

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: 12/4/15

ONSITE SEWAGE DISPOSAL SYSTEM

P 557480

APPROVAL DATE: 2/26/16 (SEC)

PERMIT: CONSTRUCTION

A _____

PROPERTY ADDRESS: 16105 Ed Warfield Road

SUBDIVISION: Oakdale LOT: 4 TAX ID: _____

CONTRACTOR: WTC Contractors EMAIL: _____

CONTRACTOR ADDRESS: 3033 Salem Bottom Road, Westminster, MD 21157 PHONE: 443-458-7024

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: MDE MANUFACTURER:

PROPERTY OWNER: Guy J. Farruggia EMAIL: _____

OWNER ADDRESS: 9713 Gudel Drive, Ellicott City, MD 21042 PHONE: _____

BAT UNIT MODEL: Norweco TNTLP-500 PUMP SIZE: _____ PUMP TANK CAPACITY: _____

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: _____ DATE RECORDED: _____

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 4 APPLICATION RATE: 0.8

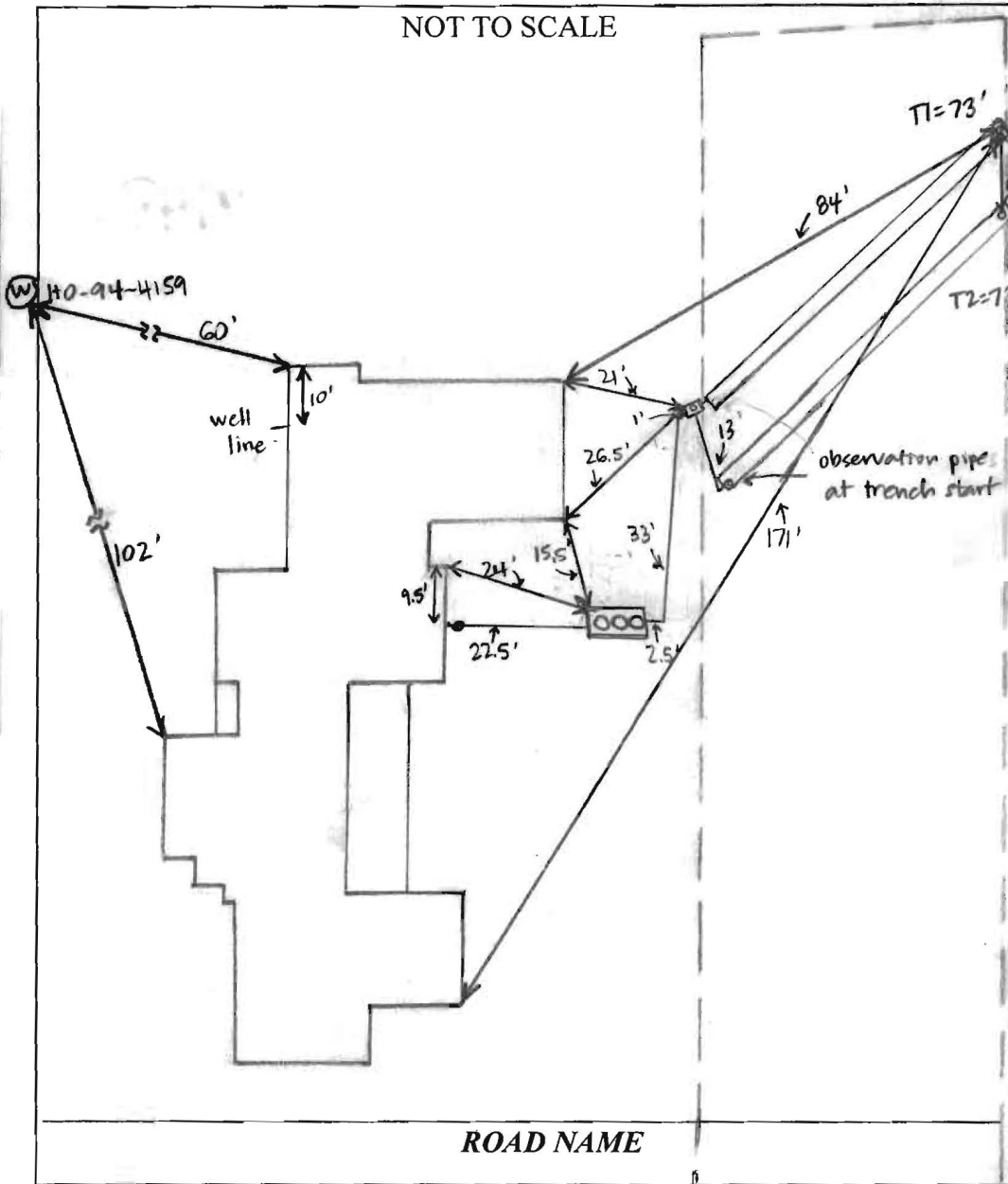
TRENCHES:	LINEAR FEET REQUIRED: <u>140</u>	INLET DEPTH: <u>4.5'</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>7</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10'</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4.5</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Install 2 x 70' trenches	

