

NORWECO SINGULAR 600
BAT TANK DETAIL

GENERAL NOTES:

- SINGULAR AIRATOR, AS TESTED AND ACCEPTED BY NSF, OPERATES 15 MINUTES ON / 15 MINUTES OFF.
- FALL THROUGH SINGULAR PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWENTY 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 AC STD. 318-05.
- REMOVABLE COVERS ON RISERS WHICH IN EXCESS OF SEVENTY FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
- CONTACT THE LOCAL LICENSED SINGULAR DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

PROJECT ENGINEER'S APPROVAL
I HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____

NAME: _____

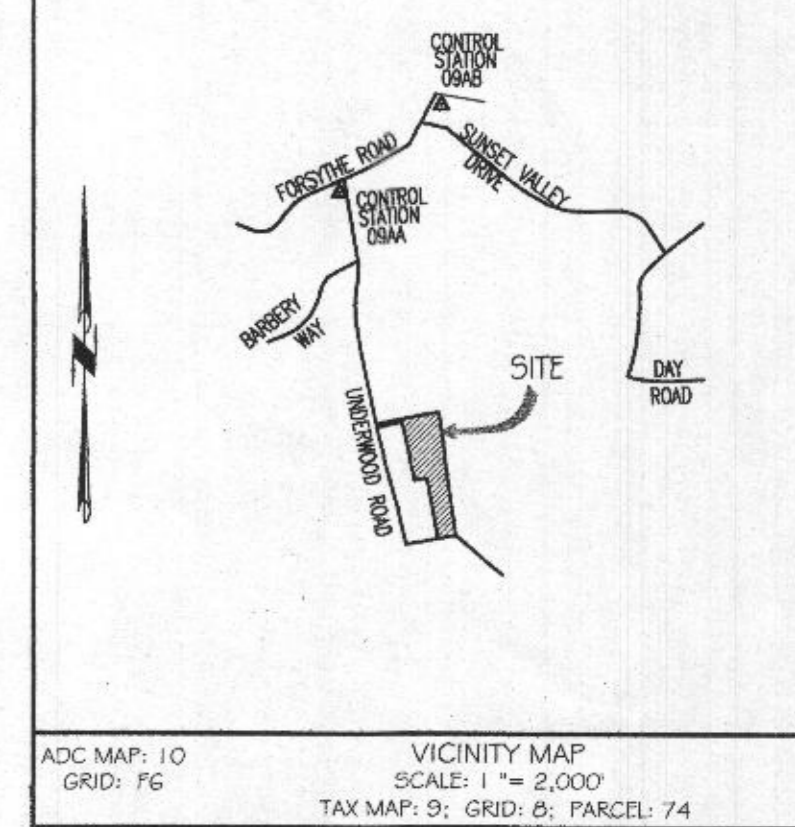
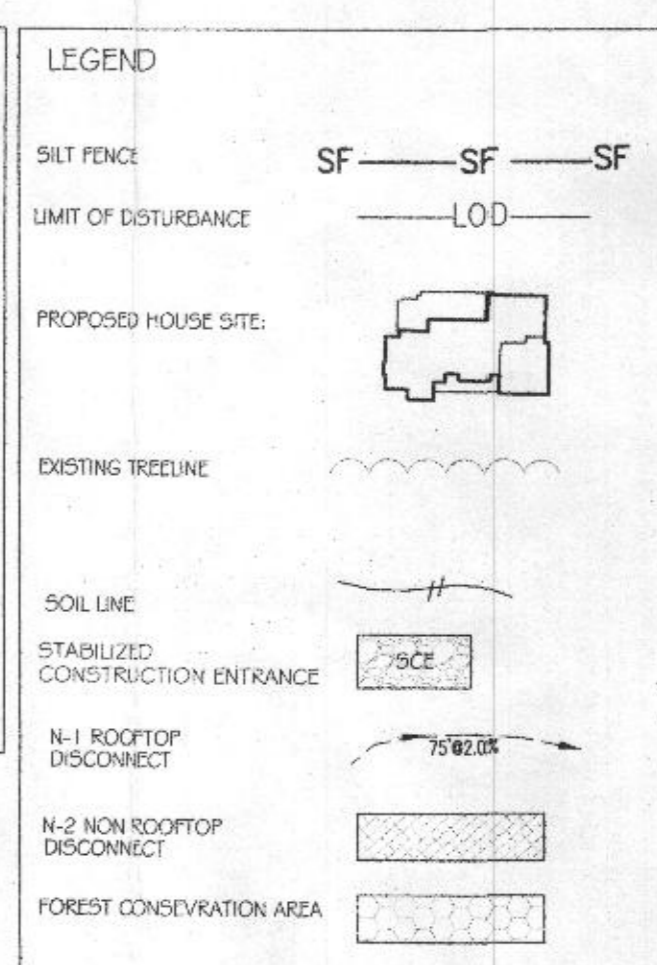
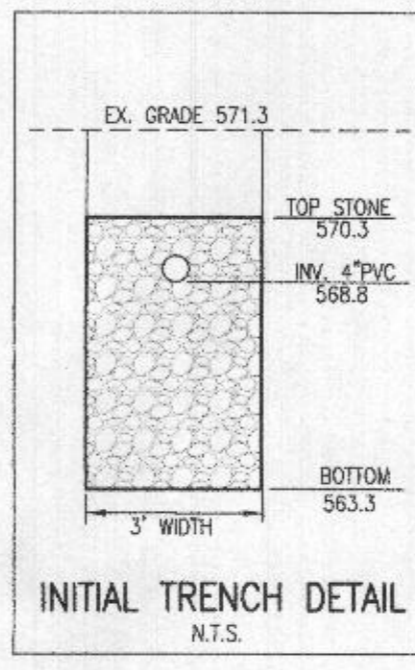
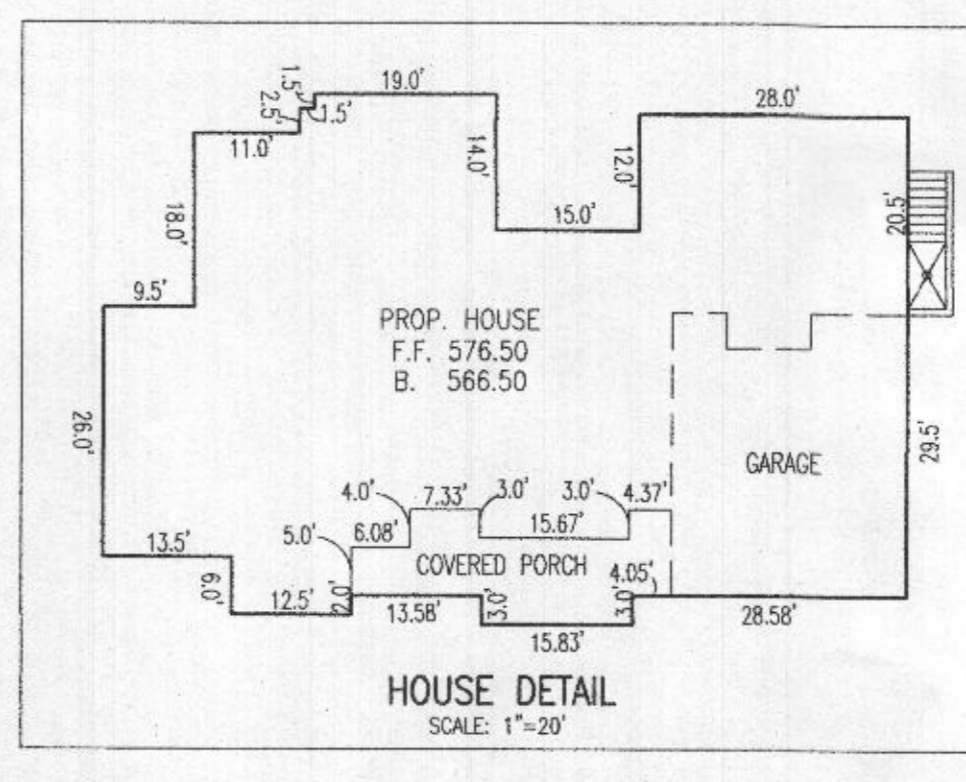
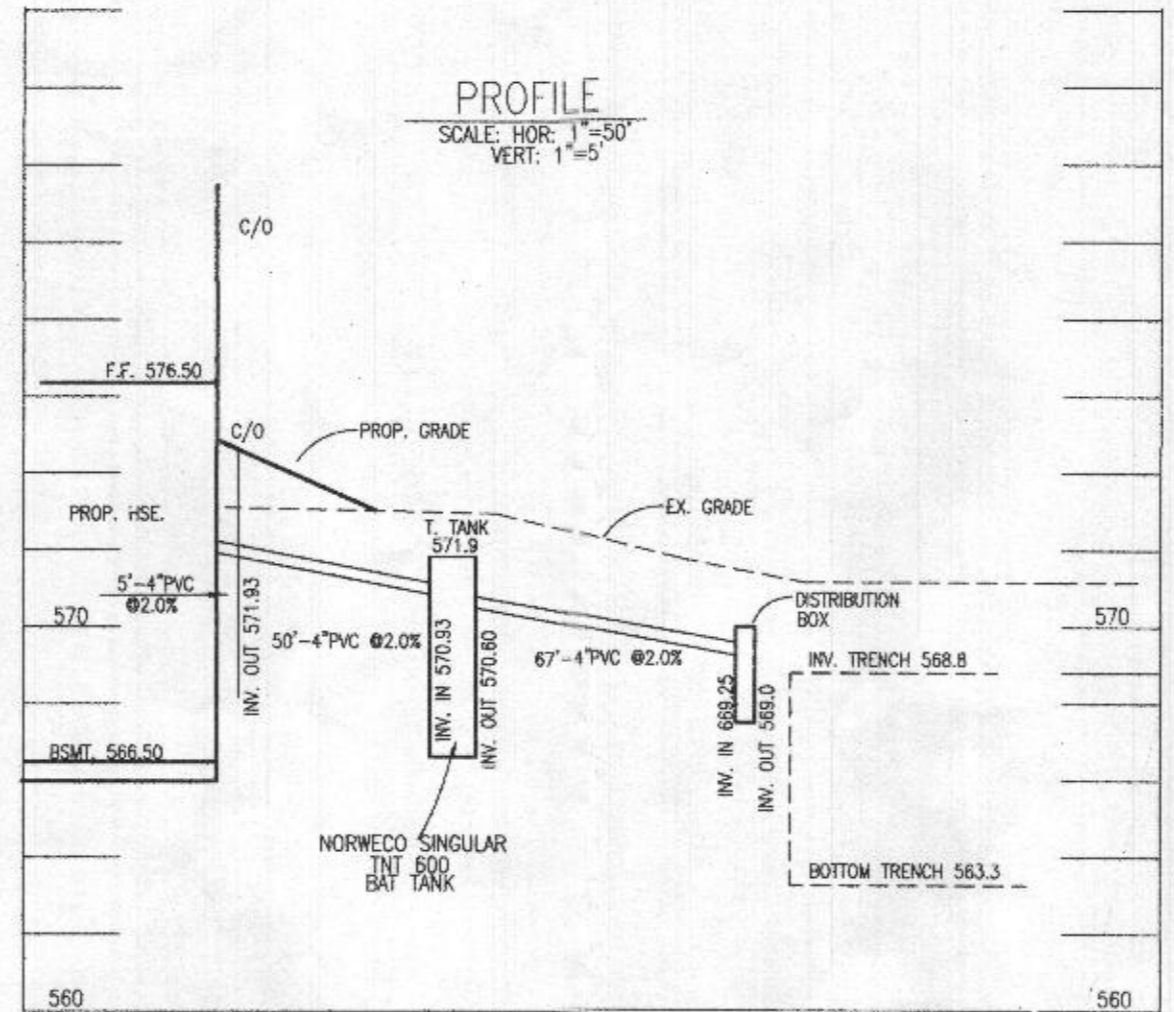
CONTRACTOR'S CERTIFICATION
I HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____

