

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: 4/6/21 **ONSITE SEWAGE DISPOSAL SYSTEM** P 568842

APPROVAL DATE: 11/3/21 **PERMIT: REPAIR** A _____

PROPERTY ADDRESS: 11486 Frederick Road

SUBDIVISION: _____ LOT: _____ TAX ID: _____

CONTRACTOR: FREEDOM SEPTIC EMAIL: christy@freedomseptic.com

CONTRACTOR ADDRESS: 2809 LIBERTY ROAD, SYKESVILLE, MD 21784 PHONE: 410-795-2947

PROPERTY OWNER: Khatat Liang EMAIL: _____

OWNER ADDRESS: 11486 Frederick Road, Ellicott City, MD 21042 PHONE: _____

SEPTIC TANK SIZE (GALLONS): 1500 PUMP CHAMBER CAPACITY (GALLONS): 1500 PUMP SIZE: WE07H

NUMBER OF BEDROOMS: 4 HOUSE SQ. FT. - APPLICATION RATE: 0.8

DISTRIBUTION SYSTEM: GRAVITY FED LOW PRESSURE DOSED

TRENCHES:	LINEAR FEET REQUIRED: <u>125'</u>	INLET DEPTH: <u>4'</u>
	TRENCH WIDTH: <u>3'</u>	MAXIMUM BOTTOM DEPTH: <u>8'</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10'</u>	EFFECTIVE AREA BEGINNING DEPTH: _____
LOCATION:	TO BE STAKED BY SANITARIAN DURING PRE-CONSTRUCTION INSPECTION.	
NOTES:	<u>RENOVATED HOUSE; INSTALL NEW SYSTEM.</u>	

ISSUED BY: _____ ISSUE DATE: _____ EXPIRATION DATE: _____

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 SEPTIC 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 21002442

NOTE: THE HCHD DOES NOT WARRANT ANY SYSTEM AND CANNOT GUARANTEE THE PERFORMANCE OF THIS SYSTEM AS DESIGNED. BY ACCEPTING THIS PERMIT, THE OWNER AND/OR APPLICANT ACKNOWLEDGE THAT THE SPECIFICATIONS DETAILED IN THIS DESIGN ARE ONE POSSIBLE OPTION AND THAT THE HCHD WILL REVIEW OTHER PROPOSALS. YOU HAVE THE OPTION TO SEEK THE ADVICE OF A QUALIFIED DESIGN CONSULTANT OR PROFESSIONAL ENGINEER FOR FURTHER GUIDANCE.

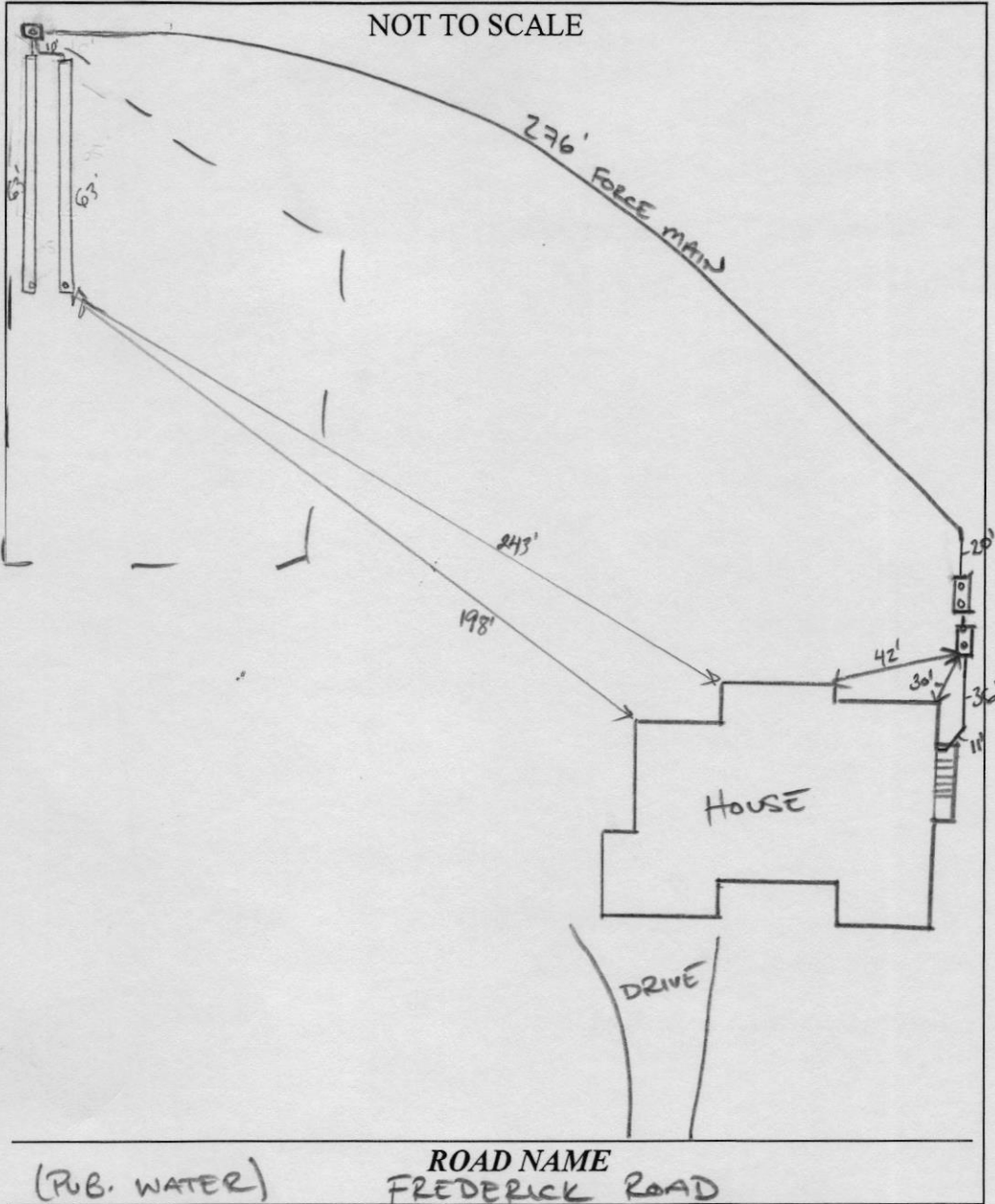
NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

