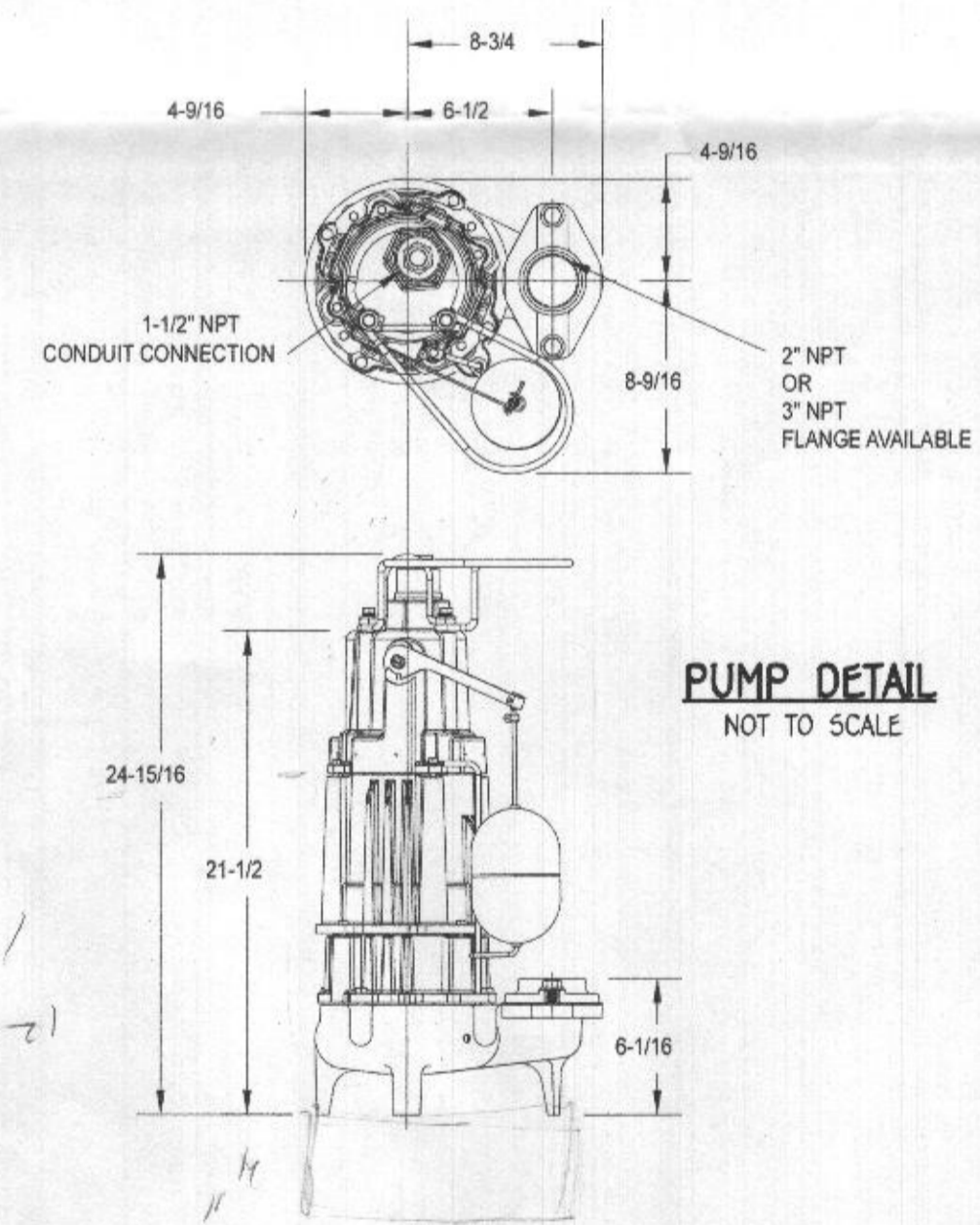
2" SDR-21 PVC = 451 LF
1 UNION @ 2 EQUIVALENT FEET = 2 LF
4 1/8 HD @ 4 EQUIVALENT FEET = 16 LF
TOTAL LINEAR FEET OF 2" SDR-21 PVC = 469 LF

DYNAMIC HEAD
469 LF X 2.05 FT PER 100 LF OF 2" PIPE = 9.61 FT OF FRICTION HEAD
VERTICAL FROM PUMP OFF TO HIGH POINT IN PUMP CHAMBER = 1.20 FT OF HEAD
HIGH POINT IN PUMP CHAMBER TO HIGHEST ELEV OF SYSTEM = 41.41 FT (PUMP OUT IS THE HIGHEST POINT)
TOTAL DYNAMIC HEAD = 52.22 FT

1/6 DESIGN FLOW (900/6=150) PLUS VOLUME OF 2" PIPE (73.6 GALLONS)
USE 224 GALLON DOSE (150 GALLON MINIMUM)
RUN TIME = 3.93 MIN (57 GPM X 3.93 = 224 GALLON DOSE)

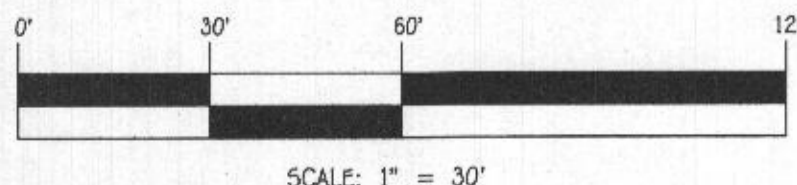
PUMP NEEDS TO HANDLE 57 GPM AT 52.22 FT OF HEAD
USE 1.5 HP (ZOELLER MODEL 294 PUMP)

- PUMP ALARMS / INFORMATION**
- A PUMP OFF : 495.36'
 - B PUMP ON : 494.96'
 - C HIGH WATER ALARM : 494.88'
 - D TOP OF TANK : 499.00'
 - E BOTTOM OF TANK : 492.25'
 - G DISCHARGE OUT OF TANK : 496.58'
 - H INVERT INTO TANK : 496.83'



PUMP TANK DETAIL
1,063.5 GAL EMERGENCY STORAGE
NOTE: THIS DETAIL IS TO BE USED FOR FLOAT CONFIGURATION ONLY - SEE DETAIL ABOVE FOR TANK DIMENSIONS AND ACTUAL LOCATION OF ACCESS COVER.

ONE TWO CHAMBER
2,000-GAL SEPTIC TANK
& ONE 2,000-GAL PUMP TANK
W/ ZOELLER 294 PUMP OR EQUAL TO GRAVITY DISTRIBUTION FOR 6 BEDROOM SFD



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2895

OWNER
WEI WEI
XU FENG
424B MAISEL FARM LANE
ELLICOTT CITY, MARYLAND 21042



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED UNDER MY SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/26.

PAUL G. CAVANAUGH
Date: 11-4-2024

**SEPTIC SYSTEM
INSTALLATION SITE PLAN**
4264 MAISEL FARM LANE
LOT 50 ZONED: RR-DEO
TAX MAP NO.: 22 GRID NO.: 22 PARCEL NO.: 535
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER 5, 2024
SHEET 2 OF 2