ISSUED BY: Hank Oswald ISSUE DATE: 12/4/15 EXPIRATION DATE: 12/4/16

- 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 _____
- NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.
- 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



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	4.5'	7'
NUMBER OF TRENCHES		2
TOTAL LENGTH		146'
ABSORPTION AREA		468' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	YES
MANUFACTURER	BACKRIVER/NORWECO
CAPACITY	1300 GAL
SEAM LOC	TOP
TANK LID DEPTH	6" - 2'
BAFFLES	No
BAFFLE FILTER	NONE
MANHOLE LOC	FRONT, MID, REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	12-18-15

PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

PRE-CONSTRUCTION:

2/19/16 Met WTC on site for layout. All SDA stakes and tank stakes present. Laid out trenches - top trench on contour, bottom trench 13' CTC and elevation higher at end due to contour + stump removal. Set 7' depth at end of T2 - will be shallower at start. Use 4.5' inlet in order to make fall from tank to D-box. (S)

INSTALLATION:

2/22/16 Tank set and house connection made. Line from house to tank bedded with small #2 stone. Outlet end of tank also bedded. D-box installed + connected to tank. (S) WTC started digging T2 - elevation set at end of trench. (S) 2/23/16 Both trenches complete and left open at ends. 4' to stone, 3' wide. D-box speed levelers must be labeled. Need BAT startup certification. (S) 2/26/16 Speed levelers on D-box leveled. BAT startup received. (S)

FINAL INSPECTOR

Sarah Collins

DATE OF APPROVAL

2/26/16

Oswald, Hank

From: Oswald, Hank
Sent: Monday, June 08, 2015 10:01 AM
To: ;
Subject: 16105 Ed Warfield Road_BAT Plan Review

Hi Guy:

In review of the BAT plan, the septic specs for the initial and replacement systems indicate that the invert exceeds the 4 foot maximum depth requirement. The invert (i.e. the bottom of the pipe) cannot exceed 4 feet mainly because of OSHA requirements but it also provides greater capacity at shallower depths. Please revise the BAT plan accordingly and submit for review.

Should you have any questions, please don't hesitate to ask.

Best Regards,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Bureau of Environmental Health
Well & Septic Program

4

Back River Pre-Cast, LLC

PO BOX 329
Glyndon, MD 21071
Phone # 410-833-3394
Fax # 410-833-4116

Letter of Certification

This is to certify that the Norweco Singlair TNT 600 GPD Septic Tank installed at 16105 Ed Warfield Rd., Woodbine, MD 21797 February 22, 2016 was installed according to the manufacture's specifications.