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



(Pub. Water)

ROAD NAME
FREDERICK ROAD

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	4'	8'
NUMBER OF TRENCHES		2
TOTAL LENGTH		126'
ABSORPTION AREA		378' +
DISTRIBUTION BOX LEVEL		N/A
DISTRIBUTION BOX BAFFLE		N/A
DISTRIBUTION BOX PORT		N/A

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	3'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT/BACK
6" PORT LOC	-
WATERTIGHT TEST	-
SLOTTED	YES
DATE ON LID	03/15/2021
PUMP/SEPTIC TANK LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	3'
BAFFLES	-
BAFFLE FILTER	-
MANHOLE LOC	FRONT/BACK
6" PORT LOC	-
WATERTIGHT TEST	-
SLOTTED	-
DATE ON LID	04/08/2021

PRE-CONSTRUCTION:

04/26/2021 LAID OUT 2x63' TRENCHES ON CONTOUR. APPROX LOCATION OF TANK TO HOUSE FOUNDATION PER PLAN. MET WITH HOMEOWNER ON SITE. OK TO START.

INSTALLATION: 05/17/2021 INSTALLED SAC. TANKS SET IN HYDRAULIC (GREY/BLUE) SOIL. INSTALLED FORCE MAIN AND D BOX. 5/18/21 2x63' trenches constructed and connected to d-box. Re-inspect for pump. 11/3/21 Obs pump functioning w/ water flowing in d-box. Alarm ds to function. Alarm located in basement next to circuit panel. Alarm and pump on separate circuits.

FINAL INSPECTOR

Susan Thomas

DATE OF APPROVAL

11/3/21



HOWARD COUNTY HEALTH DEPARTMENT

68842

DATE 4/16/24

Received From

Freedom Septic

PHONE #

410-985-2947

For

Septic permit
114816 Freedom Rd.

CASH

CHECK

NO.

4942

One hundred sixty-five Dollars

\$

165.00

Received By

M King

439 East Main Street
Westminster, MD 21157-5539



(410) 848-1790 • (301) 662-1799
Fax (410) 848-1791

February 3, 2021

Howard County Health Department
8930 Stanford Blvd
Columbia, MD 21045

Attn: Mr. Robert Freemon
Environmental Sanitarian

RE: OSDS Plan
11486 Frederick Road
CLSI Job No.: 2020284

Dear Mr. Freemon,

We offer the following responses to your comment letter dated January 22, 2021:

1. The coefficients have been revised.
2. The friction loss has been revised.
3. The volume in the pipe calculation has been shown.
4. The pump lid specifications have been revised.
5. Based on an email from the owner they have chose to have the disposal system for only 4 bedrooms.
6. The outlet pipe from the house was field verified.
7. The title has been revised.
8. The legend has been revised.

Should you have any questions or concerns, please feel free to contact our office.

Sincerely,


Linda Alexander
Associate/ Project Manager

Cc: File



439 East Main Street, Westminster, MD 21157-5539
 v. (410) 848-1790 ~ f. (410) 848-1791

Transmit To:

Mr. Robert Freemon
 Environmental Health Specialist
 Development Coordination, Well & Septic
 Program
 Howard County Bureau of Environmental Health
 8930 Stanford Boulevard
 Columbia, MD 21045

Project Info:

FREDERICK ROAD #11486
 11486 Frederick Rd.
 Howard County

Project No: 2020284

Date: Feb 3, 2021

We are Transmitting:

- | | | | | | |
|---|---|---|--|---|--------------------------|
| <input checked="" type="checkbox"/> Here with | <input checked="" type="checkbox"/> Originals | <input type="checkbox"/> Computer Media | <input type="checkbox"/> Shop Drawings | <input checked="" type="checkbox"/> Via Overnight | <input type="checkbox"/> |
| <input type="checkbox"/> Our | <input checked="" type="checkbox"/> Prints | <input type="checkbox"/> Project Manuals | <input type="checkbox"/> Payment Cert. | <input type="checkbox"/> Express Mail | <input type="checkbox"/> |
| <input type="checkbox"/> Your | <input type="checkbox"/> Copies | <input type="checkbox"/> Product Literature | <input type="checkbox"/> Change Order | <input type="checkbox"/> 1st Class Mail | <input type="checkbox"/> |