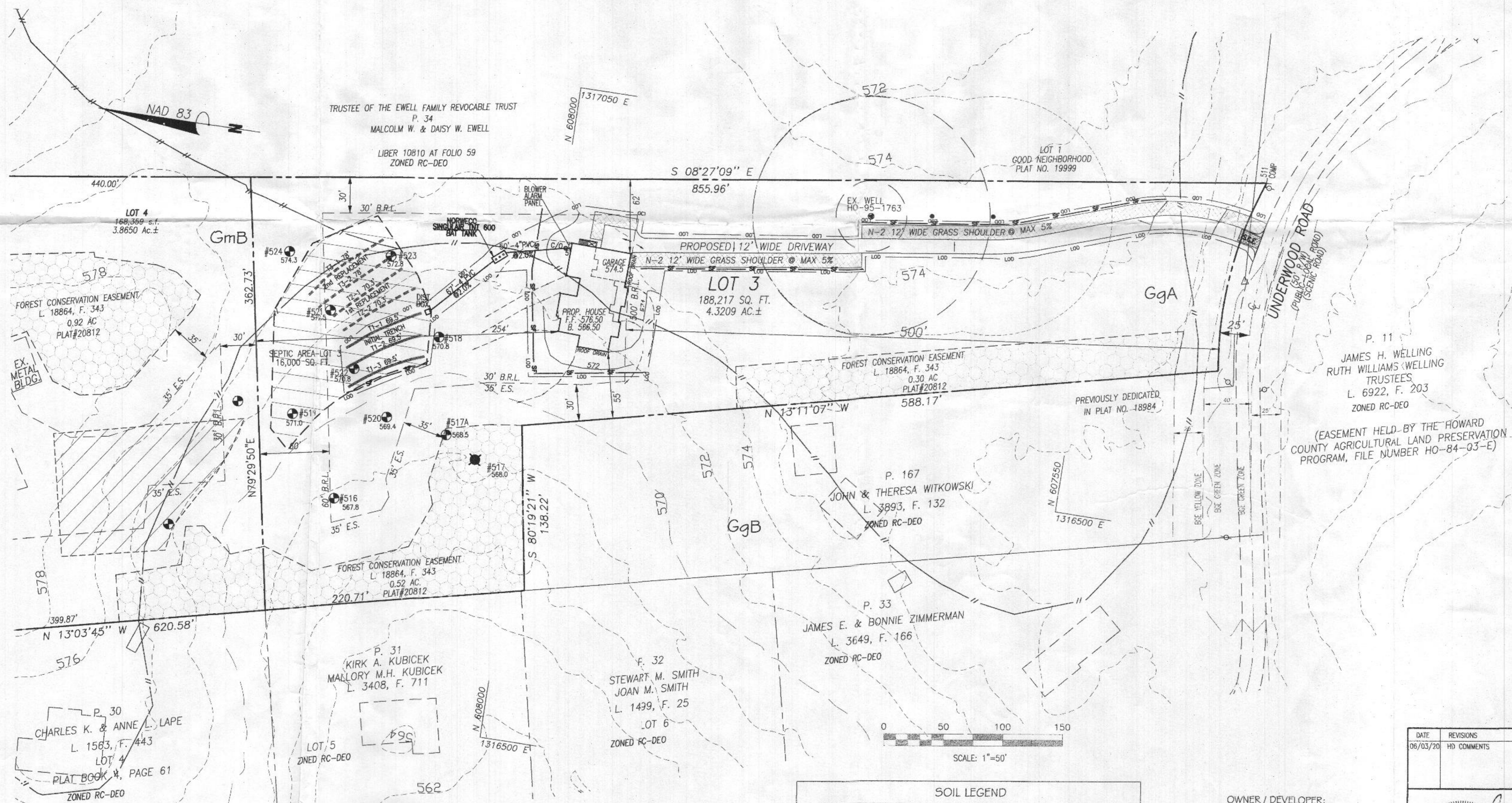
NAME: _____

CRITICAL DIMENSIONS	
1.0"	0.2"
2.0"	0.2"
3.0"	0.2"
4.0"	0.2"
5.0"	0.2"
6.0"	0.2"
7.0"	0.2"
8.0"	0.2"
9.0"	0.2"
10.0"	0.2"
11.0"	0.2"
12.0"	0.2"
13.0"	0.2"
14.0"	0.2"
15.0"	0.2"
16.0"	0.2"
17.0"	0.2"
18.0"	0.2"
19.0"	0.2"
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21.0"	0.2"
22.0"	0.2"
23.0"	0.2"
24.0"	0.2"
25.0"	0.2"
26.0"	0.2"
27.0"	0.2"
28.0"	0.2"
29.0"	0.2"
30.0"	0.2"
31.0"	0.2"
32.0"	0.2"
33.0"	0.2"
34.0"	0.2"
35.0"	0.2"
36.0"	0.2"
37.0"	0.2"
38.0"	0.2"
39.0"	0.2"
40.0"	0.2"
41.0"	0.2"
42.0"	0.2"
43.0"	0.2"
44.0"	0.2"
45.0"	0.2"
46.0"	0.2"
47.0"	0.2"
48.0"	0.2"
49.0"	0.2"
50.0"	0.2"