Installer: Walter Coons

Property Owner: Guy Farrugia

Permit #

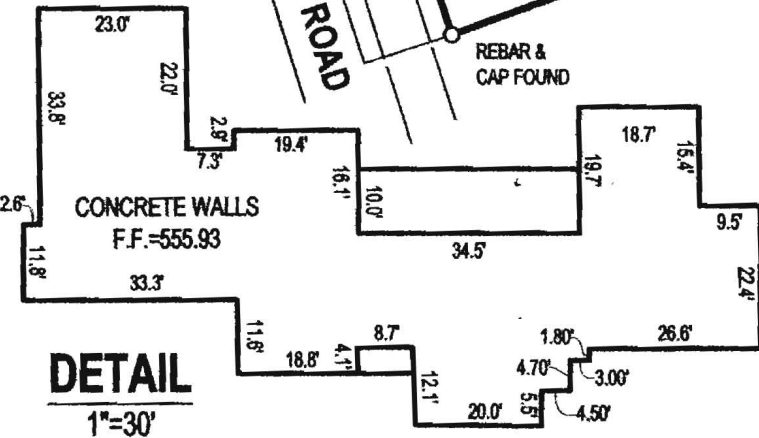
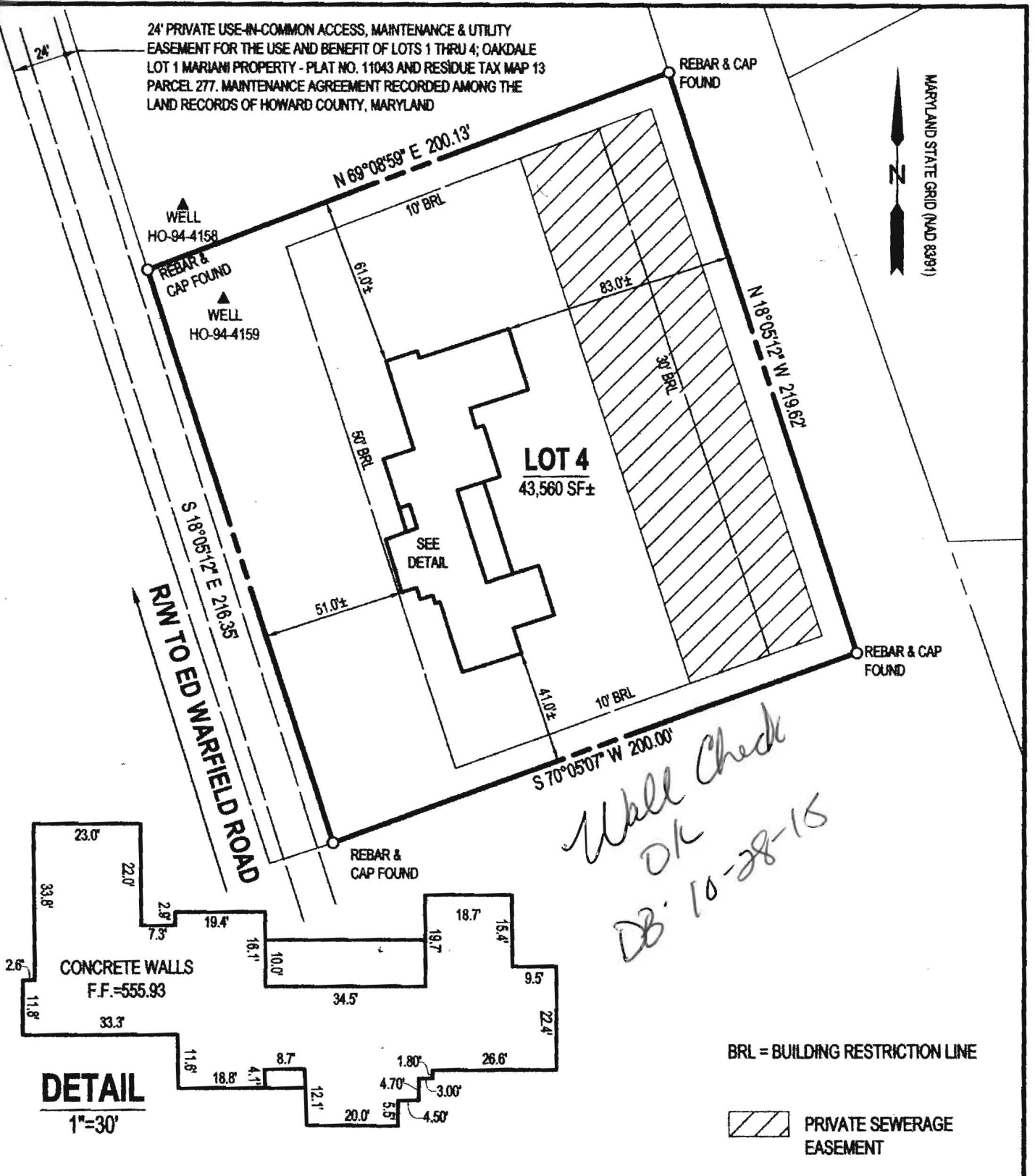


MATTHEW GECKLE

Vice-President

24' PRIVATE USE-IN-COMMON ACCESS, MAINTENANCE & UTILITY EASEMENT FOR THE USE AND BENEFIT OF LOTS 1 THRU 4; OAKDALE LOT 1 MARIANI PROPERTY - PLAT NO. 11043 AND RESIDUE TAX MAP 13 PARCEL 277. MAINTENANCE AGREEMENT RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND

MARYLAND STATE GRID (NAD 83/91)



BRL = BUILDING RESTRICTION LINE

PRIVATE SEWERAGE EASEMENT

LOCATION DRAWING
OF
LOT - 4
AGRICULTURAL LAND PRESERVATION SUBDIVISION PLAT
OAKDALE
LOTS 1 - 4
AS RECORDED ON PLAT No. 17633
16105 ED WARFIELD ROAD
4TH ELECTION DISTRICT, HOWARD CO. MD
TAX MAP: 13, GRID: 23, PARCEL: 356



TITLE REFERENCE

GUY J FARRUGGIA
15355-503
NOVEMBER 13, 2013

THIS DRAWING IS OF BENEFIT TO A CONSUMER ONLY INsofar AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENT IN CONNECTION WITH CONTEMPLATED TRANSFER, FINANCING, OR REFINANCING. IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATION OF FENCES, GARAGES, BUILDINGS, OR OTHER EXISTING OR FUTURE IMPROVEMENTS; AND DOES NOT PROVIDE FOR THE ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT THIS IDENTIFICATION MAY NOT BE REQUIRED, FOR THE TRANSFER OF TITLE OR SECURING FINANCING OR REFINANCING.

