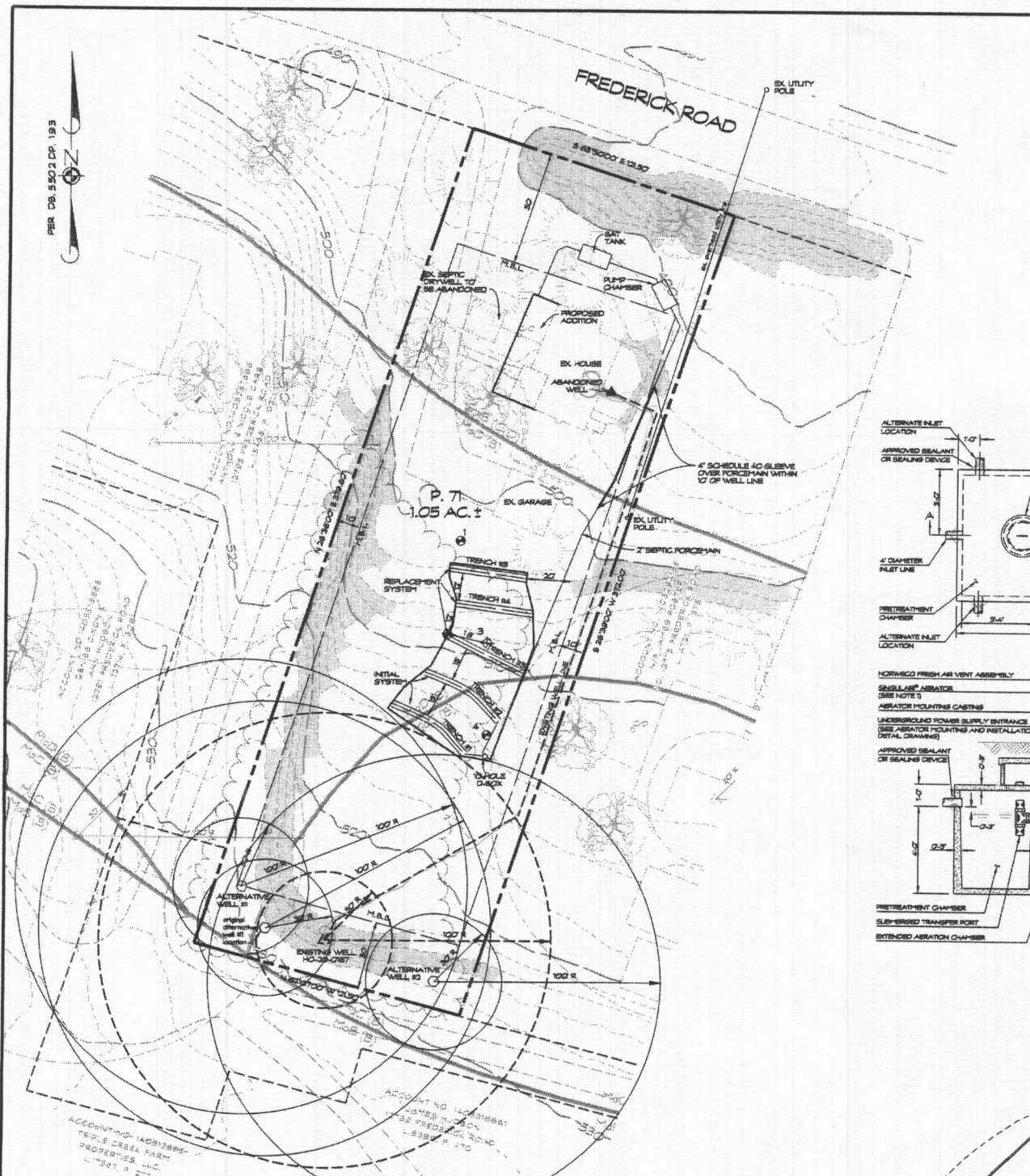


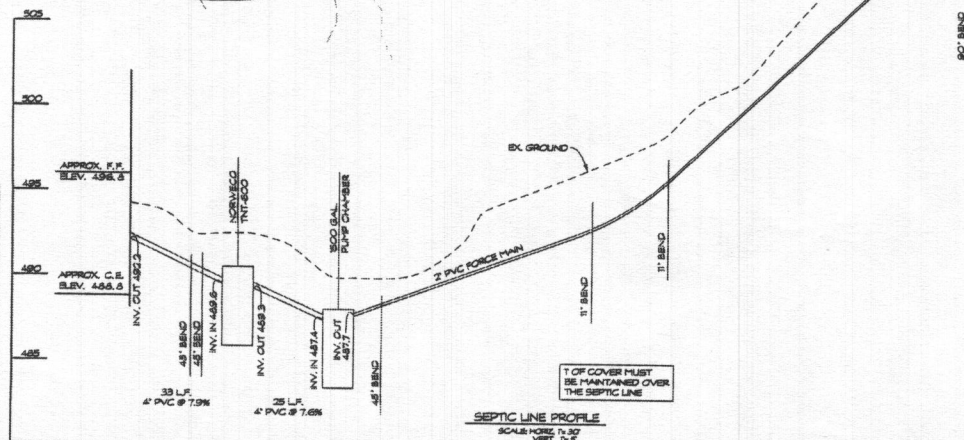
PER DB 5502 DP 193



**PLAN**  
SCALE: 1" = 30'

**LEGEND**

	PASSED PERC TEST
	PROPOSED PERC TEST
	ABANDONED WELL LOCATION
	EXISTING WELL LOCATION
	ORIGINAL WELL LOCATION
	SOIL LINES
	GENNOTES - TOTAL PROPOSED SEPTIC RESERVE EASEMENT AREA
	EXISTING TREE LINE



**SEPTIC SYSTEM TRENCH DESIGN:**

**TOTAL BEDROOMS:** 4

**INITIAL SYSTEM**  
APPLICATION RATE: 0.8 GPD/SQ. FT.  
EFFECTIVE DEPTH: 4'  
TRENCH WIDTH: 2'  
150 GAL. x 4 BEDROOMS = 600 GAL/DAY  
600 GAL/DAY / 0.8 GAL/DAYSQ. FT. = 750 SQ. FT.  
750 SQ. FT. / 2' = 375 L.F.  
250 L.F. x 3.1' = 775 L.F. OF DEEP TRENCH  
USE 2 - 39 L.F. OF TRENCH FOR EACH SYSTEM

**REPLACEMENT SYSTEM**  
APPLICATION RATE: 0.8 GPD/SQ. FT.  
EFFECTIVE DEPTH: 4'  
TRENCH WIDTH: 2'  
150 GAL. x 4 BEDROOMS = 600 GAL/DAY  
600 GAL/DAY / 0.8 GAL/DAYSQ. FT. = 750 SQ. FT.  
750 SQ. FT. / 2' = 375 L.F.  
250 L.F. x 4.2' = 1050 L.F. OF DEEP TRENCH  
& TRENCHES OF VARYING LENGTHS

**NOTES:**  
ALL TRENCHES IN BOTH THE INITIAL SYSTEM AND IN THE REPLACEMENT SYSTEM SHALL HAVE PIPE INVERT AT 2 FEET BELOW THE BOTTOM OF THE TRENCH

