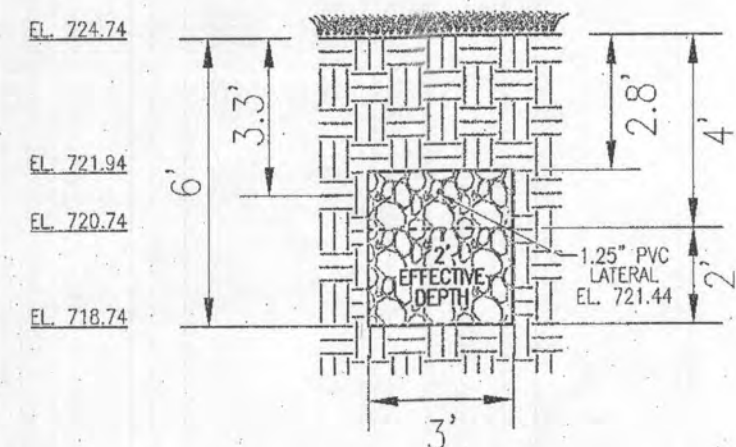
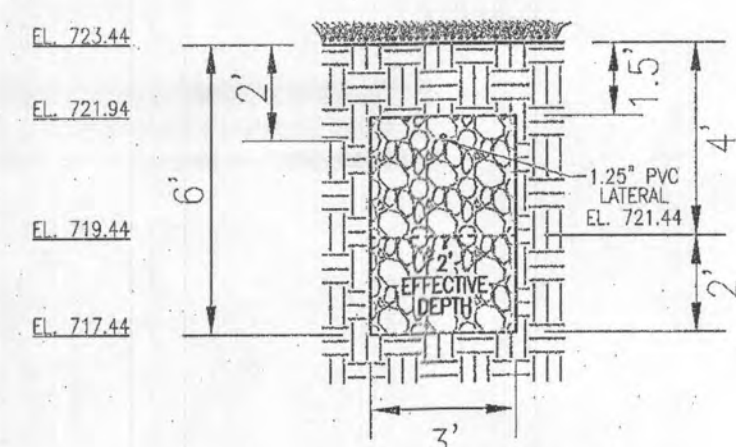
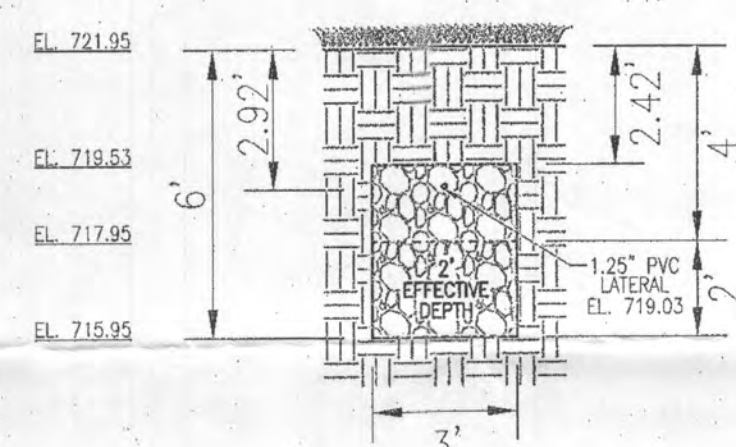




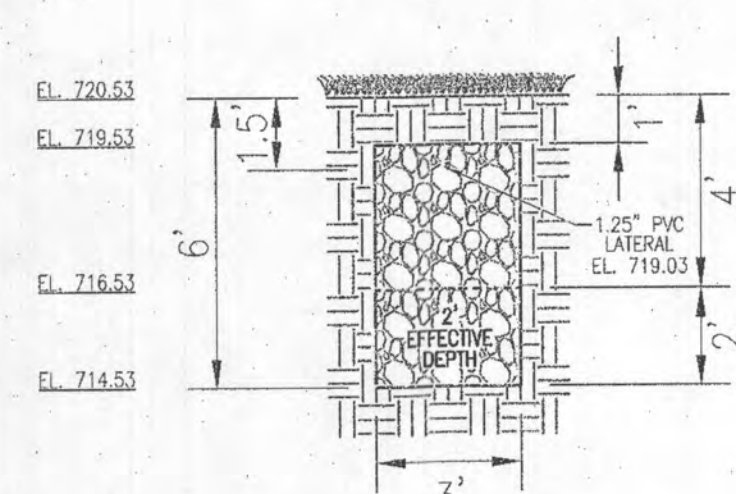
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #1)**
SCALE: 1"=4'



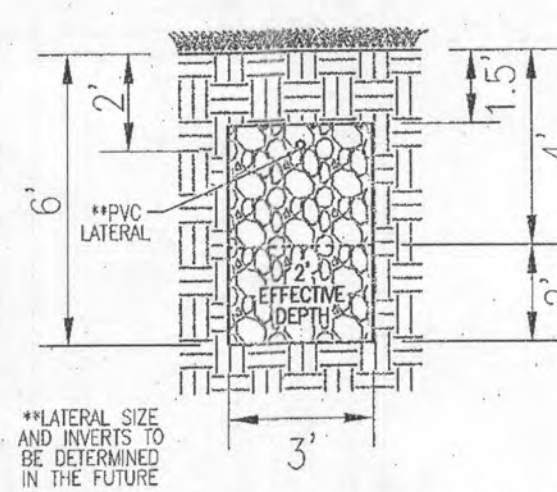
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #2)**
SCALE: 1"=4'



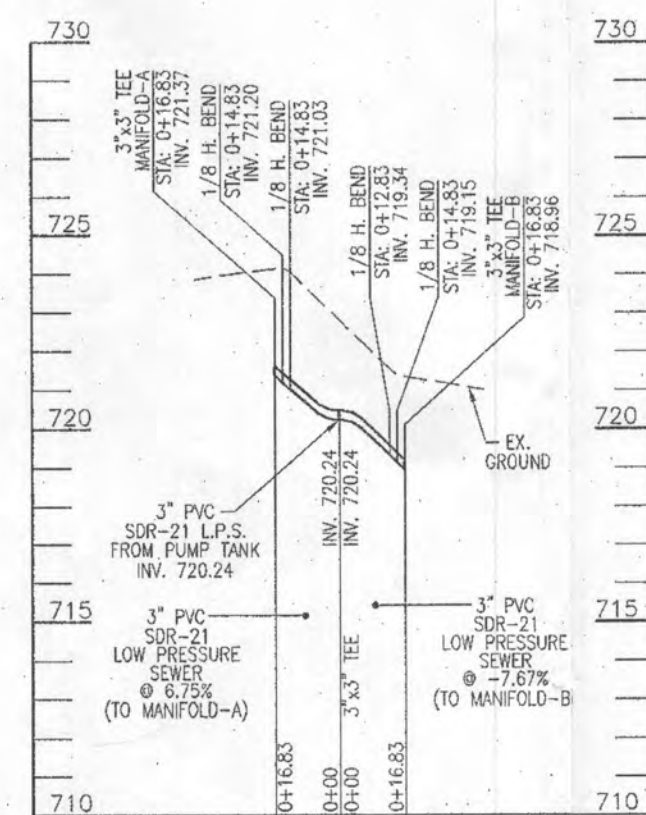
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #3)**
SCALE: 1"=4'



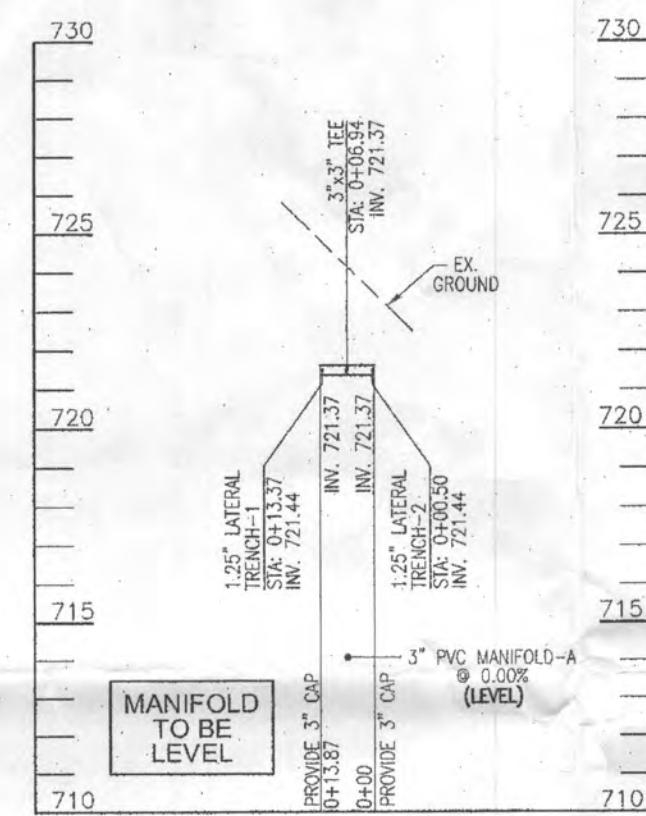
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #4)**
SCALE: 1"=4'



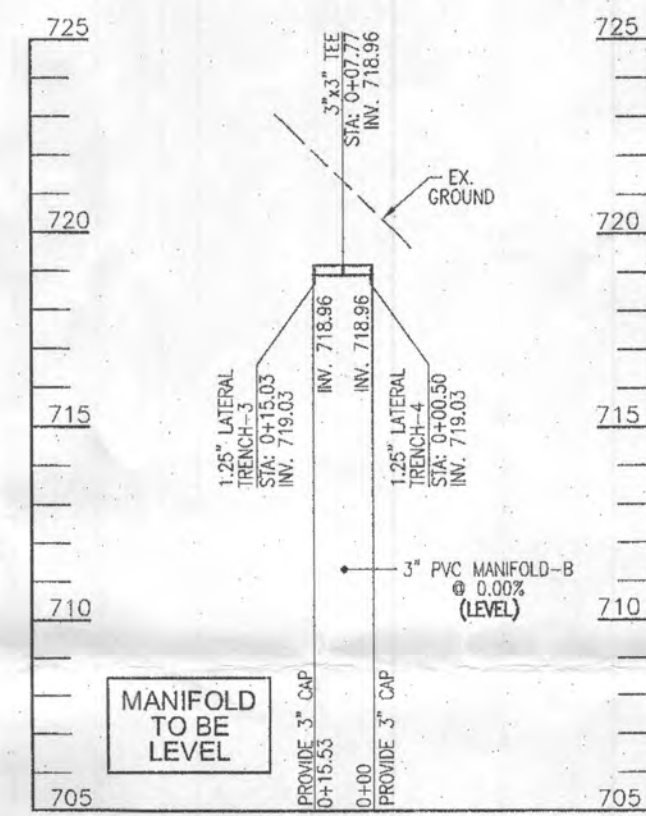
**1ST & 2ND REPLACEMENT
TRENCH DETAIL**
SCALE: 1"=4'



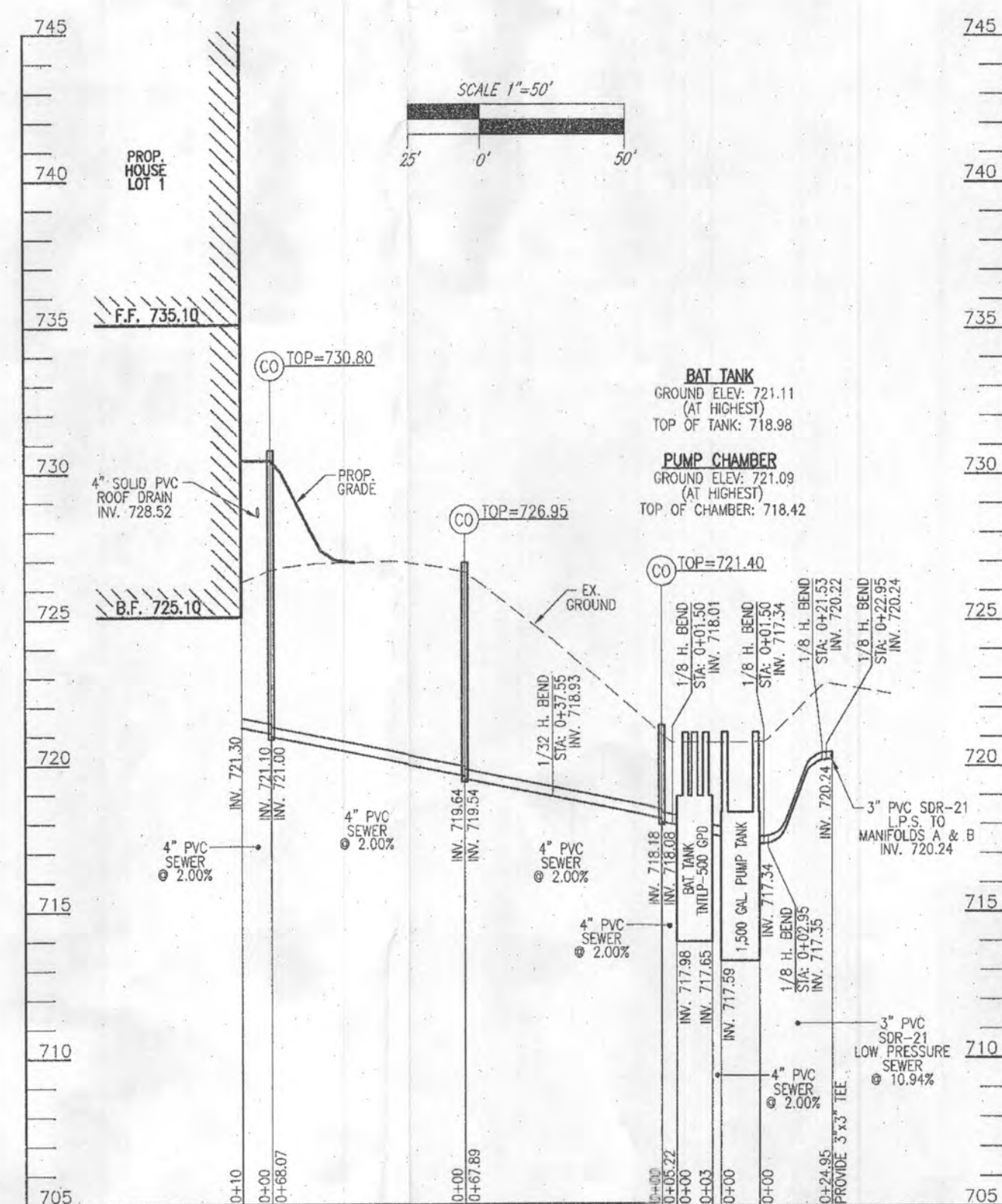
SEPTIC SYSTEM PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



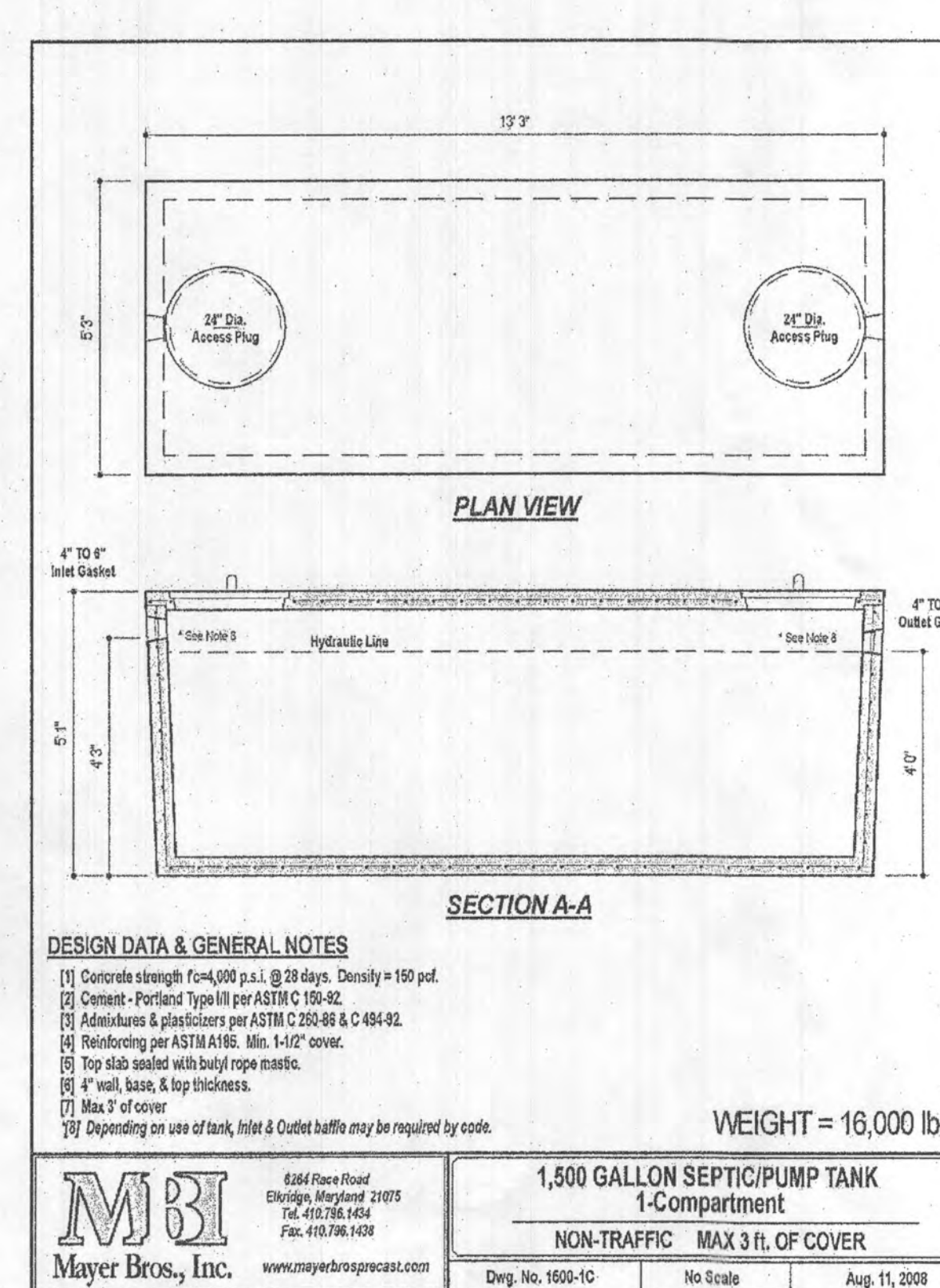
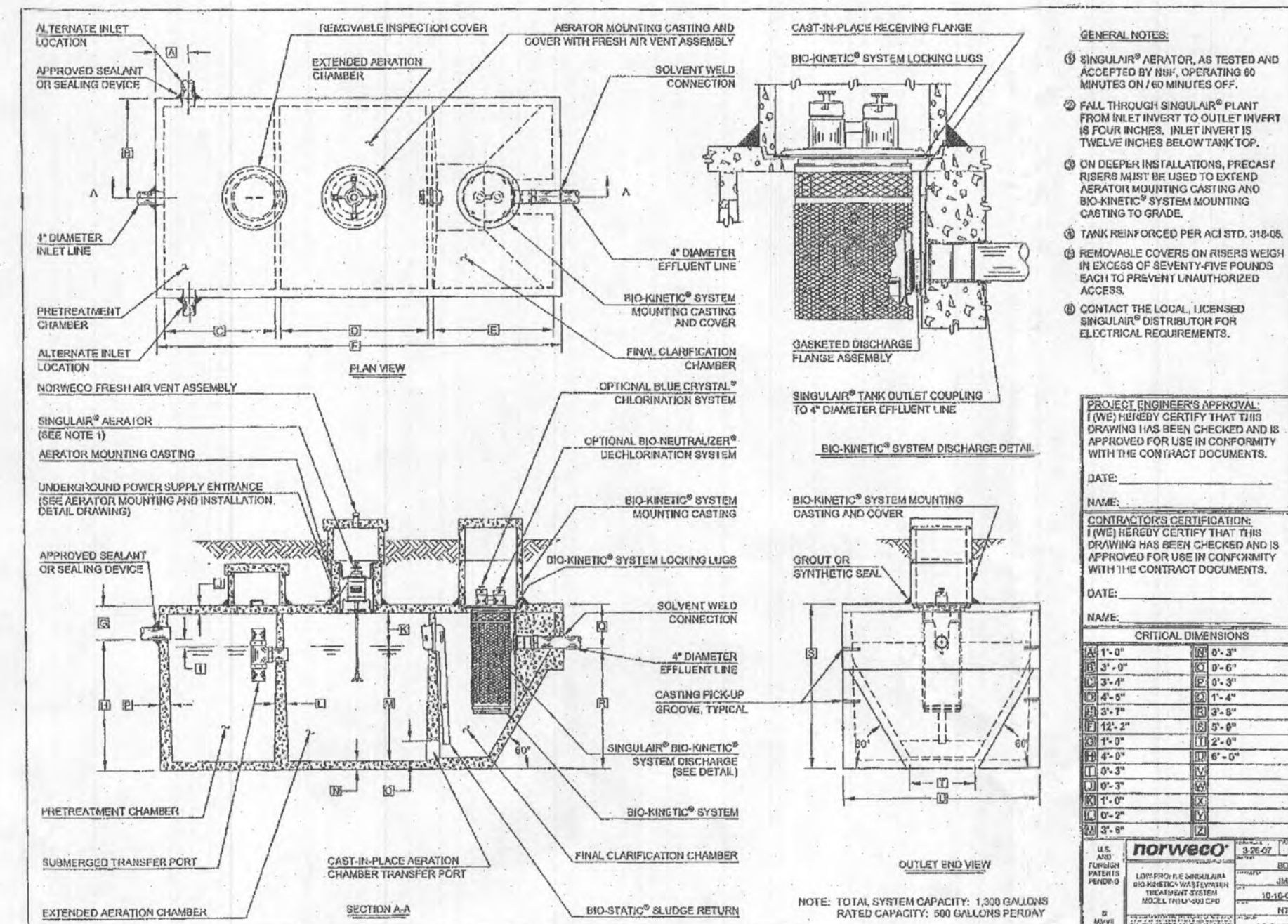
MANIFOLD-A PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