THE LEVEL OF ACCURACY OF DISTANCES TO APPARENT PROPERTY LINES SHOWN HEREON ARE 1".
A LICENSEE EITHER PERSONALLY PREPARED A LOCATION DRAWING OR WAS IN RESPONSIBLE CHARGE OVER ITS PREPARATION AND THE SURVEYING WORK REFLECTED IN IT, ALL IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN REGULATION 12 OF CHAPTER 08, MINIMUM STANDARDS OF PRACTICE OF THE ANNOTATED CODE OF MARYLAND.



142 EAST MAIN STREET WESTMINSTER, MD 21157
410-848-2040 FAX# 443-289-8942 410-876-1222
EMAIL: RTF142@GMAIL.COM WWW.RTF SURVEYING.COM
CHECKED BY: SP DATE: 9-04-2015
DRAWN BY: MEB DATE: 9-04-2015
SCALE: 1" = 50' R.T.F. JOB # 14-106

John E. Lemmerman
JOHN E. LEMMERMAN

REGISTERED PROFESSIONAL LAND SURVEYOR NO. 21096
EXP. 8-3-17

Oswald, Hank

From: Oswald, Hank
Sent: Friday, June 12, 2015 8:15 AM
To: [REDACTED]
Subject: BAT Plan
Attachments: Setback Requirements.pdf

Hi Guy:

In looking at the floor plans, the wall adjacent the septic tank appears to be open space in the basement. The setback requirement for septic tank to house with basement is 20 feet. The BAT plan shows only 11 feet. Also, please show at least the initial and replacement system calculations on BAT plan.

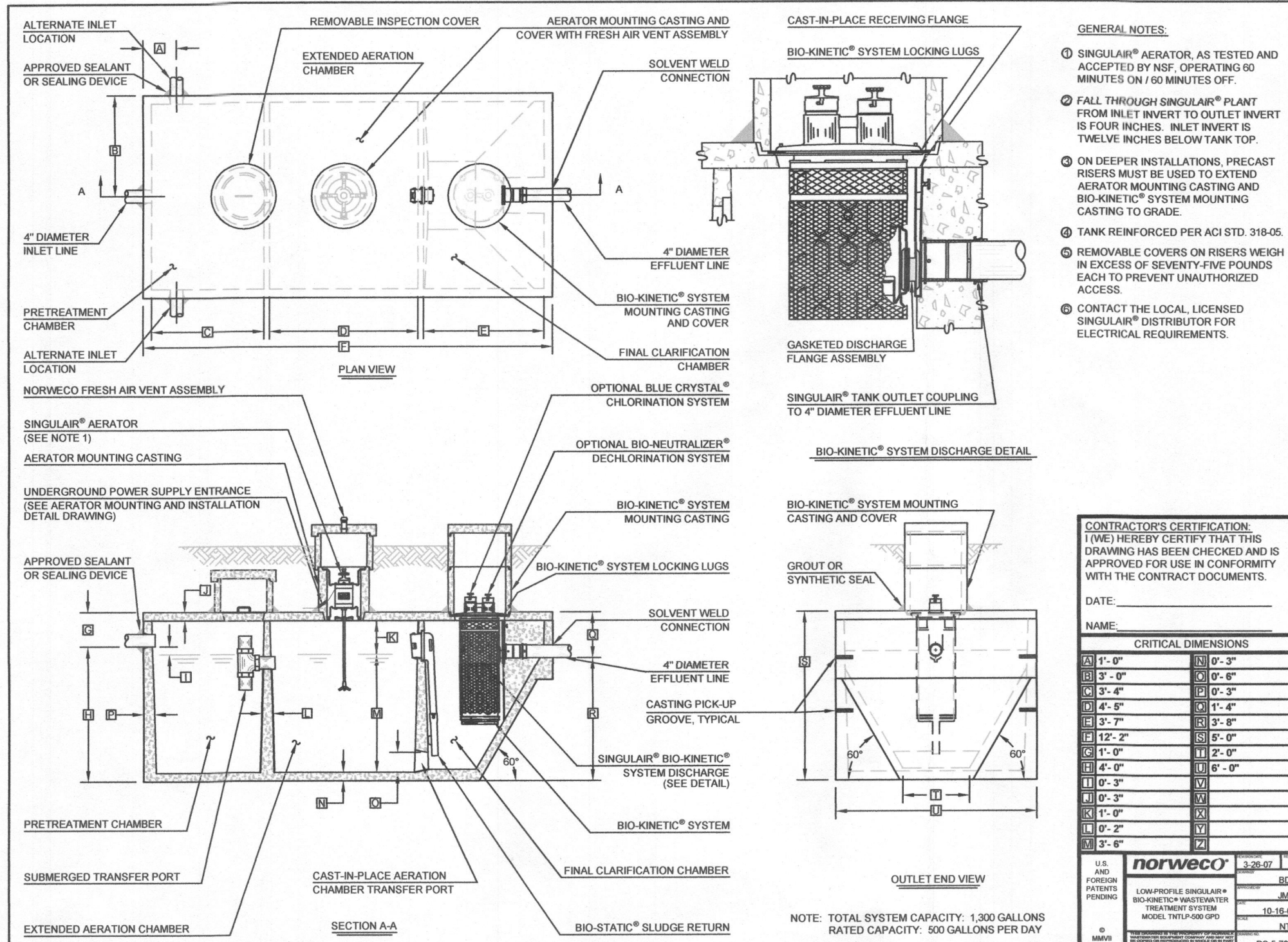
I've attached the setback requirements in case your engineer does not have them.