**TRENCH CHART**

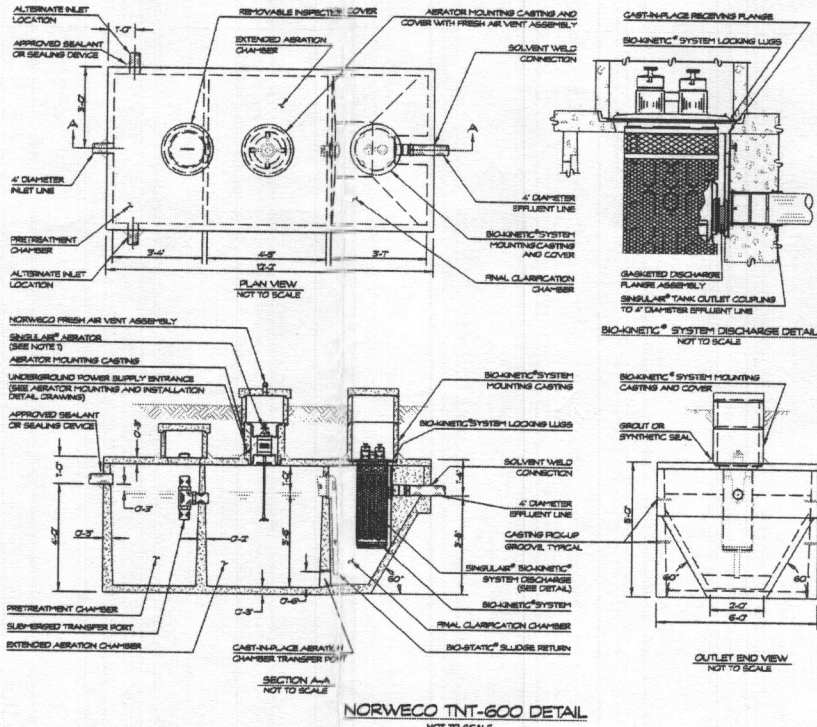
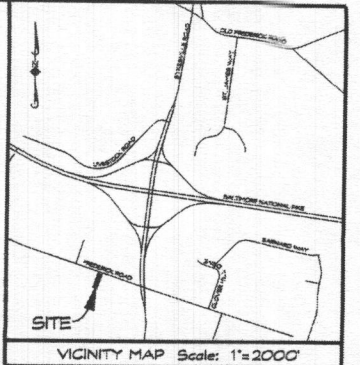
TRENCH	EX. (GRID)	INV. ELEV.	BOTTOM OF TRENCH
1	983.3	978.3	972.2
2	973.3	968.3	962.2

**BAT SITE PLAN NOTES**

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 MINIMUM DEPTH OF THE BAT PER THE MANUFACTURERS SPECIFICATION IS 4 FEET.
3. THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
4. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
5. 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.
6. ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
7. AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OR HOWARD COUNTY.
8. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
9. THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURERS SPECIFICATIONS.
10. IF A BUILDING PERMIT IS SUBMITTED ANY TIME IN THE FUTURE, A SEPTIC SYSTEM UPGRADE WILL BE REQUIRED TO FINISH THE AREA CURRENTLY IDENTIFIED AS THE BASEMENT. AT THAT TIME A SEPTIC SYSTEM UPGRADE WILL BE REQUIRED AS FINISHING THE BASEMENT COULD POSSIBLY CREATE A FIFTH BEDROOM PER HOWARD COUNTY CODE 3.20 (B).

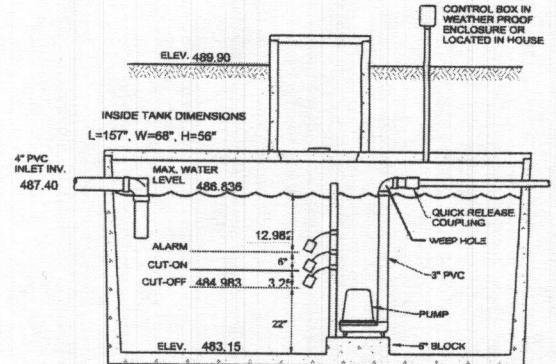
**SOILS LEGEND**

SOIL SYMBOL	SOIL SERIES	SOIL HSG	PERCOLATION (C-FACTOR) .35	HYDRC
Ch-B	Glennville silt loam	C/D	0.37	-
M-8	Manor loam 3B - 8B	B	0.28	-
M-4C	Manor loam 4B - 15B	B	0.28	-
M-4D	Manor loam 15B - 25B	B	0.28	-



**SEPTIC TANK NOTES**

1. SINGULAR® ABRATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
2. FALL THROUGH SINGULAR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
3. ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND ABRATOR HOUSING CASINGS AND BIO-GENETIC® SYSTEM MOUNTING CASTINGS TO GRADE.
4. TANK REINFORCED PER AC STD. 318-05.
5. REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
6. CONTACT THE LOCAL LICENSED SINGULAR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.



**1500 GAL. PUMP CHAMBER**  
NOT TO SCALE

**NOTE:**  
PUMP CHAMBER SIZE AND FLOATS BASED ON GOULDS VE SERIES SUBMERSIBLE PUMP. IF A PUMP SUBSTITUTION OCCURS, CHAMBER SIZE AND FLOATS WILL NEED TO BE RECALCULATED TO ENSURE THAT PUMP IS COVERED.

**SPECIFICATIONS**

- Tank measurements and elevations are based on pump chambers as manufactured by Badger Vault Co, New Windsor, Maryland (4-10) 848-0393
- All piping to be schedule 40 PVC of sizes shown.
- A submersible pump to remove 50.00 GPM against 36.89 TDH to be provided. Pump to be a Goulds Model 3885-WE-07H or equal.
- Alarm to be located at the house on circuit separate from the pump.

**NOTE:**  
THE APPROVED PERCOLATION CERTIFICATION PLAN SHOWED SEPTIC EASEMENT TO SUPPORT THE PROPOSED ADDITION. THE TOTAL BEDROOMS WILL BE 4 BEDROOMS.

**OWNER/DEVELOPER**

MARGARET A. SUIT  
12785 FREDERICK ROAD  
WEST FRIENDSHIP, MD 21794

**ON SITE SEWAGE DISPOSAL PLAN**  
**SUIT PROPERTY**

12785 FREDERICK ROAD  
TAX MAP 15 \* BLOCK 11 \* PARCEL 71  
3rd ELECTION DISTRICT \* HOWARD COUNTY, MD



Date	Revisions	Drawn By: LGA
		Designed By:
		Reviewed By:
		Date: MAY 2022
		Scale: 1" = 30'
		Job No.: 2021191
		Sheet: 1

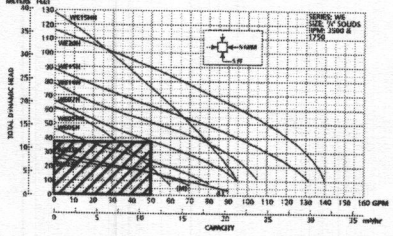
**ITT**

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

**THREE PHASE (3P) ITC:**  
• Class 10 overvoltage protection must be provided in separately controlled starter unit.  
• 1500V motor units all have lead acid acid ends.  
• Designed by Continuous Operation Pump Group are widely the most manufacturers recommended mounting base, can be replaced continuously without changing when fully submerged.

**NOTES:**  
• Fully submerged in high gradient oil for laboratory and efficient heat transfer.  
• Class B insulation on 11-11.5 HP models.  
• Class F insulation on 2 HP models.