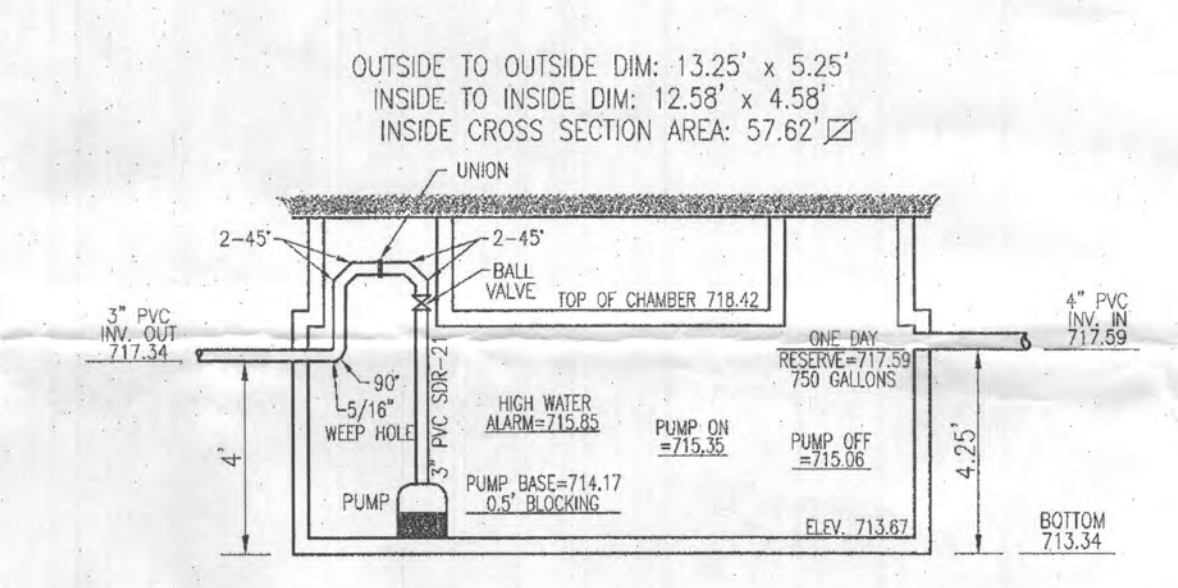
MANIFOLD-B PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



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



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



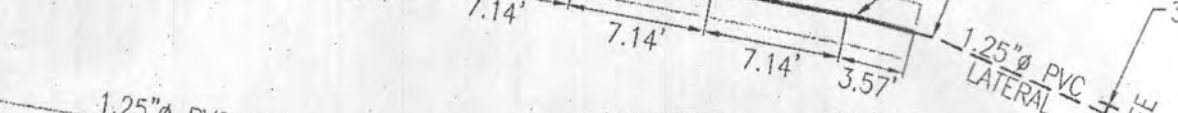
**TRENCH #4
50 LF**
PROVIDE (7)
5/16" HOLES
7.14' O/C



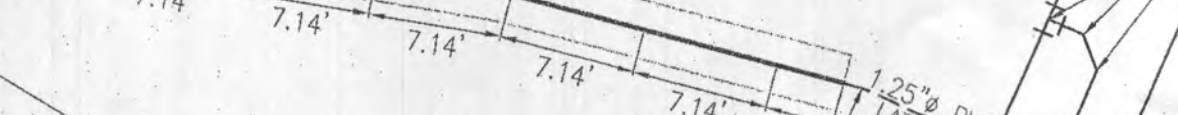
**TRENCH #3
50 LF**
PROVIDE (7)
5/16" HOLES
7.14' O/C



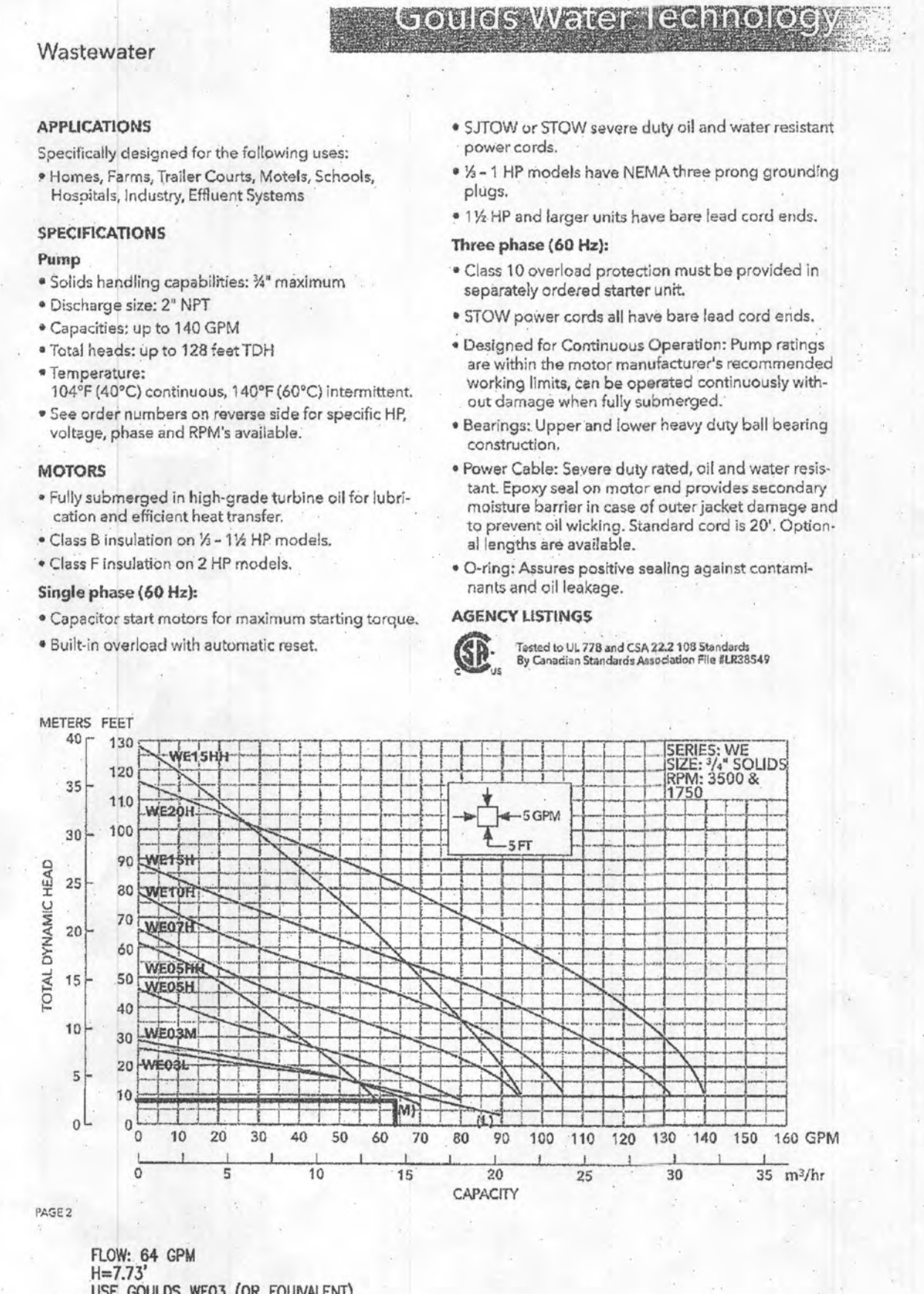
**TRENCH #2
50 LF**
PROVIDE (10)
5/16" HOLES
5.00' O/C



**TRENCH #1
50 LF**
PROVIDE (10)
5/16" HOLES
5.00' O/C



INITIAL SYSTEM LATERAL DETAIL
SCALE: 1"=10'



Wastewater

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: UNION: 1x3 = 3
BALL VALVE: 1x2 = 2
45° ELBOW: 4x6 = 24
90° ELBOW: 1x10 = 10
45° ELBOW: 8x6 = 48
TEE: 3x3 = 9

FITTING EQ. LENGTH: 95.0 LF
PIPE LENGTH: 58.6 LF
TOTAL LENGTH: 154.6 LF
FRICTION LOSS (64 GPM): (0.92)(154.6)/100 = 1.42'
STATIC: 721.37-715.06 (PUMP OFF) = 6.31'
TDH: 6.31+1.42 = 7.73'
USE GOULDS WE03 (OR EQUIVALENT)

Runtime: 725 gallons (dose) / 64.38 gpm = 1.94 minutes

OWNER
PHILLIP H. DORSEY
13090 OLD FREDERICK ROAD
SYKESVILLE, MD 21784
240-755-7378

DEVELOPER
M. GREGORY HOME BUILDING, LLC
6310 WINTERS LANE
HANOVER, MD 21076
240-755-7378

NO. REVISION DATE

SITE PLAN FOR BAT INSTALLATION

HAY MEADOW OVERLOOK - LOT 1
540 WATERSVILLE ROAD
MOUNT AIRY, MD 21771
(PLAT #25842-25844)

L 19022 / F. 322
TAX MAP: 2 GRID: 15
4TH ELECTION DISTRICT

PARCEL: 18
ZONED: RC-DEO
HOWARD COUNTY, MARYLAND

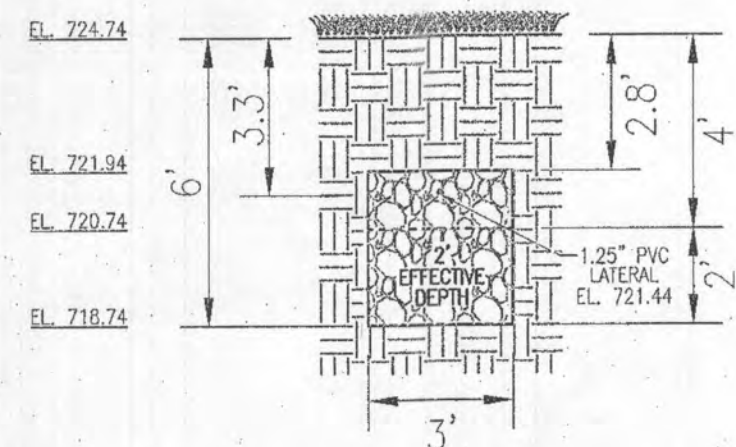
VOGEL ENGINEERING

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

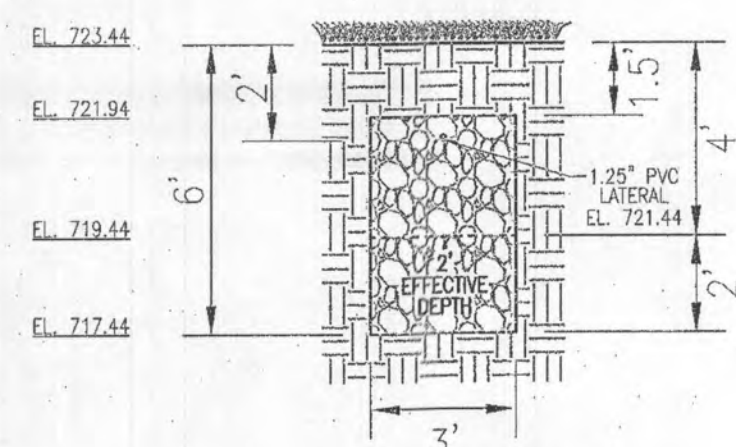
PROFESSIONAL CERTIFICATE

DESIGN BY: RHY
DRAWN BY: JMR
CHECKED BY: RHY
DATE: JUNE 2024
SCALE: AS SHOWN
W.D. NO.: 03-117

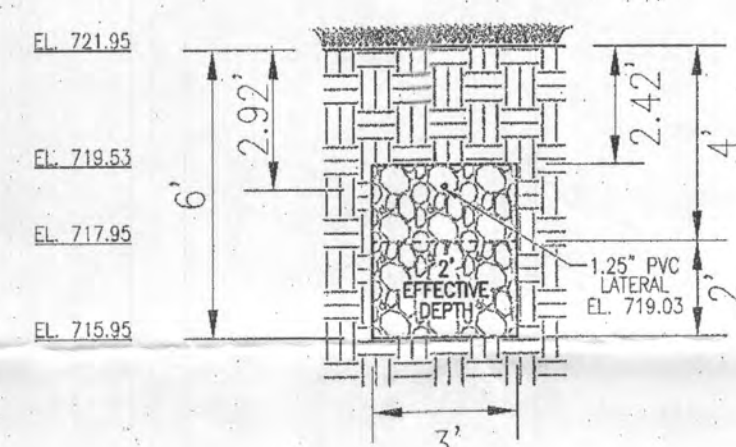
2 SHEET OF 2



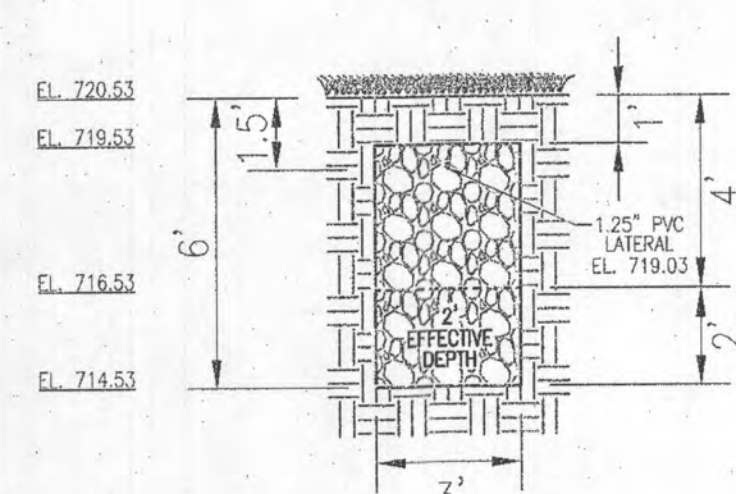
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #1)**
SCALE: 1"=4'



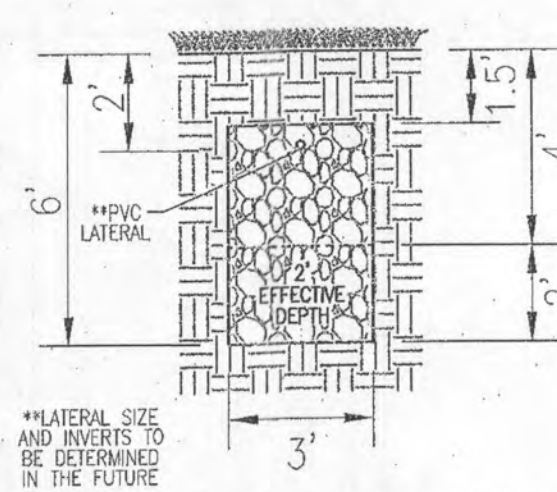
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #2)**
SCALE: 1"=4'



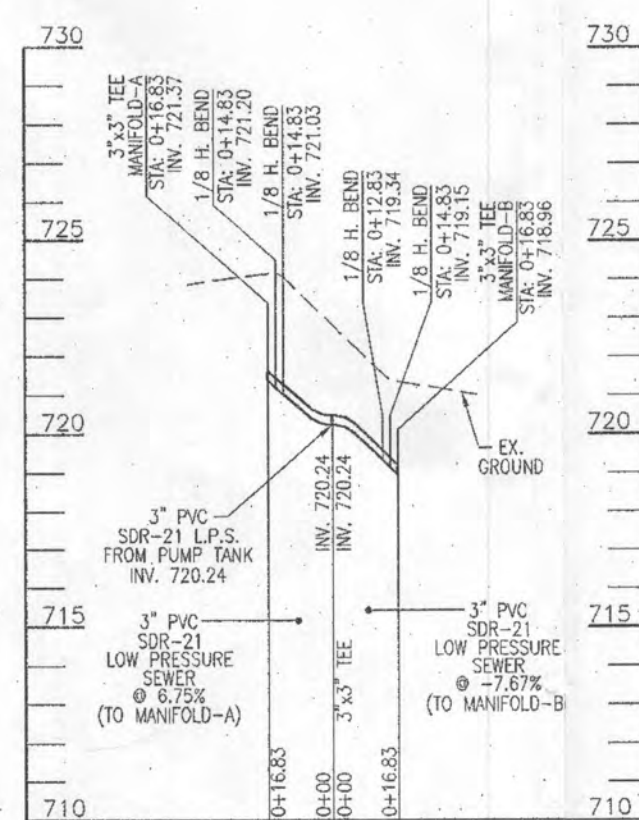
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #3)**
SCALE: 1"=4'



