

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: 5/12/15 **ONSITE SEWAGE DISPOSAL SYSTEM** P 556457
 APPROVAL DATE: _____ **PERMIT: CONSTRUCTION** A _____
 PROPERTY ADDRESS: 13596 Mitchells Way
 SUBDIVISION: Cloverfield II LOT: 13 TAX ID: 03-353516
 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: Catonsville Homes EMAIL: _____
 OWNER ADDRESS: 11175 Stratfield Court, Marriottsville, MD 21104 PHONE: _____

Norweco TNTLP-
 BAT UNIT MODEL: 500/600 PUMP SIZE: 1/3hp PUMP TANK CAPACITY: 1500

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 10/4/13 DATE RECORDED: 11/4/13

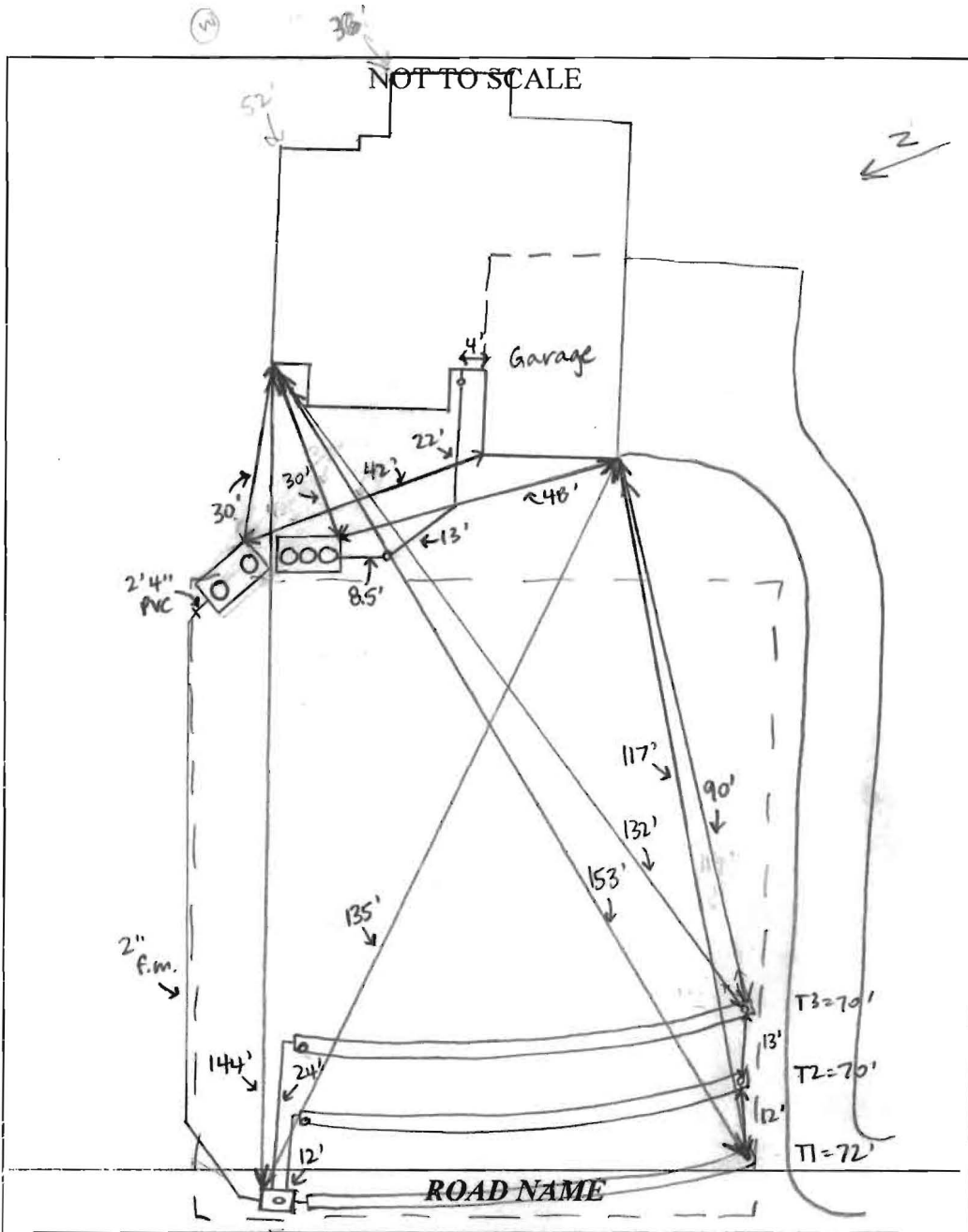
DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 4 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>156 210'</u>	INLET DEPTH: <u>3 4'</u>
	TRENCH WIDTH: <u>3 2'</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10 9'</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>3 5 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 cleanout at bend in SHC <u>3 x 70' trenches</u> <u>105 tons stone</u>	

ISSUED BY: Robert Bricker ISSUE DATE: 6/1/15 EXPIRATION DATE: 5/12/16

- 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 DOWNGRAIENT 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 15001226
- 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.**



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
2'	4'	8'
NUMBER OF TRENCHES		3
TOTAL LENGTH		212'
ABSORPTION AREA		636' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	1300 GAL
SEAM LOC	TOP
TANK LID DEPTH	2'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	FRONT, MID, REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	5-1-15

PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	BABYLON
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	2'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	FRONT - REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	4-19-15
WE0311M pump (1/3 hp)	

