



Howard County
Health Department

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: 11-22-17 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 562341-A

APPROVAL DATE: 2/23/18 **PERMIT: CONSTRUCTION**

A

PROPERTY ADDRESS: 8585 Reservoir Road

SUBDIVISION: Munro Property LOT: 1 TAX ID: 05-598278

CONTRACTOR: J & A Construction Services EMAIL:

CONTRACTOR ADDRESS: 7991 Bennett Branch Road, Mount Airy, MD 21771 PHONE: 410-635-2484

PROPERTY OWNER: Burkard Homes LLC EMAIL: tim@burkhardhomes.com

OWNER ADDRESS: 5300 Dorsey Hall Drive Suite 102, Ellicott City, MD 21042 PHONE: 240-375-1052

SEPTIC TANK SIZE (GALLONS): 1500 TANK MANUFACTURER:

PUMP MODEL: Goulds WEO3L PUMP SIZE 0.3hp PUMP TANK CAPACITY: 1500

DISTRIBUTION SYSTEM: ☒ GRAVITY ☐ PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>95</u>	INLET DEPTH: <u>4</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>7.5</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:		

ISSUED BY: Robert Bricker ISSUE DATE: 11-22-17 EXPIRATION DATE: 11-22-18

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 TANKS REQUIRED

NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADE 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 17002683

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

See separate sheet for
as-built drawing

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH 3' INLET 4' BOTTOM 7.5'
NUMBER OF TRENCHES 2
TOTAL LENGTH 99'
ABSORPTION AREA 297 sq ft ^{+5' de well}
DISTRIBUTION BOX LEVEL N/A
DISTRIBUTION BOX BAFFLE YES
DISTRIBUTION BOX PORT YES

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL YES
MANUFACTURER BABYLON
CAPACITY 1500 GAL
SEAM LOC TOP
TANK LID DEPTH 1.5-2'
BAFFLES YES
BAFFLE FILTER NO
MANHOLE LOC FRONT + REAR
6" PORT LOC NONE
WATERTIGHT TEST NO
SLOTTED YES
DATE ON LID 11-1-17

PUMP/SEPTIC TANK LEVEL YES

MANUFACTURER BABYLON
CAPACITY 1500 GAL
SEAM LOC TOP
TANK LID DEPTH 1.5-2.5'
BAFFLES NO
BAFFLE FILTER NO
MANHOLE LOC FRONT + REAR
6" PORT LOC NONE
WATERTIGHT TEST NO
SLOTTED NO
DATE ON LID 10-10-17
Pumps Gould's 1/3 hp