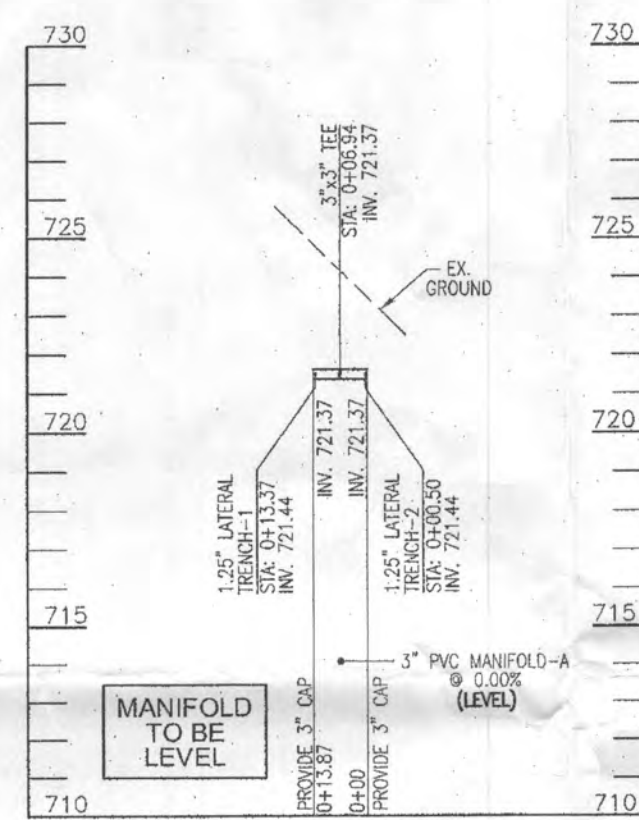
**INITIAL SYSTEM
TRENCH DETAIL
(TRENCH #4)**
SCALE: 1"=4'



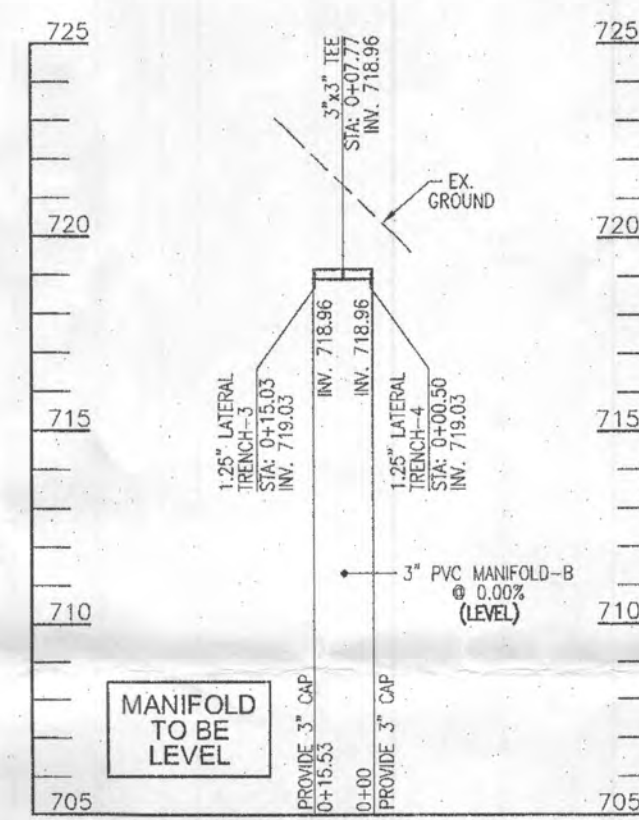
**1ST & 2ND REPLACEMENT
TRENCH DETAIL**
SCALE: 1"=4'



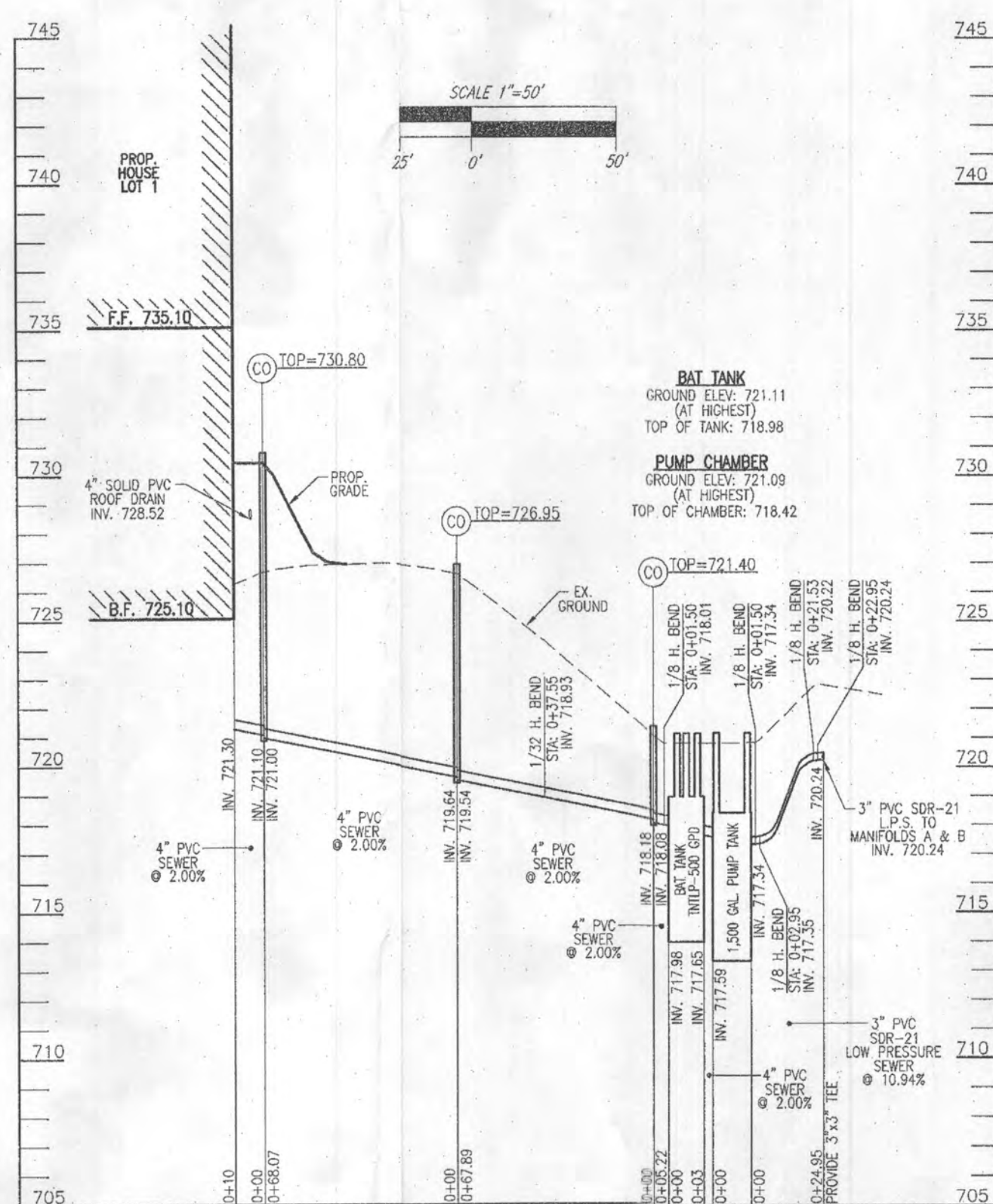
SEPTIC SYSTEM PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



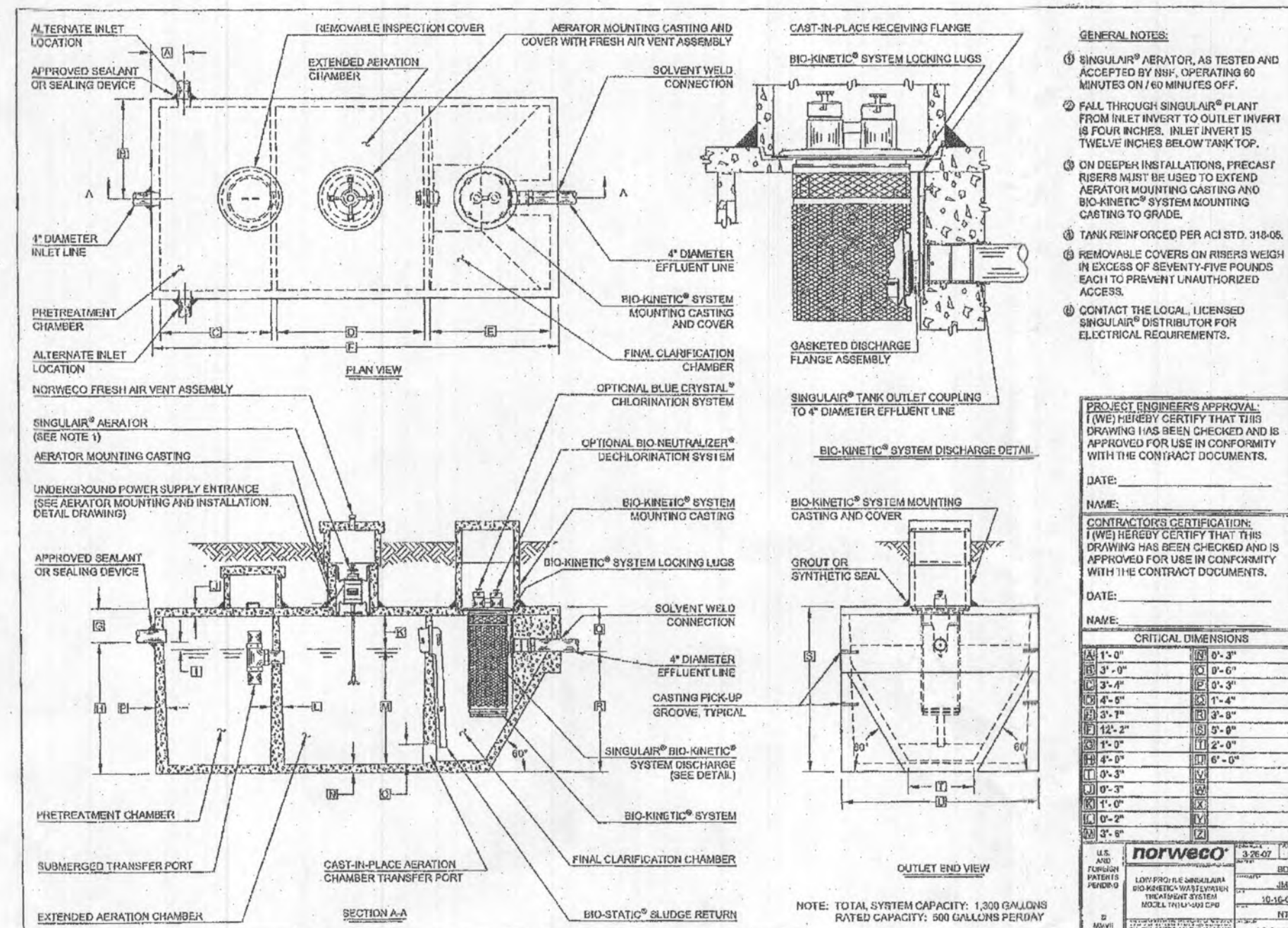
MANIFOLD-A PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



MANIFOLD-B PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

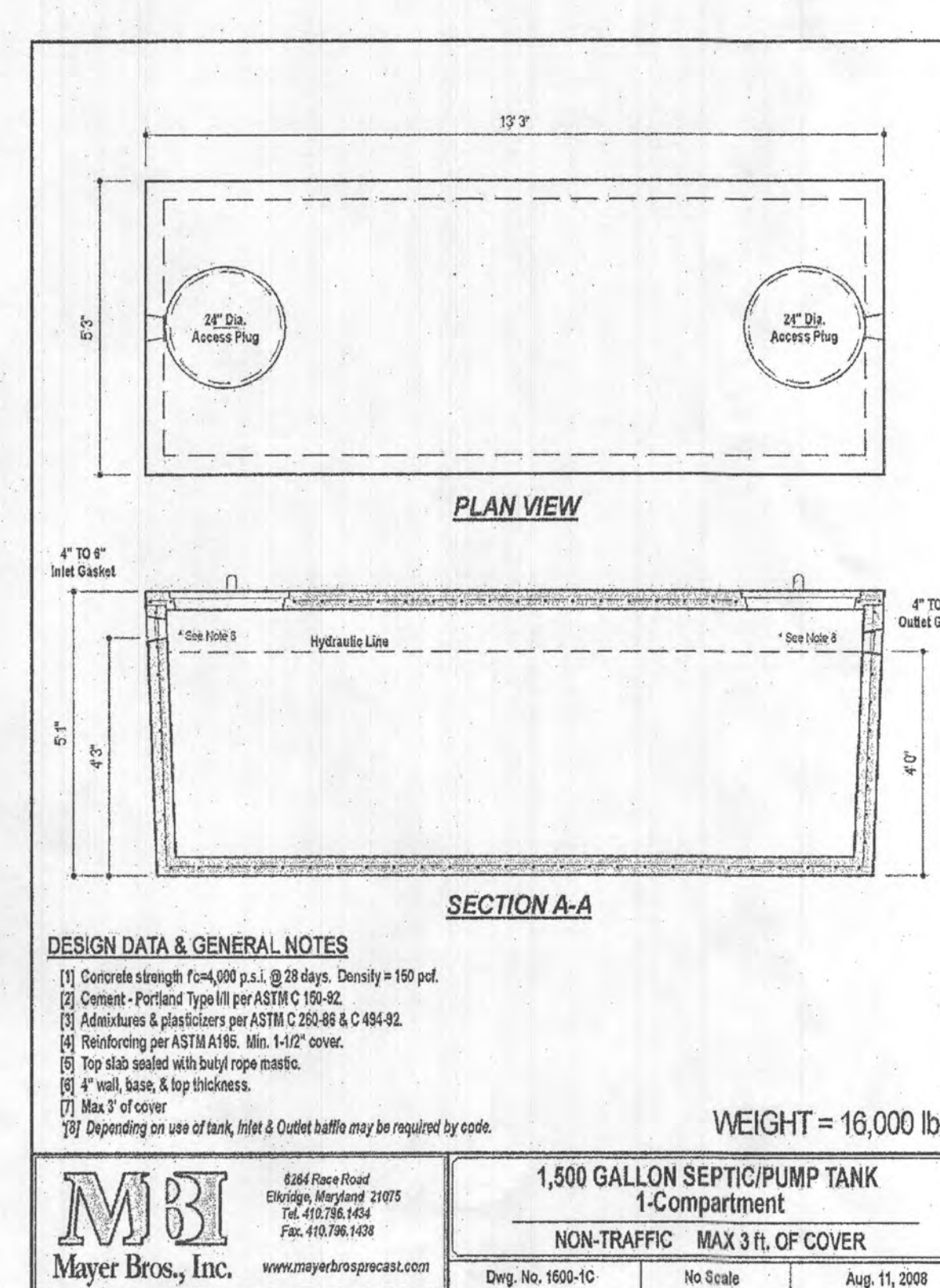


SEPTIC SYSTEM PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

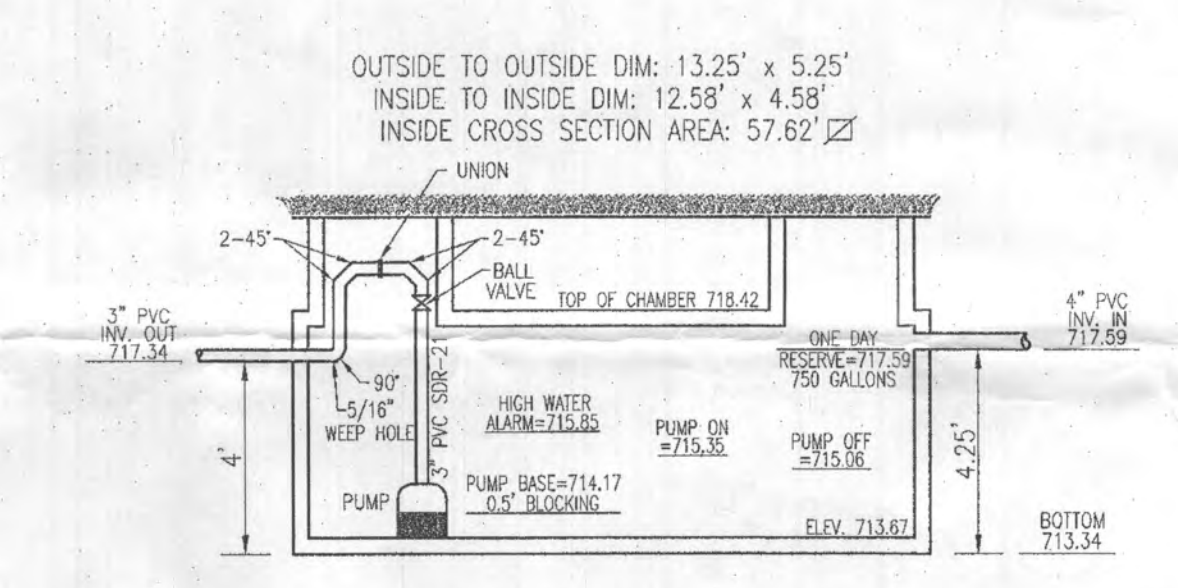


GENERAL NOTES:

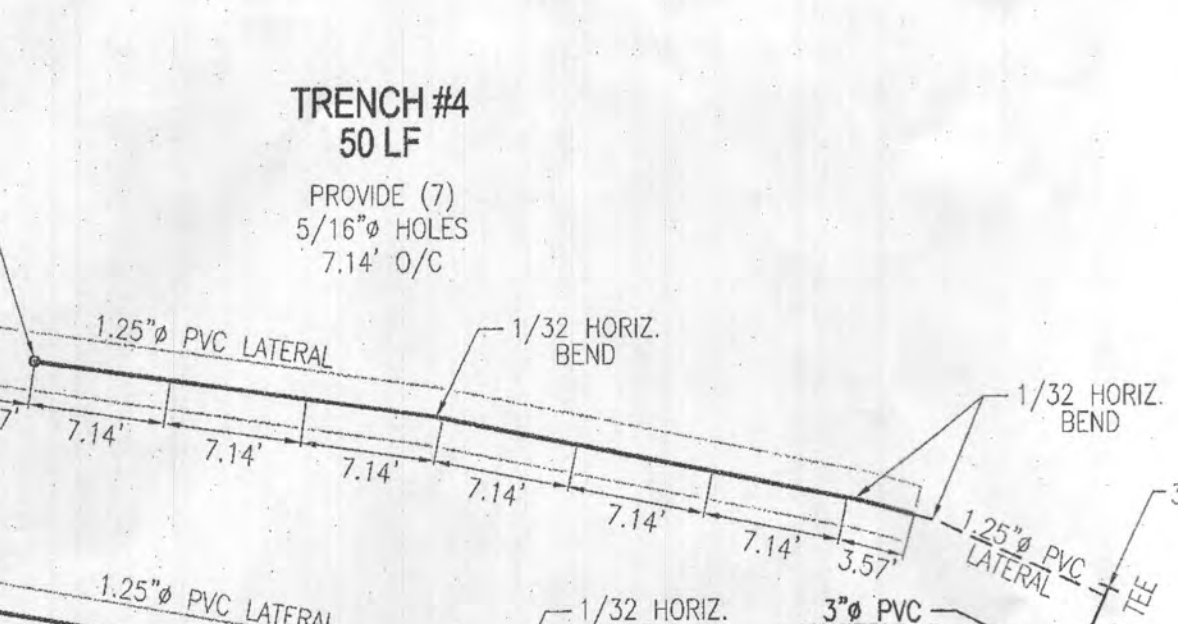
1. ALL MATERIALS SHALL BE AS TESTED AND ACCEPTED BY THE OWNER.
2. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
3. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
4. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
5. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
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10. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