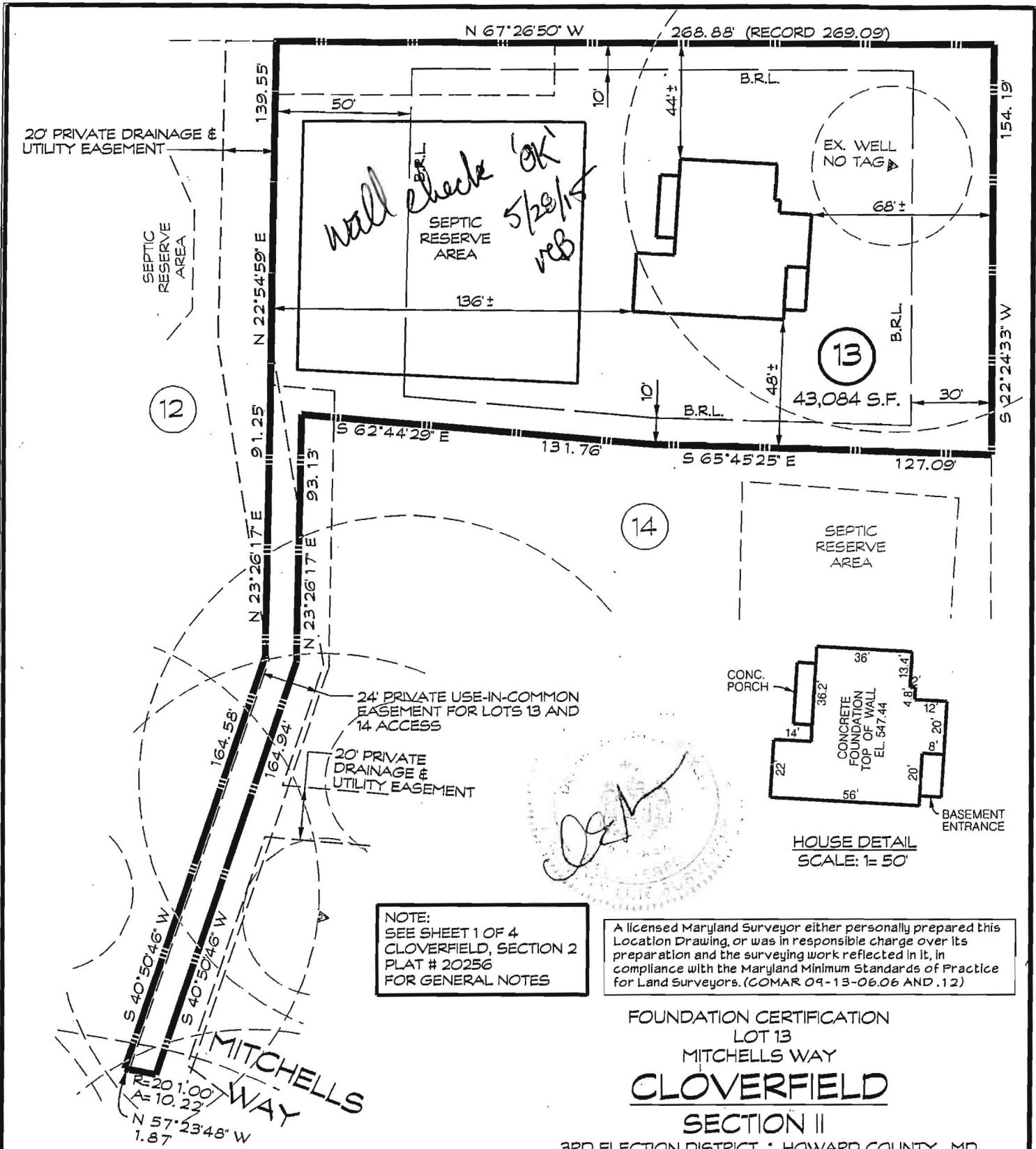
PRE-CONSTRUCTION:

6/2/15 Met Shorty from WTC on site for layout. BAT and pump tank staked, corners of SDA staked per BAT plan. Shot contour and staked 3x70' trenches with ends on the south side of the SDA. We also shot contour and confirmed adequate area for two replacement systems. (SC)

INSTALLATION:

6/22/15 On site during tank delivery. BAT tank already set, pump tank in the process of being set. No cracks on the bottom of the pump tank. House connection made and 20' of pipe from house bedded. (SC) 6/23/15 T1 dug and left open, D-box installed, and 2" f.m. installed from pump tank to D-box. Pump hasn't arrived yet. Shorty said they hit some rock at last 2' of T1, 0-2' below surface, possibly from a rocky fill used. (SC) 6/24/15 T2 finished + covered, T3 finished + left open. Observation ports at starts and ends of T2 + T3, just end of T1. Need pump + alarm and BAT startup certification. (SC) 6/29/15 BAT startup certification received. (SC) 9/4/15 Pump + alarm with WTC. Alarm works, on separate circuit from pump. Pump pumps to D-box. (SC)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 9/4/15



NOTE:
 SEE SHEET 1 OF 4
 CLOVERFIELD, SECTION 2
 PLAT # 20256
 FOR GENERAL NOTES

A licensed Maryland Surveyor either personally prepared this Location Drawing, or was in responsible charge over its preparation and the surveying work reflected in it, in compliance with the Maryland Minimum Standards of Practice for Land Surveyors. (COMAR 09-13-06.06 AND .12)

FOUNDATION CERTIFICATION
 LOT 13
 MITCHELLS WAY
CLOVERFIELD
 SECTION II

3RD ELECTION DISTRICT * HOWARD COUNTY, MD.
 TAX MAP: 15 BLOCK: 7 PARCEL: 119
 RECORDED PLAT NO. 20257

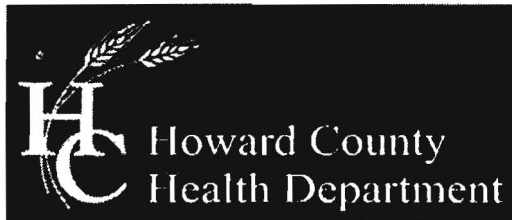
I hereby certify that I have surveyed the property shown hereon for the sole purpose of locating the improvements. This plan is a benefit to the customer only in so far as it is required by a lender or a title insurance company or its agent in connection with contemplated transfer, financing or refinancing. 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 lines are to the nearest foot (1') unless otherwise noted.

By: Dennis E. Meckley Date: 3/27/15
 Dennis E. Meckley Property Line Surveyor No. 10844
 License expires March 29, 2016



439 East Main Street Westminster, MD 21157-5539
 (410) 848-1790 FAX (410) 848-1791

DRAWN BY:	MNM
DESIGN BY:	
REVIEW BY:	KMB
DATE:	3/24/15
SCALE:	1" = 50'
JOB NO:	2013039
SHEET:	1 OF 1



Bureau of Environmental Health
 7178 Columbia Gateway Drive, Columbia, MD 21046-2147
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 Facebook: www.facebook.com/hocohealth
 Twitter: HowardCoHealthDep

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

**OPERATION AND MAINTENANCE AGREEMENT
 FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
 HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 4 day of October 2013, among
Spring Mill LLC, hereinafter collectively referred to as
 "Owner", and the Howard County Health Department hereinafter referred to as the
 "County".

20
 60
 1:
 WHEREAS, Owner is the owner or contract owner of a parcel of land located at
13596 Mitchells Way, W. Friendship, MD 21794 (Lot 13), in the 03 Election District of Howard
 County, Maryland, and the deed to same is recorded or shall be recorded among the Land
 Records of Howard County, Maryland in Liber 11285 Folio 00664.