**Single phase (1P) ITC:**  
• Capacitor start motors for maximum starting torque.  
• Shaft enclosed with automatic vent.  
• S/TOW or S/TOW sever duty oil and water resistant power mesh.



**GOULDS PUMPS**  
Wastewater

**GENERAL NOTES**

1. CURRENT TITLE REFERENCE: OWNER: MARGARET SUIT DEED REFERENCE: L. 5502, F. 193 DATE: JUNE 1, 2001 GRANTOR: MARK VALLON
2. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
3. THE TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY 200 SCALE TOPO MAPS AND VERIFIED TO ACCURATELY REPRESENT THE RELATIVE CHANGES ON THE SUBJECT PROPERTY AND WAS FIELD VERIFIED BY CLSI.
4. EXISTING WELLS AND/OR SEWER DISPOSAL AREA WITHIN 100' OF THE LOT LINES HAVE BEEN SHOWN. THERE ARE NO WELLS 200' DOWN GRADIENT OF THE SEPTIC DISPOSAL AREA SHOWN.
5. ANY CHANGES TO THE PRIVATE SEWER DISPOSAL AREA AND/OR ALTERNATIVE WELL LOCATION SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
6. ALL STOP-WATER MANAGEMENT DEVICES WILL BE HOWARD COUNTY SETBACKS TO ALL WELL SITES AND ON-SITE DISPOSAL SYSTEMS.
7. THE BOUNDARY IS A FIELD SURVEY BY CLSI IN JANUARY 2022.
8. EX. WELL ON SITE HAS NO TAG NUMBER.





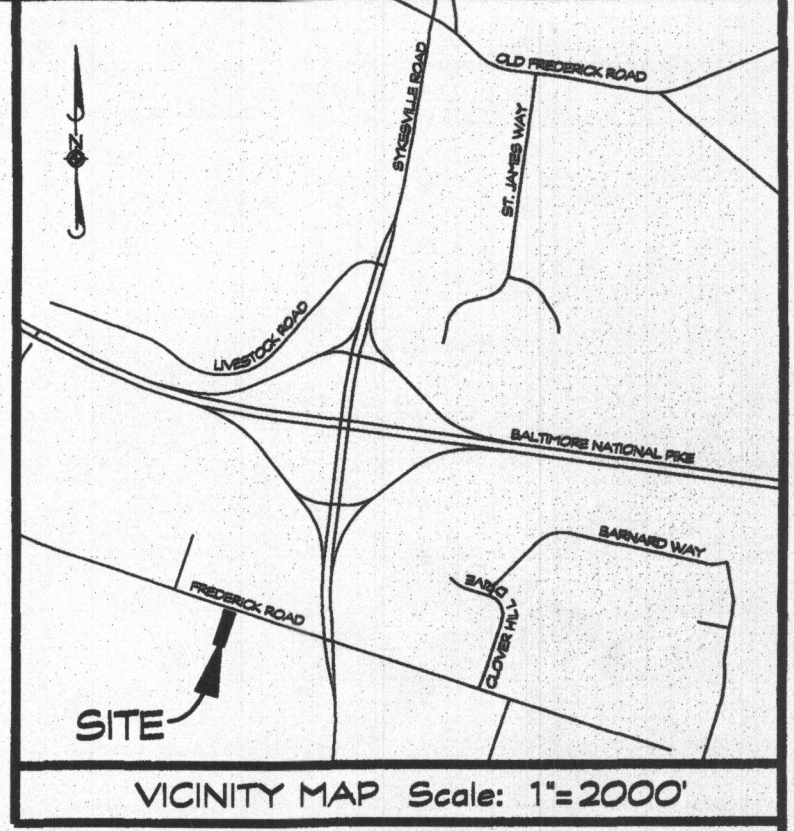
PER DB. 5502 DP. 193

**PLAN**  
SCALE: 1" = 30'

LEGEND	
	PASSED PERC TEST
	PROPOSED PERC TEST
	EXISTING WELL LOCATION
	PROPOSED WELL LOCATION
	SOIL LINES
	DENOTES - TOTAL PROPOSED SEPTIC RESERVE EASEMENT AREA
	EXISTING TREE LINE

THIS AREA DESIGNATES A PRIVATE SEWAGE AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. FOR LOTS CREATED PRIOR TO MARCH 1972 IT PROVIDES AT LEAST ENOUGH AREA TO ACCOMMODATE AN INITIAL AND TWO REPLACEMENT SEPTIC SYSTEMS AS REQUIRED BY THE HOWARD COUNTY HEALTH DEPARTMENT. 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 AREA. RECORDATION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.

SOILS LEGEND				
SOL SYMBOL	SOL SERIES	SOL HSG	ERODIBLE (K-FACTOR) .35	HYDRIC
GmB	Glenville silt loam	C/D	0.37	-
MtB	Manor loam 3% - 8%	3	0.26	-
MtC	Manor loam 8% - 15%	3	0.26	-
MtD	Manor loam 15% - 25%	3	0.26	-



**DATA TABULATIONS**

1. ZONING DISTRICT: RC-DEO
2. NUMBER OF BUILDING SITES: 1
3. TOTAL AREA OF LOT: 1.05 ACRES

**INITIAL SYSTEM**  
APPLICATION RATE = 0.8 GPD/SQ. FT.  
EFFECTIVE DEPTH IS 6'  
TRENCH WIDTH = 3'  
150 GAL. x 4 BEDROOMS = 600 GAL/DAY  
600 GAL/DAY / 0.8 GAL./DAY/SQ. FT. = 750 SQ. FT.  
750 SQ. FT. / 3' = 250 L.F.  
250 L.F. x .31 = 77.5 L.F. OF DEEP TRENCH  
USE 2 - 39 L.F. OF TRENCH FOR EACH SYSTEM

**REPLACEMENT SYSTEM**  
APPLICATION RATE = 0.8 GPD/SQ. FT.  
EFFECTIVE DEPTH IS 3'  
150 GAL. x 4 BEDROOMS = 600 GAL/DAY  
600 GAL/DAY / 0.8 GAL./DAY/SQ. FT. = 750 SQ. FT.  
750 SQ. FT. / 3' = 250 L.F.  
250 L.F. x .50 = 125 L.F. OF DEEP TRENCH  
4 TRENCHES OF VARYING LENGTHS

**NOTES:**  
REPLACEMENT SYSTEM TRENCHES 1 AND 2 WILL HAVE TRENCH BOTTOMS LIMITED AT 6 FEET, AND REPLACEMENT TRENCHES 3 AND 4 WILL HAVE TRENCH BOTTOMS LIMITED AT 5 FEET. ALL REPLACEMENT SYSTEM TRENCHES WILL BE CREDITED TO HAVE 3 FEET OF EFFECTIVE SIDEWALL.  
THE REPLACEMENT SYSTEM MUST BE DESIGNED AND INSTALLED AS LOW-PRESSURE DISTRIBUTION OR EQUIVALENT AS THE VARYING WIDTH OF THE SEWAGE DISPOSAL AREA DOES NOT ALLOW FOR TRENCHES OF EQUAL LENGTH TO BE INSTALLED.  
ALL TRENCHES IN BOTH THE INITIAL SYSTEM AND IN THE REPLACEMENT SYSTEM WILL HAVE PIPE INVERT AT 2 FEET DEPTH.