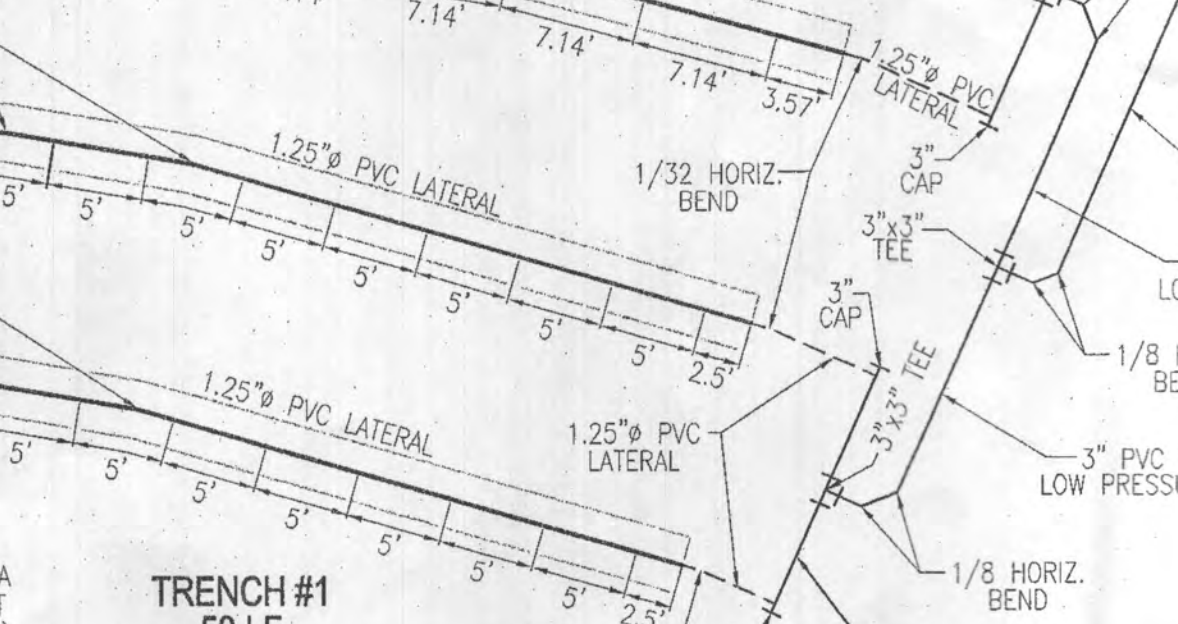
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



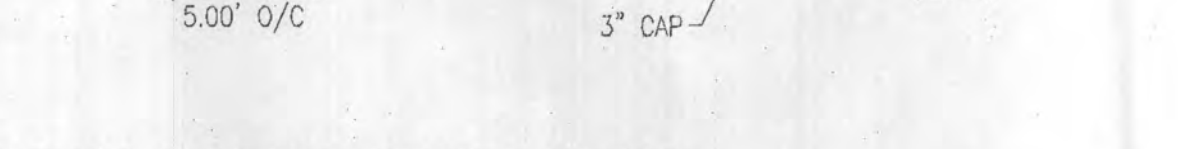
**TRENCH #4
50 LF**
SCALE: 1"=10'



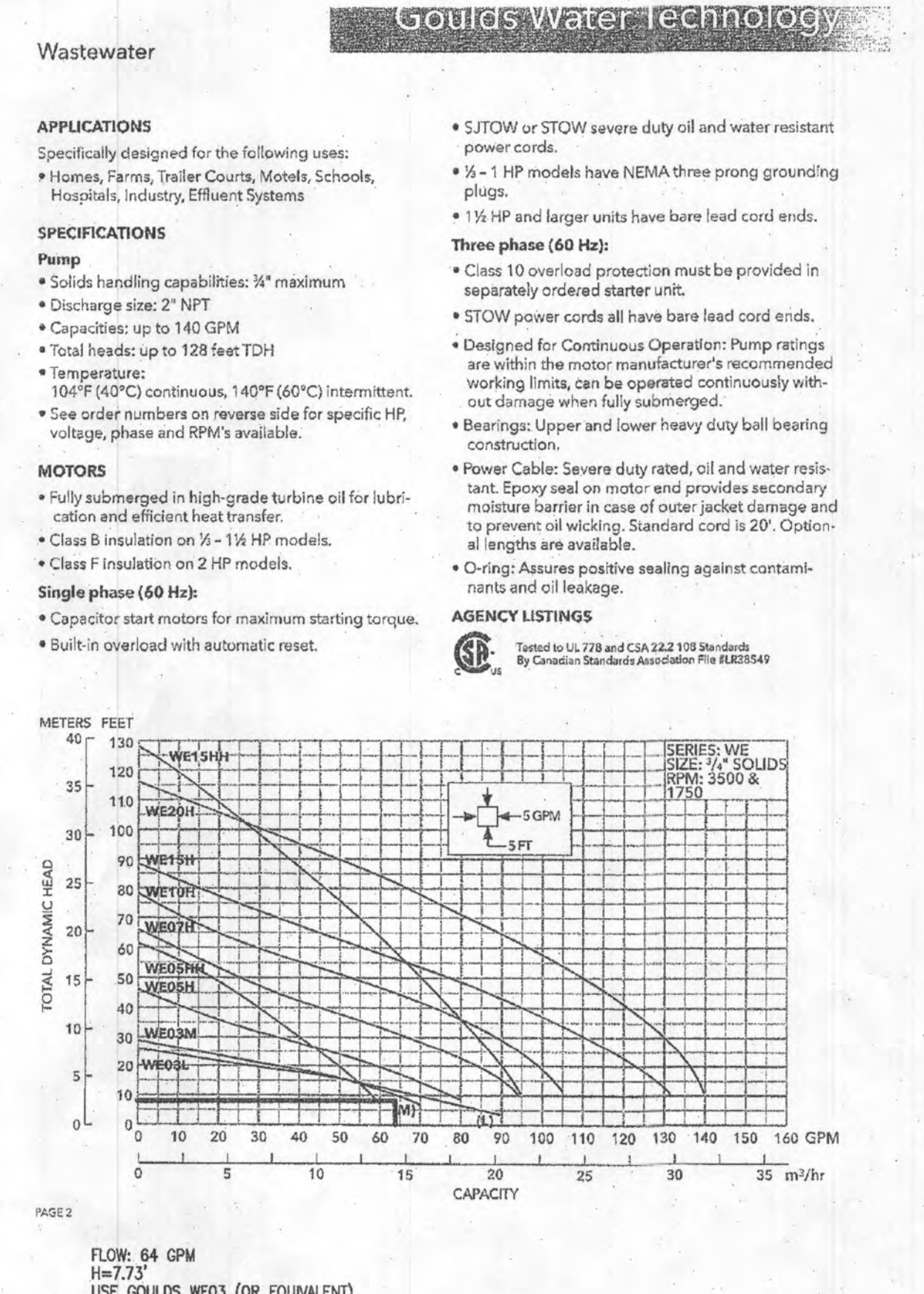
**TRENCH #3
50 LF**
SCALE: 1"=10'



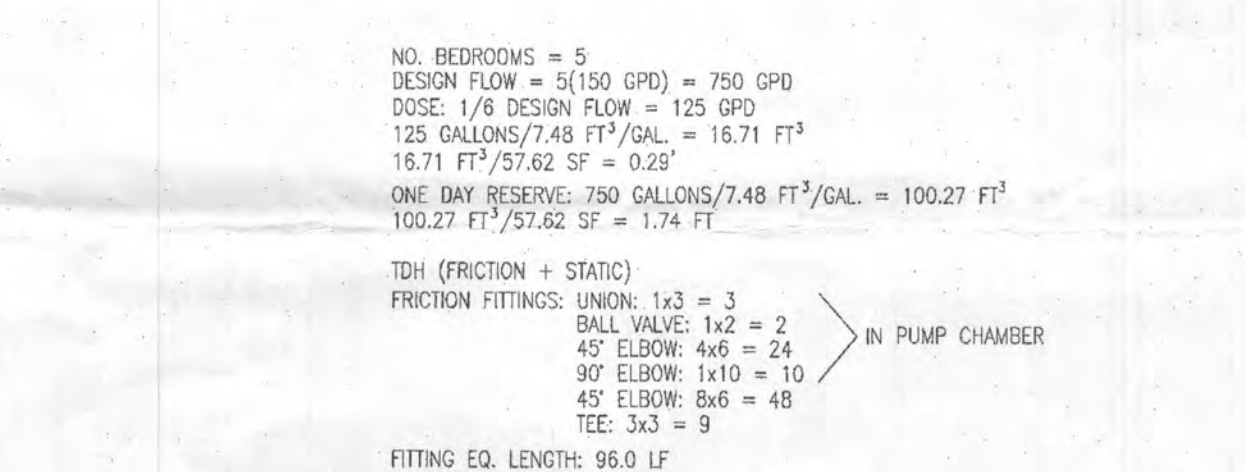
**TRENCH #2
50 LF**
SCALE: 1"=10'



**TRENCH #1
50 LF**
SCALE: 1"=10'



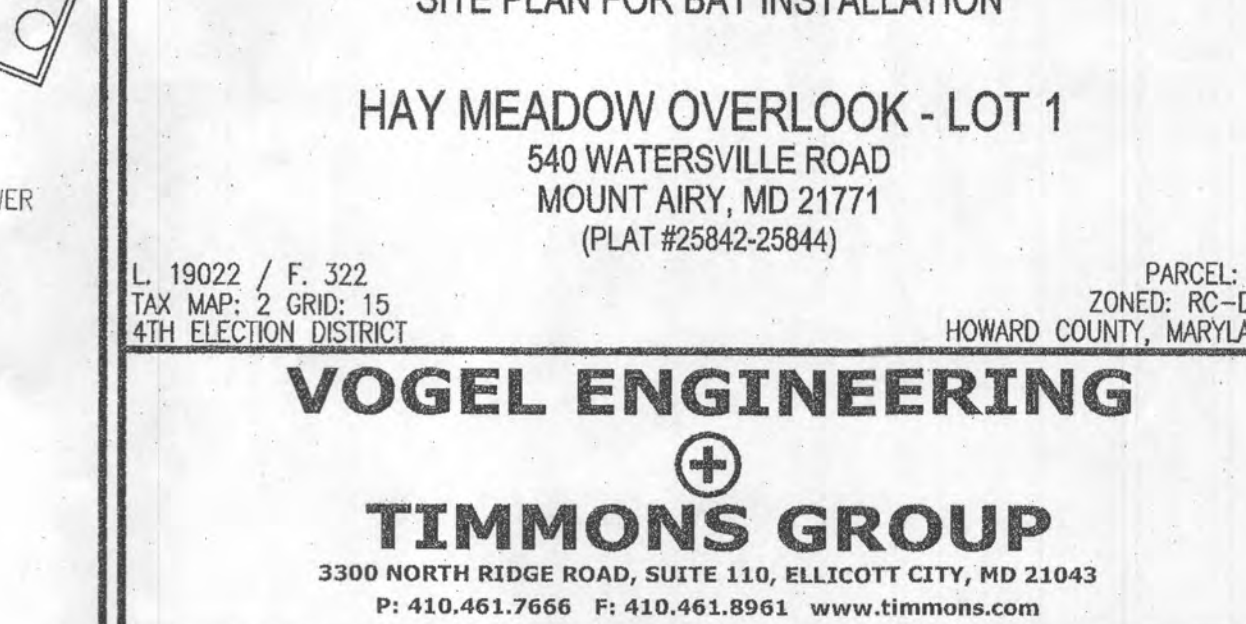
WASTEWATER FLOW CHART
SCALE: 1"=10'



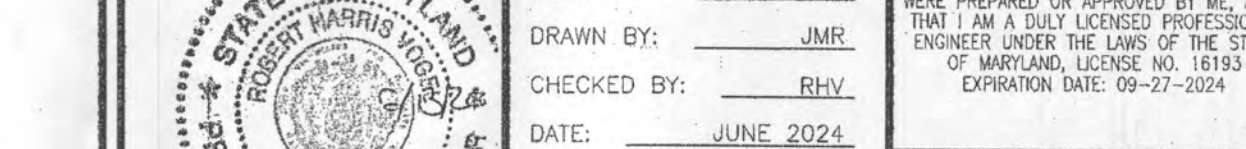
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



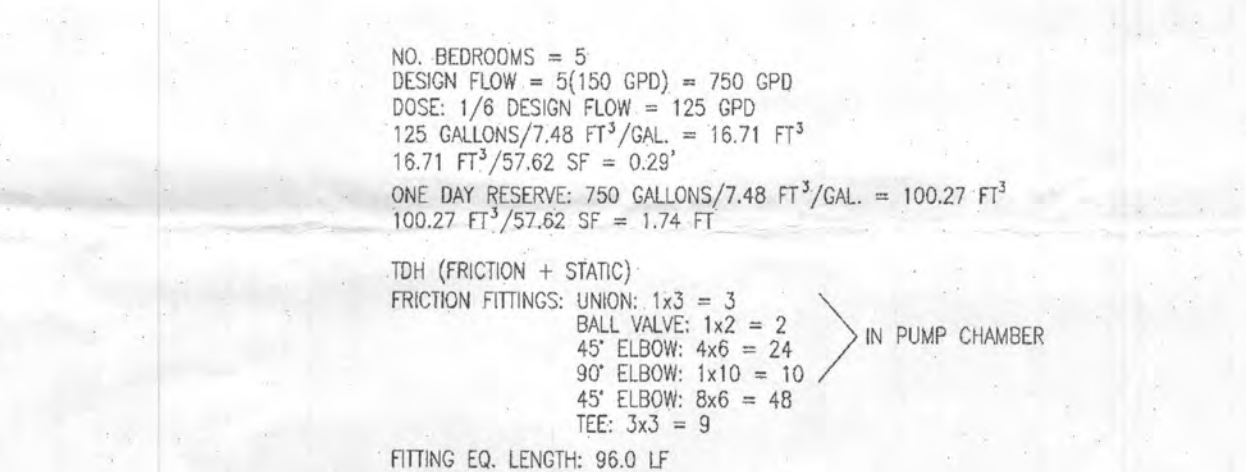
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



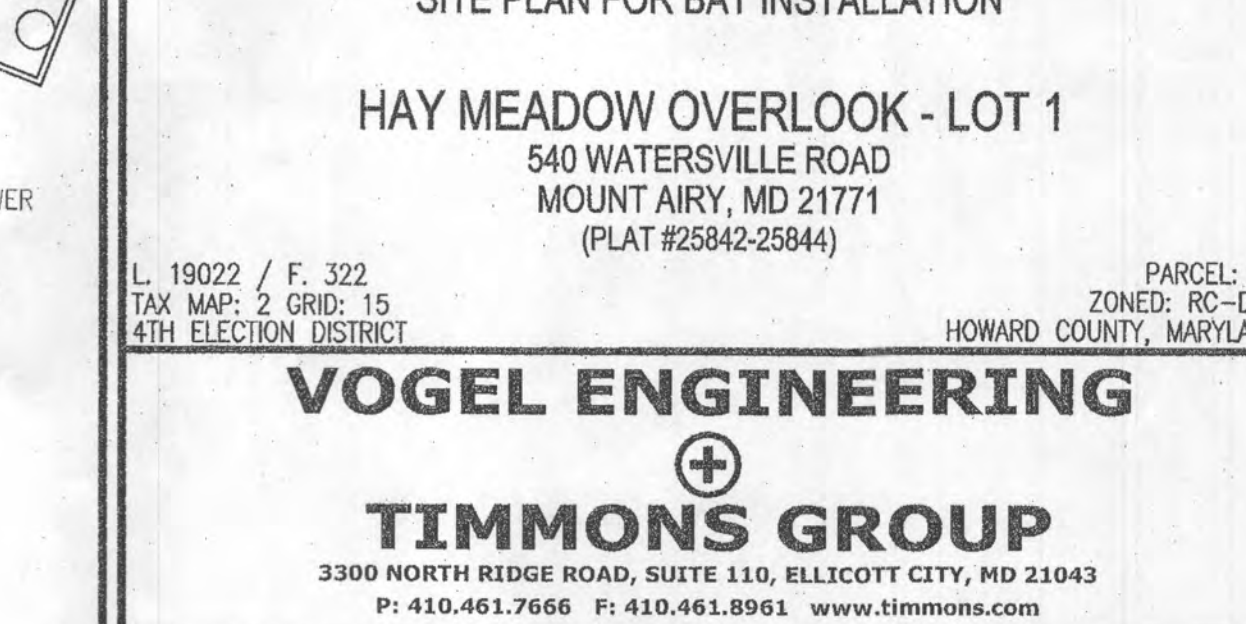
**TRENCH #1
50 LF**
SCALE: 1"=10'



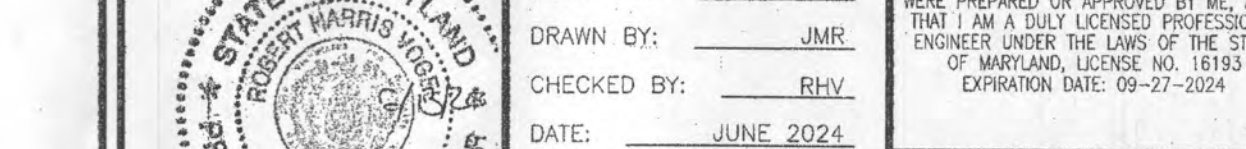
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



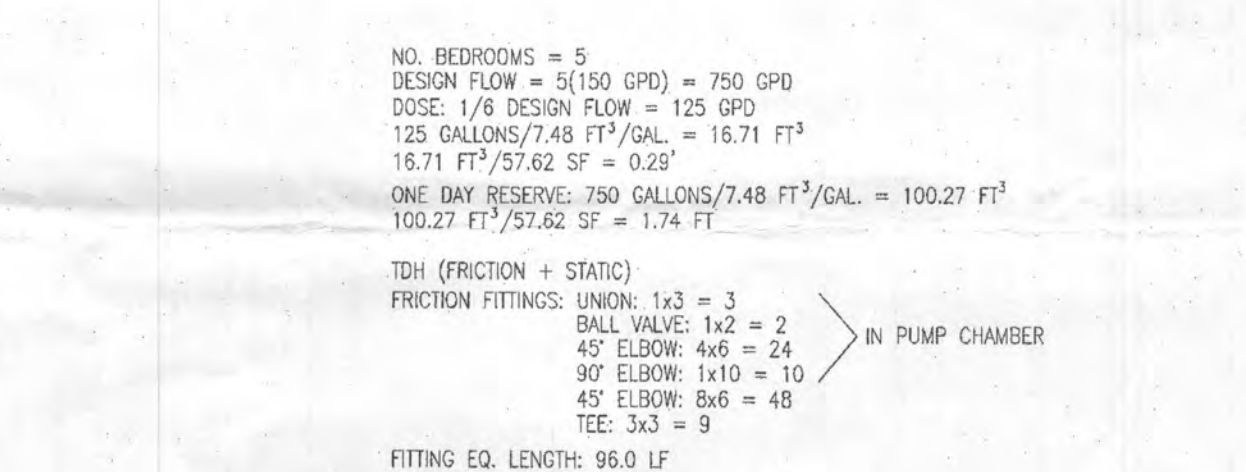
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