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage
 disposal system with an advanced pre-treatment system, utilizing best available
 technology to perform nitrogen reduction, in accordance with the Code of Maryland
 Regulations 26.04.02.07, effective January 1, 2013.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.
- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as

long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Spring Mill LLC
James R. Maxley III 10/4/13
Owner James R. Maxley, III Date

Owner Date

Bert Nufon 11/4/2013
Howard County Health Department

LR - Agreement Recording Fee 22.00
Grantor/Grantee Name: HCHD
Reference/Control #: 170
LR - Agreement Surcharge 40.00
LR - Additional Recording Fee 0.00
- linked
SubTotal: 62.00
=====
Total: 62.00
#2168213-21
11/04/2013 02:53 CC13-CH
#2168213 CC0503 - Howard Co
Columbia/CC05.03.03 - Register
03 495

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 13596 Mitchells Way, West Friendship, MD 21794 was installed on June 22, 2015 according to the manufacture's specifications.

Installer: Walter Coon

Property Owner: Catonsville Homes

Permit #



MATTHEW GECKLE

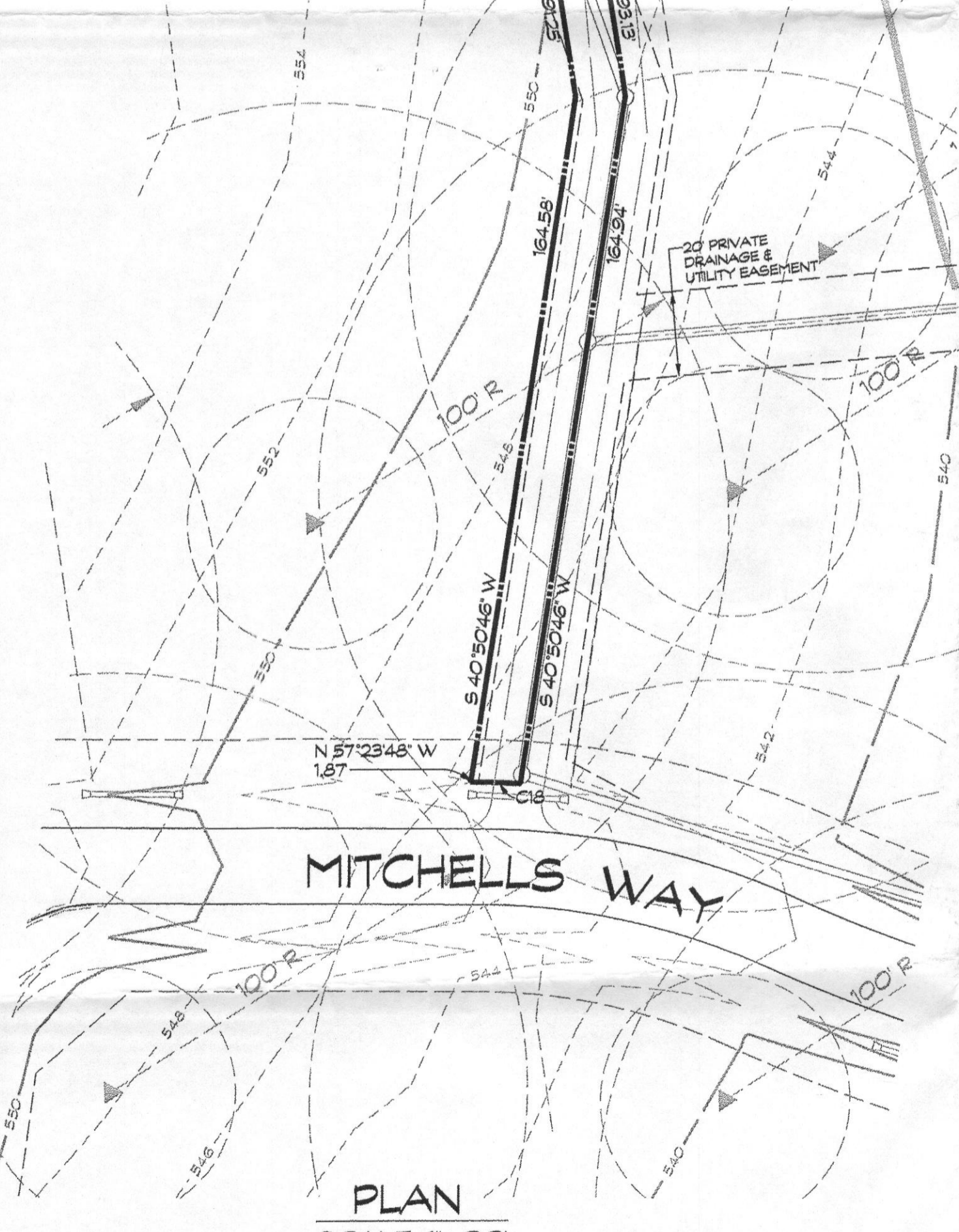
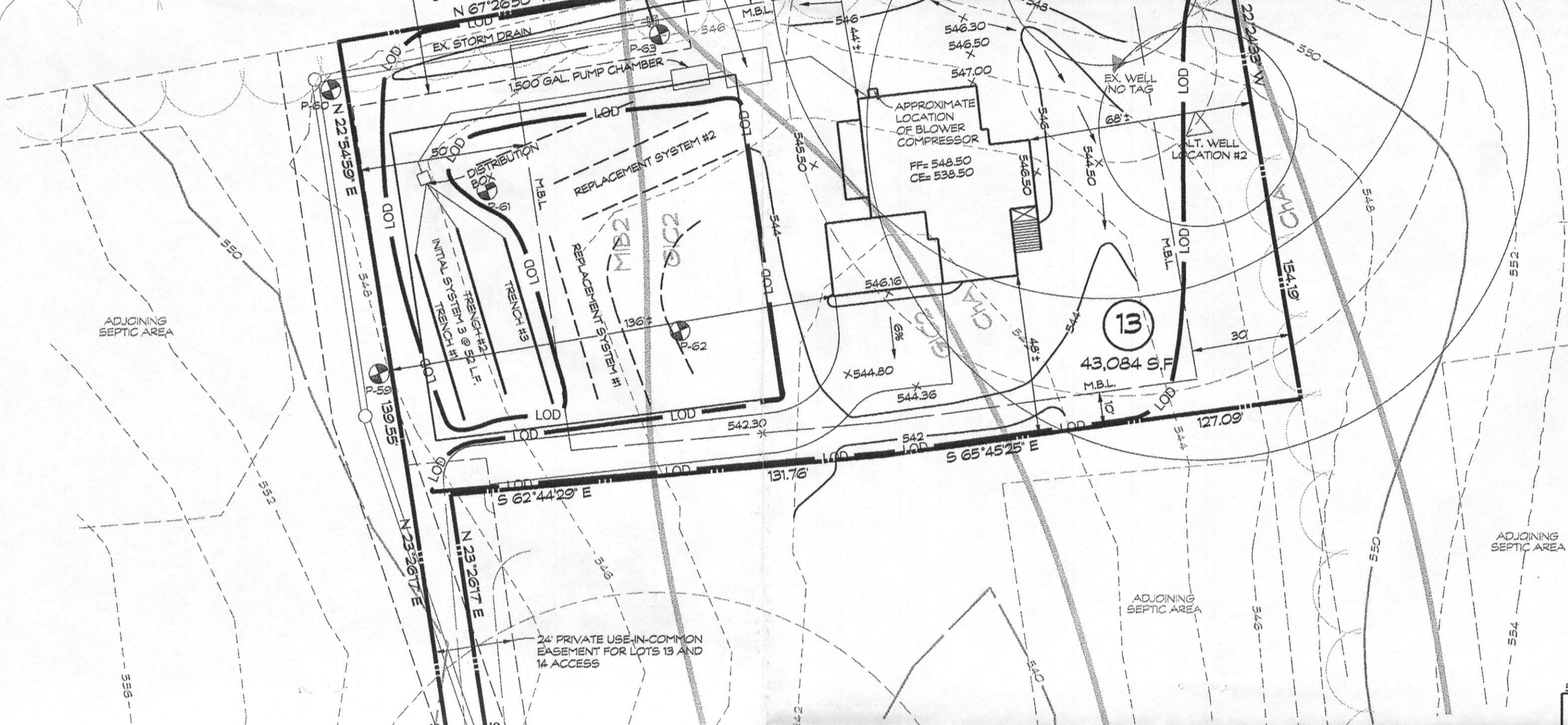
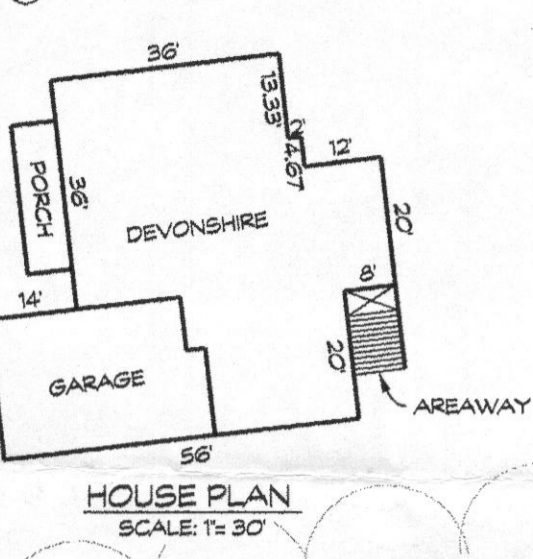
Vice-President