A BAT TANK WILL BE REQUIRED SINCE THERE ONLY SUFFICIENT AREA FOR AN INITIAL SYSTEM AND ONE REPLACEMENT SYSTEM

**GENERAL NOTES**

1. CURRENT TITLE REFERENCE: OWNER: MARGARET SUIT DEED REFERENCE: L. 5502, F. 193 DATE: JUNE 01, 2001 GRANTOR: MARK VALLON
2. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
3. THE TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY 200 SCALE TOPO MAPS AND FIELD VERIFIED BY CLSI TO ACCURATELY REPRESENT THE RELATIVE CHANGES ON THE SUBJECT PROPERTY.
4. EXISTING WELLS AND/OR SEWER EASEMENTS WITHIN 100' OF THE LOT LINES HAVE BEEN SHOWN. THERE ARE NO WELLS 200' DOWN GRADIENT OF THE SEPTIC EASEMENT AREA SHOWN.
5. M.B.L. DENOTES MINIMUM BUILDING LINE
6. ANY CHANGES TO THE PRIVATE SEWER EASEMENT AND/OR ALTERNATIVE WELL LOCATION SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
7. SHOULD STORMWATER MANAGEMENT BE REQUIRED, IT WILL BE PROVIDED BY A DRY WELL ON SITE.
8. EXISTING WELL NO. NOT AVAILABLE
9. THE BOUNDARY IS FROM A DEED RECORDED IN L. 5502, F. 193. NO BOUNDARY RETRACEMENT WAS PERFORMED BY CLSI.
10. THIS PLAN IS A BENEFIT TO THE CUSTOMER ONLY INsofar AS IT IS REQUIRED BY HOWARD COUNTY FOR THE PURPOSE OF THE APPROVAL OF THE PERCOLATION TEST. IT IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OF BOUNDARY, EASEMENT OR RIGHT-OF-WAY LINES FOR ANY REASON, SUCH AS THE LOCATION OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. OFFSETS OF BUILDINGS TO PROPERTY LINE ARE TO THE NEAREST FOOT (1') UNLESS OTHERWISE NOTED AND HAS AN ACCURACY OF ±1 FOOT.
11. PRIOR TO BUILDING PERMIT APPROVAL, THE REPLACEMENT WELL MUST BE INSTALLED AND THE OFFICIAL WELL COMPLETION REPORT RECEIVED BY THE HEALTH DEPARTMENT AND APPROVED. THE HEALTH DEPARTMENT MUST ALSO RECEIVE THE OFFICIAL WELL ABANDONMENT REPORT FOR THE EXISTING WELL PRIOR TO BUILDING PERMIT APPROVAL.
12. A BAT SITE PLAN MUST BE SUBMITTED TO THE HEALTH DEPARTMENT AND APPROVED BY THE HEALTH DEPARTMENT PRIOR TO HEALTH DEPARTMENT AND APPROVED BY THE HEALTH DEPARTMENT PRIOR TO HEALTH DEPARTMENT RELEASE OF THE BUILDING PERMIT FOR THE RESIDENCE RENOVATION.
13. INSTALLATION OF A BAT UNIT IS REQUIRED IN LIEU OF THE PROPOSED SEWAGE DISPOSAL AREA (SDA) BEING LARGE ENOUGH FOR THE INITIAL DRAIN FIELD AND TWO REPLACEMENT DRAIN FIELDS. ONLY THE INITIAL DRAIN FIELD AND ONE REPLACEMENT DRAIN FIELD WILL FIT WITHIN THE PROPOSED SDA. AN OPERATION & MAINTENANCE AGREEMENT FOR THE BAT UNIT MUST BE SUBMITTED AT LAND RECORDS PRIOR TO RELEASE OF THE PERMIT TO INSTALL THE ONSITE SEWAGE DISPOSAL SYSTEM.
14. FOR INSTALLATION OF THE FORCE MAIN, THE EAST PROPERTY LINE MUST BE MARKED BY A PROFESSIONAL ENGINEER OR LICENSED SURVEYOR PRIOR TO THE PRE CONSTRUCTION MEETING.

**OWNER/DEVELOPER**  
MARGARET A. SUIT  
12785 FREDERICK ROAD  
WEST FRIENDSHIP, MD 21794

**PURPOSE NOTE:**  
THE PURPOSE OF THIS PERCOLATION CERTIFICATION PLAN IS TO ADD TO THE EXISTING HOUSE INCREASING THE BEDROOMS TO 4

**PERC CERTIFICATION PLAN**  
**SUIT PROPERTY**

12785 FREDERICK ROAD  
TAX MAP: 15 \* BLOCK: 11 \* PARCEL: 71  
3rd ELECTION DISTRICT \* HOWARD COUNTY, MD

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEM  
HOWARD COUNTY HEALTH DEPARTMENT

*Margaret A. Suit* 2/10/22  
HOWARD COUNTY HEALTH OFFICER

*Javier Morales Roldan* 1-21-22  
JAVIER MORALES ROLDAN,  
PROFESSIONAL LAND SURVEYOR NO. 21885  
MY LICENSE EXPIRES AUGUST 3, 2023

Date	Revisions	Drawn By:
8/31/2021	REVD PER HEALTH DEPT EMAIL DATED 8/8/2021	LNL
12/20/21	REVD PER HEALTH DEPT EMAIL DATED 12/17/2021	LNL

1 HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Date: DEC., 2021  
Scale: 1" = 30'  
Job No.: 2021191  
Sheet: 1

PER DB 5502 DP. 193

**SEPTIC SYSTEM TRENCH DESIGN:**

TOTAL BEDROOMS - 4  
**INITIAL SYSTEM**  
 APPLICATION RATE = 0.8 GPD/SQ. FT.  
 EFFECTIVE DEPTH IS 6'  
 TRENCH WIDTH = 3'  
 150 GAL x 4 BEDROOMS = 600 GAL/DAY  
 600 GAL/DAY / 0.8 GAL/DAY/SQ. FT. = 750 SQ. FT.  
 750 SQ. FT. / 3' = 250 L.F.  
 250 L.F. x 3' = 775 L.F. OF DEEP TRENCH  
 USE 2 - 39 L.F. OF TRENCH FOR EACH SYSTEM

**REPLACEMENT SYSTEM**  
 APPLICATION RATE = 0.8 GPD/SQ. FT.  
 EFFECTIVE DEPTH IS 4'  
 TRENCH WIDTH = 3'  
 150 GAL x 4 BEDROOMS = 600 GAL/DAY  
 600 GAL/DAY / 0.8 GAL/DAY/SQ. FT. = 750 SQ. FT.  
 750 SQ. FT. / 3' = 250 L.F.  
 250 L.F. x 4.2' = 105 L.F. OF DEEP TRENCH  
 4 TRENCHES OF VARYING LENGTHS

