



**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](http://www.hchealth.org)

Facebook: [www.facebook.com/hocohealth](https://www.facebook.com/hocohealth)

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

RECEIPT DATE: 5/17/23 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 574134

APPROVAL DATE: 6/5/2023 **PERMIT: NEW CONSTRUCTION**

A

PROPERTY ADDRESS: 15427 Rivercrest Court

SUBDIVISION: Rivercrest

LOT: 3

TAX ID:

04-370589

CONTRACTOR: Hatfield's

EMAIL:

CONTRACTOR ADDRESS:

PHONE:

PROPERTY OWNER: Roxbury Farm, LLC

EMAIL:

OWNER ADDRESS: 6420 Autumn Sky Way, Columbia, MD 21044

PHONE:

410-730-3940

SEPTIC TANK SIZE (GALLONS): 2000

TANK MANUFACTURER:

Babylon Vault

PUMP MODEL: N/A

PUMP SIZE

N/A

PUMP TANK CAPACITY:

N/A

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS:

5

APPLICATION RATE:

0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>260</u>	INLET DEPTH: <u>4</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>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: Wank Oswald ISSUE DATE: 5/17/23 EXPIRATION DATE: 5/17/24

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 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: 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

ROAD NAME

**TRENCH/DRAINFIELD DATA**

WIDTH	INLET	BOTTOM
3'	3.5'-4'	5'
NUMBER OF TRENCHES		5
TOTAL LENGTH		269'
ABSORPTION AREA		807 ft <sup>2</sup>
DISTRIBUTION BOX LEVEL		yes
DISTRIBUTION BOX BAFFLE		yes
DISTRIBUTION BOX PORT		yes

**SEPTIC TANK DATA**

SEPTIC TANK 1 LEVEL yes

MANUFACTURER \_\_\_\_\_  
CAPACITY 2000 GAL  
SEAM LOC top  
TANK LID DEPTH 3'-2'  
BAFFLES 6" front & 4" back  
BAFFLE FILTER \_\_\_\_\_  
MANHOLE LOC front & back  
6" PORT LOC \_\_\_\_\_  
WATERTIGHT TEST \_\_\_\_\_  
SLOTTED yes  
DATE ON LID 3/13/2023

PUMP/SEPTIC TANK LEVEL N/A

MANUFACTURER \_\_\_\_\_  
CAPACITY \_\_\_\_\_ GAL  
SEAM LOC \_\_\_\_\_  
TANK LID DEPTH \_\_\_\_\_  
BAFFLES \_\_\_\_\_  
BAFFLE FILTER \_\_\_\_\_  
MANHOLE LOC \_\_\_\_\_  
6" PORT LOC \_\_\_\_\_  
WATERTIGHT TEST \_\_\_\_\_  
SLOTTED \_\_\_\_\_  
DATE ON LID \_\_\_\_\_

**PRE-CONSTRUCTION:**

5/26/2023 - 3' of fill on SDA, did not stake trenches. Tank 20' from house & 140' from well. Gave OK to set tank, sewer not stubbed out. Foundation to tank will make fall. (SP)

6/1/2023 - Top 3 trenches measured @ 53', bottom 2 @ 52'. 1, on contour w/ 1"-1.5" difference. Distance between 1, & 1<sub>2</sub> is 14'. 1<sub>2</sub> on contour w/ 1"-1.5" difference. 1<sub>2</sub> & 1<sub>3</sub> is 14' apart. 1<sub>3</sub> on contour w/ 0.5" difference in elevation. Distance between 1<sub>3</sub> & 1<sub>4</sub> is 15'. 1<sub>4</sub> on contour w/ 2" difference. Distance between 1<sub>4</sub> & 1<sub>5</sub> is 13'. 1<sub>5</sub> has 3'-2" difference in contour. (SP)

INSTALLATION: 6/1/2023 - 82w C10 out of house, verified house to tank has fall w/ level. SCH40 90 pipe used. Tank lid depth @ 3'. Saw slots, reinspect for baffles. (SP)

6/2/2023 - 1<sub>5</sub> inlet @ 3.5'-4' length @ 56'. 1<sub>4</sub> @ 54' 1<sub>3</sub> @ 53', 1<sub>2</sub> @ 53'. Saw D-box to 1<sub>3</sub> - 1<sub>5</sub>. Saw 6" front & 4" back baffle in tank. All trenches had the ports. Reinspect for upper trench & level D-box. (SP)

6/5/2023 - 1, inlet 3.5'-4' length @ 53'. Measured 1, to house & D-box to house. 1, stone OK, installer sent pic of fabric, did not have white noise (see attached pic). D-box leveled. Gave OK to backfill all work after fabric installed. (SP)