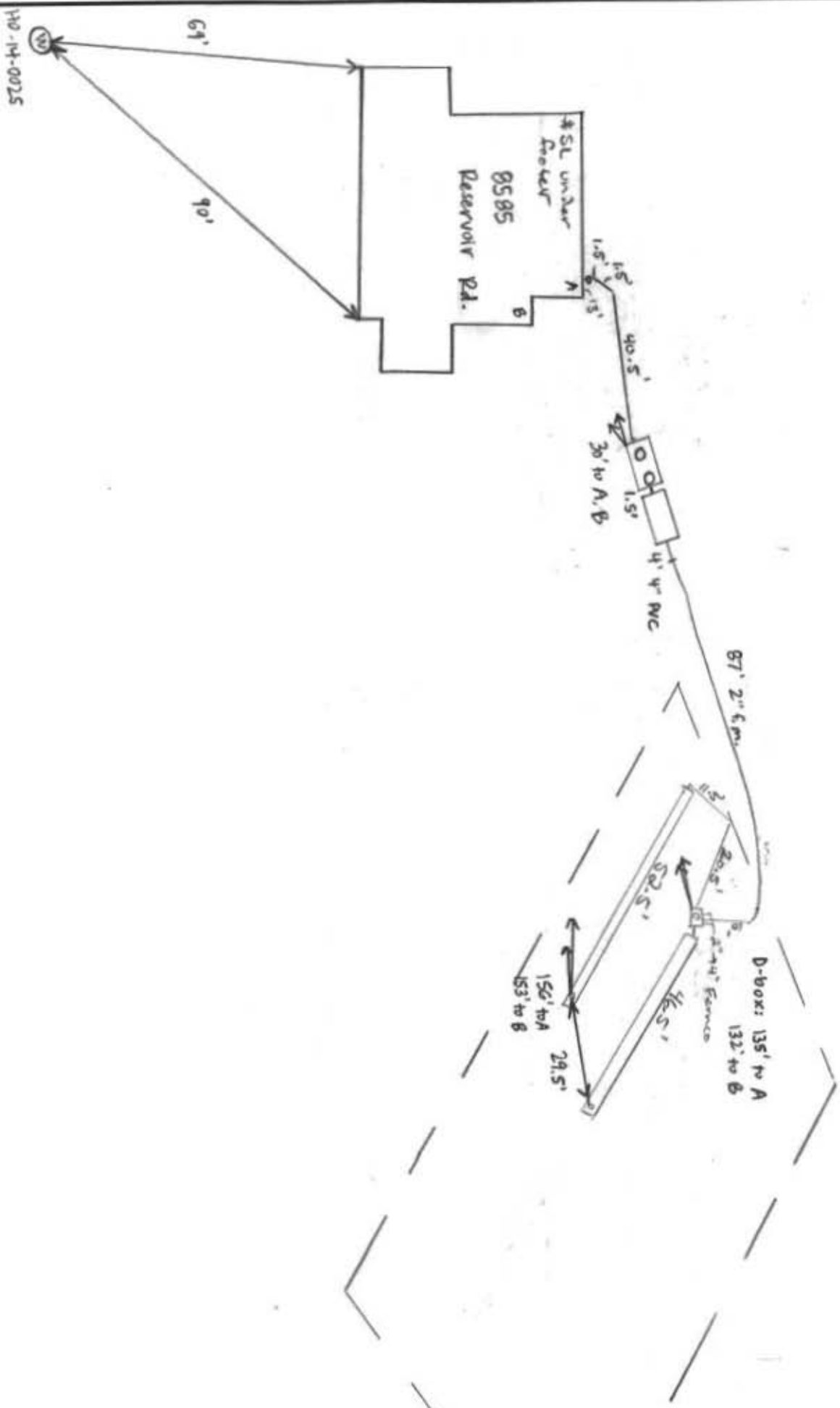
PRE-CONSTRUCTION:

12/15/17 Met J+A on site for layout. Tanks, SDA corners + trenches staked. Shot contour + laid out 2x48' trenches on contour. Keep T2 to western edge of SDA to separate from neighboring well. (SC)

INSTALLATION: 12/20/17 On site while tanks were set. No obvious cracks on bottom or sides of either tank. (SC) 12/20/17 2" force main installed up to area of D-box. OK to cover. (SC) 12/21/17 Trenches complete. OK to backfill. (SC) 12/22/17 Sewer line installed. C.O. for 1/2" inlet tee extension. Arranging pump and alarm. (SC) 2/21/18 Met J+A on site for pump + alarm test. Alarm sounds, pump pumps effluent to D-box. Alarm float set to trigger @ 18" below tank lid - only ~500 gal above alarm float storage (need 750 gal for 5 BR). Moved float down to 27" ~750 gal. Pump electric mounted inside riser - need outside. Check final grade around tanks. (SC) 2/23/18 Junction box now outside tank, mounted on post. Alarm sounds pump runs, FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 2/23/18
holes from settling around tanks filled in. (SC)