NOTE: TOTAL SYSTEM CAPACITY: 1300 GALLONS
RATED CAPACITY: 500 GALLONS PER DAY



- GENERAL NOTES:
- TOPOGRAPHY & PLANIMETRIC FEATURES SHOWN HEREON TAKEN FROM COPYRIGHTED GIS DATA FROM HOWARD COUNTY, SUPPLEMENTED WITH FIELD LOCATIONS BY VANMAR ASSOCIATES, INC. CONTOUR INTERVAL IS 2 FEET. VERTICAL DATUM IS NAVD83.
 - THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES OR TAKEN FROM AVAILABLE RECORDS AND ACCURATELY SHOWN.
 - ZONING DISTRICT: RC-DEO
 - LIMIT OF DISTURBANCE (LOD) = 29,171 SQ.FT.
 - THERE ARE NO STREAMS, PONDS, FLOODPLAINS OR WETLANDS ON THIS LOT.
 - STORM WATER MANAGEMENT FOR THIS LOT IS PROVIDED BY N-1 ROOFTOP DISCONNECTION, N-2 NON-ROOFTOP DISCONNECTION.



SEPTIC SYSTEM TRENCH DESIGN

INITIAL NUMBER OF BEDROOMS = 5
APPLICATION RATE = 0.6 GPD / sq.ft.
DESIGN FLOW: 150 GPD X 5 BEDROOMS = 750 GPD
750 GPD / 0.6 GPD/sq.ft. = 1250 sq.ft.
1250 sq.ft. / 3 ft. WIDE TRENCH = 417 LF TRENCH
417 LF TRENCH X 0.50 REDUCTION CREDIT = 208.5 LF TRENCH
TRENCH T1-1 EX. GRD=571.3 -INV. TRENCH=568.8 -B. TRENCH=563.3
TRENCH T1-2 EX. GRD=571.0 -INV. TRENCH=568.5 -B. TRENCH=563.0
TRENCH T1-3 EX. GRD=570.5 -INV. TRENCH=568.0 -B. TRENCH=562.5

1st REPLACEMENT
APPLICATION RATE = 0.8 GPD / sq.ft.
DESIGN FLOW: 150 GPD X 5 BEDROOMS = 750 GPD
750 GPD / 0.8 GPD/sq.ft. = 937.5 sq.ft.
937.5 sq.ft. / 3 ft. WIDE TRENCH = 312.5 LF TRENCH
312.5 LF TRENCH X 0.45 REDUCTION CREDIT = 140.6 LF TRENCH
TRENCH T2-1 EX. GRD=572.3 -INV. TRENCH=568.8 -B. TRENCH=563.3
TRENCH T2-2 EX. GRD=571.8 -INV. TRENCH=568.8 -B. TRENCH=563.8

2nd REPLACEMENT
APPLICATION RATE = 0.8 GPD / sq.ft.
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750 GPD / 0.8 GPD/sq.ft. = 937.5 sq.ft.
937.5 sq.ft. / 3 ft. WIDE TRENCH = 312.5 LF TRENCH
312.5 LF TRENCH X 0.50 REDUCTION CREDIT = 156 LF TRENCH
TRENCH T3-1 EX. GRD=573.3 -INV. TRENCH=568.8 -B. TRENCH=565.3
TRENCH T3-2 EX. GRD=572.7 -INV. TRENCH=568.8 -B. TRENCH=564.7

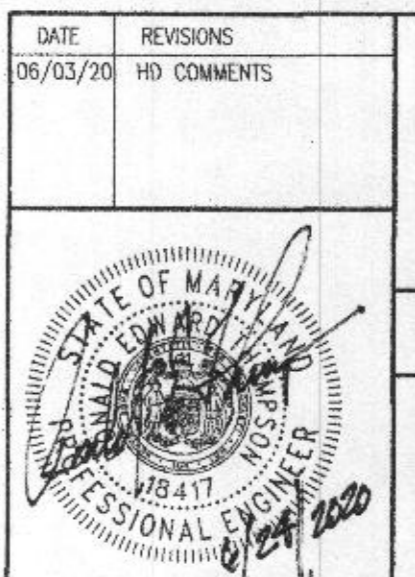
- BAT SITE PLAN NOTES:
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 - MAXIMUM COVER OVER THE BAT PER MANUFACTURER'S SPECIFICATION IS 3 FEET.
 - THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
 - THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
 - THE BAT SHALL BE OPERATED AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
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 - THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF INSTALLATION.