Sets	Type	Dwg No	Dated	Description
3	D Size Bond Copies		2/3/21	OSDS PLAN, NOTES AND DETAILS
1	Letter		2/3/21	FREEMON RESPONSE LETTER

- | | | | | |
|---------------------------------------|---|--------------------------------------|---------------------------------------|--------------------------|
| <input type="checkbox"/> As Requested | <input type="checkbox"/> For Your Use | <input type="checkbox"/> For Filing | <input type="checkbox"/> For Approval | <input type="checkbox"/> |
| <input type="checkbox"/> As Required | <input checked="" type="checkbox"/> For Your Review | <input type="checkbox"/> For Bidding | <input type="checkbox"/> As Discussed | <input type="checkbox"/> |

Remarks:

If enclosures are not as noted,
 please notify us immediately.

Copy To _____

_____ Linda D. Alexander

P 568842

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

INFORMATION FORM - SEPTIC SYSTEM REPAIR/UPGRADE

Reason for Request:

- Failing System
- System relocation for proposed addition
- System upgrade for proposed addition
- Inadequate treatment zone
- Collapsed septic tank
- Collapsed drywell

Has the septic tank been pumped within the last month?

Yes Date pumped: 3/31/21 - did tank empty
 No

Was a visual inspection of the septic tank and/or drain fields conducted?

Yes Explain observation: _____
 No

Existing system design

- Drywell
- Trench
- Mound
- Unknown
- Other: _____

Was a visual inspection of the sewage line conducted?

Yes
 No

Blockage Leading to the field

Yes Explain _____
 No

Is discharge surfacing on the ground?

Yes
 No

Additional Comments:

*For REPAIRS, are the owners proposing, or do they plan to add in the future any additions or modifications to the property, i.e. pools, living space additions, garages, etc? This information must be disclosed at the time of this application. The Health Department will not be able to accommodate requests in the field for property modifications unrelated to the repair request. Such requests may require an additional fee, testing, and submittal of a Percolation Certification Plan, if the property does not meet current Code and Regulations.

Septic Contractor: Freedom Septic Service, Inc. Contractor's Phone: 410.795.2947
 Contractor's Address: 2809 Liberty Rd Sykesville, MD 21784
 Property Address: 11486 Frederick Rd Ellistown City, MD County File: _____
 Subdivision: 2002 Lot: _____ Year Built: 1968
 Owner's Name: Karntat Lyons Existing bedrooms: 4
 Name of previous owners: Mark Carroll Existing bedrooms: _____
 Proposed bedrooms: _____

*A Sanitarian will be in contact within three business days, depending upon the urgency of the situation, to coordinate the scheduling/review of the repair or upgrade.

Prior to scheduling inspections, scaled plans should be submitted to clarify the nature of the addition.

Print out a copy of Real Property Data via Dept. of Taxation website _____ Indexed file found _____

If soil/site conditions are limited and sewer and/or Metro District status is not conducive to connection, the Sanitarian may recommend pursuit of Emergency Sewer Extension or Emergency Metro District Inclusion. The Owner should contact the Bureau of Utilities for details.

No permit is to be issued nor inspection to be scheduled without prior fee collection at the office unless an emergency exists.

The contractor is to notify the office of the emergency as soon as possible.