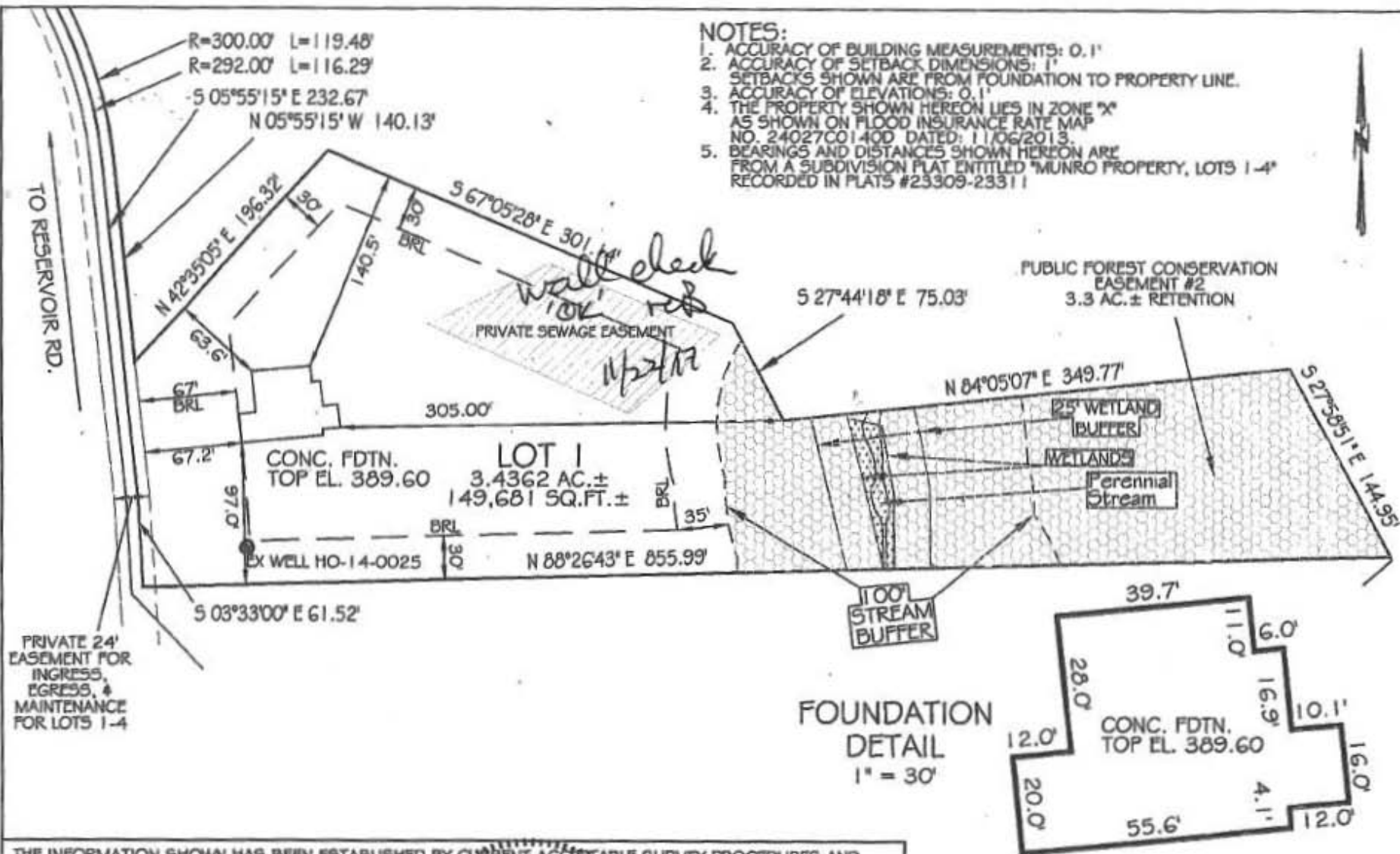
S.L. House to S.T. \oplus
 4" Cresline PVC Set to
 & Solvent welded

NOT TO SCALE



NOTES:

1. ACCURACY OF BUILDING MEASUREMENTS: 0.1'
2. ACCURACY OF SETBACK DIMENSIONS: 1'
3. SETBACKS SHOWN ARE FROM FOUNDATION TO PROPERTY LINE.
4. ACCURACY OF ELEVATIONS: 0.1'
5. THE PROPERTY SHOWN HEREON LIES IN ZONE "X" AS SHOWN ON FLOOD INSURANCE RATE MAP NO. 24027C01400 DATED: 11/06/2013.
6. BEARINGS AND DISTANCES SHOWN HEREON ARE FROM A SUBDIVISION PLAT ENTITLED "MUNRO PROPERTY, LOTS 1-4" RECORDED IN PLATS #23309-23311



THE INFORMATION SHOWN HAS BEEN ESTABLISHED BY CURRENTLY ACCEPTABLE SURVEY PROCEDURES AND FROM AVAILABLE RECORD INFORMATION. THIS DRAWING IS NOT TO BE USED FOR THE ESTABLISHMENT OF PROPERTY LINES, LOCATION OF FENCES, GARAGES, BUILDINGS OR OTHER FUTURE IMPROVEMENTS. IT WAS PREPARED UNDER MY DIRECT SUPERVISION AND REVIEW IN ACCORDANCE WITH SEC. 09.13.06.06 OF THE ANNOTATED CODE OF MD.