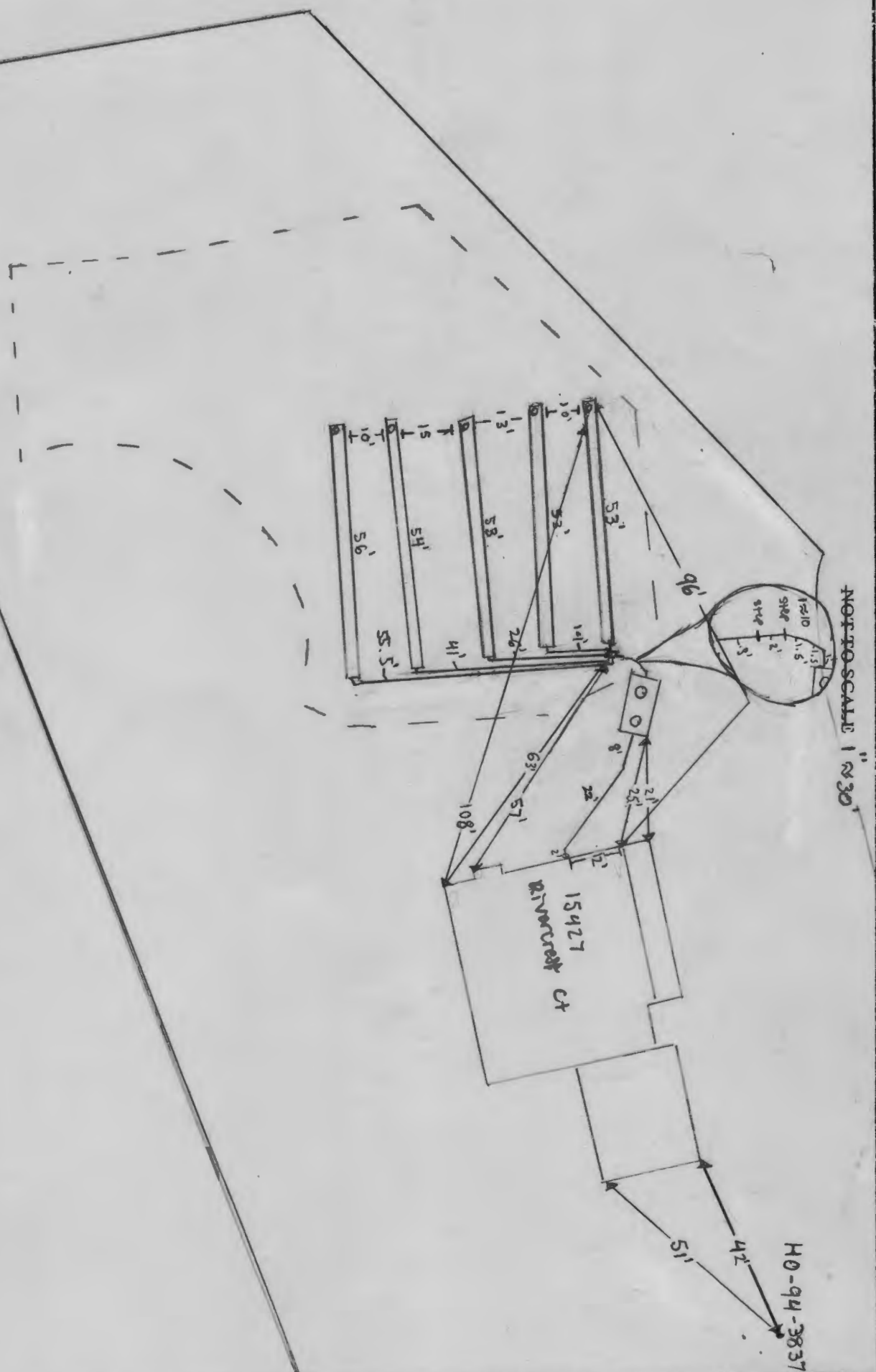
FINAL INSPECTOR

S. Page

DATE OF APPROVAL

6/5/2023





## Freemon, Robert

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**From:** Freemon, Robert  
**Sent:** Tuesday, March 7, 2023 12:45 PM  
**To:** RTASH@COLUMBIABUILDERSINC.COM  
**Cc:** Paul Cavanaugh; Luke Groom  
**Subject:** 15427 Rivercrest Ct.

Hi Ron,

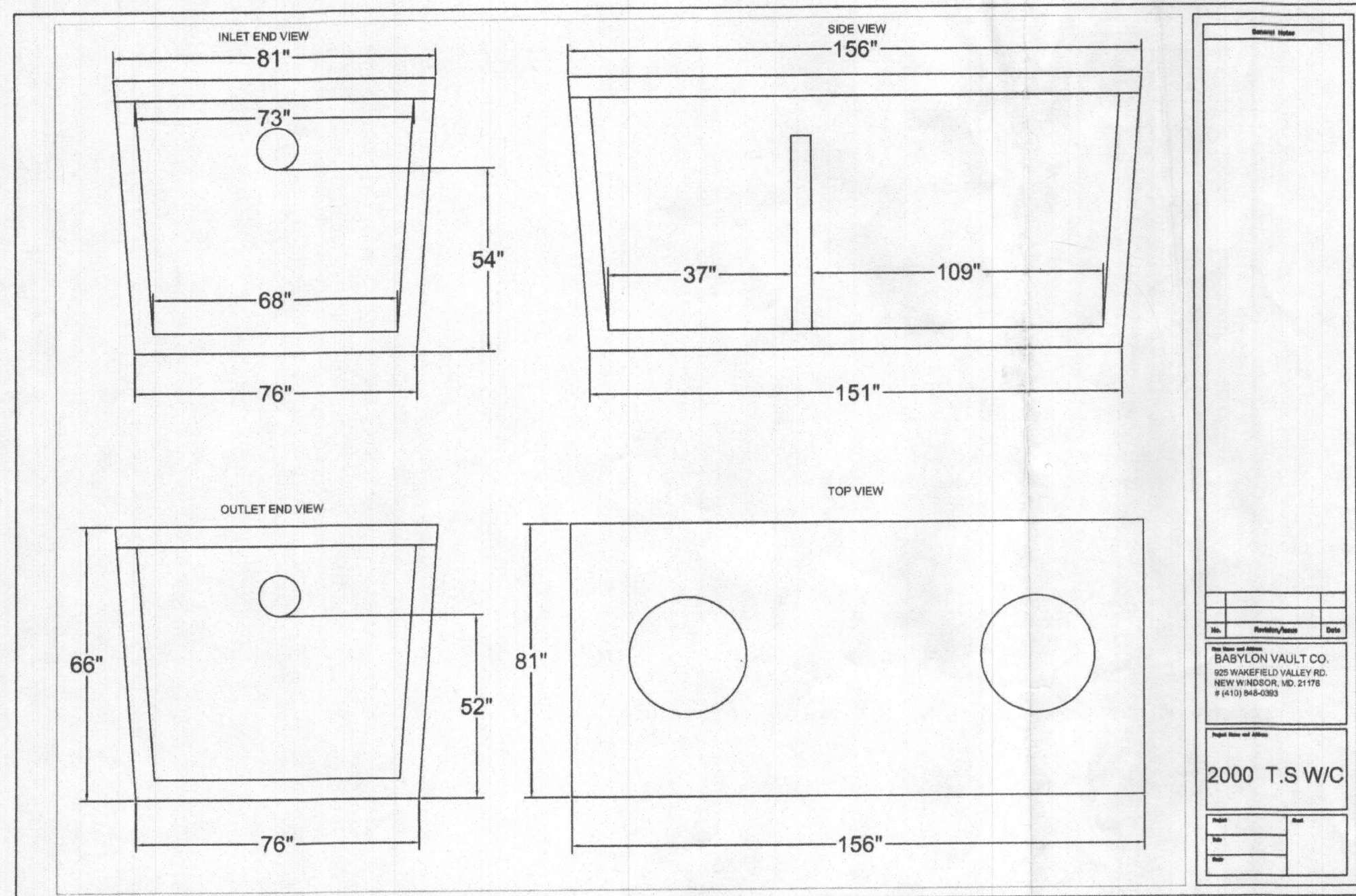
Building permit B23000510 is proposing 5 bedrooms when the OSDS plan was approved for 4 bedrooms. If you want to continue with the current bp proposal the OSDS plan will need to be revised. If you want to keep the approved OSDS plan the floor plans for this building permit will need to be revised. Please let us know which option you are going to move forward with.