LEGEND:
 542.5 SPOT ELEVATION
 2.5% FLOW PATH & SLOPE
 EX. WELL
 PERC TEST LOCATION

CURVE DATA

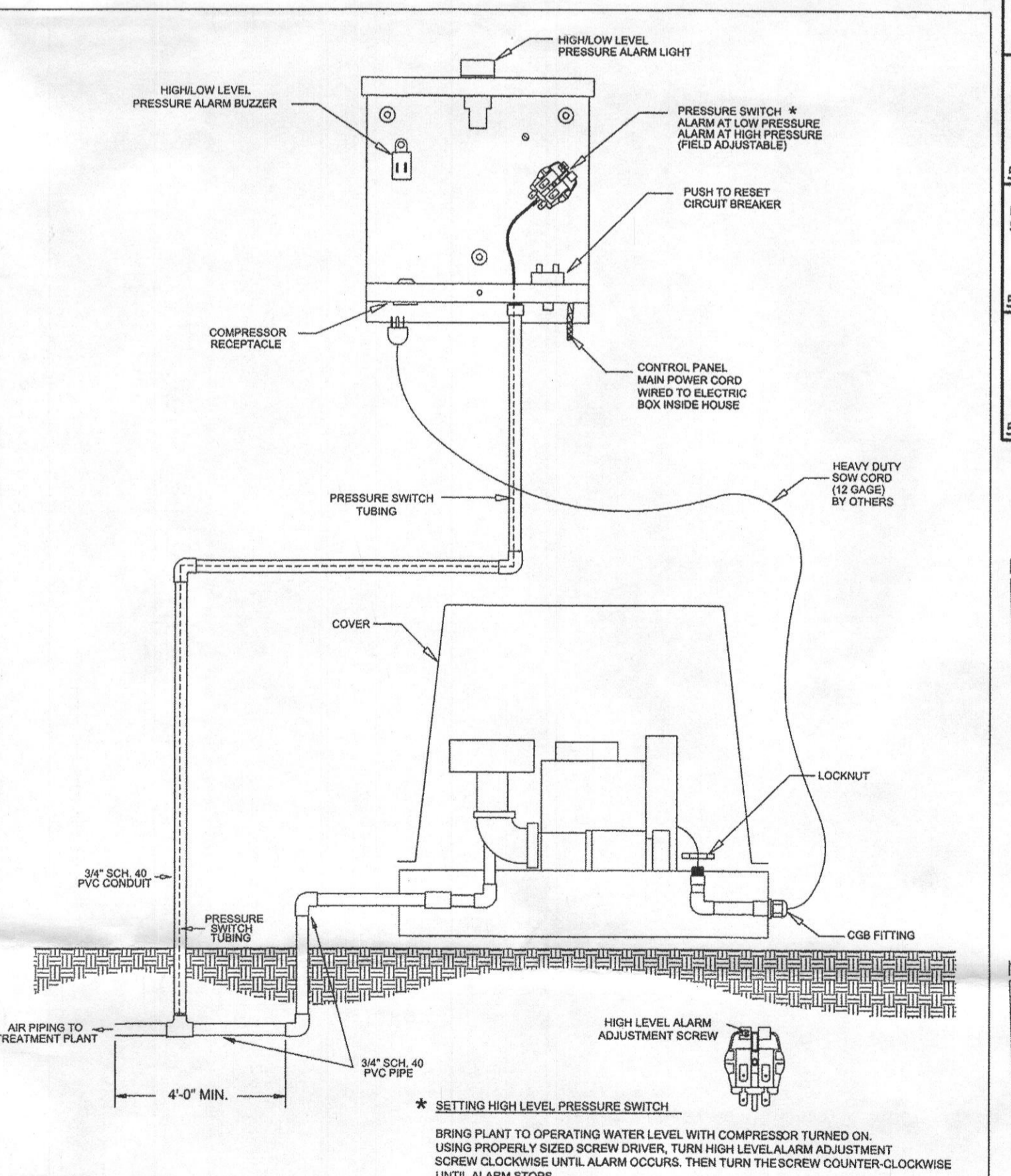
NUMBER	RADIUS	ARC	DELTA	TAN	CHORD BRG.	DIST
C18	201.00	10.22	24°00'35"	42.74	N 45°23'31" W	10.22

LOD DENOTES LIMIT OF DISTURBANCE
 TOTAL AREA = 27,638 S.F.