G. SCOTT SHANABERGER PROFESSIONAL L.S. 10849

SHANABERGER & LANE

8726 TOWN AND COUNTRY BLVD., SUITE 201
ELICOTT CITY, MD. 21043

(410)461-9563 FAX: (410)461-9693



10/2/17

EXP. DATE 4/2/2018

FOUNDATION LOCATION DRAWING LOT 1 MUNRO PROPERTY

PLAT NUMBERS 23309-23311

5TH ELECTION DISTRICT, HOWARD COUNTY, MD
TAX MAP 45 BLOCK 12 PARCEL 9 & P/O PARCEL 50
ZONING: RR-DEO

SCALE: 1"=100' DATE: 10/11/17



DIMENSIONS
[All dimensions are in inches. Do not use for construction purposes.]



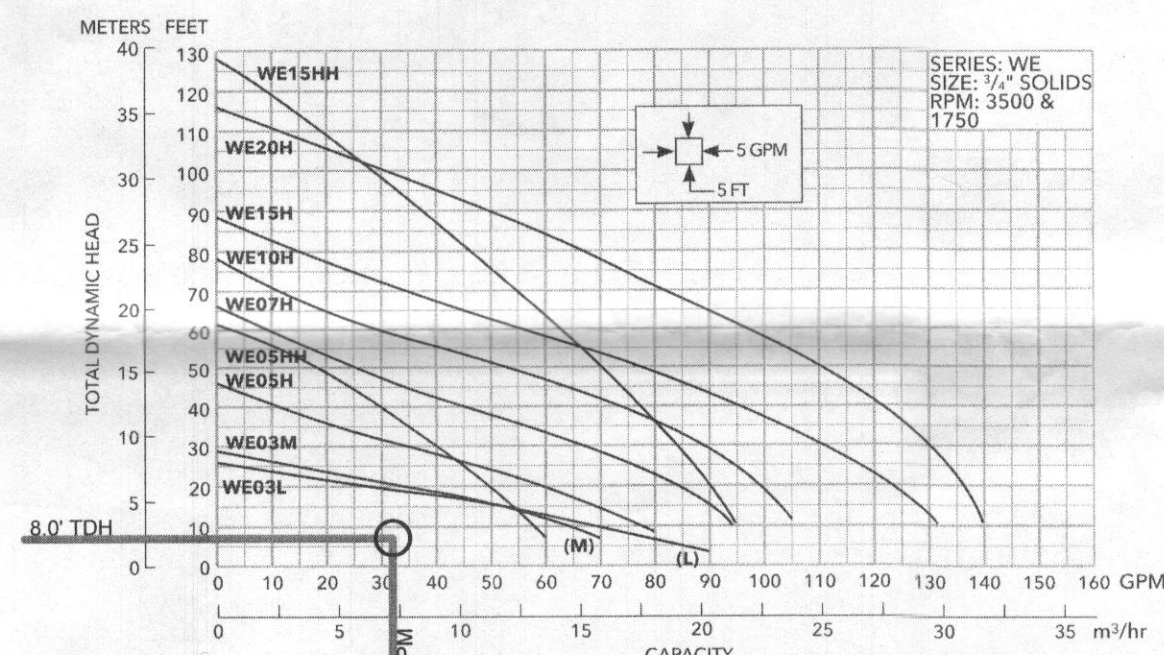
1. SUBJECT PROPERTY ZONED RR-DEO PER 02/20/2014 COMPREHENSIVE ZONING PLAN.
2. TOTAL AREA OF PROPERTY = 3.4362 AC±.
3. PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
4. ~~THE~~ THIS AREA DESIGNATES A PRIVATE SEWAGE AREA, OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE 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.
5. THE ROAD DEED DESCRIBED HEREIN IS BASED ON HOWARD COUNTY A FIELD RUM BOUNDARY SURVEY PREPARED BY SHANABARGER & LANE, IN JUNE 2016.
6. THE TOPOGRAPHY SHOWN HEREON WAS FIELD RUM BY SHANABARGER & LANE, DATED JUNE 1, 2016.
7. PROPERTY ADDRESS: 8585 RESERVIOIR ROAD, FULTON, MD 20759
8. REFERENCE: LIBER 16958, FOLIO 226
9. THE LOT SHOWN HEREON COMPLEXES WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT
10. A WETLAND AND FOREST STAND DELINEATION STUDY WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS DATED JANUARY 14, 2013.
11. LIMIT OF DISTURBANCE: 34,862 SF OR 0.8003 AC±
12. A GRADING PLAN HAS BEEN REVIEWED AND APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT AS GP-17-093
13. PLAT REFERENCE: 23310