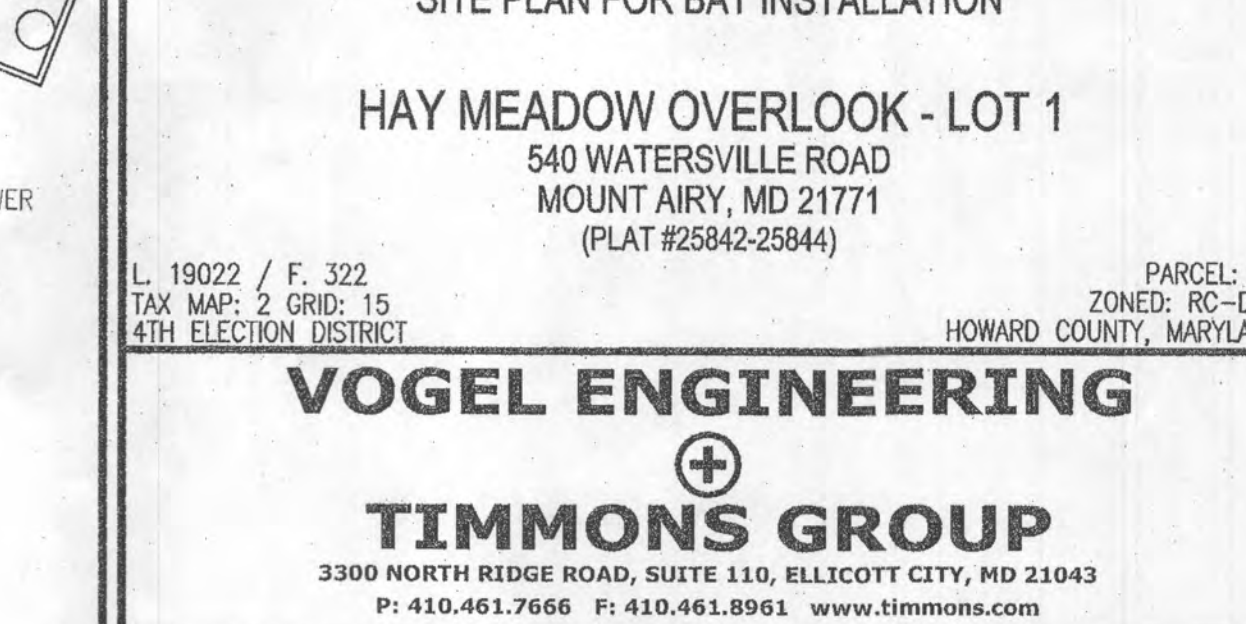
**TRENCH #1
50 LF**
SCALE: 1"=10'



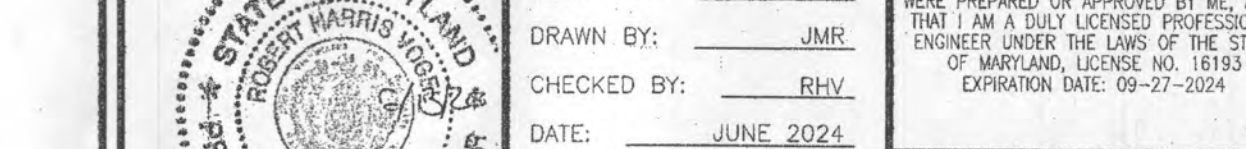
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



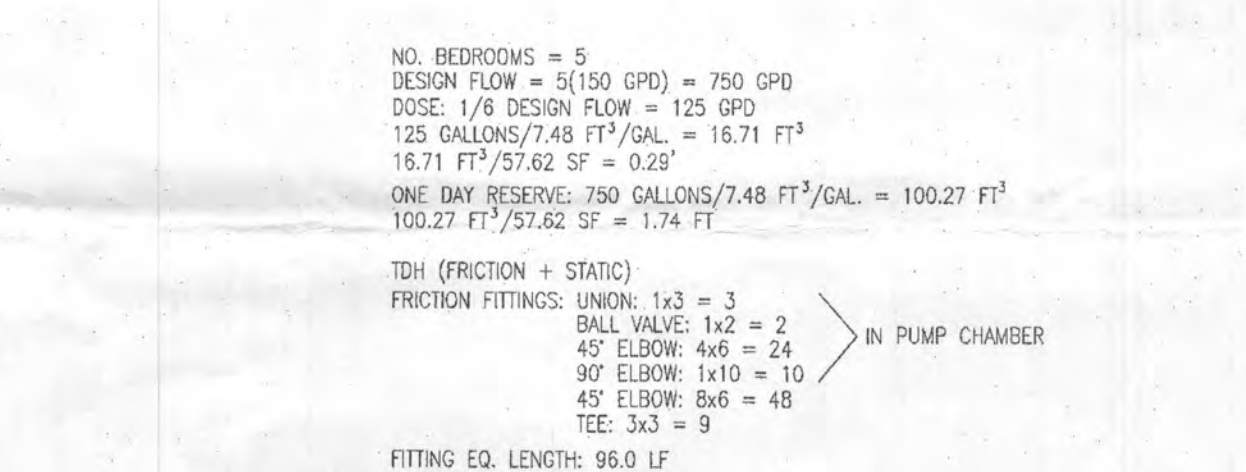
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



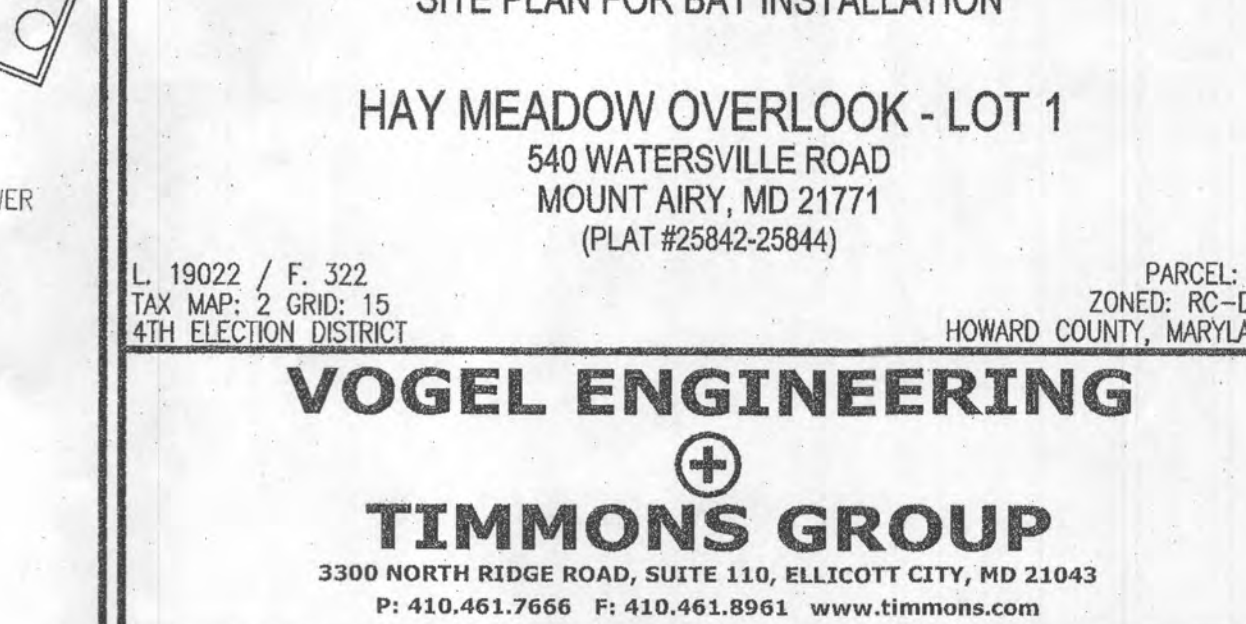
**TRENCH #1
50 LF**
SCALE: 1"=10'



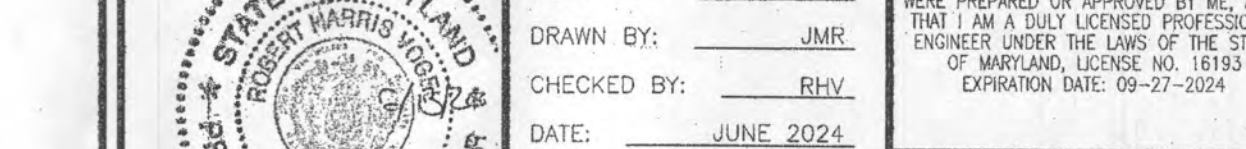
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



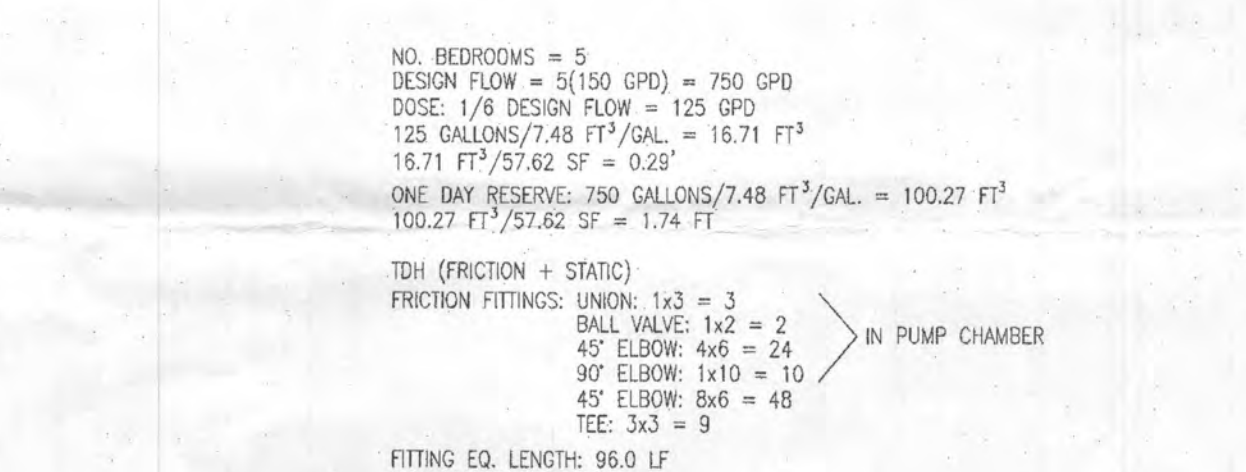
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



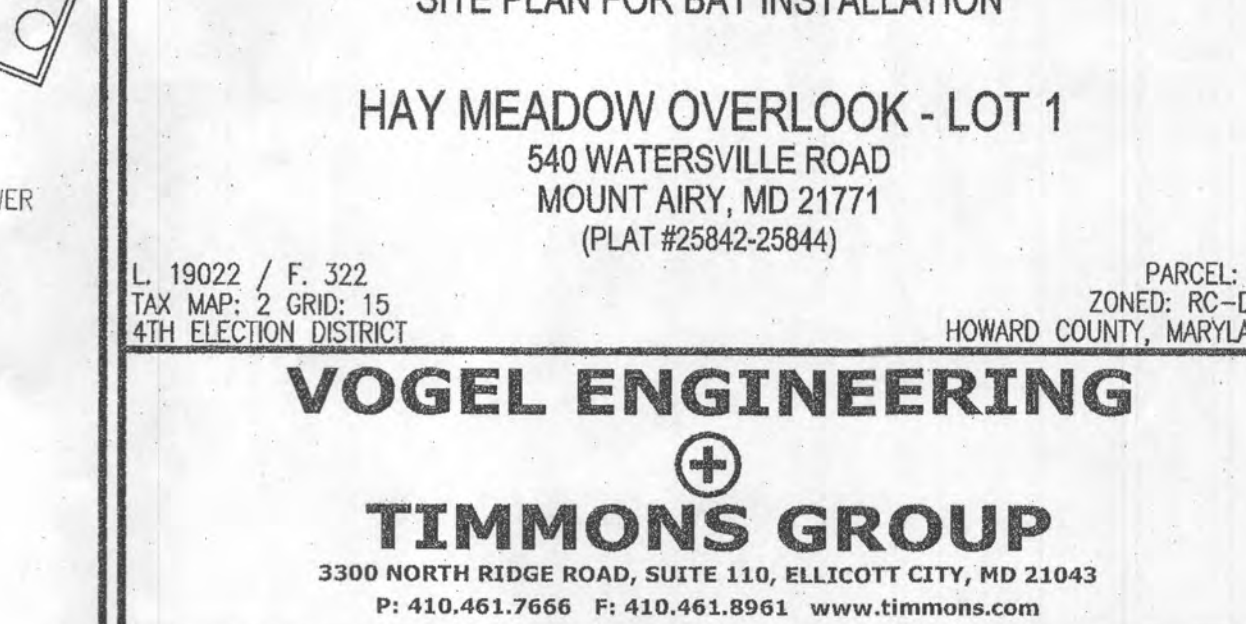
**TRENCH #1
50 LF**
SCALE: 1"=10'



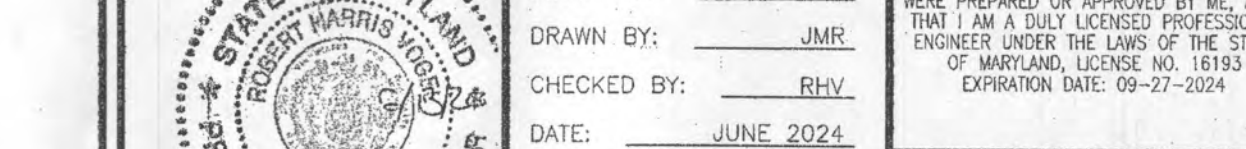
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



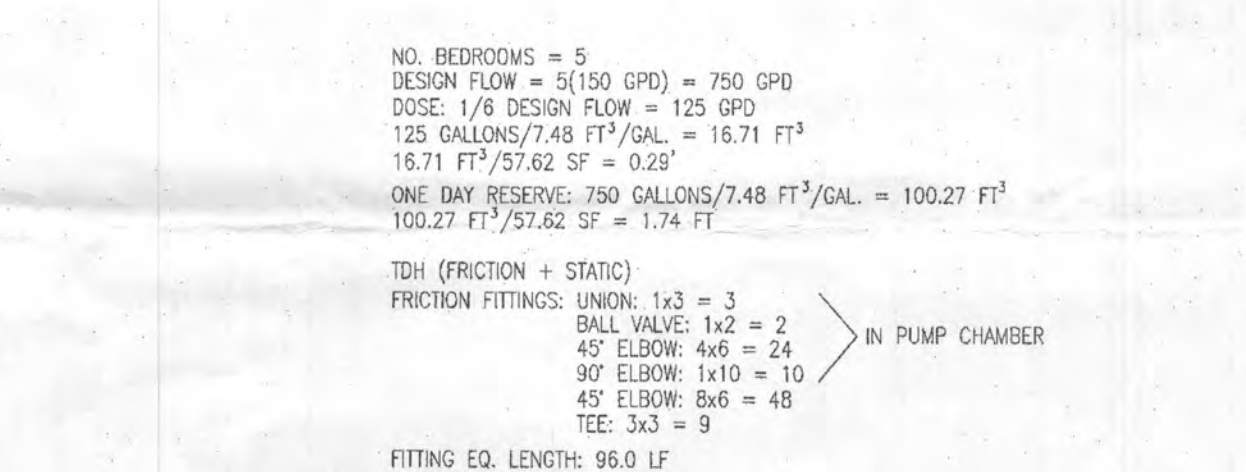
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



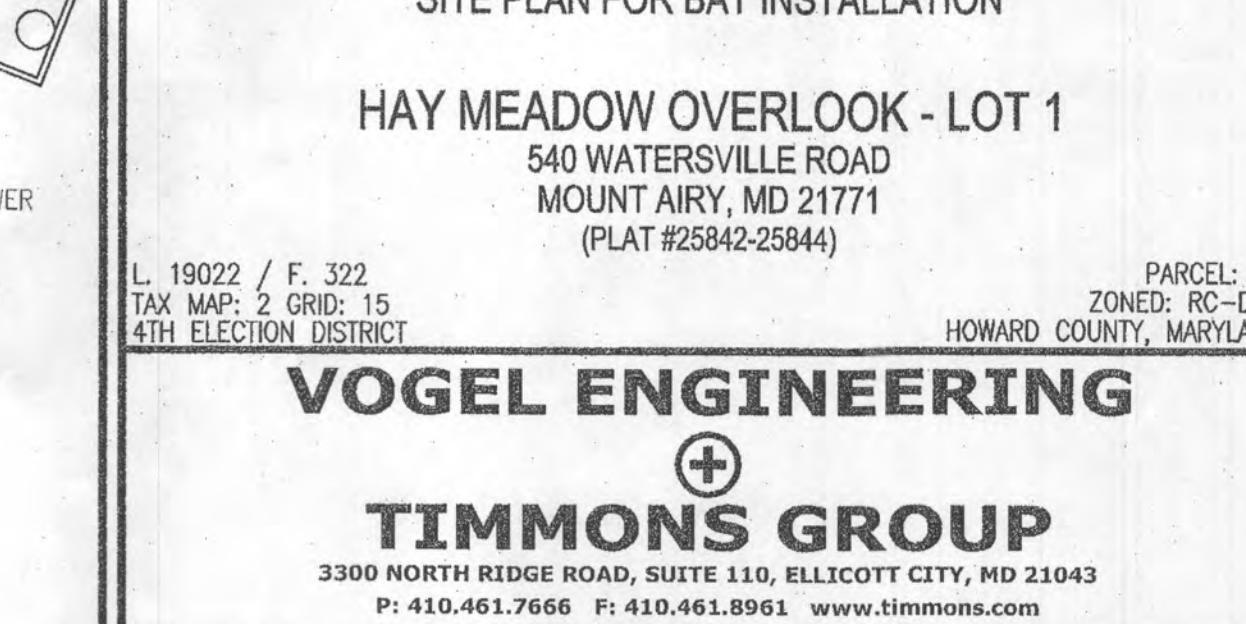
**TRENCH #1
50 LF**
SCALE: 1"=10'



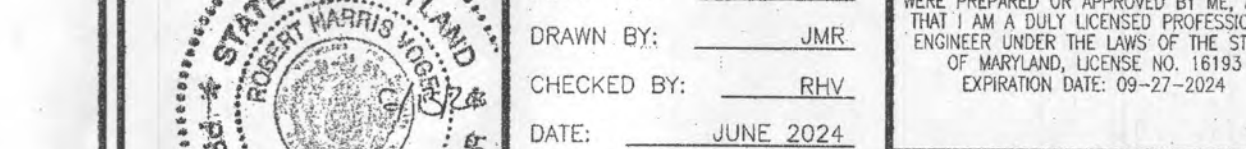
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



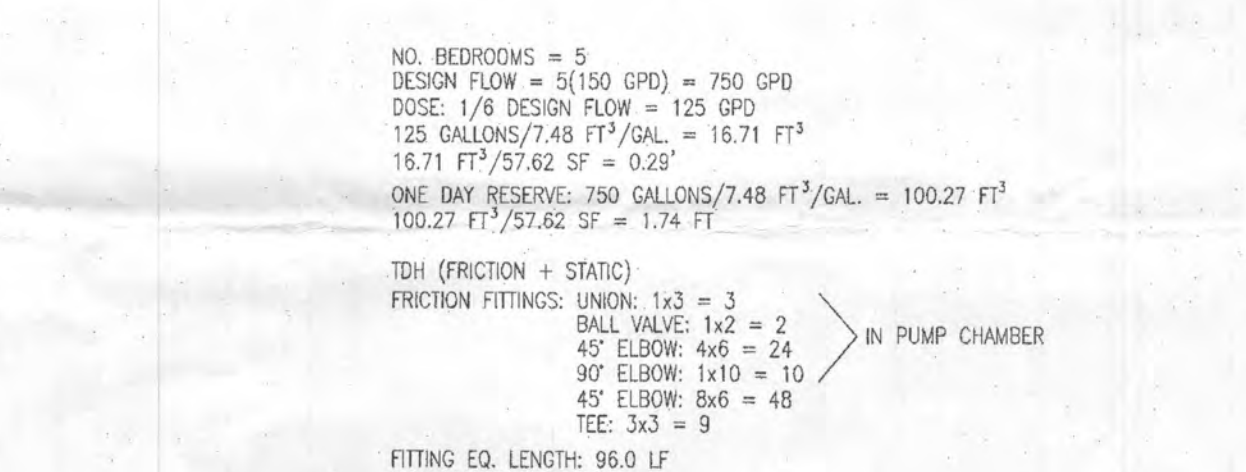
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