TRENCH CHART

TRENCH	EX. GROUND	INV. ELEV.	BOTTOM OF TRENCH
1	547.00	544.00	539.00
2	546.00	543.00	538.00
3	545.50	542.50	537.50



CONTROL PANEL CONNECTIONS USING REGENERATIVE SERIES COMPRESSORS
 BRING PLANT TO OPERATING WATER LEVEL WITH COMPRESSOR TURNED ON. USING PROPERLY SIZED SCREW DRIVER, TURN HIGH LEVEL ALARM ADJUSTMENT SCREW COUNTERCLOCKWISE UNTIL ALARM OCCURS. THEN TURN THE SCREW COUNTERCLOCKWISE UNTIL ALARM STOPS.
 * SETTING HIGH LEVEL PRESSURE SWITCH

BLOWER DETAIL:
 DWN BY: C.RACHAL DATE: 05/18/09 SCALE: N.T.S. DWG. NO.: CP Con Regen

GOULDS PUMPS
Submersible Effluent Pump
WE Series
 PROBABLY AVAILABLE FOR RESIDENTIAL APPLICATIONS.

APPLICATIONS
 Specifically designed for the following uses:
 • Homes
 • Farms
 • Trailer courts
 • Mobiles
 • Schools
 • Hospitals
 • Industry
 • Effluent systems

FEATURES
 • Shaft: Corrosion-resistant, stainless steel. Threaded design. Locked on all models to guard against component damage on accidental reverse rotation.
 • Features: 300 series stainless steel.
 • Capable of running dry without damage to components.
 • Designed for continuous operation when fully submerged.

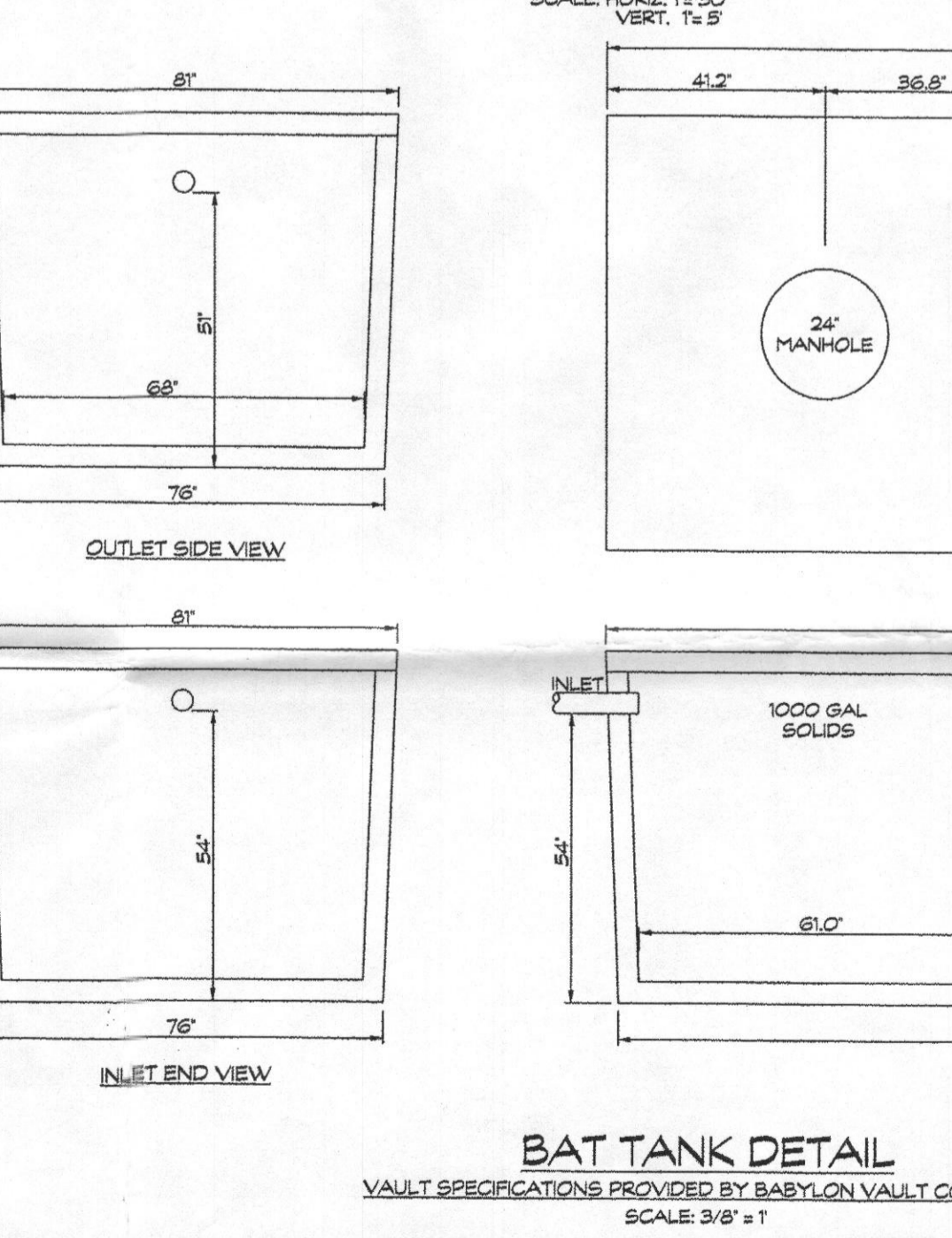
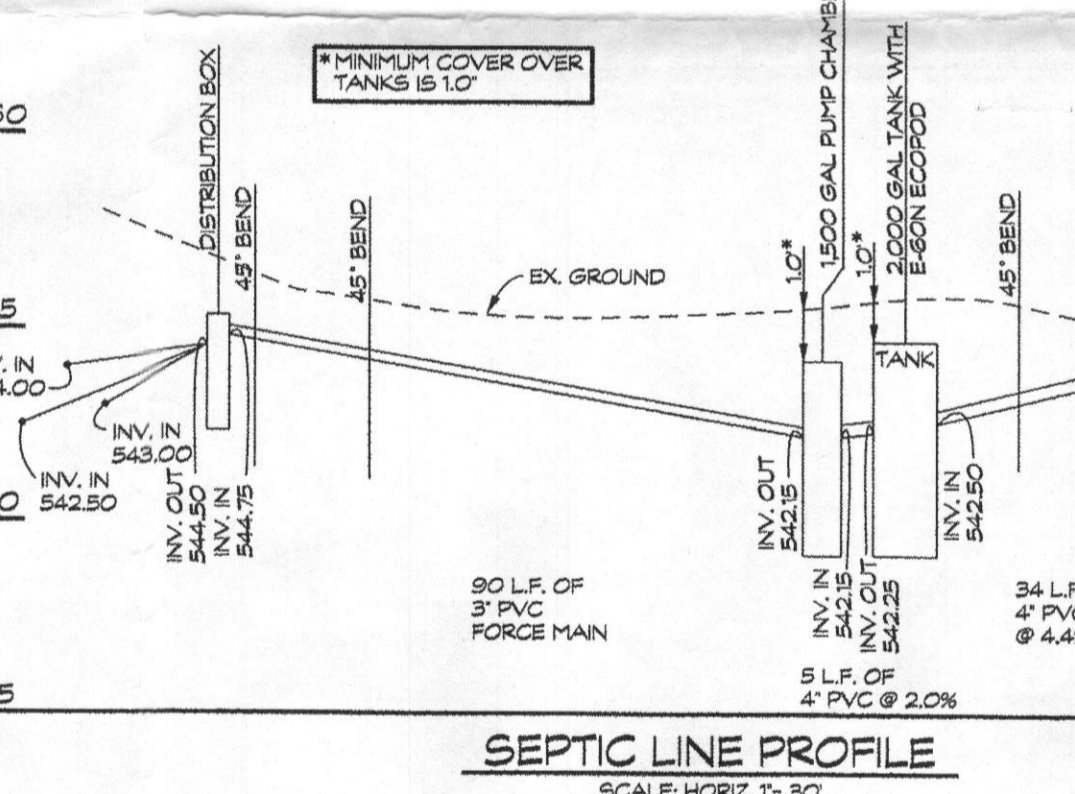
MOTORS
 • Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.
 • Class 10 insulation on 1-1/2 HP models.
 • Class 2 insulation on 2 HP models.