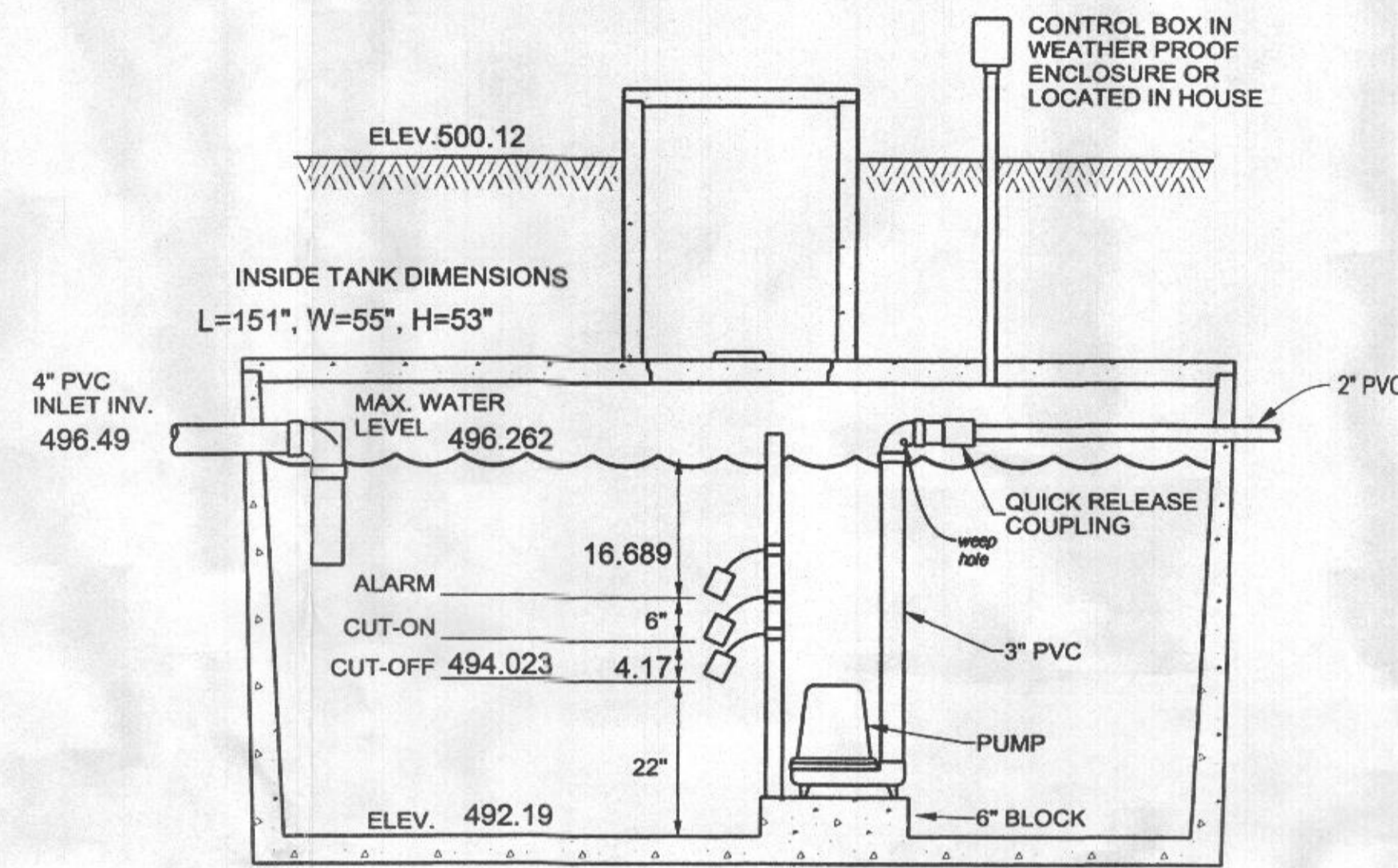
2/2020



GOULDS PUMPS
Wastewater



Wastewater



1500 GAL. PUMP CHAMBER
NOT TO SCALE

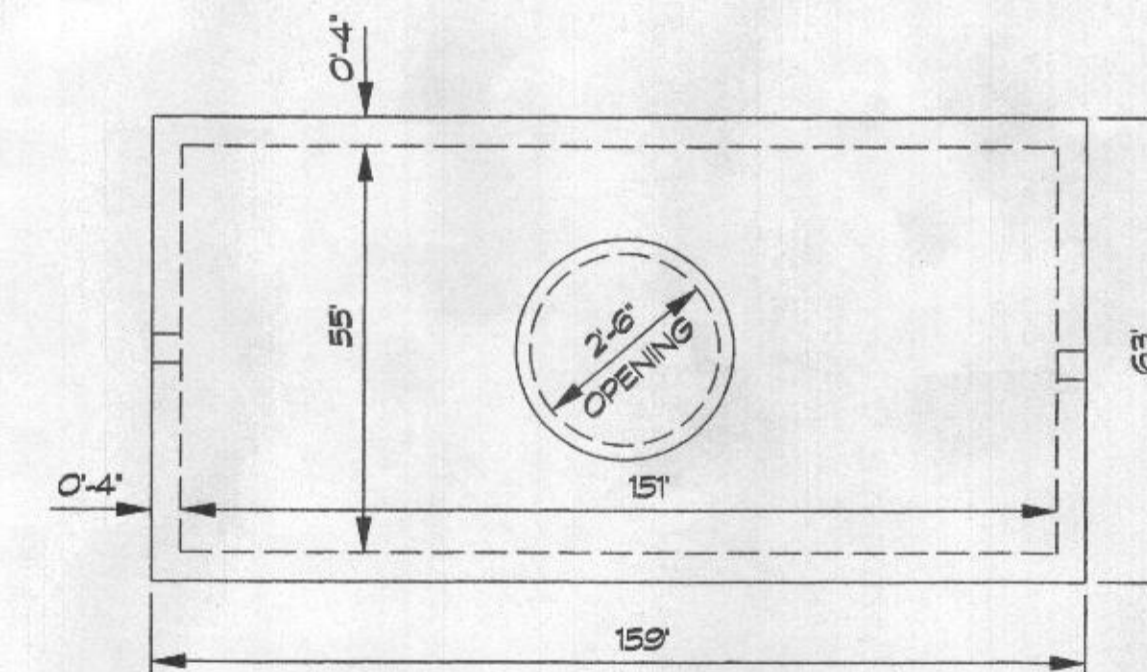
NOTE:
PUMP CHAMBER SIZE AND FLOATS BASED ON GOULDS WE SERIES SUBMERSIBLE PUMP. IF A PUMP SUBSTITUTION OCCURS, CHAMBER SIZE AND FLOATS WILL NEED TO BE RECALCULATED TO ENSURE THAT PUMP IS COVERED.