*Howard County Health Department  
8930 Stanford Blvd. Columbia, MD 21045  
Bureau of Environmental Health*

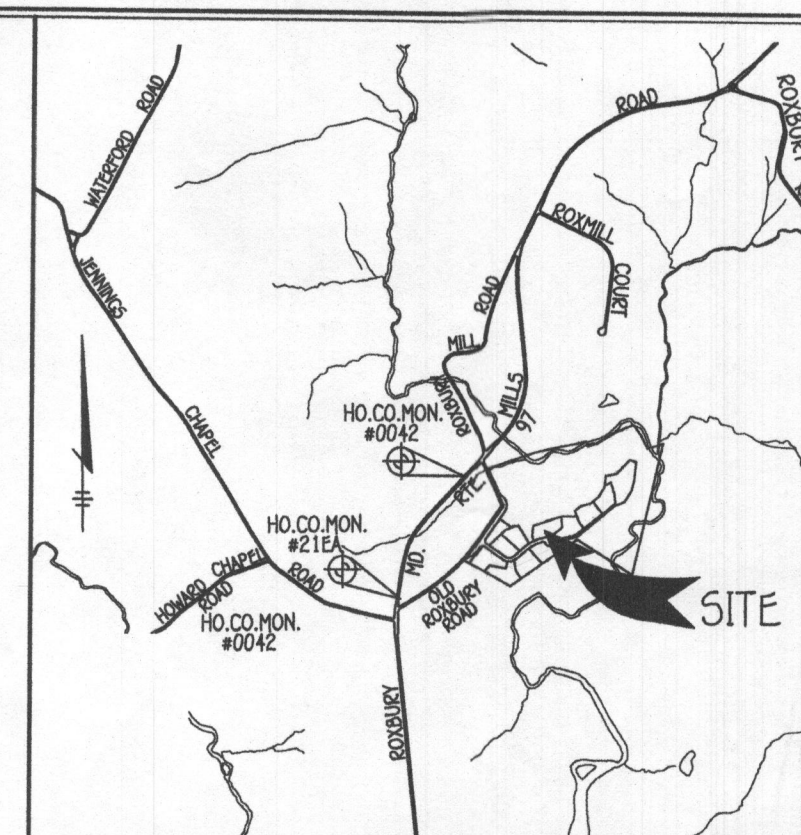
*Well and Septic Program  
Robert "Spencer" Freemon  
Phone: 410-313-6357  
Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)  
Website: <https://www.howardcountymd.gov/health/well-septic-program>*





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. THE WELL HO-94-3837 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
4. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
5. THE ENGINEER IS REGISTERED WITH MDE TO PERFORM ON-SITE WASTEWATER SERVICES IN MARYLAND.

- LEGEND**
- EXISTING 2' CONTOURS
  - EXISTING 10' CONTOURS
  - EXISTING TREE LINE
  - SOIL LINES AND TYPES
  - DENOTES EXISTING WELL
  - DENOTES PASSED PERC
  - DENOTES FAILED PERC



### INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR  
5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 1 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  
 $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 1)) = 0.833$   
TRENCH LENGTH =  $312.5 \text{ SF} \times 0.833 = 260.42 \text{ FEET}$   
(USE 5 TRENCHES AT 52.08 L.F.)  
TRENCH SPACING =  $20+W = ((2 \times 1) + 3) = 5'$  USE 10'