AGENCY LISTINGS
 Goulds Pump is ISO 9000 Registered.

GENERAL NOTES

- THE STORMWATER MANAGEMENT FOR THIS LOT IS PROVIDED OFF-SITE IN THE TWO MICROPOOL EXTENDED DETENTION FACILITIES AND GRASSED SWALES PER THE RECORDED PLAT NO. 202566.
- THERE ARE NO STREAMS, PONDS, FLOODPLAINS, OR WETLANDS ON THIS LOT.
- THERE ARE NO 20% OR GREATER SLOPES ON THIS LOT.
- EXISTING WELL LOCATION IS FIELD LOCATED.

SEPTIC SYSTEM TRENCH DESIGN:
 HOUSE SQUARE FOOTAGE: 2,605 S.F.
 PROPOSED NUMBER OF BEDROOMS = 4
 AVERAGE PERCOLATION TEST TIME = 6
 APPLICATION RATE = 0.8
 DESIGN FLOW: 150 GALS X 4 BEDROOM = 600 GAL/DAY
 600 GAL/DAY / 0.8 GAL/DAY/SQ. FT. = 750 SQ. FT.
 750 SQ. FT. / 3 FT. = 250 LF. OF TRENCH
 USE 3 - 32 LF. OF TRENCH FOR INITIAL SYSTEM
 USE 3 - 32 LF. OF TRENCH FOR EACH REPLACEMENT SYSTEM



GOULDS PUMPS
Submersible Effluent Pump
WE Series

COMPONENTS

ITEM NO.	DESCRIPTION	QTY
1	Motor	1
2	Mechanical Seal	1
3	Shaft	1
4	Impeller	1
5	Power Cable	1
6	Control Box	1

PERFORMANCE RATINGS (gallons per minute)

Model	110'	120'	130'	140'	150'	160'	170'	180'	190'	200'
WE110	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE120	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE130	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE140	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE150	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE160	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE170	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE180	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE190	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
WE200	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

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

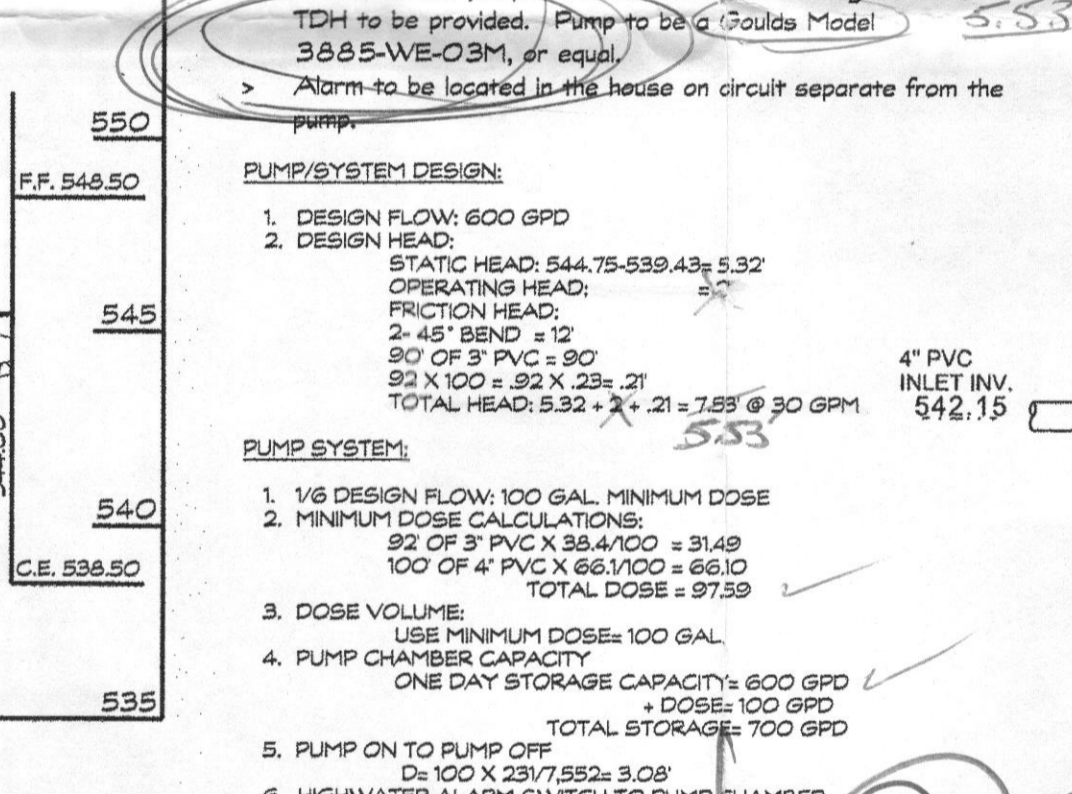
- Tank measurements and elevations are based on septic tanks and pump chambers as manufactured by Mayer Bros., Elkridge, Maryland (410) 796-1434 and Babylon Vault Co, New Windsor, Maryland (410) 848-0393
- All piping to be schedule 40 PVC of sizes shown.
- A submersible pump to remove 30,000 GPM against 7.5' TDH to be provided. Pump to be Goulds Model 3885-WE-03M, or equal.
- Alarm to be located in this house on circuit separate from the pump.