**TRENCH CHART**

TRENCH	EX. GROUND	INV. ELEV.	BOTTOM OF TRENCH
1	515.2	513.2	507.2
2	512.5	510.5	504.5

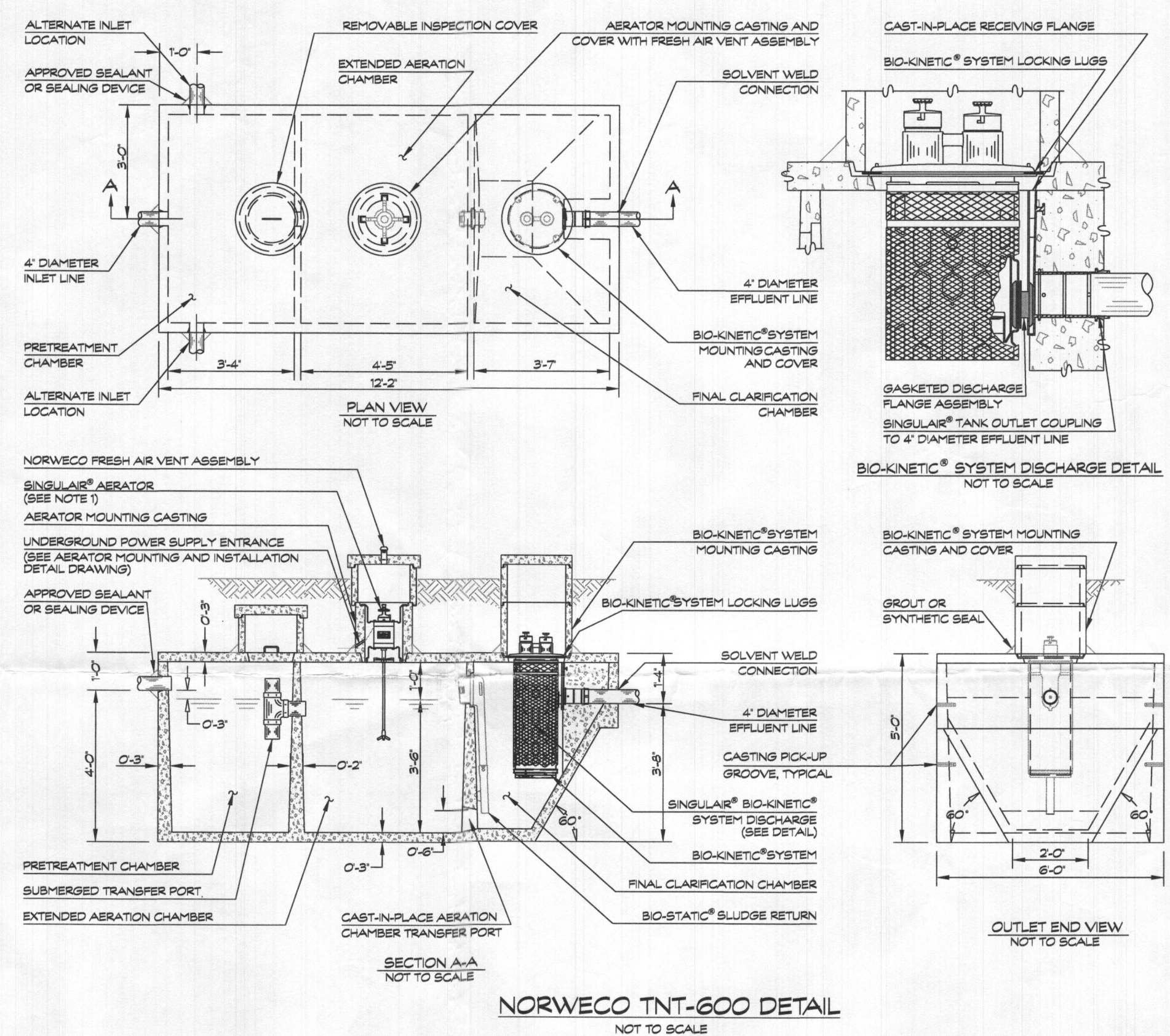
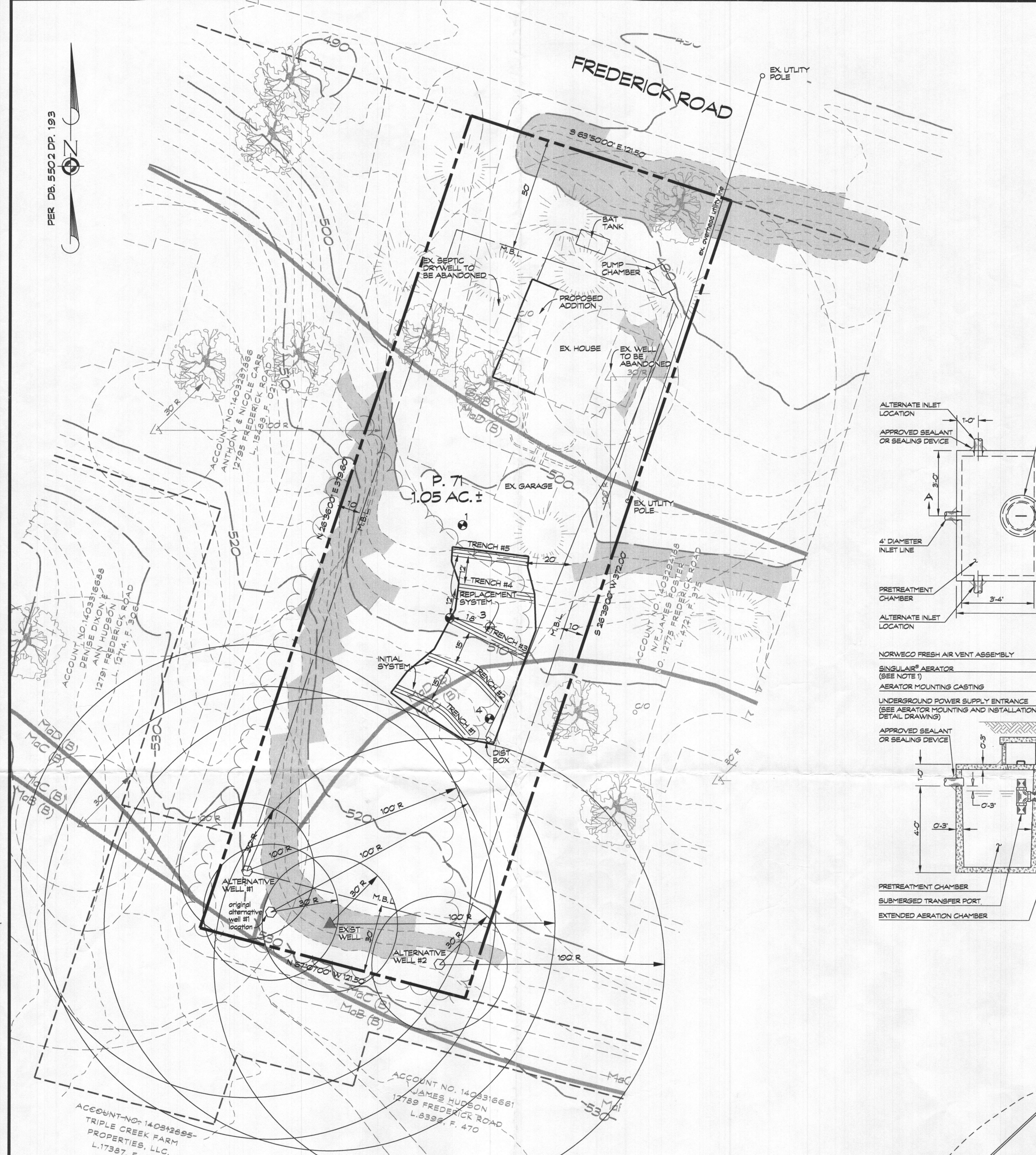
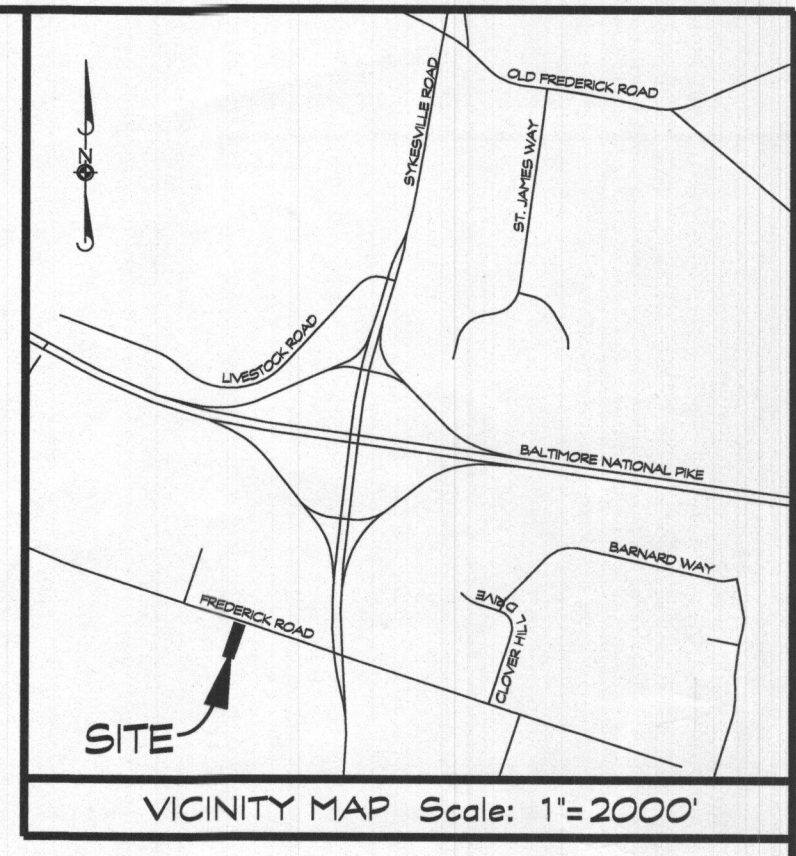
**NOTES:**  
 ALL TRENCHES IN BOTH THE INITIAL SYSTEM AND IN THE REPLACEMENT SYSTEM WILL HAVE PIPE INVERT AT 2 FEET DEPTH