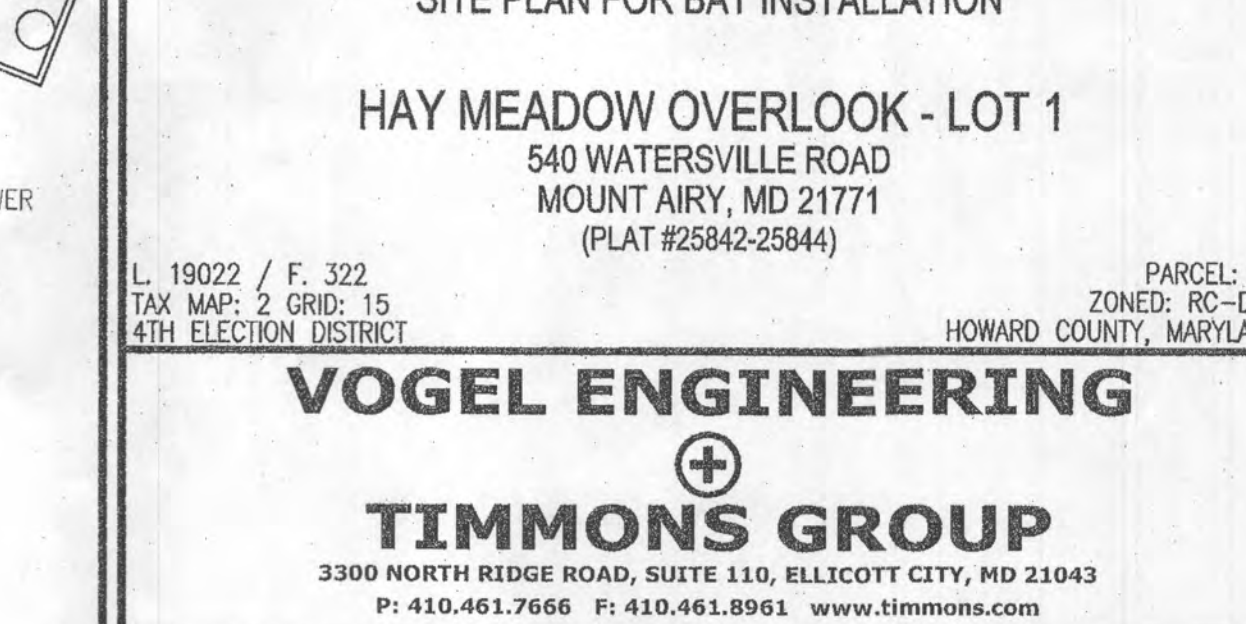
**TRENCH #1
50 LF**
SCALE: 1"=10'



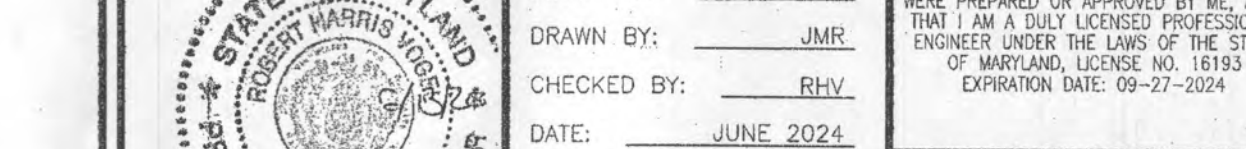
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



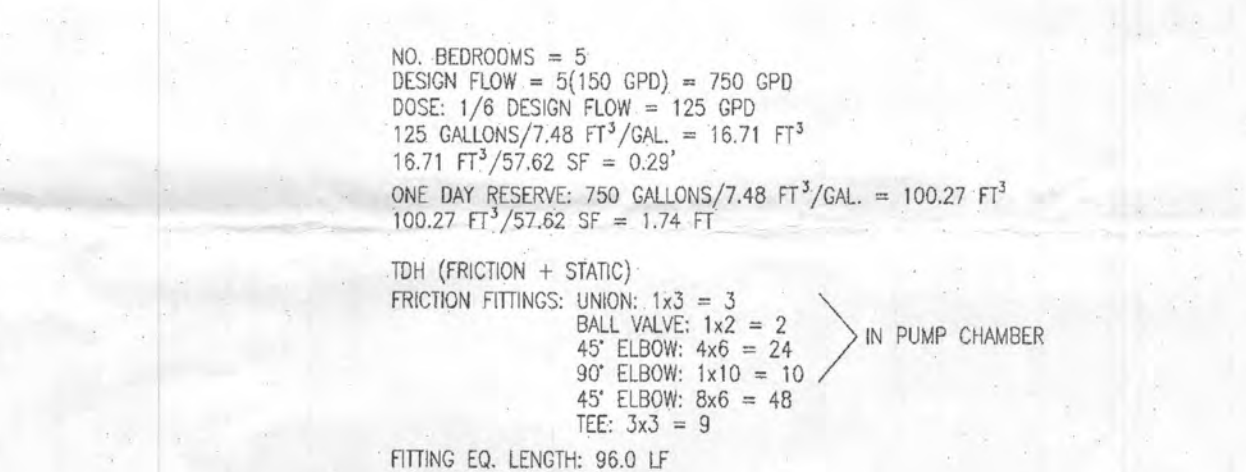
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



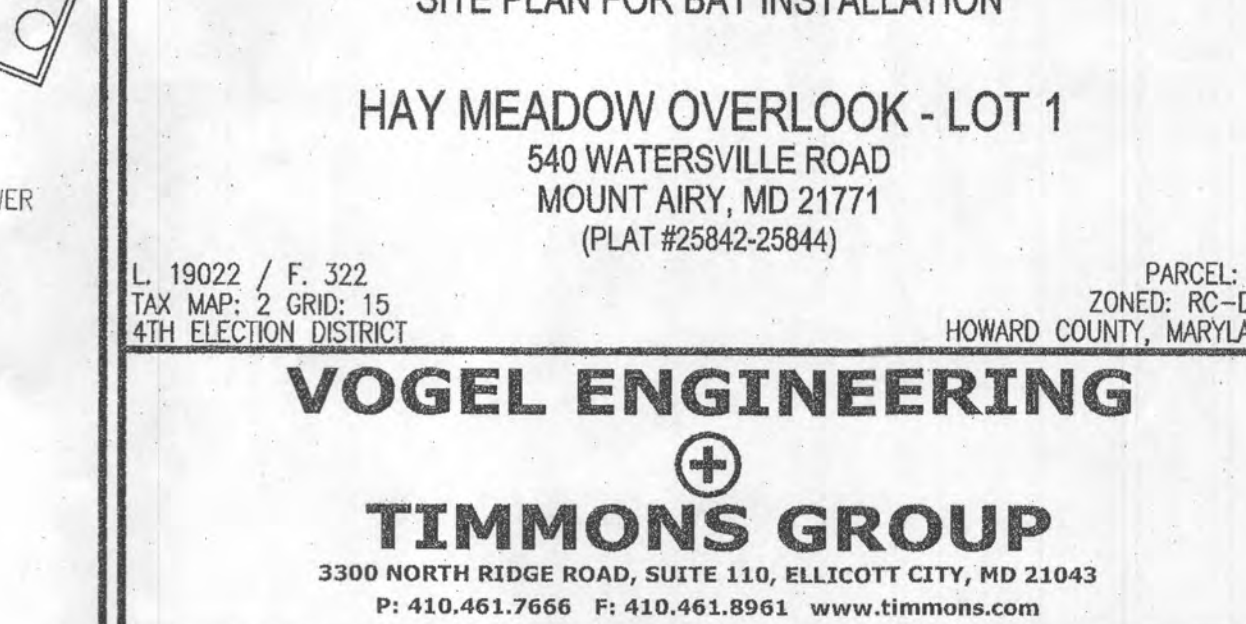
**TRENCH #1
50 LF**
SCALE: 1"=10'



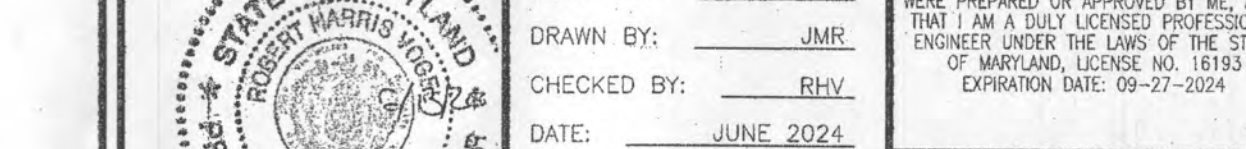
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



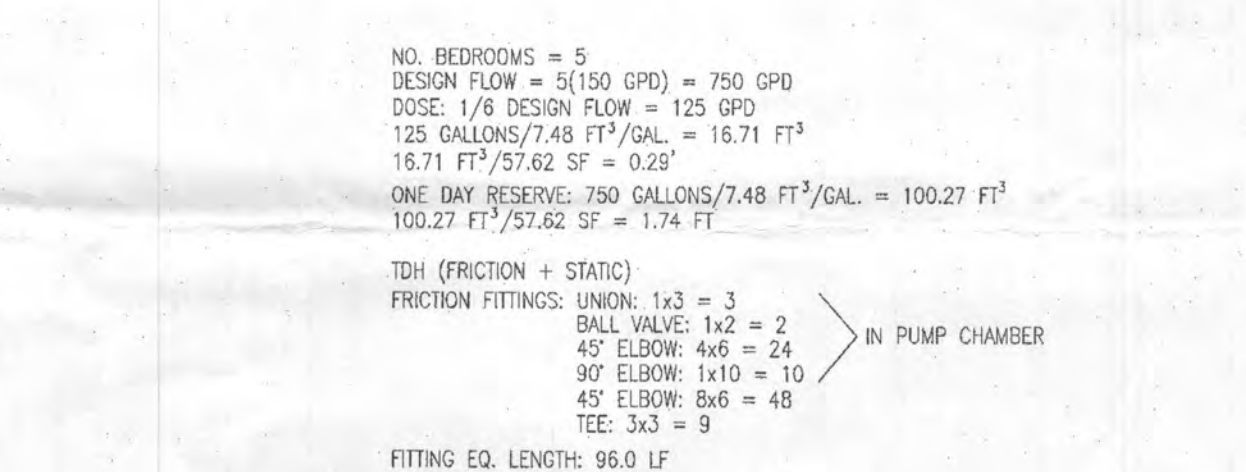
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



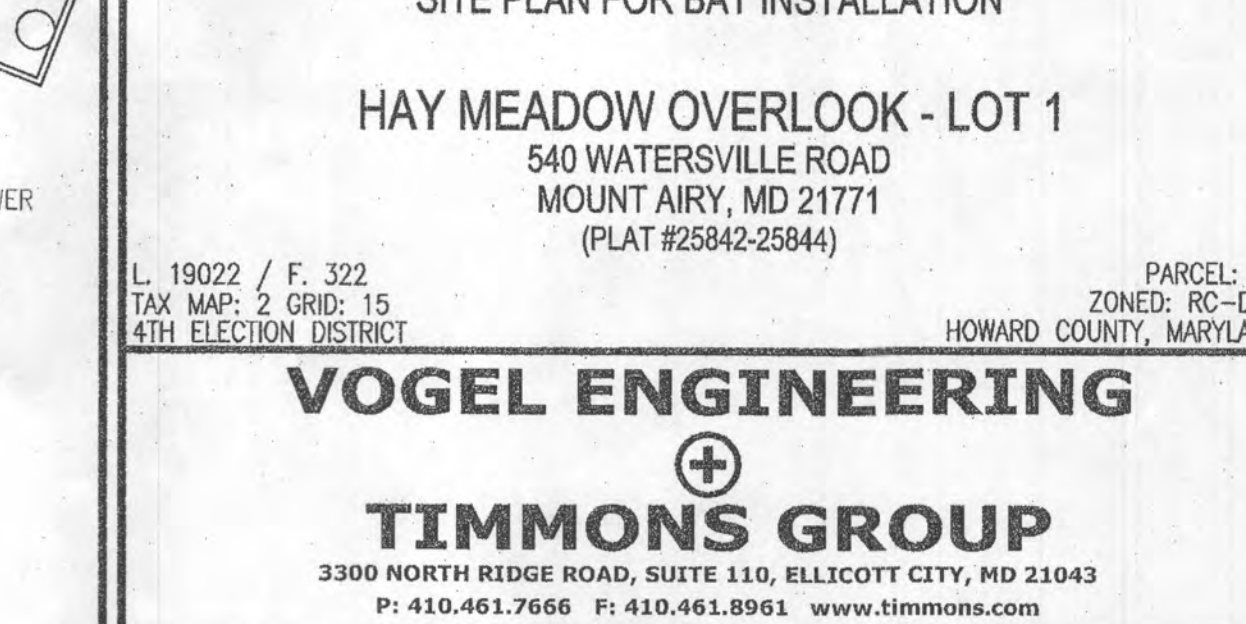
**TRENCH #1
50 LF**
SCALE: 1"=10'



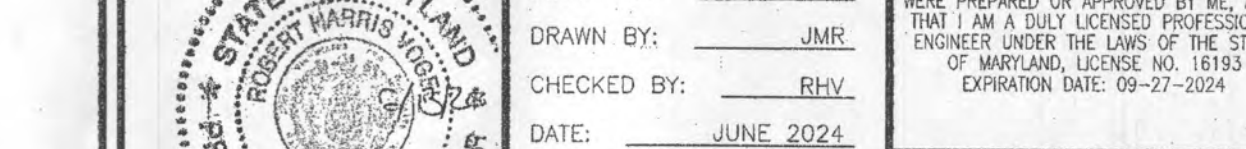
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



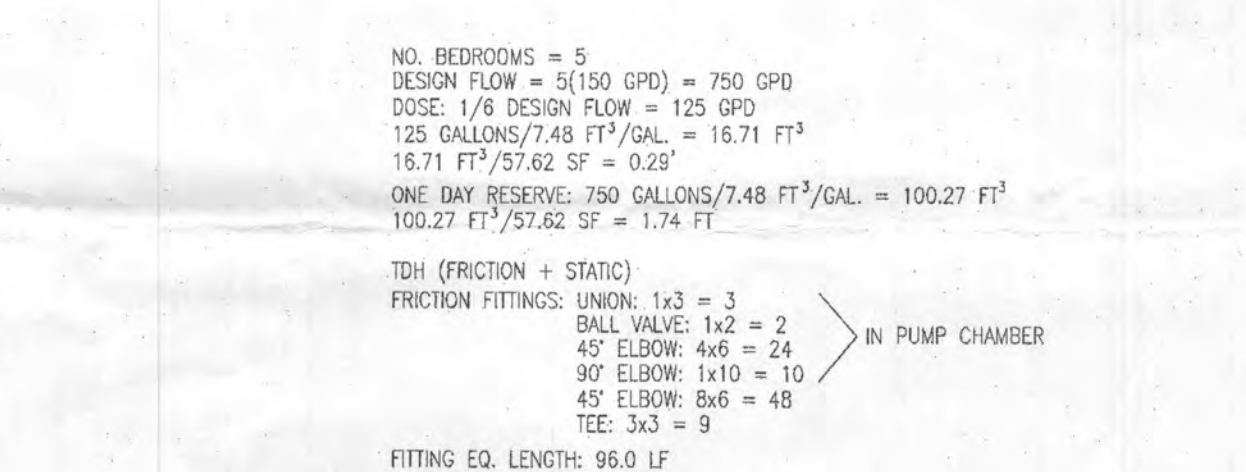
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



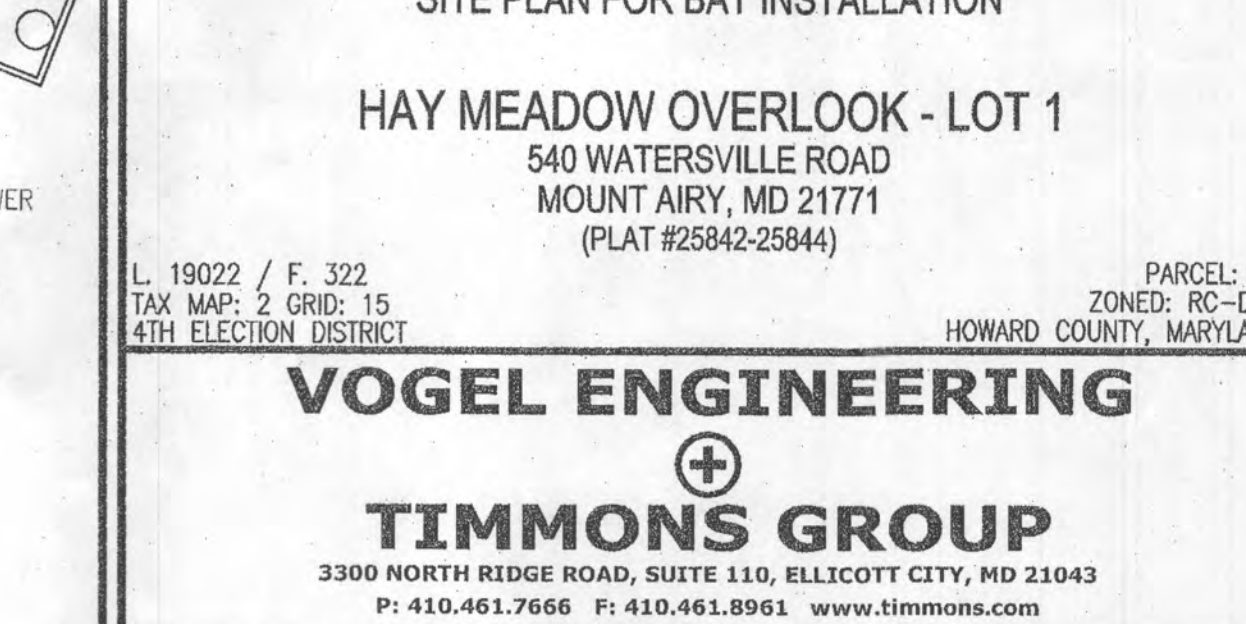
**TRENCH #1
50 LF**
SCALE: 1"=10'



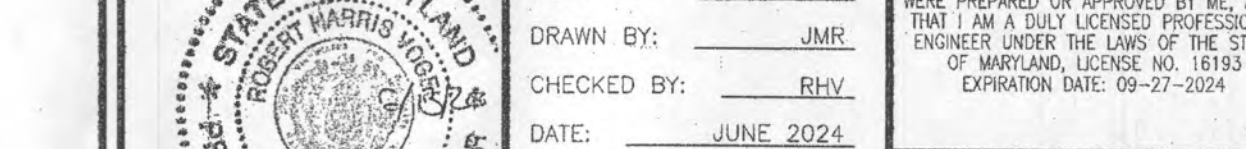
1,500 GALLON PUMP CHAMBER DETAIL
SCALE: 1"=4'