SOIL LEGEND

MAP SYMBOL	MAPPING UNIT	Kw	SLOPE	HYDROLOGIC SOIL GROUP
GmB	GLENVILLE	0.37	3-8%	C
GgA	GLENELG LOAM	0.24	0-3%	B
GgB	GLENELG LOAM	0.24	3-8%	D

OWNER / DEVELOPER:
STUMPF, LEE
3634 LIGON ROAD
ELICOTT CITY, MD. 21042
443-745-1162

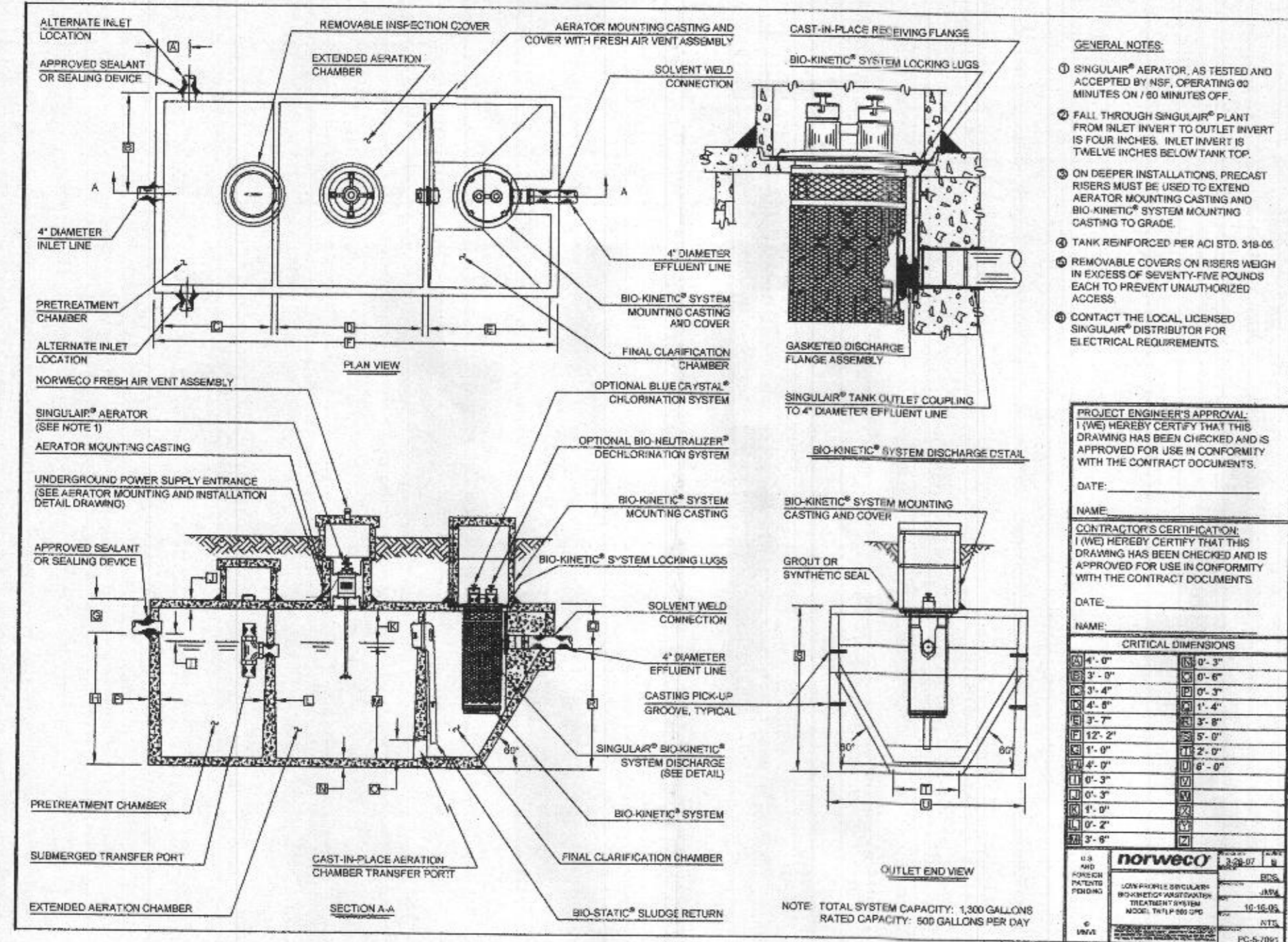
PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18417, Expiration Date: 9-18-21.