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Bureau of Environmental Health
Well & Septic Program
410.313.1786

T



- GENERAL NOTES:**
- 1. SINGULAR AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 30 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 AERATOR MOUNTING CASTING AND BIO-KINETIC SYSTEM MOUNTING CASTING TO GRADE.
 - 4. TANK REINFORCED PER ACI STD. 318-05.
 - 5. REMOVABLE COVERS ON RISERS NEAR IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
 - 6. CONTACT THE LOCAL LICENSED SINGULAR DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

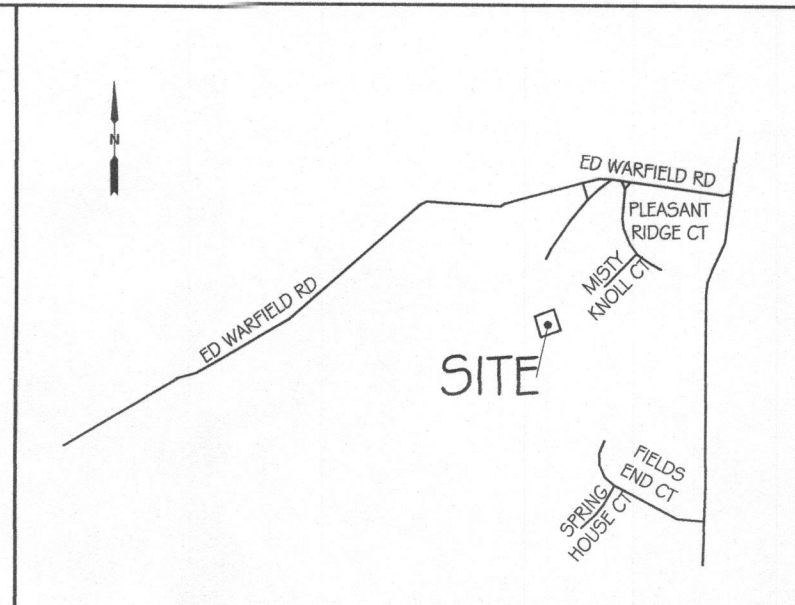
CONTRACTOR'S CERTIFICATION:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____

CRITICAL DIMENSIONS	
1'-0"	2'-0"
2'-0"	3'-0"
3'-0"	4'-0"
4'-0"	5'-0"
5'-0"	6'-0"
6'-0"	7'-0"
7'-0"	8'-0"
8'-0"	9'-0"
9'-0"	10'-0"
10'-0"	11'-0"
11'-0"	12'-0"
12'-0"	13'-0"
13'-0"	14'-0"
14'-0"	15'-0"
15'-0"	16'-0"
16'-0"	17'-0"
17'-0"	18'-0"
18'-0"	19'-0"
19'-0"	20'-0"
20'-0"	21'-0"
21'-0"	22'-0"
22'-0"	23'-0"
23'-0"	24'-0"
24'-0"	25'-0"
25'-0"	26'-0"
26'-0"	27'-0"
27'-0"	28'-0"
28'-0"	29'-0"
29'-0"	30'-0"
30'-0"	31'-0"
31'-0"	32'-0"
32'-0"	33'-0"
33'-0"	34'-0"
34'-0"	35'-0"
35'-0"	36'-0"
36'-0"	37'-0"
37'-0"	38'-0"
38'-0"	39'-0"
39'-0"	40'-0"
40'-0"	41'-0"
41'-0"	42'-0"
42'-0"	43'-0"
43'-0"	44'-0"
44'-0"	45'-0"
45'-0"	46'-0"
46'-0"	47'-0"
47'-0"	48'-0"
48'-0"	49'-0"
49'-0"	50'-0"
50'-0"	51'-0"
51'-0"	52'-0"
52'-0"	53'-0"
53'-0"	54'-0"
54'-0"	55'-0"
55'-0"	56'-0"
56'-0"	57'-0"
57'-0"	58'-0"
58'-0"	59'-0"
59'-0"	60'-0"
60'-0"	61'-0"
61'-0"	62'-0"
62'-0"	63'-0"
63'-0"	64'-0"
64'-0"	65'-0"
65'-0"	66'-0"
66'-0"	67'-0"
67'-0"	68'-0"
68'-0"	69'-0"
69'-0"	70'-0"
70'-0"	71'-0"
71'-0"	72'-0"
72'-0"	73'-0"
73'-0"	74'-0"
74'-0"	75'-0"
75'-0"	76'-0"
76'-0"	77'-0"
77'-0"	78'-0"
78'-0"	79'-0"
79'-0"	80'-0"
80'-0"	81'-0"
81'-0"	82'-0"
82'-0"	83'-0"
83'-0"	84'-0"
84'-0"	85'-0"
85'-0"	86'-0"
86'-0"	87'-0"
87'-0"	88'-0"
88'-0"	89'-0"
89'-0"	90'-0"
90'-0"	91'-0"
91'-0"	92'-0"
92'-0"	93'-0"
93'-0"	94'-0"
94'-0"	95'-0"
95'-0"	96'-0"
96'-0"	97'-0"
97'-0"	98'-0"
98'-0"	99'-0"
99'-0"	100'-0"