**TRENCH #4
50 LF**
SCALE: 1"=10'



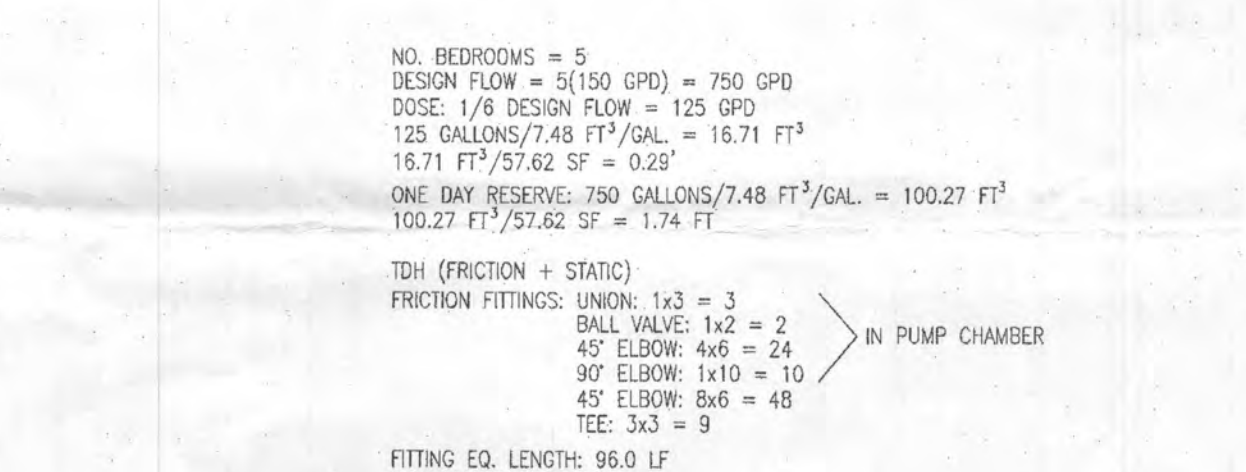
**TRENCH #3
50 LF**
SCALE: 1"=10'



**TRENCH #2
50 LF**
SCALE: 1"=10'



**TRENCH #1
50 LF**
SCALE: 1"=10'



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



**TRENCH #4
50 LF**
SCALE: 1"=10'

GENERAL NOTES:

1. THE EXISTING TOPOGRAPHY SHOWN HEREON IS TAKEN FROM FIELD RUN SURVEY WITH 2' CONTOUR INTERVALS PREPARED BY VOGEL ENGINEERING + TIMMONS GROUP, DATED OCTOBER 18, 2023. INFORMATION IS SUPPLEMENTED WITH HOWARD COUNTY GIS DATA.
2. PROPERTY OUTLINE SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY VOGEL ENGINEERING, INC., DATED APRIL 06, 2007 AND PRECISION INPUT BASED ON PLAT NO. 21740.
3. EXISTING WELLS, SEPTIC SYSTEMS, AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWNDRAINAGE OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWAGE DISPOSAL AREAS HAVE BEEN SHOWN USING ALL REASONABLE EFFORTS.
4. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH, AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
5. 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.
6. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
7. THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS THREE FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
8. THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
9. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
10. WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
11. ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
12. AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OF HOWARD COUNTY.
13. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.

SYSTEM CALCULATIONS:

INITIAL SYSTEM:

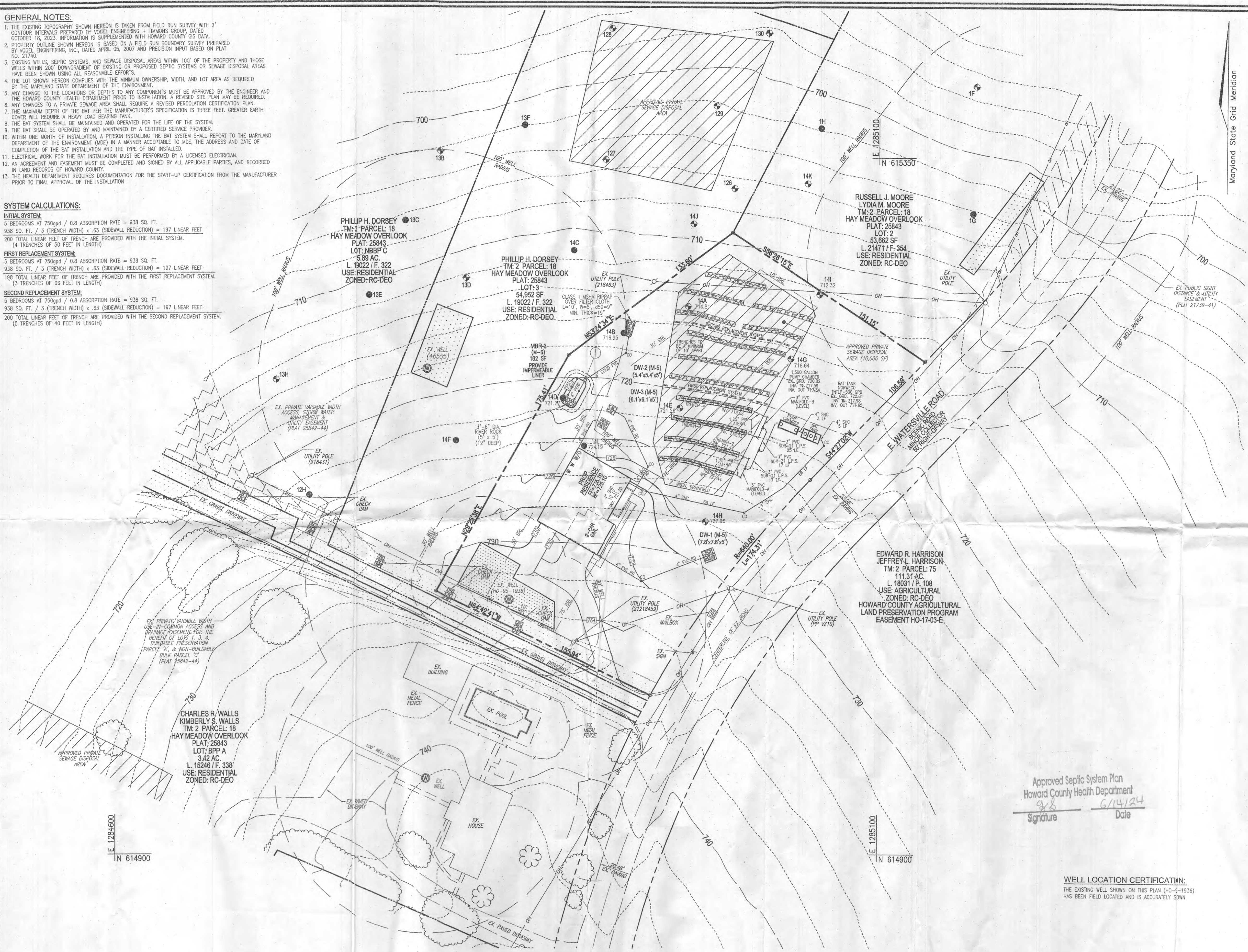
5 BEDROOMS AT 750gpd / 0.8 ABSORPTION RATE = 938 SQ. FT.
938 SQ. FT. / 3 (TRENCH WIDTH) x .63 (SIDEWALL REDUCTION) = 197 LINEAR FEET
200 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE INITIAL SYSTEM.
(4 TRENCHES OF 50 FEET IN LENGTH)

FIRST REPLACEMENT SYSTEM:

5 BEDROOMS AT 750gpd / 0.8 ABSORPTION RATE = 938 SQ. FT.
938 SQ. FT. / 3 (TRENCH WIDTH) x .63 (SIDEWALL REDUCTION) = 197 LINEAR FEET
198 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE FIRST REPLACEMENT SYSTEM.
(3 TRENCHES OF 66 FEET IN LENGTH)

SECOND REPLACEMENT SYSTEM:

5 BEDROOMS AT 750gpd / 0.8 ABSORPTION RATE = 938 SQ. FT.
938 SQ. FT. / 3 (TRENCH WIDTH) x .63 (SIDEWALL REDUCTION) = 197 LINEAR FEET
200 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE SECOND REPLACEMENT SYSTEM.
(5 TRENCHES OF 40 FEET IN LENGTH)



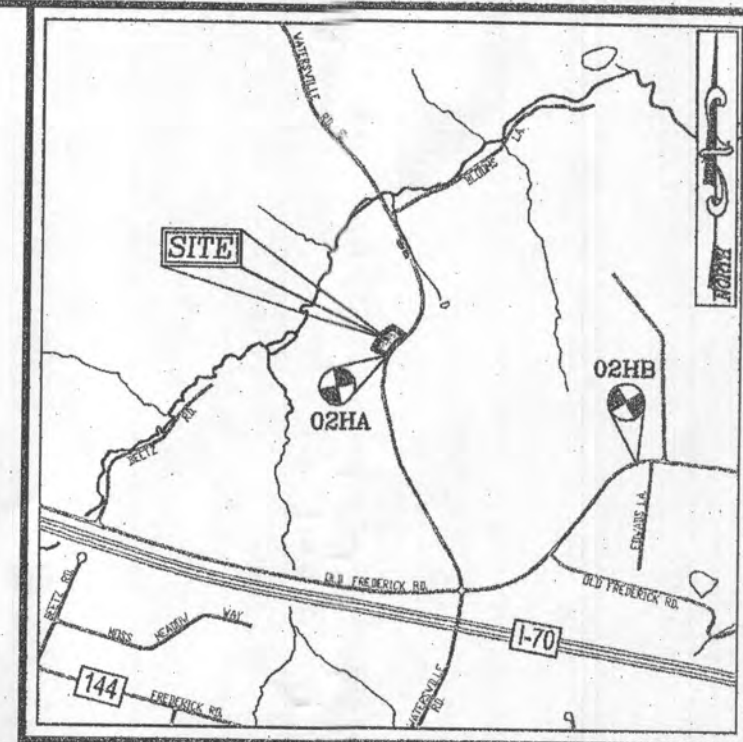
LOW PRESSURE DOSING SYSTEM												
TRENCH	GROUND ELEV.	INVERT ELEV.	TRENCH LENGTH	LATERAL LENGTH	ASSUMED HEAD	LATERAL DIAMETER	ORIFICE DIAMETER	ORIFICE FLOW RATE	NUMBER OF ORIFICES	FLOW RATE PER LF	TRENCH FLOW RATE	
1	724.74	721.44	50'	47.97'	2.00'	5/16"	1.63 gpm	5.00	10	0.33 gpm/lf	16.30 gpm	
2	723.44	721.44	50'	47.97'	2.00'	1.25"	5/16"	1.63 gpm	5.00	10	0.33 gpm/lf	16.30 gpm
3	721.95	719.53	50'	46.43'	3.91'	1.25"	5/16"	2.27 gpm	7.14'	7	0.32 gpm/lf	15.89 gpm
4	720.53	719.53	50'	46.43'	3.91'	1.25"	5/16"	2.27 gpm	7.14'	7	0.32 gpm/lf	15.89 gpm
										1.30 gpm/lf	64.38 gpm	

BAT PLAN

SCALE: 1"=30'

SCALE 1"=30'

TRENCH DESIGN											
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT	DEPTH TO STONE	DEPTH OF TRENCH	DEPTH OF EFFECTIVE DEPTH	EFFECTIVE DEPTH BEGINS AT	EFFECTIVE DEPTH ENDS AT	TRENCH WIDTH	TRENCH LENGTH	TRENCH SPACING
1	724.74	721.94	721.44	2.80'	3.20'	718.14	4.0'	0'	3'	50'	10' MIN.
2	723.44	721.94	721.44	1.50'	4.50'	717.44	4.0'	0'	3'	50'	10' MIN.
3	721.95	719.53	719.03	2.42'	3.58'	715.95	4.0'	0'	3'	50'	10' MIN.
4	720.53	719.53	719.03	1.00'	5.00'	714.53	4.0'	0'	3'	50'	10' MIN.



VICINITY MAP

SCALE: 1"=200'
ADC MAP/GRID NO: 8-E3

BENCHMARKS

HOWARD COUNTY BENCHMARK 02HA (CONC. MON.)
N 615000.21 E 1284960.98 ELEV. 735.28
LOCATION: WATERSVILLE RD. E (1/2 MI. N. OF RT-99)

HOWARD COUNTY BENCHMARK 02HB (CONC. MON.)
N 613910.96 E 1287573.30 ELEV. 736.34
LOCATION: RT-99 1/2 MI. E. OF WATERSVILLE RD. E

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVING
- EXISTING WELL
- EXISTING TREELINE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PASSED PERC. TEST
- FAILED PERC. TEST
- APPROVED WELL BOX AREA TO REMAIN
- APPROVED SEWAGE DISPOSAL AREA
- EX. PRIVATE VARIABLE WIDTH ACCESS, STORM WATER MANAGEMENT & UTILITY EASEMENT (PLAT 25842-44)
- EX. PUBLIC SIGHT DISTANCE & UTILITY EASEMENT (PLAT 21739-41)
- EX. PRIVATE VARIABLE WIDTH USE-IN-COMMON ACCESS AND BRIDGE EASEMENT FOR THE BENEFIT OF LOTS 1, 3 & 4, BUILDABLE PRESERVATION PARCEL 'A' & NON-BUILDABLE BULK PARCEL 'C' (PLAT 25842-44)

THIS AREA DESIGNATES A PRIVATE SEWAGE DISPOSAL 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. THIS AREA 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 DISPOSAL AREA. RECONSTRUCTION OF A MODIFIED SEWAGE DISPOSAL AREA SHALL NOT BE NECESSARY.

OWNER

PHILLIP H. DORSEY
13090 OLD FREDERICK ROAD
SYKESVILLE, MD 21784
240-755-7378

DEVELOPER

M. GREGORY HOME BUILDING, LLC
6310 WINTERS LANE
HANOVER, MD 21076
240-755-7378

Approved Septic System Plan
Howard County Health Department
Signature: [Signature] Date: 6/14/24

WELL LOCATION CERTIFICATION:
THE EXISTING WELL SHOWN ON THIS PLAN (W-6-1936)
HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN

SITE PLAN FOR BAT INSTALLATION

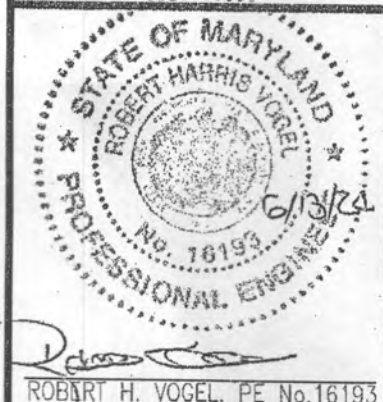
HAY MEADOW OVERLOOK - LOT 1
540 WATERSVILLE ROAD
MOUNT AIRY, MD 21771
(PLAT #25842-25844)