PUMP/SYSTEM DESIGN:

- DESIGN FLOW: 600 GPD (TOTAL 4 BEDROOMS)
- DESIGN HEAD:
 STATIC HEAD: 517.72 - 494.02 = 23.7'
 FRICTION HEAD:
 28' 1" OF 2" PVC = 28.1'
 1 - 45° BEND = 4'
 1 - 22.5° BEND = 2'
 1 - 22.5° VERTICAL BEND = 2'
 28.1' + 4' + 2' + 2' = 36.3'
 28.9' x 3.98 / 100 = 11.50'
 TOTAL HEAD: 23.7' + 11.50' = 35.20' @ 50 GPM

PUMP SYSTEM:

- DOSE VOLUME:
 USE MINIMUM DOSE = 100 GAL
 FORCE MAIN VOLUME =
 28.9' x 17.4" / 100 = 50.28 GAL
 ACTUAL DOSE VOLUME = 155 GAL
- PUMP CHAMBER CAPACITY:
 ONE DAY STORAGE CAPACITY = 600 GPD
 + DOSE = 155 GPD
 TOTAL STORAGE = 755 GPD
- PUMP ON TO PUMP OFF:
 D₁ = 1.53 X 23 1/8,305 = 4.31'
- HIGH WATER ALARM SWITCH TO PUMP CHAMBER:
 R₁ = 600 X 23 1/8,305 = 16.69'



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 28.2 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.

APPLICATIONS

Specifically designed for the following uses:

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

SPECIFICATIONS

- Package size: 2" NPT
- Solids handling capabilities: 1/2" maximum
- Capacity: up to 140 GPM
- Total head: up to 128 feet TDH
- Temperature: 104°F (40°C) continuous, 147°F (60°C) intermittent
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available

MOTORS

- Full 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
- STOW or STOWV 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.

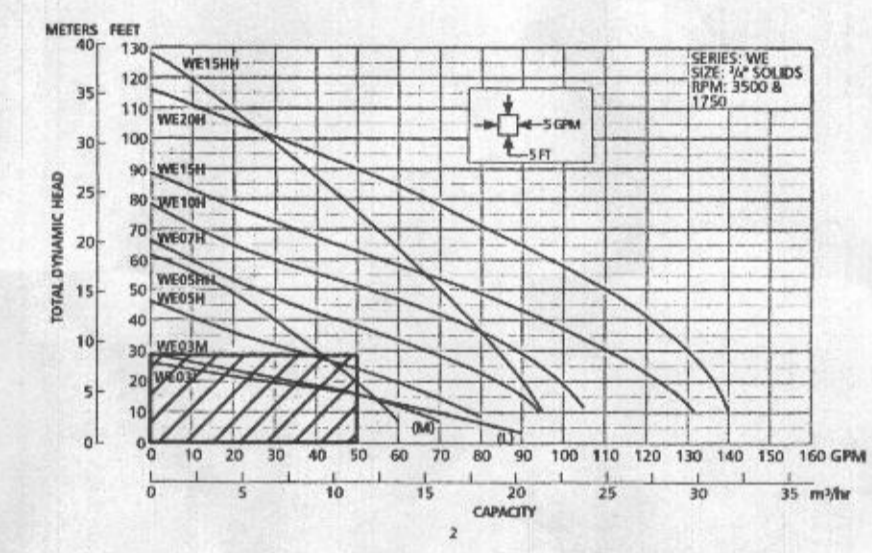
Three phase (60 Hz):

- Class 10 overload protection must be provided in separately enclosed starter unit.
- STOW power cords all have bare lead cord ends.
- Class 10 overload protection must be provided in separately enclosed starter unit.
- Designed for Continuous Operation: Pump ratings are within the motor manufacturers 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 to ease of water jacket damage and to prevent oil leakage. Standard cord is 20'. Optional lengths are available.
- Design: Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS

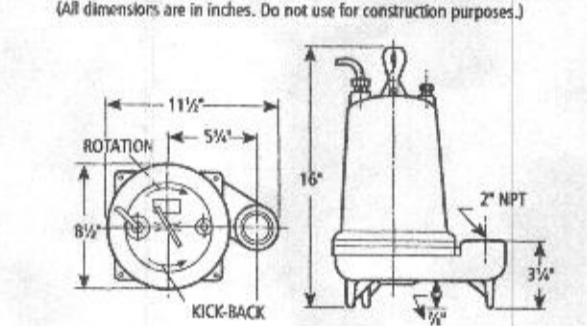
- Used in 10,000 and 100,000 GPD flow
- By Canadian Standards Association (CSA) for 100,000 GPD
- Goodyear Pump is ISO 9001 Registered



PERFORMANCE RATINGS (gallons per minute)

Order No.	1/2 HP	3/4 HP	1 HP	1 1/2 HP	2 HP
110	70	63	78	94	—
115	52	52	70	80	102
20	27	35	60	83	98
25	5	15	48	76	94
30	—	—	35	67	88
35	—	—	22	57	82
40	—	—	—	45	74
45	—	—	—	35	64
50	—	—	—	25	53
55	—	—	—	—	40
60	—	—	—	—	30
65	—	—	—	—	20
70	—	—	—	—	—
75	—	—	—	—	—
80	—	—	—	—	—
90	—	—	—	—	—
100	—	—	—	—	—