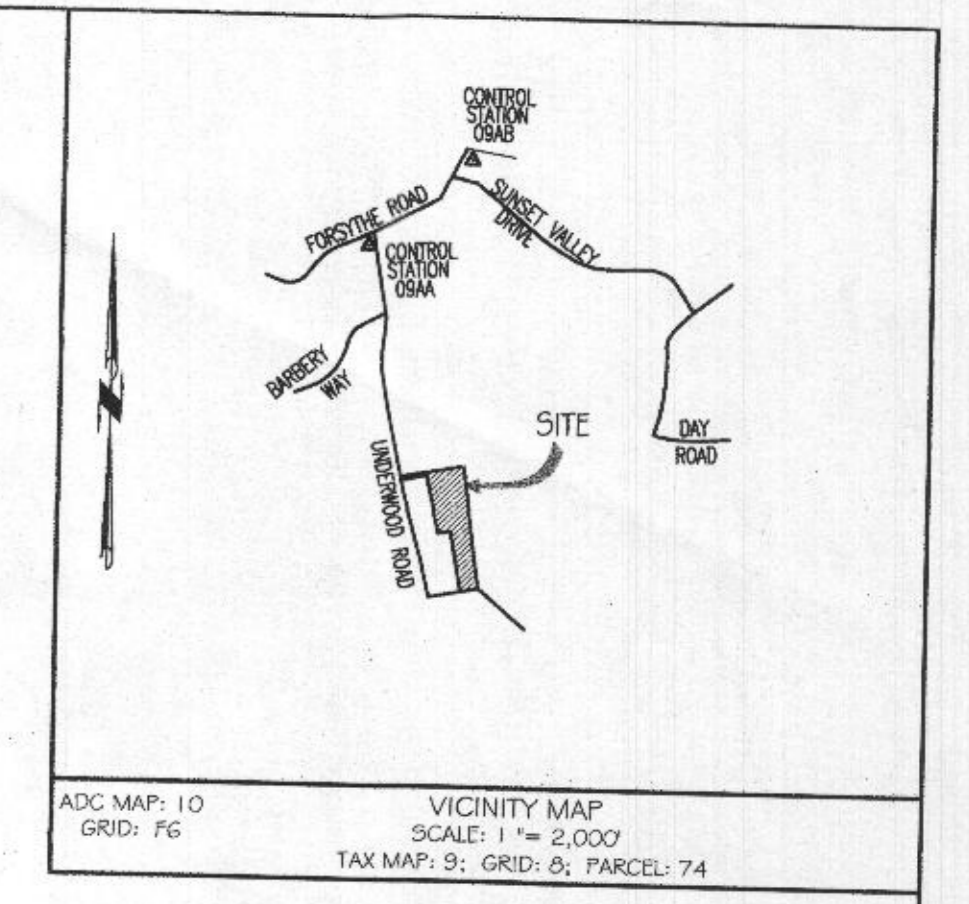
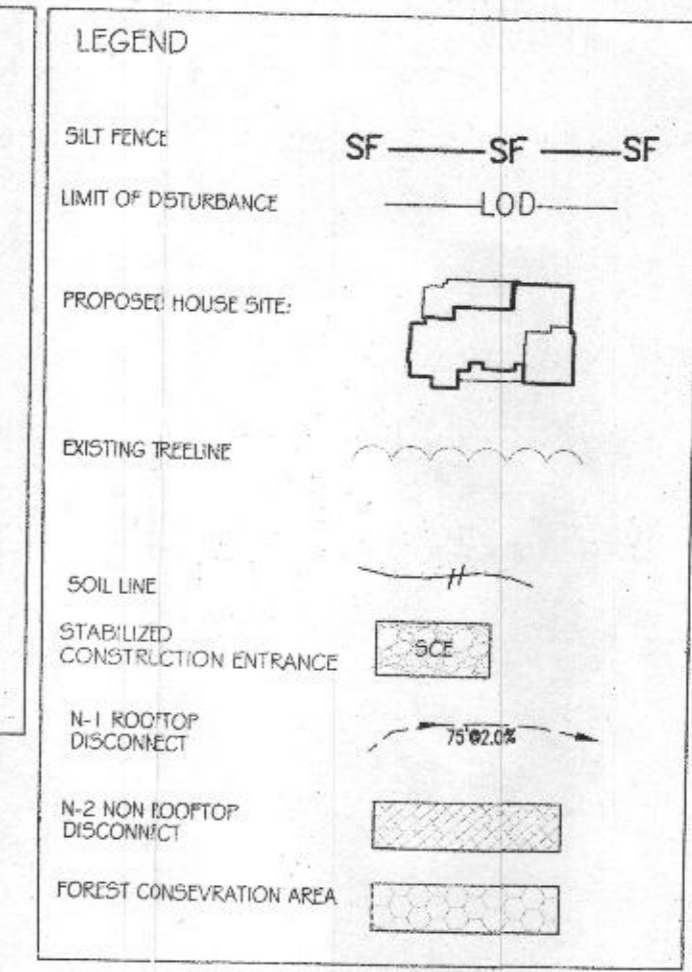
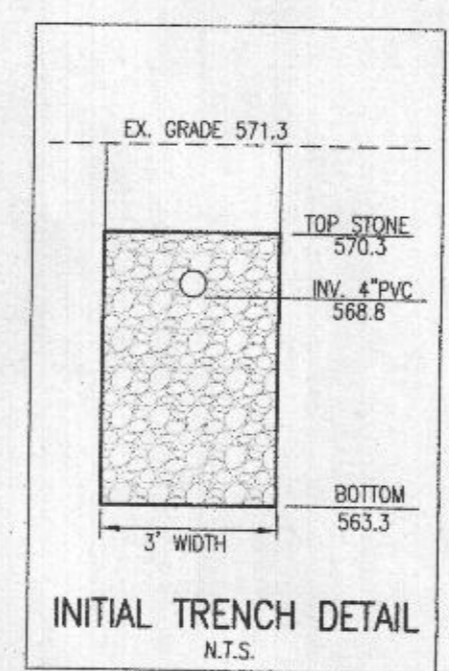
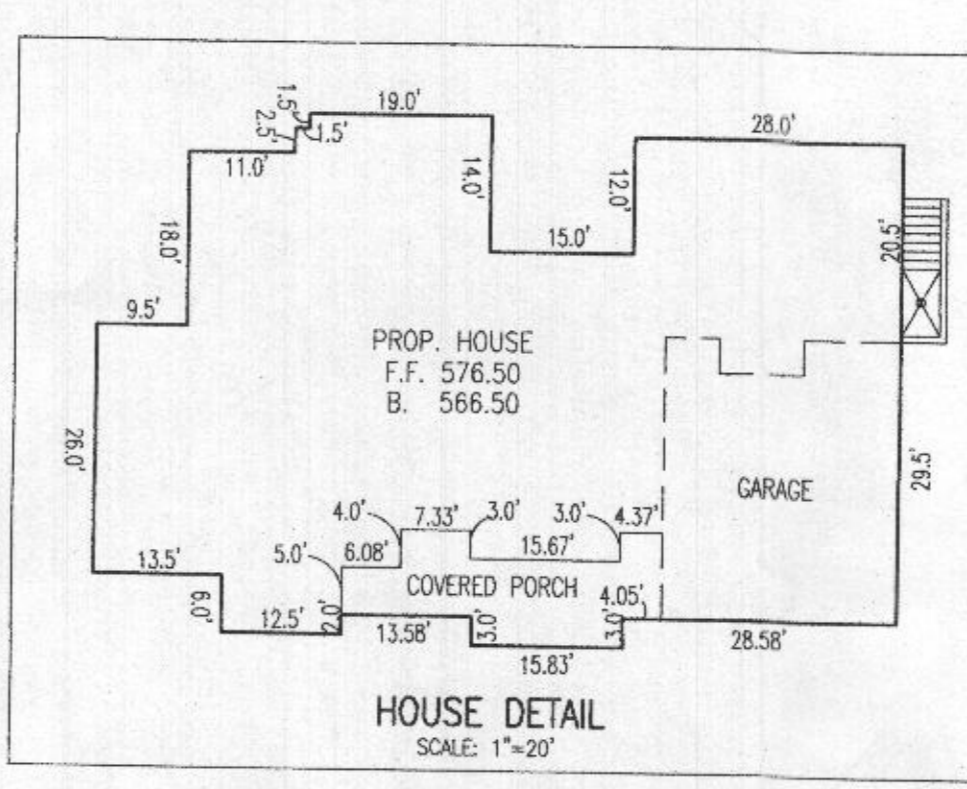