norweco 318-05
LOW PROFILE DISCHARGE
PRECAST CONCRETE
SEWER TREATMENT UNIT
MODEL: TMT-500
PC 4-2004

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

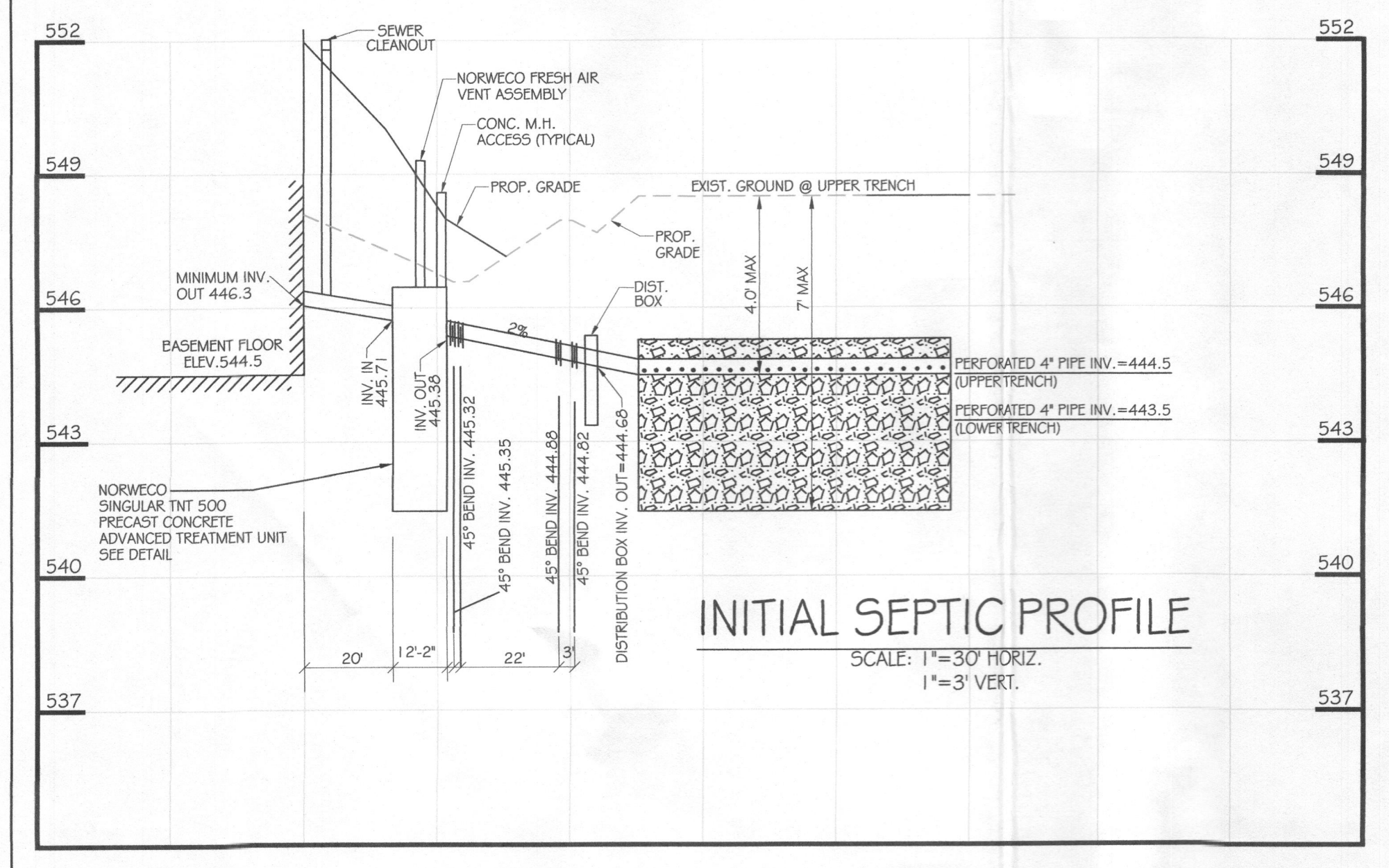
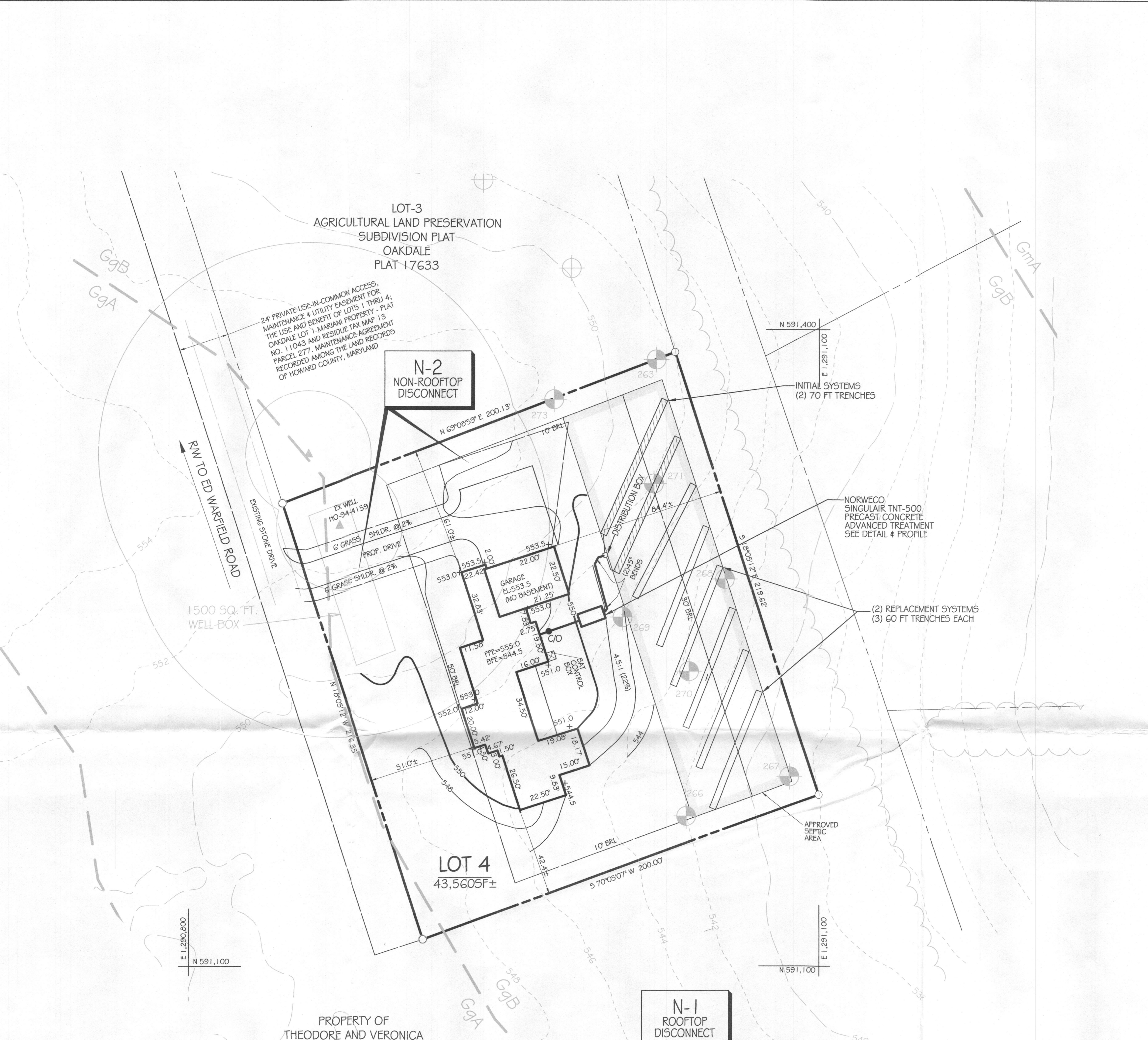


VICINITY MAP
SCALE: 1" = 200'
ADC MAP COORDINATES: 481 I-14

- NOTES:**
- ANY CHANGES TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER/DESIGNER 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 SPECIFICATIONS 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.
 - 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 OF HOWARD COUNTY.
 - THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.