L 19022 / F. 322
TAX MAP: 2 GRID: 15
4TH ELECTION DISTRICT

PARCEL: 18
ZONED: RC-DEO
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

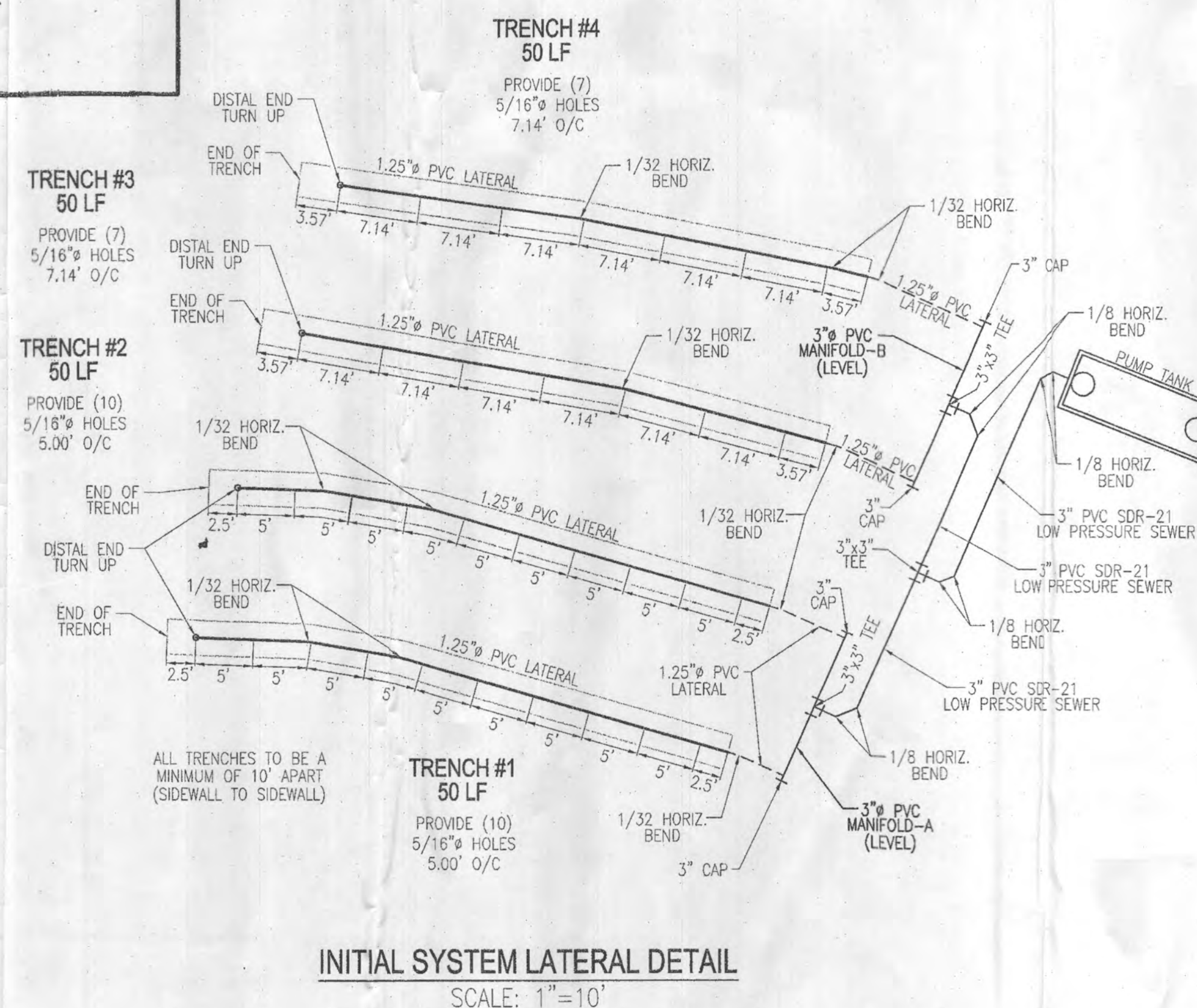
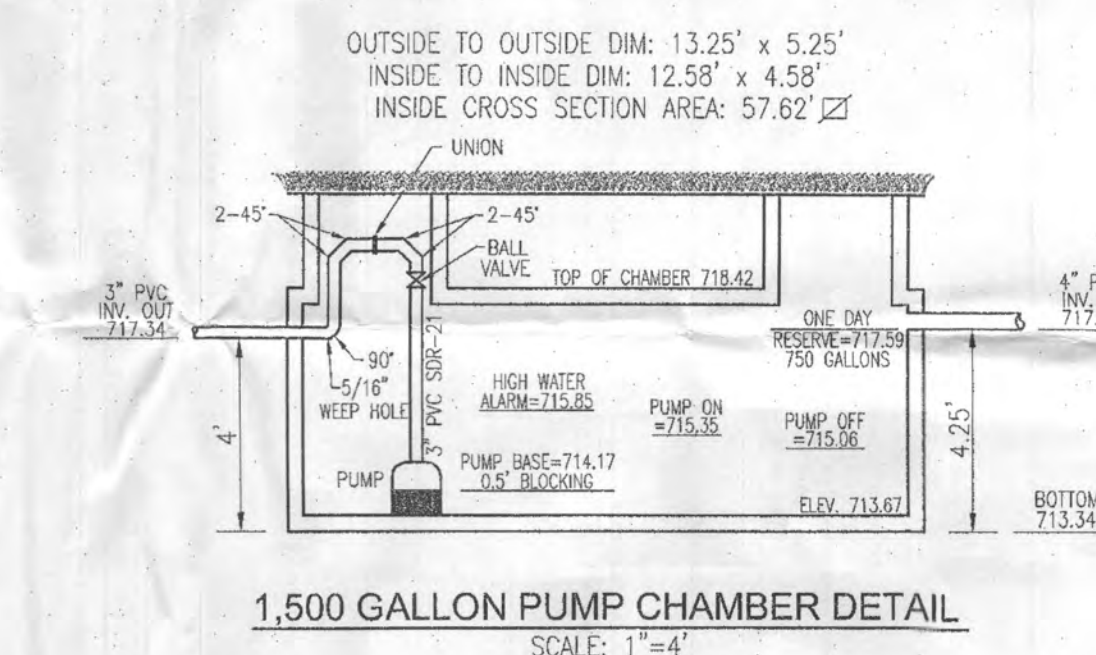
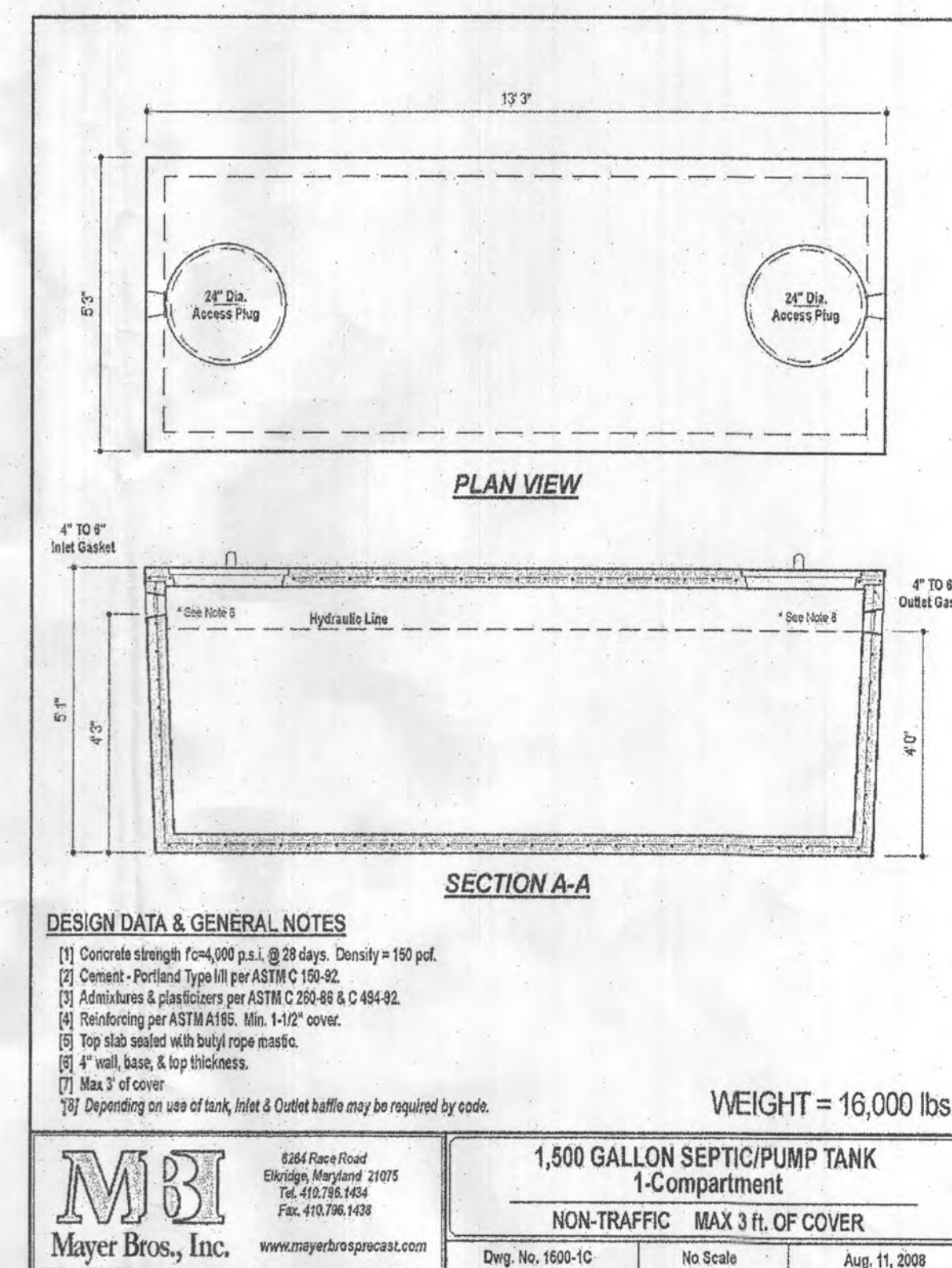
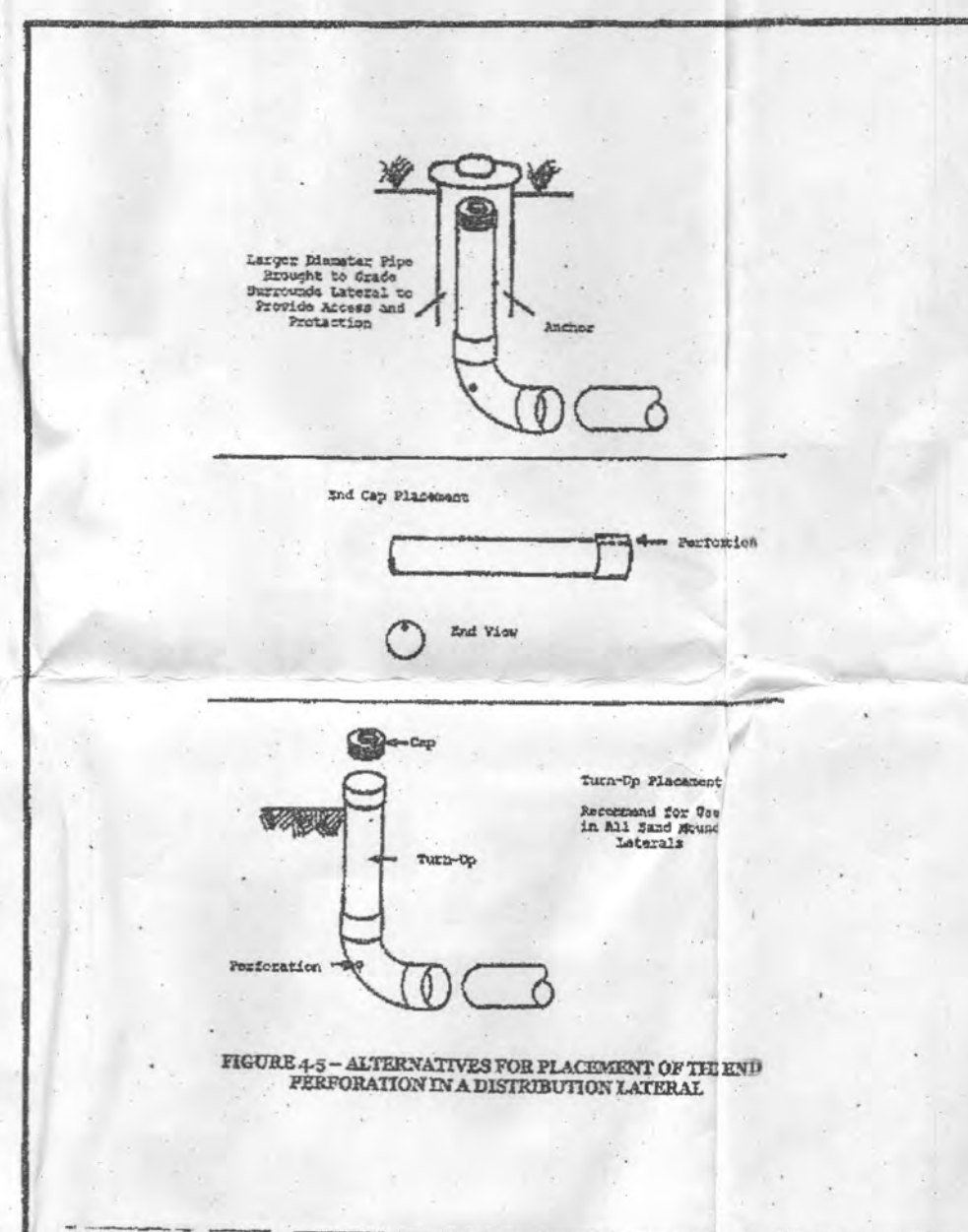
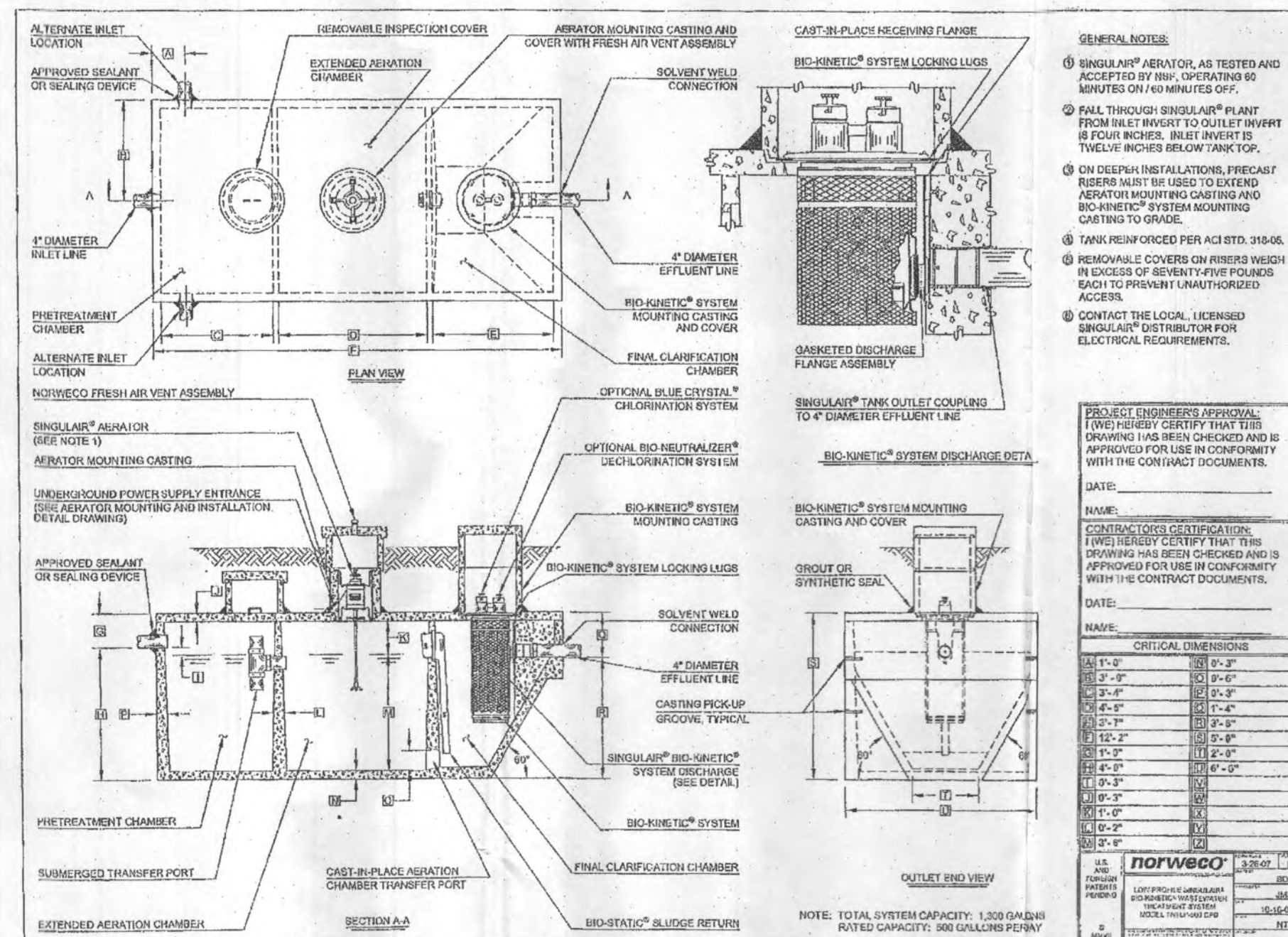
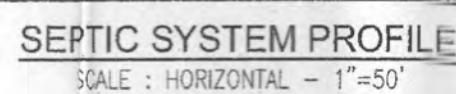
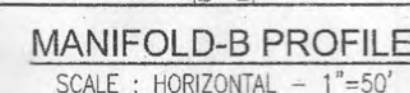
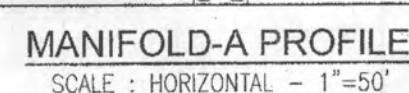
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com



DESIGN BY: R.H.V.
DRAWN BY: J.M.R.
CHECKED BY: R.H.V.
DATE: JUNE 2024
SCALE: AS SHOWN
W.O. NO.: 03-117

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. 10193.
EXPIRATION DATE: 09-27-2024

1 SHEET OF 2



Wastewater

APPLICATIONS

Specifically designed for the following uses:

- Homes, Farms, Trailer Courts, Motels, Schools, Hospitals, Industry, Effluent Systems

SPECIFICATIONS

Pump

- Solid 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.

Use 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 1/4 - 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.

Goulds Water Technology

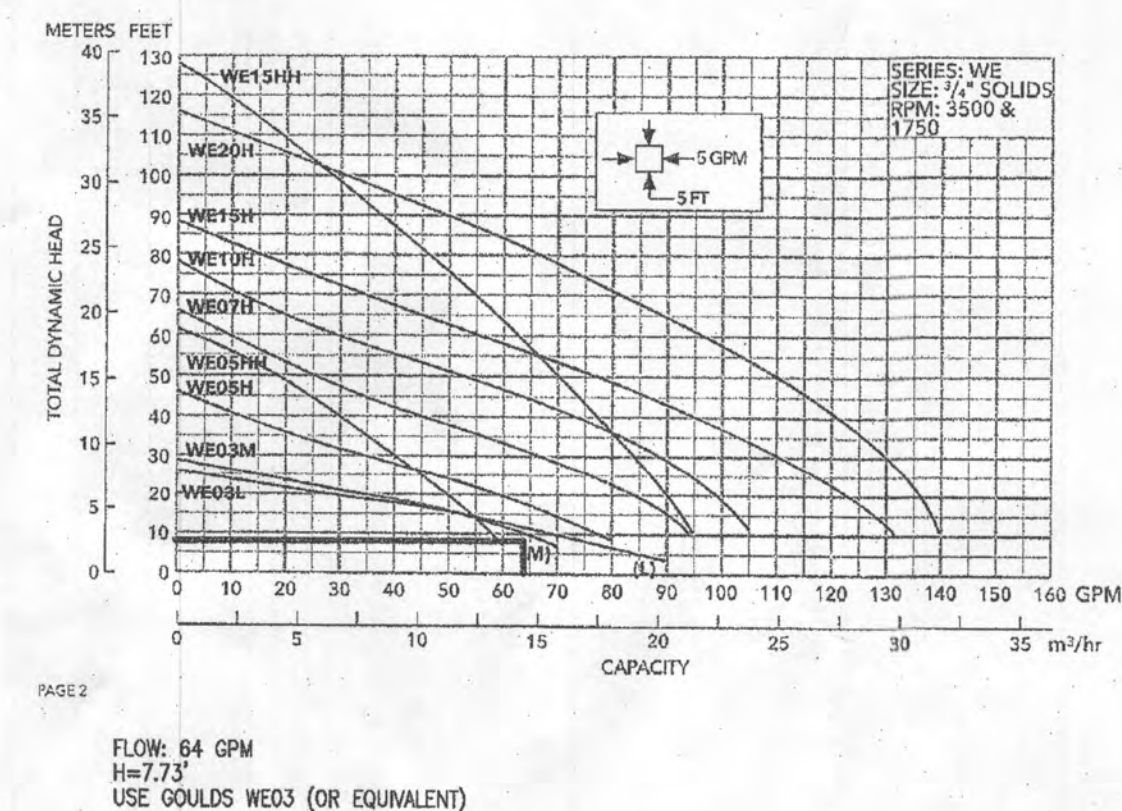
- S/TOW or S/TOW severe duty oil and water resistant power cords.
- 3/4 - 1 HP models have NEMA three prong grounding plugs.
- 1 1/2 HP and larger units have bare lead cord ends.

Three phase (60 Hz):

- Class 1 overload protection must be provided in separately ordered starter unit.
- S/TOW 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 and provides secondary moisture barrier in case of outer jacket damage and to prevent wet coupling. 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 22.2 199 Standards
See Canadian Standards Association File # B70543



NO. BEDROOMS = 5
DESIGN FLOW = 5(150 GPD) = 750 GPD
GAL. 1/8" DESIGN FLOW = 125 GPD
125 GALLONS / 7.48 FT³ = 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: UNION: 1x3 = 3
BALL VALVE: 1x2 = 2
45° ELBOW: 4x6 = 24
90° ELBOW: 1x10 = 10
45° ELBOW: 6x6 = 48
TEE: 3x3 = 9
FRICTION EQ. LENGTH: 96.0 LF
PIPE LENGTH: 58.6 LF
TOTAL LENGTH: 154.6 LF
FRICTION LOSS (64 GPM): (0.92)(154.6)/100 = 1.42'
STATIC: 721.57' - 715.06' (PUMP OFF) = 6.51'
TOT: 6.51' + 1.42' = 7.93'
USE COULDS WEO3 (OR EQUIVALENT)
ROUTING: 177' CALS (SLOPE) 178' 28' 0" 194' 4' 0"

OWNER	DEVELOPER
PHILLIP H. DORSEY 13090 OLD FREDERICK ROAD SYKESVILLE, MD 21784 240-755-7378	M. GREGORY HOME BUILDING, LLC 6310 WINTERS LANE HANOVER, MD 21076 240-755-7378

SITE PLAN FOR BAT INSTALLATION

HAY MEADOW OVERLOOK - LOT 1
540 WATERSVILLE ROAD
MOUNT AIRY, MD 21771
(PLAT #25842-25844)

L. 19022 / F. 322
TAX MAP: 2 GRID: 15
4TH ELECTION DISTRICT

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

STATE OF MARYLAND
ROBERT HARRIS VOGEL
No. 16193
PROFESSIONAL ENGINEER

ROBERT H. VOGEL, PE No. 16193

DESIGN BY: _____ RHV
DRAWN BY: _____ JMR
CHECKED BY: _____ RHV
DATE: _____ JUNE 2024
SCALE: _____ AS SHOWN
W.O. NO.: 03-117

PROFESSIONAL CERTIFICATE

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THAT I AM A DULY LICENSED PROFESSIONAL
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EXPIRATION DATE: 09-27-2024

2 SHEET 2