**BAT SITE PLAN 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 DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 4 FEET.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- 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.
- A LICENSED ELECTRICIAN SHALL BE REQUIRED TO COMPLETE THE ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OR HOWARD COUNTY.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
- IF A BUILDING PERMIT IS SUBMITTED ANY TIME IN THE FUTURE, A SEPTIC SYSTEM UPGRADE WILL BE REQUIRED TO FINISH THE AREA CURRENTLY IDENTIFIED AS THE BASEMENT. AT THAT TIME A SEPTIC SYSTEM UPGRADE WILL BE REQUIRED AS FINISHING THE BASEMENT COULD POSSIBLY CREATE A FIFTH BEDROOM PER HOWARD COUNTY CODE 3.80 (B).

**SOILS LEGEND**

SOIL SYMBOL	SOIL SERIES	SOIL HSG	ERODIBLE (K-FACTOR) x35	HYDRIC
GmB	Glenville silt loam	C/D	0.37	+
MmB	Manor loam 3% - 8%	B	0.28	-
MmC	Manor loam 8% - 15%	B	0.28	-
MmD	Manor loam 15% - 25%	B	0.28	-



**SEPTIC TANK NOTES**

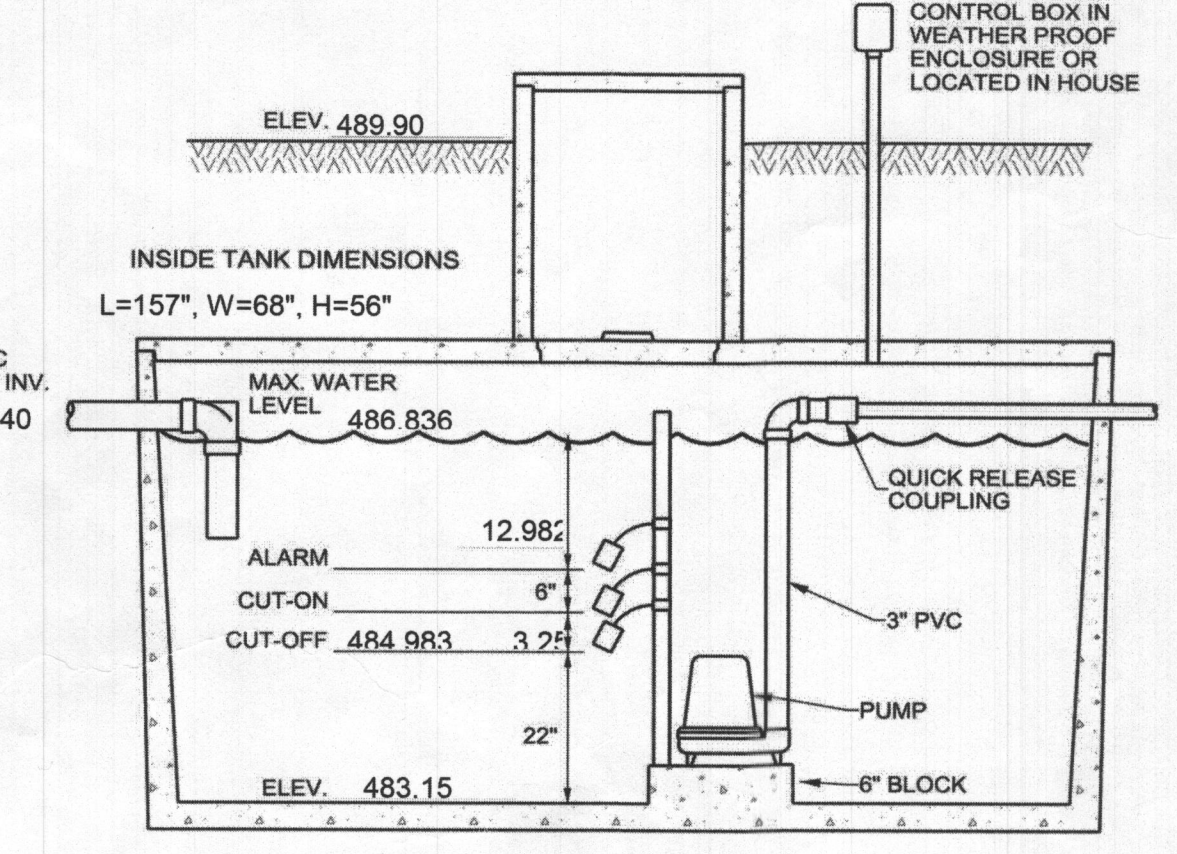
- SINGULAR® AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 50 MINUTES ON / 60 MINUTES OFF.
- FALL THROUGH SINGULAR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
- ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE.
- TANK REINFORCED PER ACI STD. 318-05.
- REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
- CONTACT THE LOCAL, LICENSED SINGULAR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