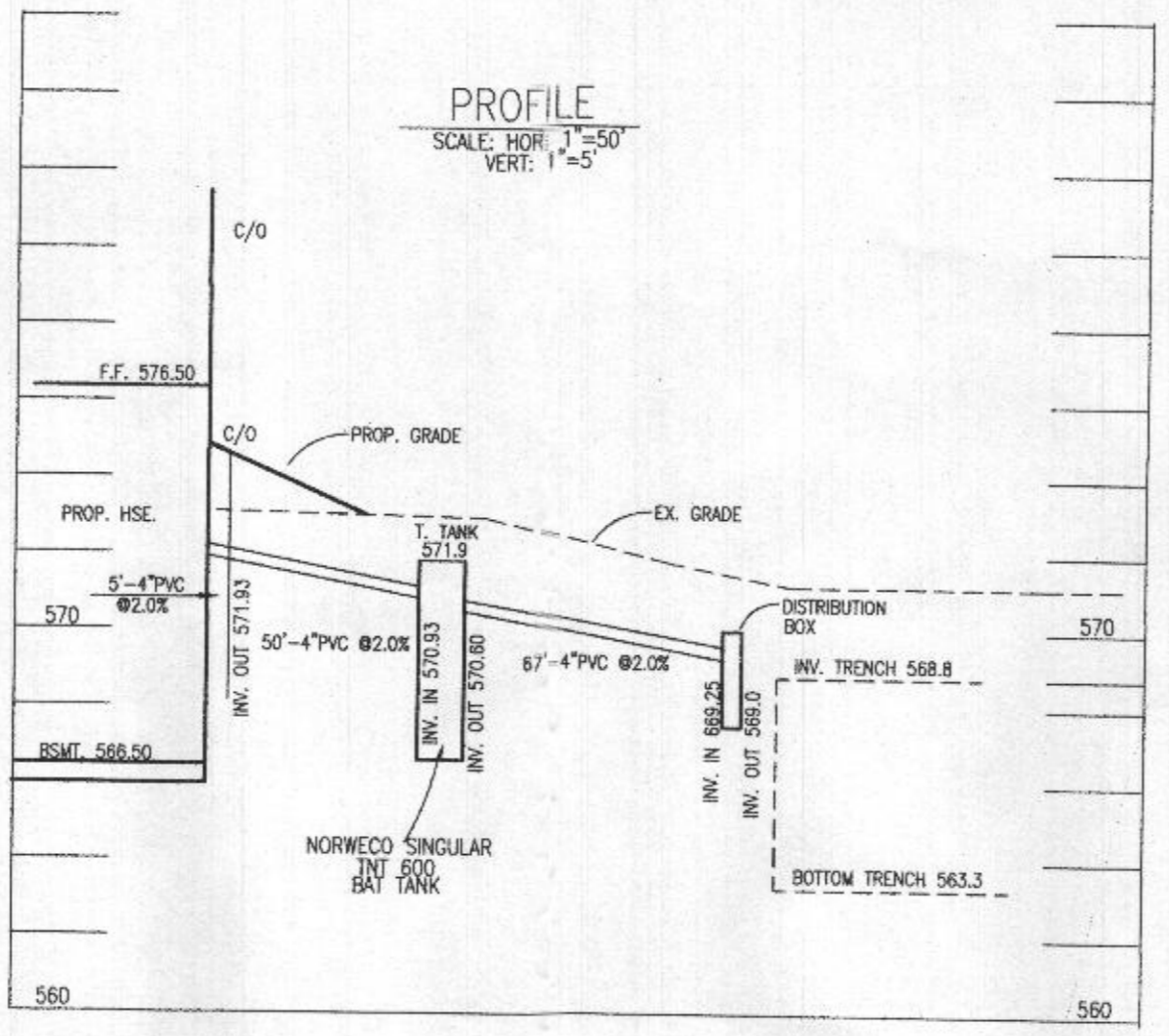
SITE PLAN FOR BAT INSTALLATION
LOT 3
EWELL PROPERTY
PLAT#20812
L. 18864 F. 343
LOT 3
1411 UNDERWOOD ROAD