PUMP SYSTEM DESIGN:

- DESIGN FLOW: 600 GPD
- DESIGN HEAD: STATIC HEAD: 544.75-539.43= 5.32
OPERATING HEAD: 5.32
FRICTION HEAD: 2.45' BEND = 12
90' OF 3" PVC = 80
90' X 100' X 2.5" JT
TOTAL HEAD: 5.32 + 21 = 26.5' @ 30 GPM

PUMP SYSTEM:

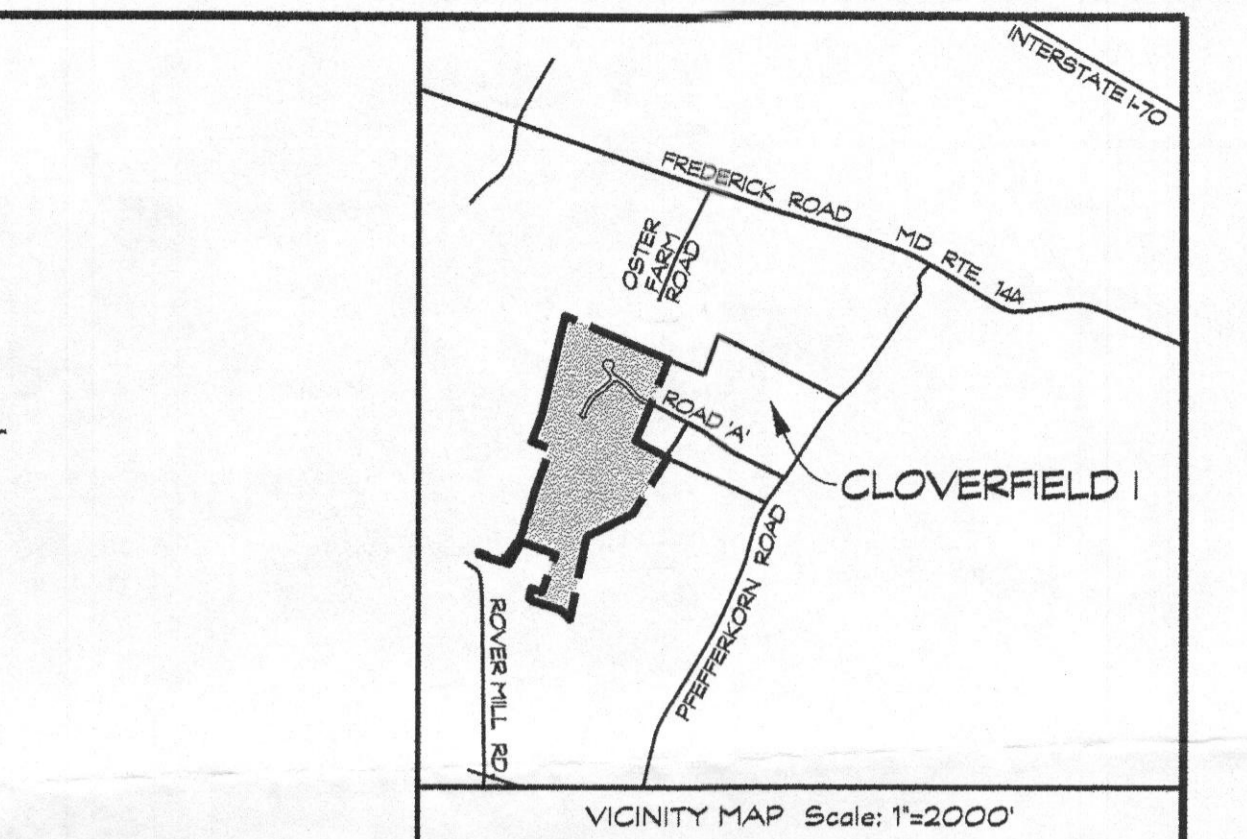
- 1/8" DESIGN FLOW: 100 GAL. MINIMUM DOSE
- MINIMUM DOSE CALCULATIONS:
90' OF 3" PVC X 38.4100 = 3148
100' OF 4" PVC X 66.1700 = 6610
TOTAL DOSE = 9758
- DOSE VOLUME: USE MINIMUM DOSE: 100 GAL
- PUMP CHAMBER CAPACITY: ONE DAY STORAGE CAPACITY: 600 GPD
DOSE: 100 GPD
TOTAL STORAGE: 700 GPD
- PUMP ON TO PUMP OFF: 100 X 231/252 = 3.08'
HIGH WATER ALARM SWITCH TO PUMP CHAMBER: R= 600 X 231/252 = 19.38'



BAT TANK DETAIL
 VULT SPECIFICATIONS PROVIDED BY BABYLON VULT COMPANY
 SCALE: 3/8" = 1'