**PUMP/SYSTEM DESIGN:**

- DESIGN FLOW: 600 GPD (TOTAL 4 BEDROOMS)
- DESIGN HEAD:  
 STATIC HEAD: 512.40 - 484.98 = 27.42'  
 FRICTION HEAD:  
 220' OF 2" PVC = 2.20'  
 1 - 45° BEND = 0.4'  
 1 - 90° BEND = 0.7'  
 2 - 11' BEND = 0.4'  
 220' x 4.7' / 100 = 9.35'  
 235' x 3.98' / 100 = 9.35'  
 TOTAL HEAD: 27.42 + 9.35 = 36.89' @ 50 GPM

**PUMP SYSTEM:**

- DOSE VOLUME:  
 MINIMUM DOSE = 100 GAL.  
 FORCE MAIN VOLUME = 235 X 17.4 / 100 = 40.89 GAL  
 100 + 40.89 = 140.89 GALS  
 ACTUAL DOSE VOLUME = 150 GAL.
- PUMP CHAMBER CAPACITY:  
 ONE DAY STORAGE CAPACITY = 600 GPD  
 + DOSE = 150 GPD  
 TOTAL STORAGE = 750 GPD
- PUMP ON TO PUMP OFF  
 D: 150 X 23.1 / 10,676 = 3.25'
- HIGH WATER ALARM SWITCH TO PUMP CHAMBER  
 R: 600 X 23.1 / 10,676 = 12.98'



**1500 GAL. PUMP CHAMBER**  
NOT TO SCALE

**NOTE:**  
 PUMP CHAMBER SIZE AND FLOATS BASED ON GOULDS WE SERIES SUBMERSIBLE PUMP. IF A PUMP SUBSTITUTION OCCURS, CHAMBER SIZE AND FLOATS WILL NEED TO BE RECALCULATED TO ENSURE THAT PUMP IS COVERED.

**SPECIFICATIONS**

- Tank measurements and elevations are based on pump chambers as manufactured by Babylon Vault Co, New Windsor, Maryland (410) 848-0393
- All piping to be schedule 40 PVC of sizes shown.
- A submersible pump to remove 50.00 GPM against 36.89' TDH to be provided. Pump to be a Goulds Model 3885-WE-07H or equal.
- Alarm to be located at the house on circuit separate from the pump.

**NOTE:**  
 THE APPROVED PERCOLATION CERTIFICATION PLAN SHOWED SEPTIC EASEMENT TO SUPPORT THE PROPOSED ADDITION. THE TOTAL BEDROOMS WILL BE 4 BEDROOMS.

**ITT**

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

**SPECIFICATIONS**  
 Pump  
 • Solids handling capabilities: 1/2" 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 ratings, phase and RPM's available.

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

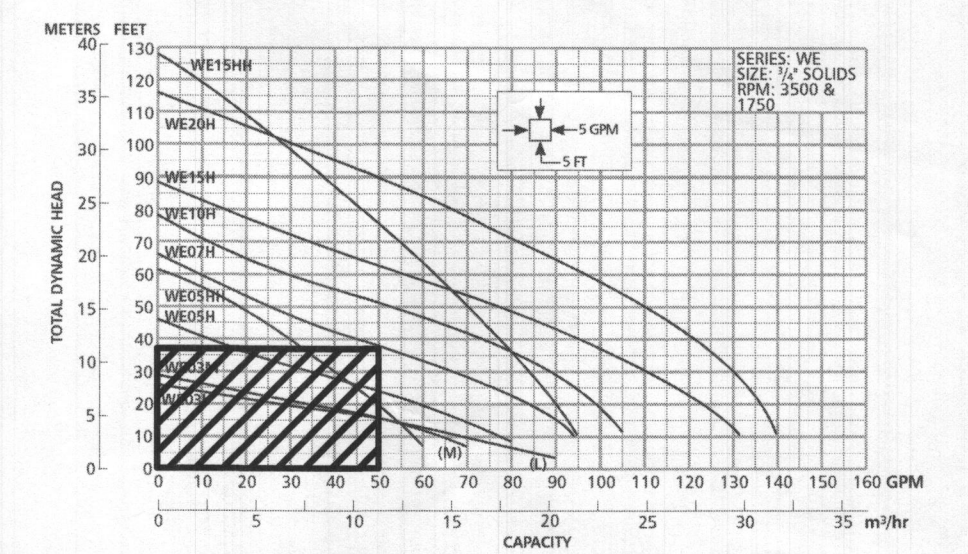
**GOULDS PUMPS**  
Wastewater

• 1/2 - 1 HP models have NEMA three prong grounding plugs.  
 • 1 1/2 HP and larger units have bare lead cord ends.

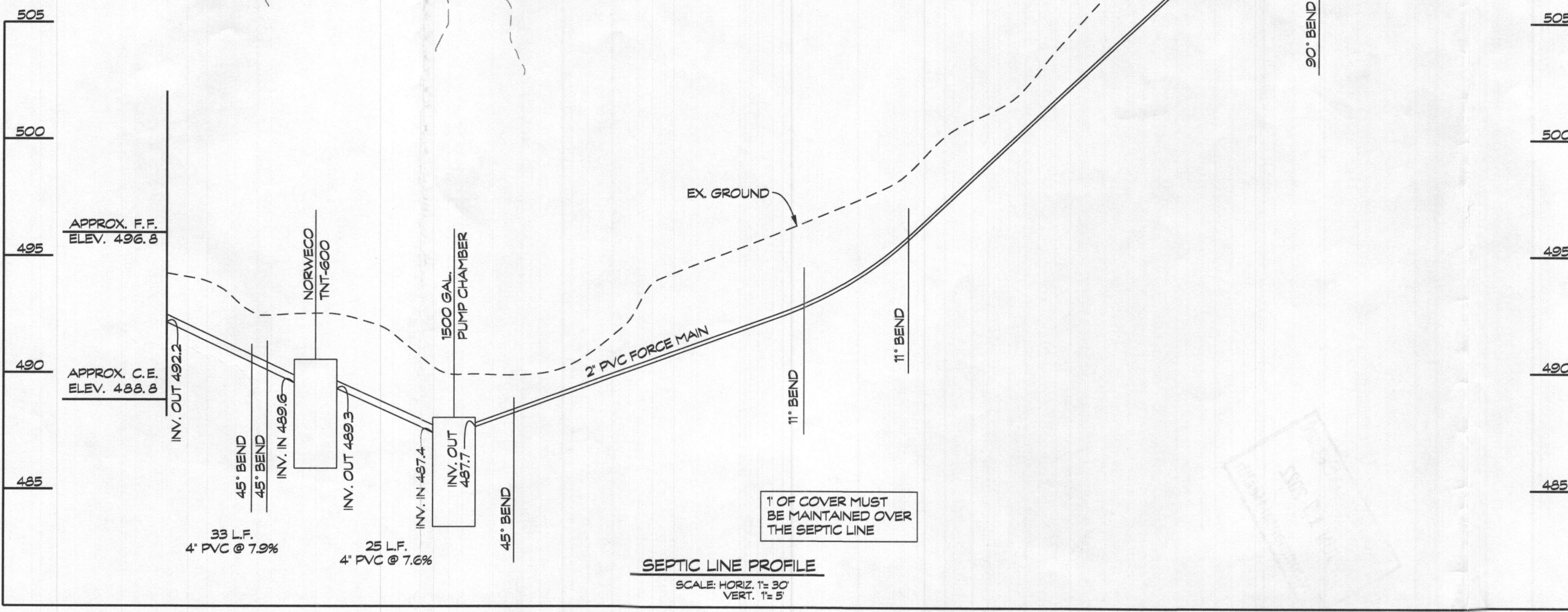
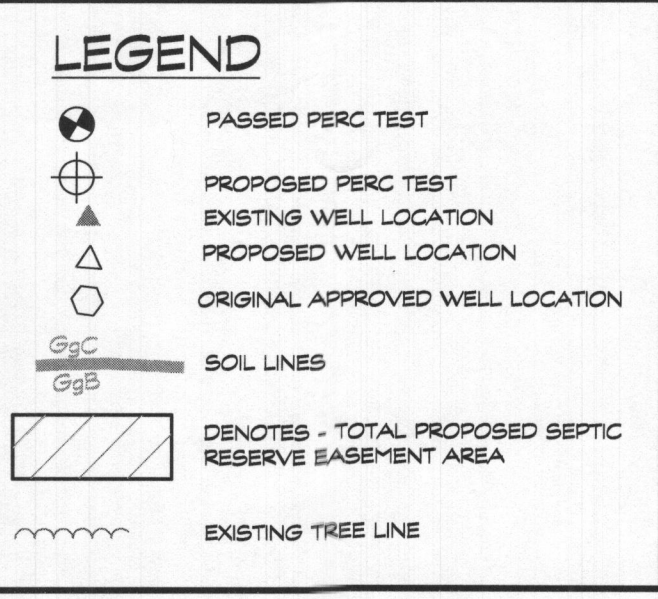
**Three phase (60 Hz):**  
 • Class 10 overload protection must be provided in separately enclosed starter unit.  
 • STOW power cords all have bare lead cord ends.