TAX MAP: 9 ELECTION DISTRICT: No. 3 SCALE: AS SHOWN
GRID NO: 8 HOWARD COUNTY, MARYLAND DATE: DECEMBER, 2019
PARCEL NO: P/0 74 EX. ZONING: RCDEO SHEET 1 OF 1

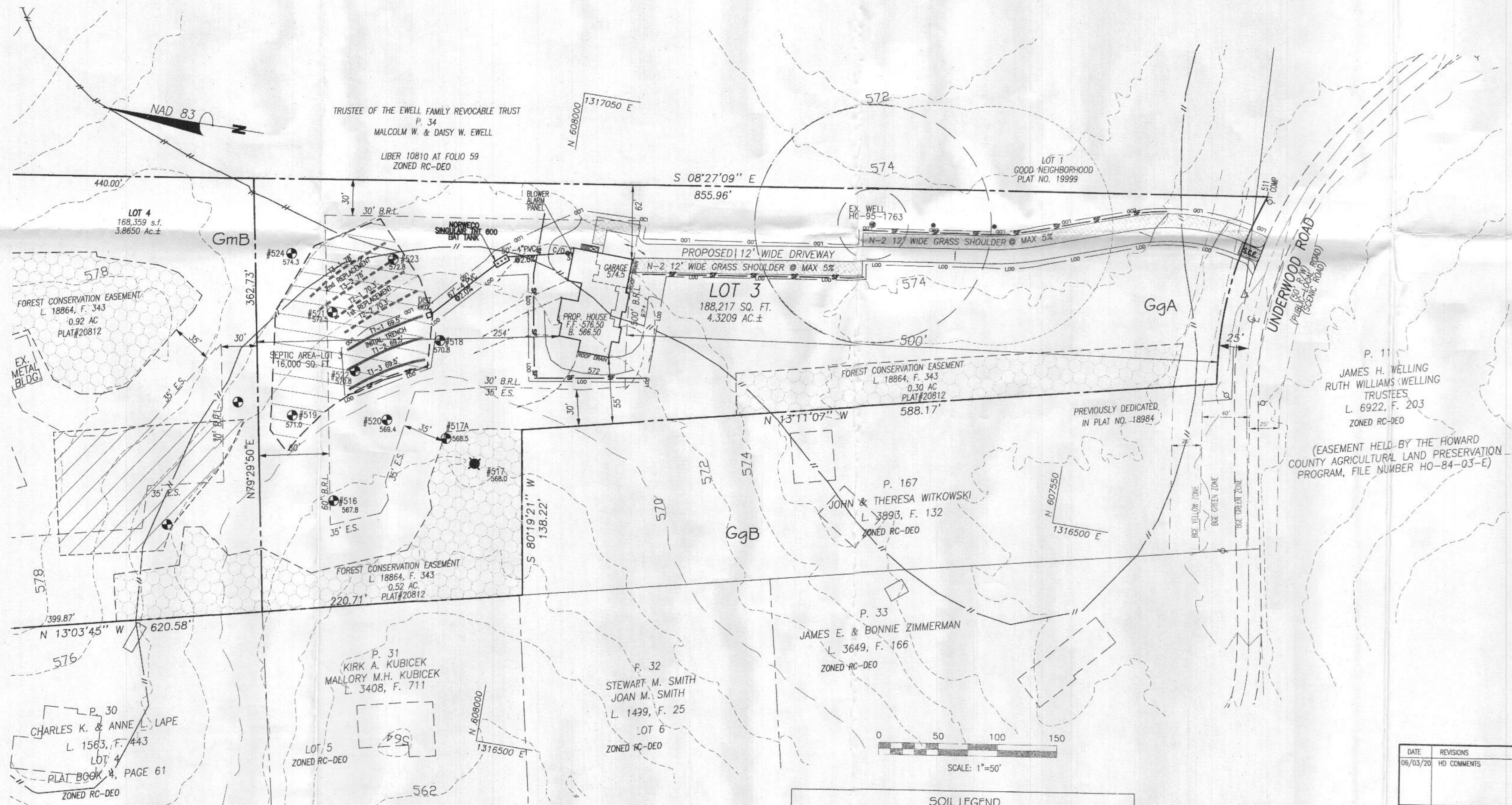
VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street Mount Airy, Maryland 21771
(301) 829-2890 (301) 831-5015 (410) 549-2751
vanmar.com Fax (301) 831-5603 ©Copyright, Latest Date Shown



NORWECO SINGULAR 600
BAT TANK DETAIL



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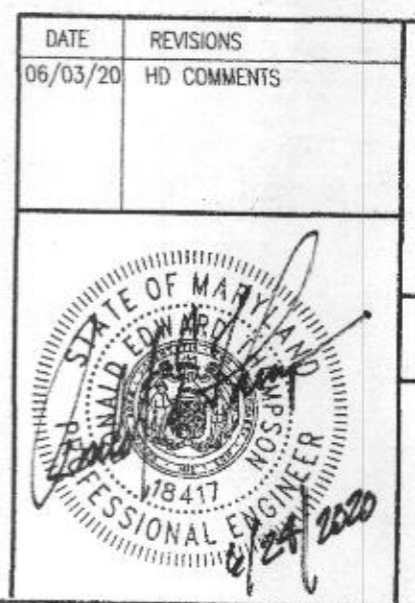
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OWNER / DEVELOPER:
 STUMPF, LEE
 3634, LIGON ROAD
 ELLICOTT CITY, MD. 21042
 443-745-1162

PROFESSIONAL CERTIFICATION
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 PLAT#20812
 L. 18864 F. 343
 LOT 3
 1411 UNDERWOOD ROAD

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 PARCEL NO: P/O 74

ELECTION DISTRICT: No. 3
 HOWARD COUNTY, MARYLAND
 EX. ZONING: RC-DEO

SCALE: AS SHOWN
 DATE: DECEMBER, 2019
 SHEET 1 OF 1

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