### 1ST REPLACEMENT SYSTEM

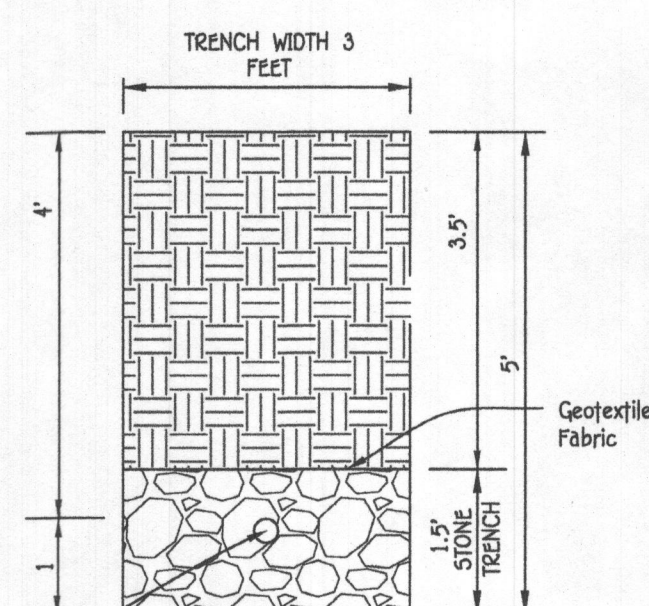
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR  
5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 6 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 625 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  
 $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3)) = 0.500$   
TRENCH LENGTH =  $208.33 \text{ SF} \times 0.500 = 104.17 \text{ FEET}$   
(USE 3 TRENCHES AT 34.72 L.F.)  
TRENCH SPACING =  $20+W = ((2 \times 3) + 3) = 9'$  USE 10'

### 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR  
5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 6 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 625 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  
 $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3)) = 0.500$   
TRENCH LENGTH =  $208.33 \text{ SF} \times 0.500 = 104.17 \text{ FEET}$   
(USE 3 TRENCHES AT 34.72 L.F.)  
TRENCH SPACING =  $20+W = ((2 \times 3) + 3) = 9'$  USE 10'

### TRENCH DATA:

TRENCH 1:  
EX. GROUND ABOVE = 444  
INV. IN = 440  
BOTTOM TRENCH = 439  
TRENCH 2:  
EX. GROUND ABOVE = 440  
INV. IN = 436  
BOTTOM TRENCH = 435  
TRENCH 3:  
EX. GROUND ABOVE = 438  
INV. IN = 434  
BOTTOM TRENCH = 433.0  
TRENCH 4:  
EX. GROUND ABOVE = 435  
INV. IN = 431  
BOTTOM TRENCH = 430.0  
TRENCH 5:  
EX. GROUND ABOVE = 432  
INV. IN = 428  
BOTTOM TRENCH = 427.0



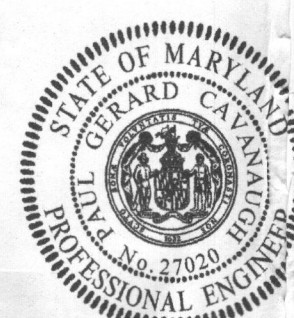
4" PVC INV. INTO  
TRENCH

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTONIAL SQUARE OFFICE PARK - 10076 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2095

### 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. 27020, EXPIRATION DATE: 01/25/2024.

*Signature of Professional Engineer*  
DATE: 9/20/23



### PLAN

SCALE: 1" = 30'

### OWNER

ROXBURY FARM, LLC  
C/O COLUMBIA DEVELOPERS LLC  
6420 AUTUMN SKY WAY  
COLUMBIA, MARYLAND 21044  
410-730-3940

### BUILDER/DEVELOPER

COLUMBIA BUILDERS  
P.O. BOX 999  
COLUMBIA, MARYLAND 21044  
410-730-3940

FFE 452.74  
BSE 442.54  
INV. OUT OF HOUSE = 447.06  
PROP. GROUND AT CLEANOUT #1 = 449.0  
INV. INTO CLEANOUT = 446.94  
INV. OUT OF CLEANOUT = 446.84  
EX. GROUND AT SEPTIC TANK = 447.0  
PROP. GRADE ABOVE SEPTIC TANK = 449.0  
TOP OF SEPTIC TANK = 447.5  
INV. INTO SEPTIC TANK = 446.50  
INV. OUT OF SEPTIC TANK = 446.25  
PROP. GROUND AT CLEANOUT = 447.2  
INV. INTO CLEANOUT = 446.19  
INV. OUT OF CLEANOUT = 441.32  
EX. GROUND AT DISTRIBUTION BOX = 445  
INV. INTO DISTRIBUTION BOX = 441.1  
INV. OUT OF DISTRIBUTION BOX = 441.0

### SEPTIC PROFILE

SCALE: 1" = 50'

Approved Septic System Plan  
Howard County Health Department  
*Signature* 3/4/2023  
Date

★ Approved for SBRs

### REVISED SEPTIC SYSTEM RIVERCREST

LOT 3  
15427 RIVERCREST COURT

ZONED: RC-DEO PLAT NO.: 18208 THRU 18210  
TAX MAP NO.: 21 GRID NO.: 20 PARCEL NO.: 270  
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: MARCH 8, 2023