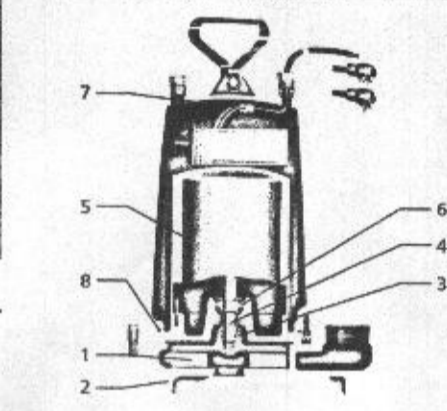
DIMENSIONS



GOULDS PUMPS

COMPONENTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casting O-Ring



PUMP CHAMBER NOTES & DETAILS

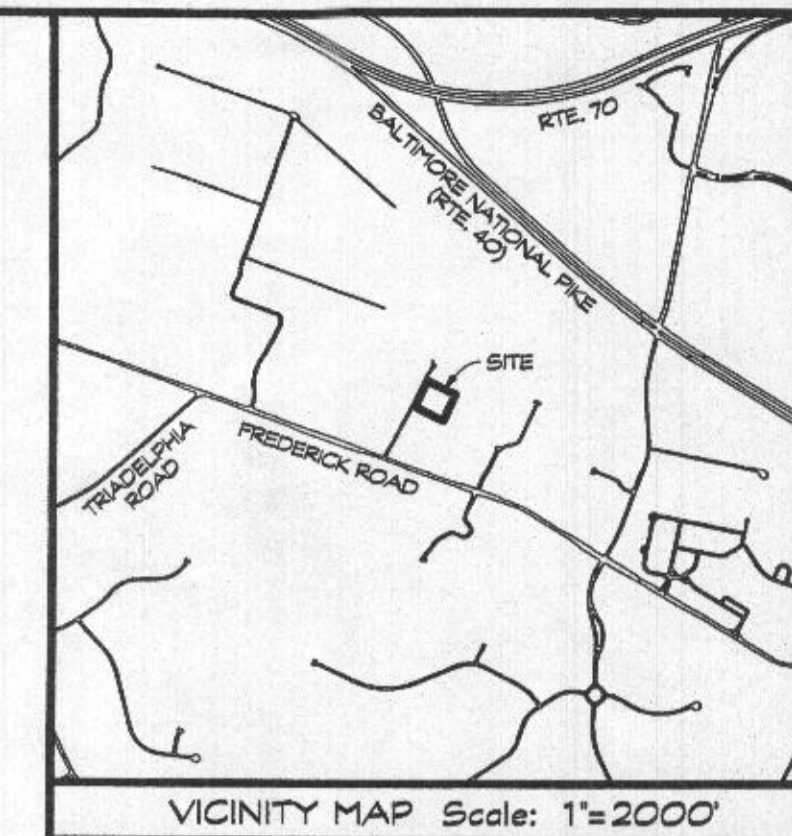
11486 FREDERICK ROAD
 LOTS 1 THROUGH 26 AND
 NON-BUILDABLE PARCEL 'A'
 TAX MAP 16, PARCEL 244
 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Handwritten signature and date: Linda D. Alexander 11/3/21



OWNER/DEVELOPER
 MARK CARROLL
 11486 FREDERICK ROAD
 ELLICOTT CITY, MD. 21042

Date	Revisions	Drawn By: BH
1/29/21	REV'D PER HEALTH DEPT LTR. 1/22/21	Designed By: LDA
		Reviewed By:
		Date: NOVEMBER 2020
		Scale: AS SHOWN
		Job No.: 2020284
		Sheet: 2 OF 2



- 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 MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 3. IF A BUILDING PERMIT IS SUBMITTED ANYTIME 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 & 80.1(b).
 4. TANK MEASUREMENTS AND ELEVATIONS ARE BASED ON SEPTIC TANKS AS MANUFACTURED BY HAYTER BROS., ELKREE, MD 410-786-1434.
 5. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

- GENERAL NOTES**
1. THE STORM-WATER MANAGEMENT WAS NOT REQUIRED.
 2. THERE ARE NO STREAMS, PONDS, FLOODPLAINS, OR WETLANDS ON THIS LOT UNLESS OTHERWISE SHOWN HEREON.
 3. THERE ARE NO 20% OR GREATER SLOPES ON THIS LOT UNLESS SHOWN.
 4. THIS LOT IS SERVICED BY PUBLIC WATER.

- DATA TABULATIONS**
1. ZONING DISTRICT: RC-DEO (RURAL RESIDENTIAL)
 2. NUMBER OF BUILDING SITES: 1
 3. TOTAL AREA OF LOT: 2.278 ACRES

SEPTIC SYSTEM TRENCH DESIGN:

EXISTING HOUSE - 3 BEDROOMS
 PROPOSED ADDITION - 1 BEDROOM
 TOTAL BEDROOMS - 4

INITIAL SYSTEM:
 APPLICATION RATE = 0.8 GPD/SQ. FT.
 EFFECTIVE DEPTH IS 3'
 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 .50 = 125 L.F. OF DEEP TRENCH
 USE 2 - 75 L.F. OF TRENCH FOR EACH SYSTEM

REPLACEMENT SYSTEM #1:
 APPLICATION RATE = 1.2 GPD/SQ. FT.
 EFFECTIVE DEPTH IS 3'
 TRENCH WIDTH = 3'
 150 GAL x 4 BEDROOMS = 600 GAL/DAY
 600 GAL/DAY / 1.2 GAL/DAY/SQ. FT. = 500 SQ. FT.
 500 SQ. FT. / 3' = 167 L.F.
 167 L.F. x .50 = 83.5 L.F. OF DEEP TRENCH
 USE 1 - 83.5 L.F. OF TRENCH FOR EACH SYSTEM