SEPTIC SYSTEM NOTES

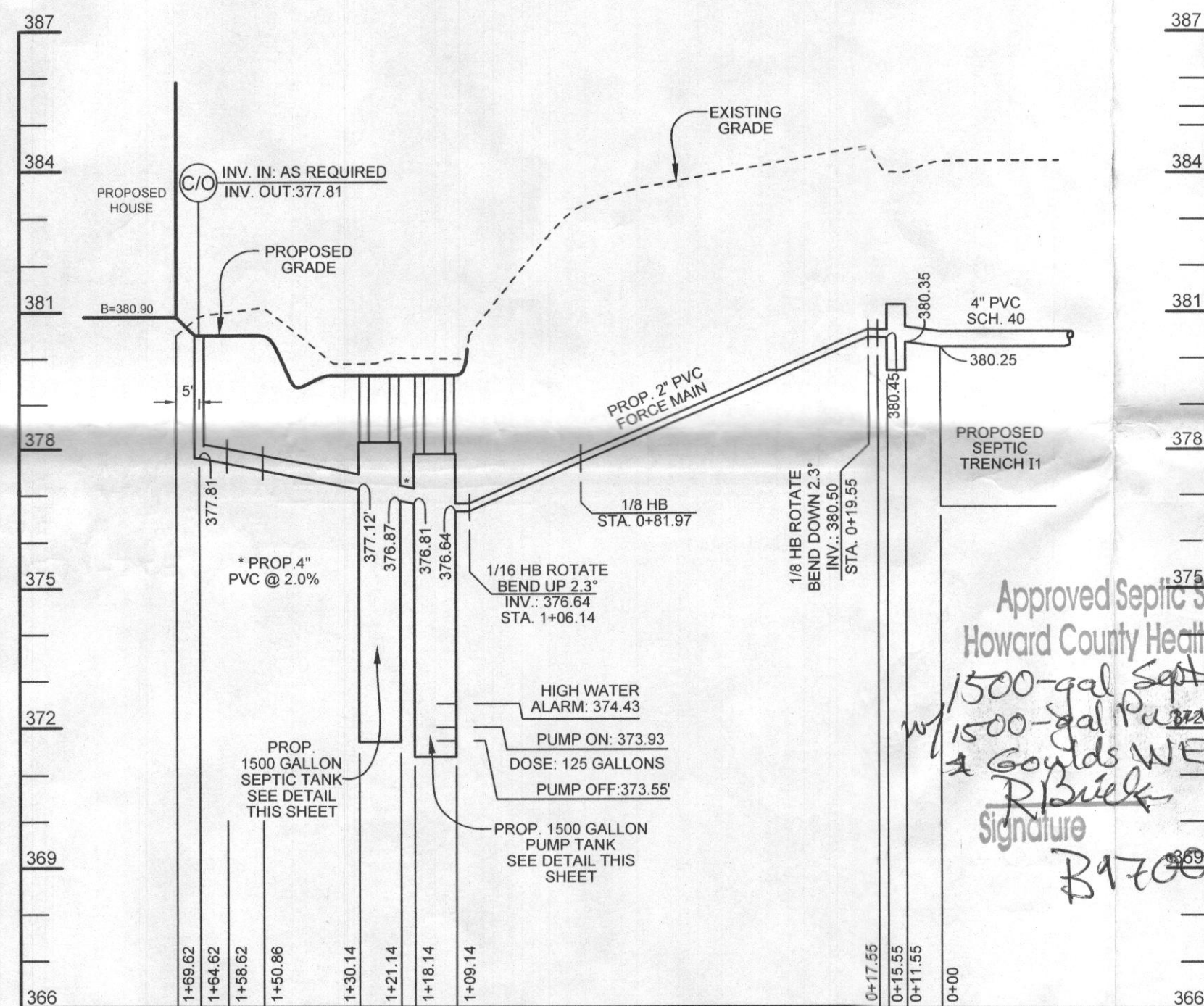
1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL TAG # HO-14-0025 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. ALL WELLS AND SEPTIC SYSTEMS ARE LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADE OF ANY WELLS AND OR SEPTIC SYSTEMS MUST BE BEEN SHOWN.
6. WELL LINE MUST BE SLEEVED UNDER THE DRIVEWAY AND PARKING AREA.
7. PUMP DISCH: 125 GALLONS. PUMP RUN TIME 4.0 MINUTES.
8. TOTAL DYNAMIC HEAD:
STATIC HEAD + FRICTION HEAD
10' + 1.23' + 13' USE 8.0'
PUMP TO BE A GULF WE031 (1/3HP) SERIES PUMP OR EQUIVALENT.