SHEET 1 OF 1

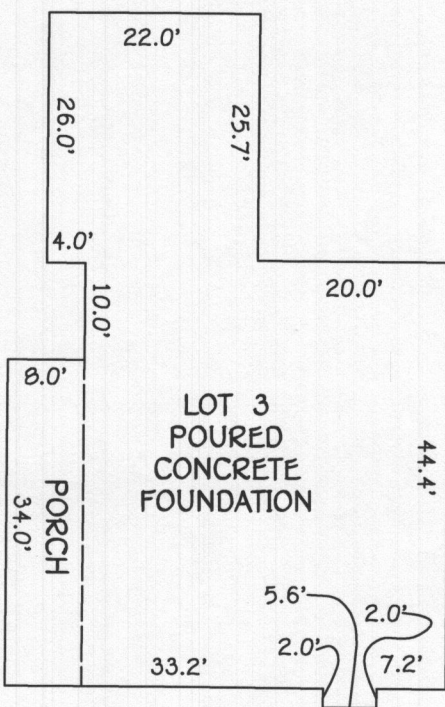
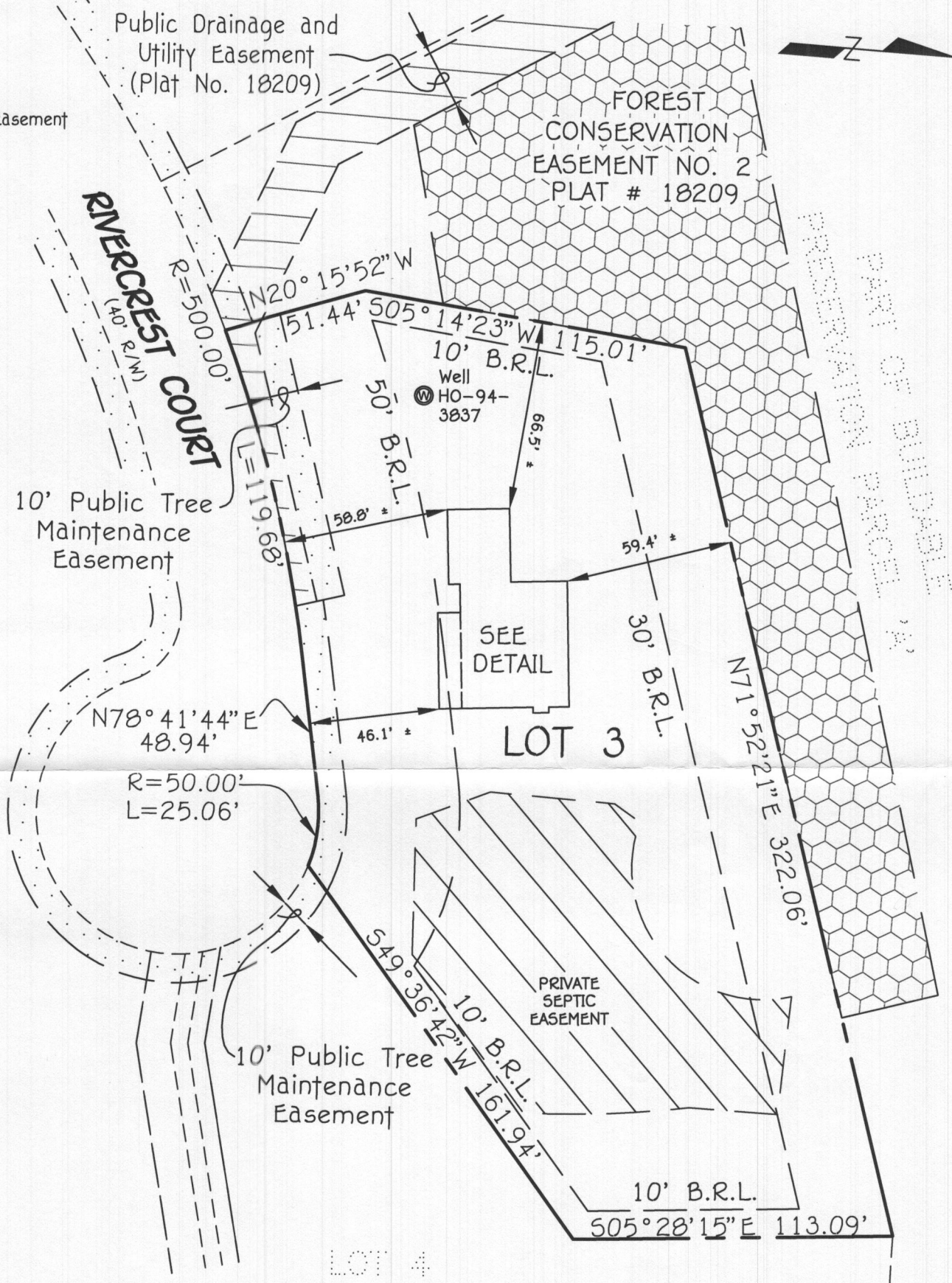


**GENERAL NOTES:**

- 1) THIS LOCATION DRAWING IS PREPARED FOR THE BENEFIT OF THE CLIENT SIGNING THE HOUSE LOCATION SURVEY APPROVAL FORM INsofar AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING OR REFINANCING OF THE PROPERTY SHOWN HEREON. UNLESS INDICATED AS BEING A BOUNDARY SURVEY, THIS LOCATION DRAWING IS NOT INTENDED FOR USE IN THE ESTABLISHMENT OF PROPERTY LINES AND IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATIONS OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. AS A RESULT, THIS LOCATION DRAWING DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING FOR RE-FINANCING.
- 2) SUBJECT PROPERTY IS SHOWN IN ZONE X ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL No. 24027C0045D EFFECTIVE NOV. 6, 2013.
- 3) THE OFFSETS FROM BUILDING LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 0.2'
- 4) NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- 5) THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-94-3837 HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.
- 6) PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE 7/14/2023.
- 7) BUILDING PERMIT: B-23000510

**Legend**

- Existing 10' Public Tree Maintenance Easement (Plat Nos. 18208 Thru 18210)
- Public Drainage and Utility Easement (Plat No. 18209)
- Forest Conservation Easement (Plat No. 18209)
- Private Septic Easement



DETAIL:  
1"=20'

LOT 3  
RIVERCREST  
LOTS 1 THRU 10,  
BUILDABLE PRESERVATION PARCEL 'A',  
NON-BUILDABLE PRESERVATION  
PARCELS 'B' & 'C' AND  
NONBUILDABLE BULK PARCEL 'D'  
FOURTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