- SEWAGE DISPOSAL SYSTEM SPEC'S:**
- APPLICATION RATE= 0.8
 - DESIGN FLOW= 600 G.P.D. (4 bedrooms)
 - WIDTH OF TRENCH= 3 FEET
 - MAXIMUM PIPE DEPTH:
 - INITIAL SYSTEM = 4.0 FEET
 - REPLACEMENT SYSTEMS = 4.0 FEET
 - DEPTH OF STONE BELOW PIPE:
 - INITIAL SEPTIC SYSTEM= 3.0 FEET
 - 1st REPLACEMENT SYSTEM= 4 FEET
 - 2nd REPLACEMENT SYSTEM= 4 FEET
 - MINIMUM TRENCH SPACING= 10 FEET BETWEEN
 - TOTAL LINEAR LENGTH OF TRENCH PER SYSTEM:
 - INITIAL SEPTIC SYSTEM= 139 FEET
 - 1st REPLACEMENT SYSTEM= 179 FEET
 - 2nd REPLACEMENT SYSTEM= 179 FEET
 - INITIAL SEPTIC SYSTEM= (2) 70 FT TRENCHES
 - REPLACEMENT SEPTIC SYSTEMS= (3) 60 FT TRENCHES

MD. STATE PLANE NAD 83(07)



PROPERTY OF
THEODORE AND VERONICA
MARIANI
LIBER 4626 FOLIO 354
TAX MAP 13, PARCEL 277

N-1 ROOFTOP DISCONNECT
ALL DOWNSPOUTS ARE TO BE DISCONNECTED VIA GRADING. DOWNSPOUTS TO FLOW AT AN AVERAGE MAXIMUM GRADE OF 5% FOR 75 FEET.

- INITIAL SYSTEM SIZING:**
- APPLICATION RATE = 0.8
 - EFFECTIVE AREA BEGINNING DEPTH = 4.5 FT.
 - BOTTOM MAXIMUM DEPTH = 7 FT.
 - DESIGN FLOW = 600 G.P.D.
 - SQUARE FOOTAGE OF DRAINFIELD REQUIRED = 600 G.P.D. / 0.8 = 750 S.F.
 - SIDEWALL REDUCTION CREDIT = (3' WIDE + 2 / 3' WIDE + 1 + (2 x 2.5 DEPTH)) x 100 = 55.5%
 - LINEAR LENGTH OF TRENCH REQUIRED = 750 S.F. x .55 / 3' WIDTH = 139 FEET
 - LINEAR LENGTH PROVIDED = (2) 70 FT. TRENCHES = 140 FT

- TWO REPLACEMENT SYSTEMS SIZING:**
- APPLICATION RATE = 0.8
 - EFFECTIVE AREA BEGINNING DEPTH = 6.5 FT.
 - BOTTOM MAXIMUM DEPTH = 8 FT.
 - DESIGN FLOW = 600 G.P.D.
 - SQUARE FOOTAGE OF DRAINFIELD REQUIRED = 600 G.P.D. / 0.8 = 750 S.F.
 - SIDEWALL REDUCTION CREDIT = (3' WIDE + 2 / 3' WIDE + 1 + (2 x 1.5 DEPTH)) x 100 = 71.4%
 - LINEAR LENGTH OF TRENCH REQUIRED = 750 S.F. x .714 / 3' WIDTH = 179 FEET
 - LINEAR LENGTH PROVIDED = (3) 60 FT. TRENCHES = 180 FT

REVISIONS	
DATE	REASON
6-9-2015	MAX PIPE DEPTH
6-25-2015	BAT TANK LOCATION

TITLE REFERENCE: GUY J. FARRUGGIA & NANCY J. FARRUGGIA, LIBER 15355, FOLIO 503, NOVEMBER 13, 2013

OWNER / DEVELOPER: GUY J. FARRUGGIA, 9713 GUELD DRIVE, ELLICOTT CITY, MD 21043, 443-722-7798

JOHN E. LEMMERMAN
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 21096
EXP. 8-3-15



BUILDING PERMIT# B15000412

SITE PLAN FOR BAT INSTALLATION OF LOT-4
AGRICULTURAL LAND PRESERVATION SUBDIVISION PLAT OAKDALE - LOTS 1 - 4
AS RECORDED ON PLAT C.M.P. NO. 17633
16105 ED WARFIELD ROAD
4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP: 13, GRID: 23, PARCEL: 356
TAX ID# 04-369718

RTF associates, Inc.
LAND SURVEYORS & PLANNERS

142 EAST MAIN STREET WESTMINSTER, MD 21157
410-848-2040 FAX# 410-840-8387 410-876-1222
EMAIL: RTF142@VERIZON.NET WWW.RTFSURVEYING.COM

CHECKED BY: JEL DATE: 3-2-15
DRAWN BY: NCC DATE: 2-28-15
SCALE: 1" = 30'

RTF JOB#: 14-106 COUNTY FILE#: SHEET: 1 OF 1