SEPTIC SYSTEM TRENCH DESIGN SPECIFICATIONS

- | | | |
|--|---|---|
| • INITIAL SYSTEM: | • REPLACEMENT SYSTEM #1: | • REPLACEMENT SYSTEM #2: |
| - APPLICATION RATE: 1.2 | - APPLICATION RATE: 1.2 | - APPLICATION RATE: 1.2 |
| - EFFECTIVE AREA BEGINNING | - EFFECTIVE AREA BEGINNING | - EFFECTIVE AREA BEGINNING |
| DEPTH: 4" | DEPTH: 3" | DEPTH: 2.5" |
| - BOTTOM MAXIMUM DEPTH: 7.5" | - BOTTOM MAXIMUM DEPTH: 6" | - BOTTOM MAXIMUM DEPTH: 5" |
| - DESIGN FLOW | - DESIGN FLOW | - DESIGN FLOW |
| - 5 BEDROOMS AT 150 GPD | - 5 BEDROOMS AT 150 GPD | - 5 BEDROOMS AT 150 GPD |
| - 5 X150 GPD = 750 GPD | - 5 X150 GPD = 750 GPD | - 5 X150 GPD = 750 GPD |
| - SQUARE FOOTAGE OF DRAIN FIELD REQUIRED: | - SQUARE FOOTAGE OF DRAIN FIELD REQUIRED: | - SQUARE FOOTAGE OF DRAIN FIELD REQUIRED: |
| - DESIGN FLOW (750 GPD) / | - DESIGN FLOW (750 GPD) / | - DESIGN FLOW (750 GPD) / |
| (APPLICATION RATE) (1.2) = 625 SF | (APPLICATION RATE) (1.2) = 625 SF | (APPLICATION RATE) (1.2) = 625 SF |
| 3. SIDEWALL REDUCTION CREDIT: | 3. SIDEWALL REDUCTION CREDIT: | 3. SIDEWALL REDUCTION CREDIT: |
| - TRENCH WIDTH (W) = 3" | - TRENCH WIDTH (W) = 3" | - TRENCH WIDTH (W) = 3" |
| - TRENCH EFFECTIVE DEPTH (D) = 3.5" | - TRENCH EFFECTIVE DEPTH (D) = 3" | - TRENCH EFFECTIVE DEPTH (D) = 2.5" |
| - $(W-2) / (W+1-2D) \times 100 = 45.5\%$ | - $(W-2) / (W+1-2D) \times 100 = 50\%$ | - $(W-2) / (W+1-2D) \times 100 = 55.6\%$ |
| - DRAIN FIELD SQUARE FOOTAGE REQUIRED: | - DRAIN FIELD SQUARE FOOTAGE REQUIRED: | - DRAIN FIELD SQUARE FOOTAGE REQUIRED: |
| - DRAIN FIELD SQUARE FOOTAGE (625) / SIDEWALL REDUCTION CREDIT (45.5%) / TRENCH WIDTH (3") = 94.79 | - DRAIN FIELD SQUARE FOOTAGE (625) / SIDEWALL REDUCTION CREDIT (50%) / TRENCH WIDTH (3") = 104.17 | - DRAIN FIELD SQUARE FOOTAGE (625) / SIDEWALL REDUCTION CREDIT (55.6%) / TRENCH WIDTH (3") = 115.83 |
| 4. LINEAR LENGTH OF TRENCH PROVIDED = 95 | 4. LINEAR LENGTH OF TRENCH PROVIDED = 105 | 4. LINEAR LENGTH OF TRENCH PROVIDED = 116" |
| - TWO TRENCHES @ 38.25' EACH | - TWO TRENCHES @ 38.25' EACH | - TWO TRENCHES @ 38.56' EACH |
| EX. GRADE: TRENCH 1: 38.25' | EX. GRADE: TRENCH 1: 38.25' | EX. GRADE: TRENCH 1: 37.925' |
| TRENCH 2: 38.25' | TRENCH 2: 38.100' | TRENCH 2: 37.775' |
| 5. INVERT: TRENCH 1: 38.25' | 5. INVERT: TRENCH 1: 37.800' | 5. INVERT: TRENCH 1: 37.750' |
| TRENCH 2: 35.50' | TRENCH 2: 35.50' | TRENCH 2: 35.50' |



GOULDS PUMPS PERFORMANCE CURVES



SEPTIC SYSTEM PROFILE

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