#15427 RIVERCREST COURT  
B.R.L. = BUILDING RESTRICTION LINE  
TOP FOUNDATION ELEVATION = 451.6'±

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE.  
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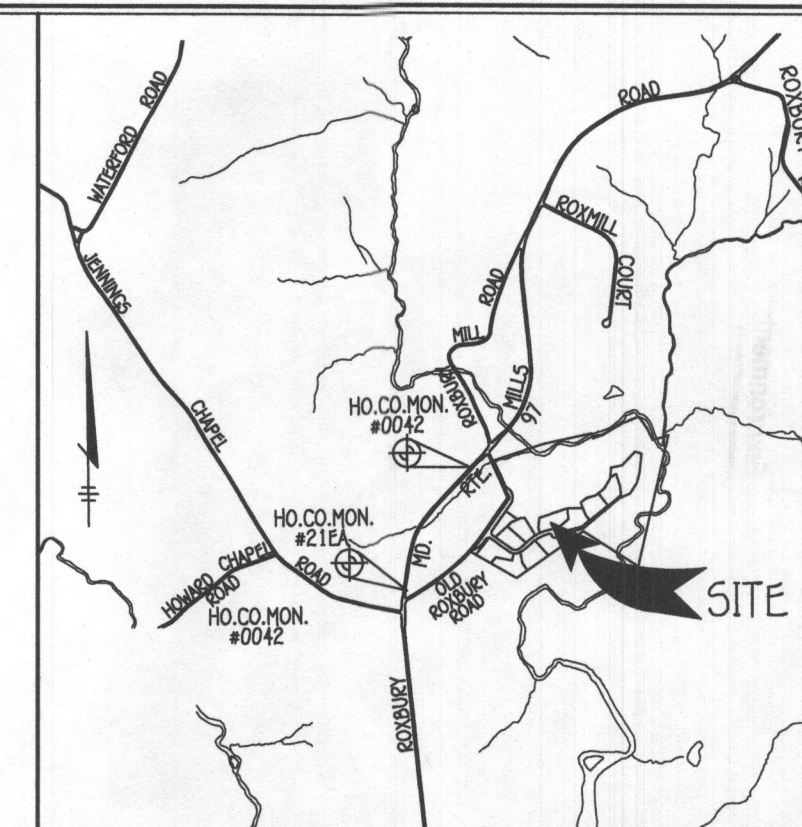
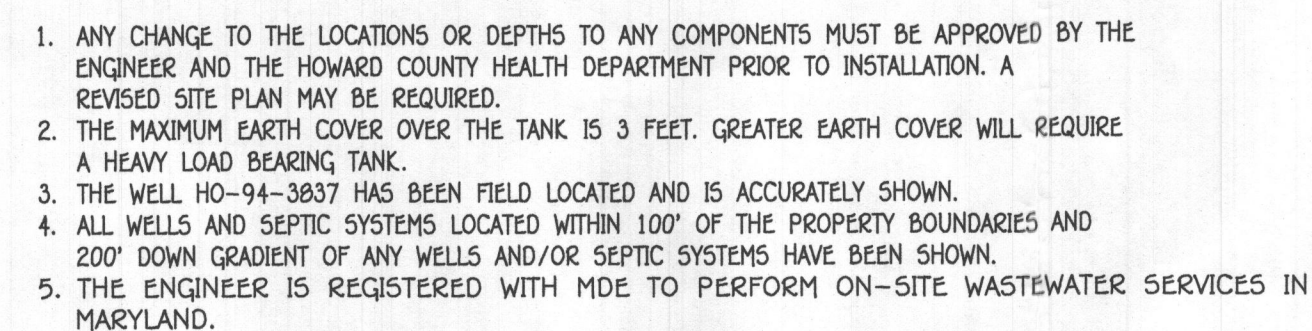
4/25/23  
PROFESSIONAL LAND SURVEYOR DATE  
REG. #21476

**HOUSE LOCATION  
DRAWING**

FOUNDATION LOCATION: 4/12/23  
FINAL LOCATION:  
BOUNDARY SURVEY:

SCALE: 1"=50'  
DATE: 4/13/2022  
DRAWN BY: WAS  
CHECKED BY: FM II  
PROJECT No.: 30636-6004

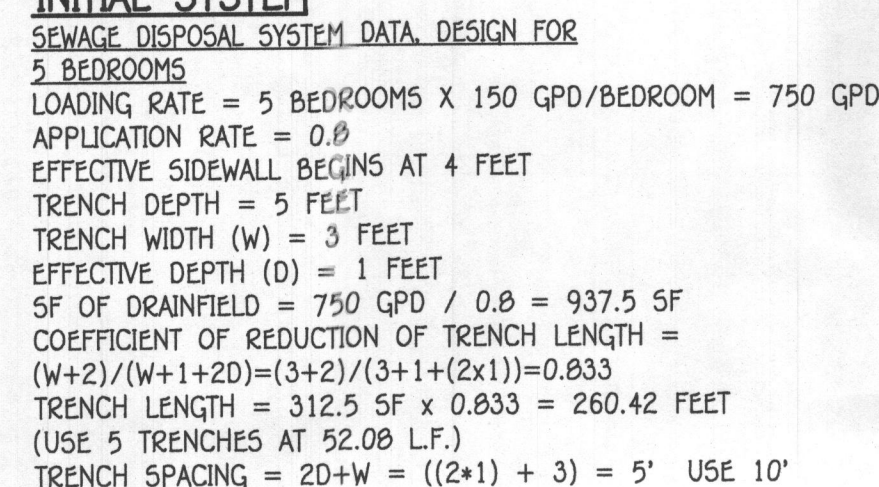




Howard County ADC, Map Map #23, Grid C-2

VICINITY MAP

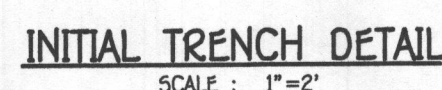
SCALE: 1" = 2000'



SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR  
5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1/2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 625 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  
 $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3)) = 0.500$   
TRENCH LENGTH =  $208.33 \text{ SF} \times 0.500 = 104.17 \text{ FEET}$   
(USE 3 TRENCHES AT 34.72 LF.)  
TRENCH SPACING =  $20\text{-}W + W = ((2 \times 3) + 3) = 9'$  USE 10'

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR  
2 BEDROOMS  
 LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
 APPLICATION RATE = 1.2  
 EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
 TRENCH DEPTH = 6 FEET  
 TRENCH WIDTH (W) = 3 FEET  
 EFFECTIVE DEPTH (D) = 3 FEET  
 SF OF DRAINFIELD = 750 GPD / 1.2 = 625 SF  
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BOTTOM TRENCH = 435  
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INV. IN = 434  
BOTTOM TRENCH = 433.0  
TRENCH 4:  
EX. GROUND ABOVE = 435  
INV. IN = 431  
BOTTOM TRENCH = 430.0  
TRENCH 5:  
EX. GROUND ABOVE = 4  
INV. IN = 428  
BOTTOM TRENCH = 427.0



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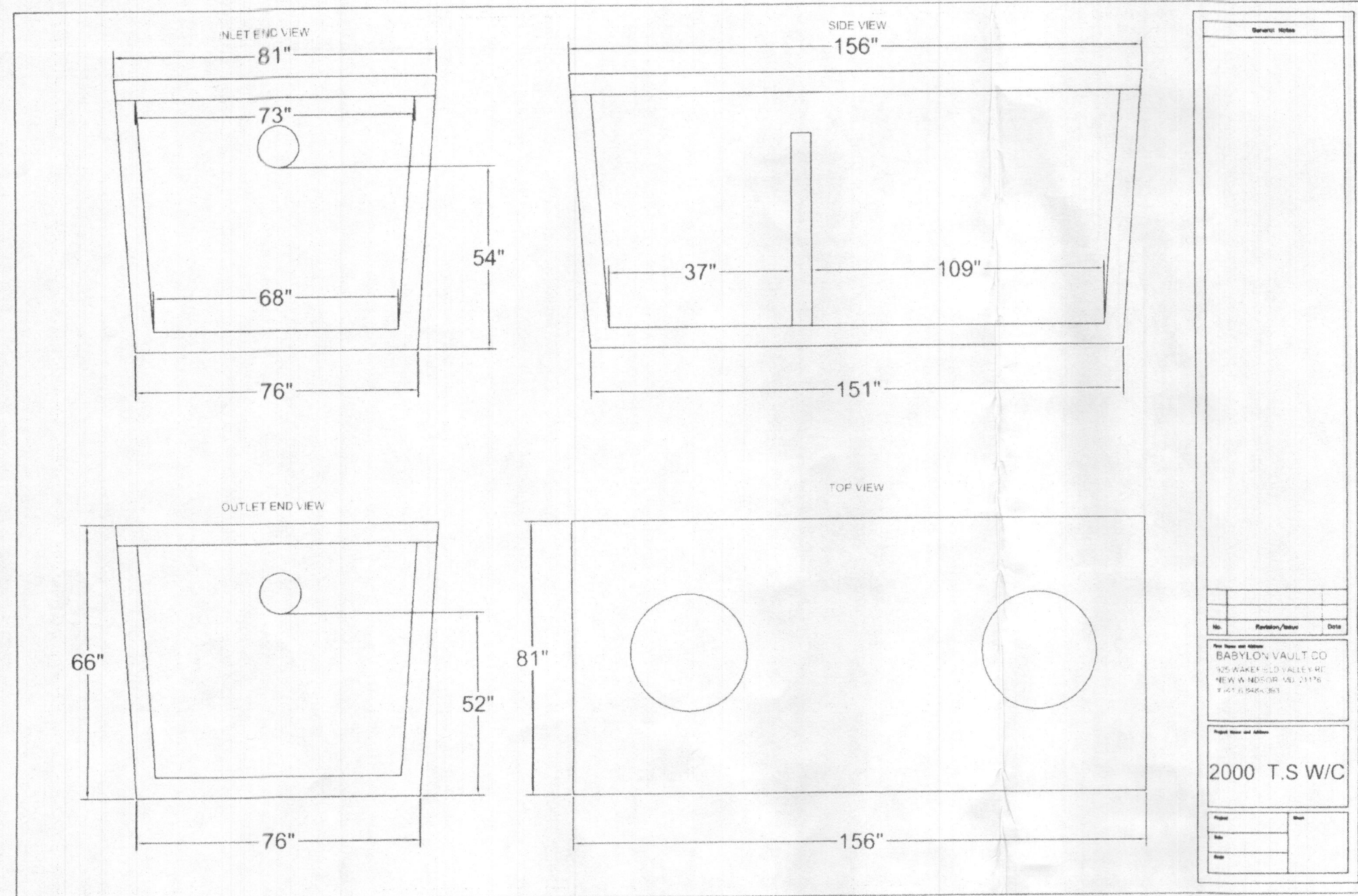
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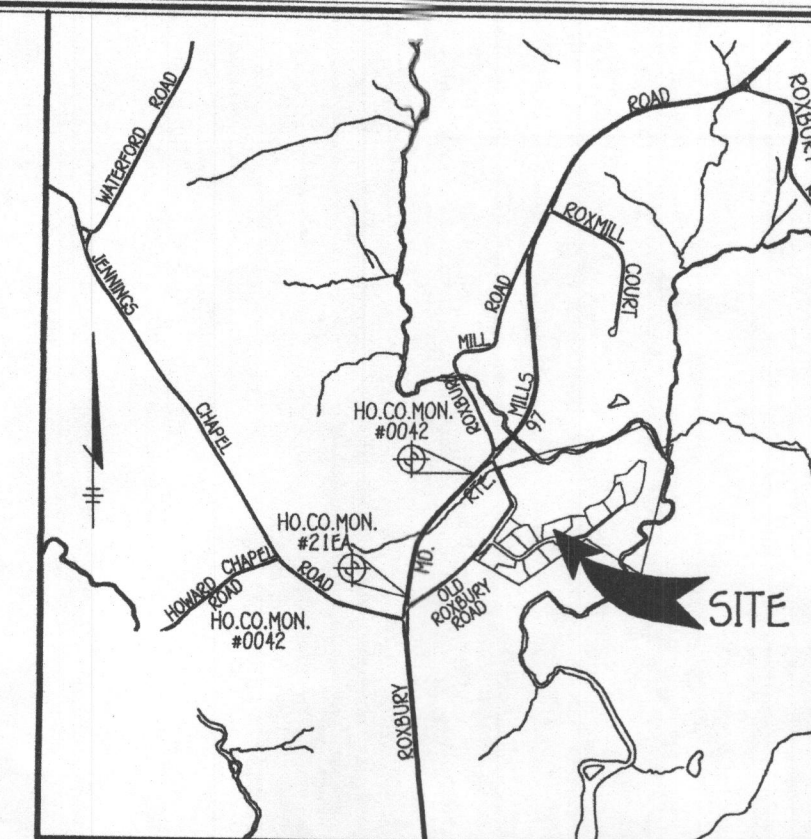
SHEET 1 OF 1