REPLACEMENT SYSTEM #2:
 APPLICATION RATE = 0.5 GPD/SQ. FT.
 EFFECTIVE DEPTH IS 1'
 TRENCH WIDTH = 3'
 150 GAL x 4 BEDROOMS = 600 GAL/DAY
 600 GAL/DAY / 0.5 GAL/DAY/SQ. FT. = 750 SQ. FT.
 750 SQ. FT. / 3' = 250 L.F.
 250 L.F. x .83 = 207.5 L.F. OF DEEP TRENCH
 USE 3 - 70 L.F. OF TRENCH FOR EACH SYSTEM

Approved Septic System Plan
 Howard County Health Department
 Signature: *[Signature]* Date: 3/16/2021

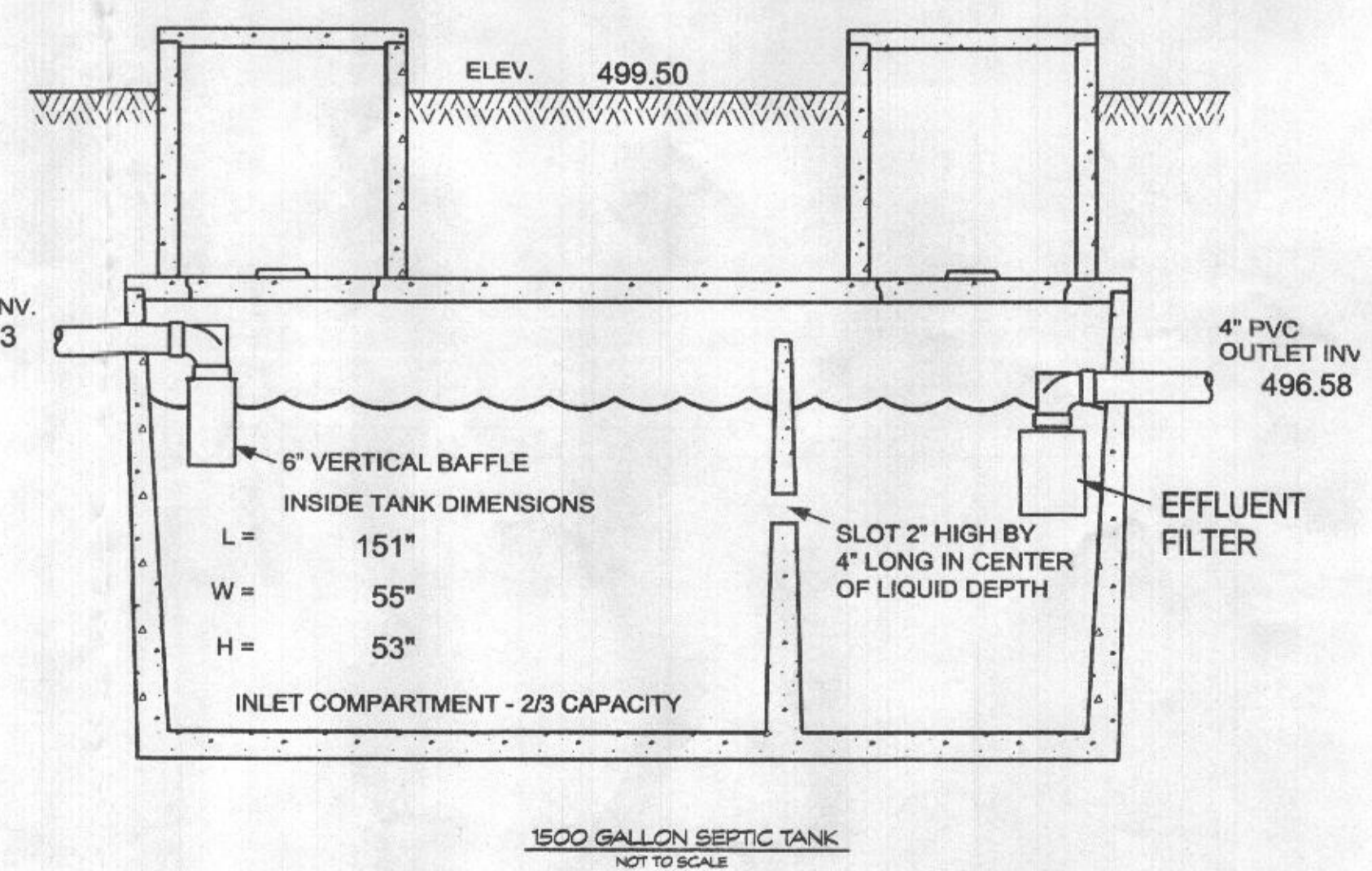
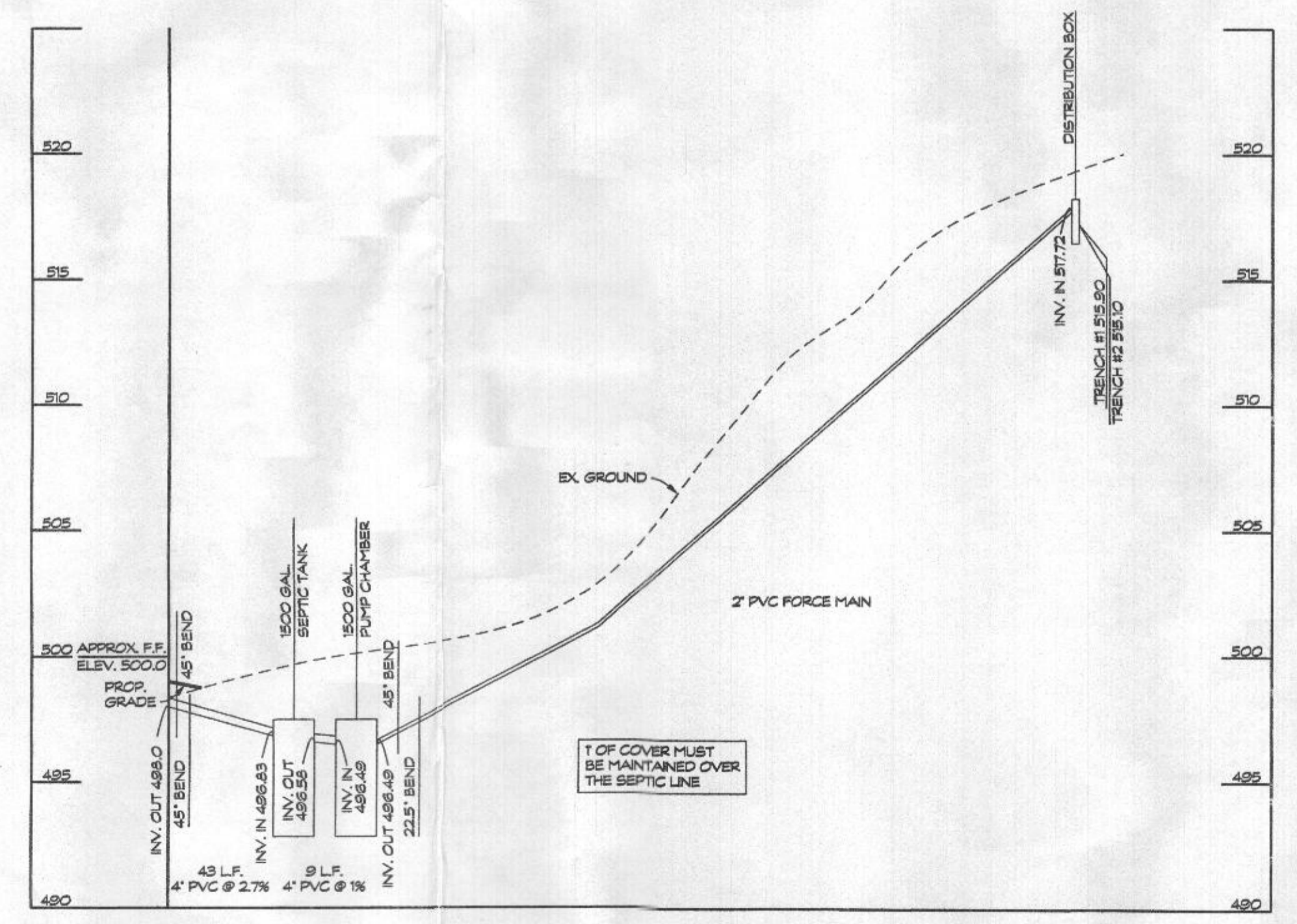
SOILS LEGEND