• 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**  
 • Inquiries to: 70 and 612 168 Standard.  
 • By Canadian Standards Association File #R38250  
 • Goulds Pumps is ISO 9001 Registered.



**PLAN**  
SCALE: 1"=30'



**ON SITE SEWAGE DISPOSAL PLAN**

**SUIT PROPERTY**

12785 FREDERICK ROAD  
 TAX MAP: 15 \* BLOCK: 11 \* PARCEL: 71  
 3rd ELECTION DISTRICT \* HOWARD COUNTY, MD



OWNER/DEVELOPER  
 MARGARET A. SUIT  
 12785 FREDERICK ROAD  
 WEST FRIENDSHIP, MD 21794

6/16/2022

Linda D. Alexander  
 Qualified Professional

Date	Revisions	Drawn By: LDA
		Designed By:
		Reviewed By:
		Date: MAY 2022
		Scale: 1" = 30'
		Job No.: 2021191
		Sheet: 1

## Silvast, Zackary

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**From:** Silvast, Zackary  
**Sent:** Tuesday, August 30, 2022 1:45 PM  
**To:** Linda D. Alexander  
**Cc:** Bernard, Dana; Margaret Suit; Todd Swanson  
**Subject:** RE: Suit Property...(clsi2021191) 12785 Frederick Road OSDS Plan review status

Hello everyone,

I have the following revision comments to this site plan.

*Eliminated comments 1, 2, 7.  
7/8 9/9/22*

3. Force main should be clearly labeled.
4. The water line connection to the house should be shown.
5. The septic force main will need a 4" sched. 40 PVC sleeve where 10' separation cannot be maintained from any water lines.  
This section(s) should be clearly labeled on the site plan.
6. Need well tag number on OSDS plan.
  
8. Label dbox as "10-hole dbox"
  - a. Dbox should align with start of first trench.

We look forward to your revisions. Thank you.

- ZS

**From:** Todd Swanson <todd@dbrgmaryland.com>  
**Sent:** Tuesday, August 30, 2022 11:04 AM  
**To:** Silvast, Zackary <zsilvast@howardcountymd.gov>  
**Cc:** Todd Swanson <todd@dbrgmaryland.com>; Linda D. Alexander <lalexander@clsimail.com>; Bernard, Dana <dbernard@howardcountymd.gov>; Margaret Suit <Margaret.Suit@erickson.com>  
**Subject:** Re: Suit Property...(clsi2021191) 12785 Frederick Road OSDS Plan review status

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

Hello Zach,

I am just checking in on the approval of the OSDS for Ms. Suit that you were reviewing last week. Has it been approved?

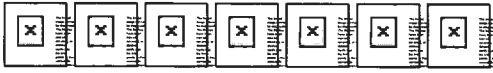
We are anxious to get this work performed as we are getting closer to needing to apply for our building permit. Thanks

Regards,

**Todd Swanson**

**General Manager,  
Design Build Remodeling Group of Maryland, LLC**

1299 Judges Ct.  
Sykesville, MD 21784  
Office: 443.300.2268  
Cell: 410.596.2899



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On Tue, Aug 23, 2022 at 10:20 AM Silvast, Zackary <[zsilvast@howardcountymd.gov](mailto:zsilvast@howardcountymd.gov)> wrote:

Hello everyone,

I just got the red-lined revision of the perc certification plan reviewed and approved. I will be making a site visit out there tomorrow morning. I plan on finishing my review of the OSDS either tomorrow afternoon or Thursday. I'll send another update shortly. The well location change impacted our timeline. Thank you.

- ZS

**From:** Todd Swanson <[todd@dbrgmaryland.com](mailto:todd@dbrgmaryland.com)>  
**Sent:** Monday, August 22, 2022 10:22 AM  
**To:** Linda D. Alexander <[lalexander@clsimail.com](mailto:lalexander@clsimail.com)>  
**Cc:** Silvast, Zackary <[zsilvast@howardcountymd.gov](mailto:zsilvast@howardcountymd.gov)>; Bernard, Dana <[dbernard@howardcountymd.gov](mailto:dbernard@howardcountymd.gov)>; Todd Swanson <[todd@dbrgmaryland.com](mailto:todd@dbrgmaryland.com)>; Margaret Suit <[Margaret.Suit@erickson.com](mailto:Margaret.Suit@erickson.com)>  
**Subject:** Re: Suit Property...(clsi2021191) 12785 Frederick Road OSDS Plan review status

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

Good morning Zach,

Can you please provide us an update on the OSDS plan that Linda Alexander submitted for the property located at 12785 Frederick Rd West Friendship, MD 21794.

We are ready to get the septic work completed so that we can soon file for our building permit for the project. Thank you for your time.

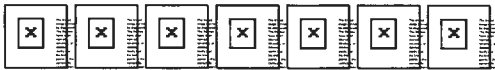
Regards,

**Todd Swanson**  
***General Manager,***  
**Design Build Remodeling Group of Maryland, LLC**

1299 Judges Ct.  
Sykesville, MD 21784

Office: 443.300.2268

Cell: 410.596.2899



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On Mon, Aug 15, 2022 at 3:28 PM Linda D. Alexander <[lalexander@clsimail.com](mailto:lalexander@clsimail.com)> wrote:

Good Afternoon Zach,

I am following up on the review/approval of the OSDS plan. The initial submittal was received by your office on June 11. Per our meeting on July 29, the OSDS plan submittal was discovered in the county file. And we took care of a minor markup to the perc cert plan at the meeting so as to speed the process up.

The owner needs to get the septic system replacement moving forward as quickly as possible since it will need to be done prior to any building permit for the addition.