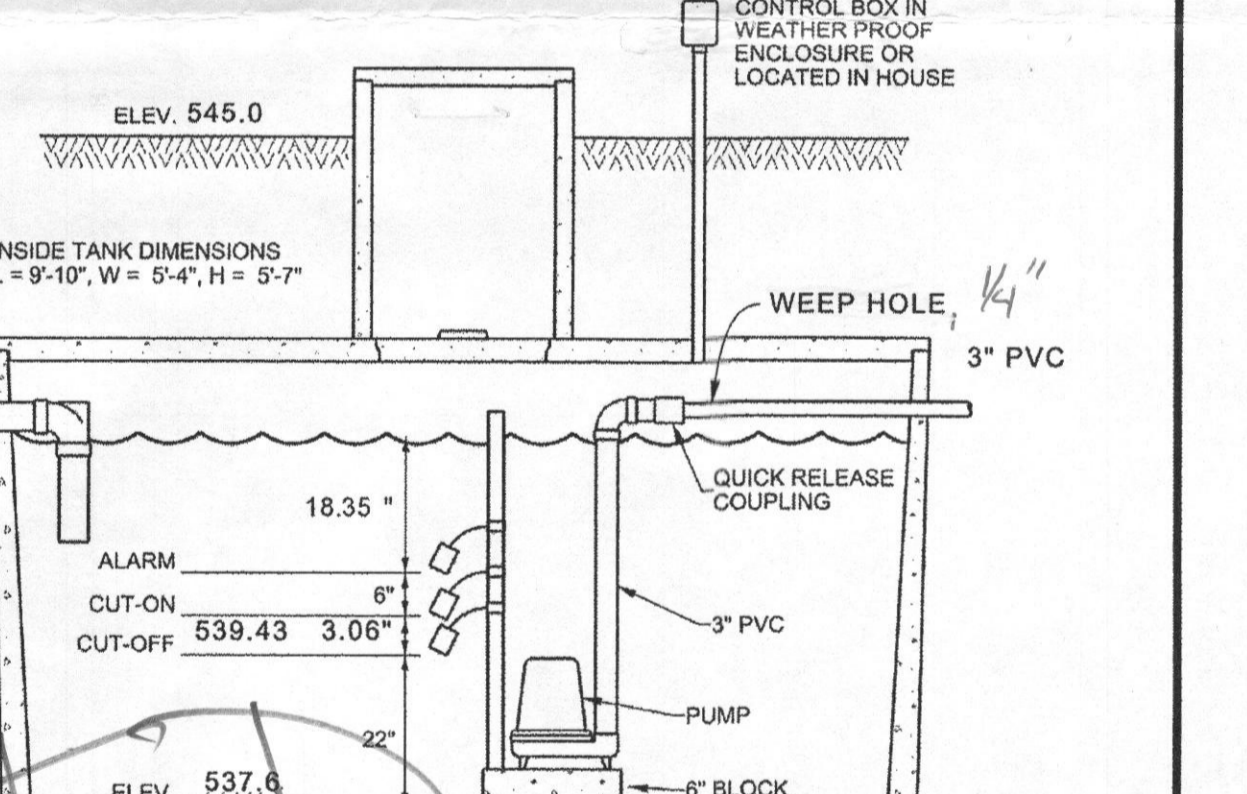
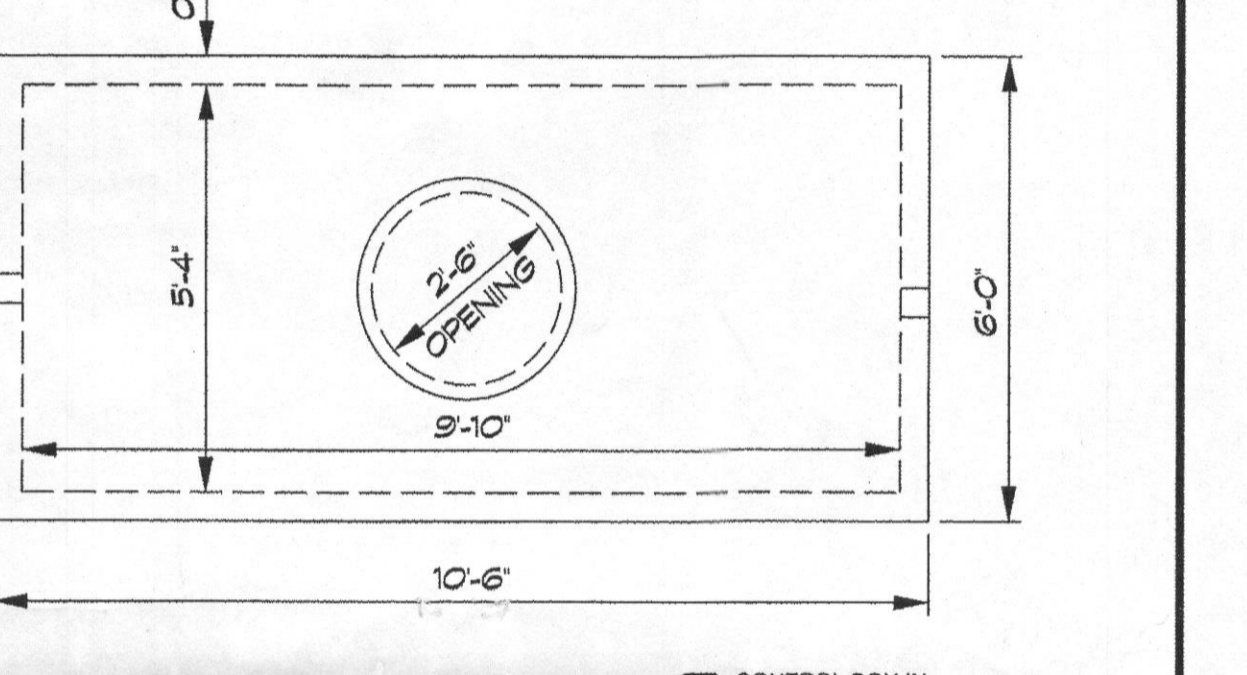
NOTE:
 ECOPROD-N SERIES MANUFACTURED BY DELTA ENVIRONMENTAL PRODUCTS

OWNER/DEVELOPER
 SPRING MILL LLC
 P.O. BOX 417
 ELLICOTT CITY, MD 21041



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.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND WAIVER 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.



Approved Septic System Plan
 Howard County Health Department
 ECOPROD-N Series E-BON in 2000-gal. 2-chamber Tank w/1500-gal Pump Tank
 Back 1/20/2015

1500 GAL. PUMP CHAMBER
 NOT TO SCALE

SITE PLAN AND PLOT PLAN FOR BAT INSTALLATION
 SPRING MILL LLC
 13596 MITCHELLS WAY
 TAX ACCOUNT NO.: 353427
 LOT 13

CLOVERFIELD- SECTION II
 3RD ELECTION DISTRICT * HOWARD COUNTY, MD.
 TAX MAP: 15 BLOCK: 7 PARCEL: 119

Engineers - Surveyors
CLSI
 Long Planning & Environmental Consultants
 www.clsi-civileng.com

439 East Main Street Westminster, MD 21157-5539
 (410) 848-1790 FAX (410) 848-1791

Handwritten notes:
 Contractor to install ECOPROD-N SERIES E-BON TREATMENT PLANT IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS
 Trenches: 150 ft. dia. 3 ft. wide Inlet at 3 ft. bottom at 8 ft. Application Rate: 0.8 gpd/ea

Signature:
 Linda D. Alexander
 1/15/14
 Qualified Professional

Date	Revisions	Drawn By: MNM
		Designed By: LDA
		Reviewed By: LDA
		Date: 11/26/14
		Scale: 1" = 30'
		Job No.: 2013039
		Sheet: 1 OF 1