SOIL SYMBOL	SOIL SERIES	SOIL HSG	ERODIBLE (K FACTOR X35)	HYDRIC
GpB	GLIENELG LOAM	B	-	-
GpC	GLIENELG LOAM	B	-	-
GpB	GLIENVILLE-SALE SILT LOAMS	C	+	+

TRENCH CHART

TRENCH	EX. GROUND	IN. ELEV.	BOTTOM OF TRENCH
1	519.9	515.9	511.9
2	519.1	515.1	511.1

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



LEGEND

- 25% SLOPES
- EX 10' CONTOUR
- EX 2' CONTOUR
- STREAM BUFFER
- FAILED PERC TEST
- PASSED PERC TEST
- SOIL LINES
- DENOTES - TOTAL PROPOSED SEPTIC RESERVE EASEMENT AREA FOR THE PURPOSE OF THIS PROPERTY, SINGLE FAMILY RESIDENCE
- EXISTING TREELINE

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
 11486 FREDERICK ROAD

TAX MAP 16, PARCEL 244
 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

[Signature]
 Linda D. Alexander
 Qualified Professional

CLSI
 www.clsi-chileng.com
 439 East Main Street Westminster, MD 21157-5539
 (410) 848-1790 FAX (410) 848-1791

Date	Revisions	Drawn By: BH
1/29/21	REVD PER HEALTH DEPT LETTER 1/22/2021	Designed By: LDA, BH
		Reviewed By: LDA
		Date: NOV-18-2020
		Scale: 1" = 50'
		Job No: 2020284
		Sheet: 1 OF 1

OWNER/DEVELOPER
 MARK CARROLL
 11486 FREDERICK ROAD
 ELICOTT CITY, MD. 21042

Repair?

Upgrade?

$$\text{Fee} = \frac{396 \cdot 100}{100}$$

$$= 165 \cdot 100 \quad 418$$