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  - EXISTING 10' CONTOURS
  - EXISTING TREE LINE
  - SOIL LINES AND TYPES
  - ⊙ DENOTES EXISTING WELL
  - DENOTES PASSED PERC
  - DENOTES FAILED PERC



### INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 4 BEDROOMS  
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APPLICATION RATE = 0.8  
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TRENCH DEPTH = 5 FEET  
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TRENCH LENGTH = 250 SF X 0.833 = 208.33 FEET  
(USE 4 TRENCHES AT 52.08 L.F.)  
TRENCH SPACING =  $2D+W = ((2 \times 1) + 3) = 5'$  USE 10'

### 1ST REPLACEMENT SYSTEM

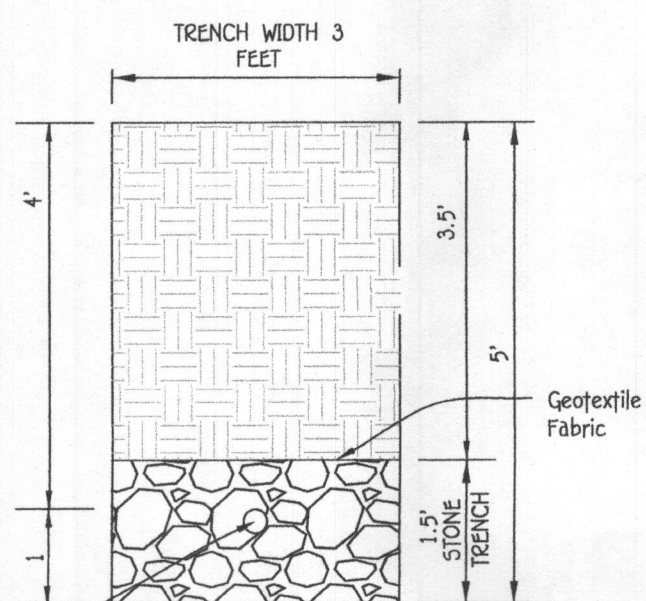
SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 4 BEDROOMS  
LOADING RATE = 4 BEDROOMS X 150 GPD/BEDROOM = 600 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 6 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 600 GPD / 1.2 = 500 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3)) = 0.500$   
TRENCH LENGTH = 166.67 SF X 0.500 = 83.33 FEET  
(USE 2 TRENCHES AT 41.67 L.F.)  
TRENCH SPACING =  $2D+W = ((2 \times 3) + 3) = 9'$  USE 10'

### 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 4 BEDROOMS  
LOADING RATE = 4 BEDROOMS X 150 GPD/BEDROOM = 600 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 6 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 600 GPD / 1.2 = 500 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3)) = 0.500$   
TRENCH LENGTH = 166.67 SF X 0.500 = 83.33 FEET  
(USE 2 TRENCHES AT 41.67 L.F.)  
TRENCH SPACING =  $2D+W = ((2 \times 3) + 3) = 9'$  USE 10'

#### TRENCH DATA:

TRENCH 1:  
EX. GROUND ABOVE = 444  
INV. IN = 440  
BOTTOM TRENCH = 439  
TRENCH 2:  
EX. GROUND ABOVE = 440  
INV. IN = 436  
BOTTOM TRENCH = 435  
TRENCH 3:  
EX. GROUND ABOVE = 438  
INV. IN = 434  
BOTTOM TRENCH = 433.0  
TRENCH 4:  
EX. GROUND ABOVE = 435  
INV. IN = 431  
BOTTOM TRENCH = 430.0



**INITIAL TRENCH DETAIL**

SCALE: 1"=2'

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10772 BALDWIN NATIONAL PIKE  
ELIOTT CITY, MARYLAND 21836  
(410) 461-8995

### 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. 20740, EXPIRATION DATE: 02/22/2023.

Signature of Professional Engineer

DATE: 9/13/22

### PLAN

SCALE: 1" = 30'

### OWNER

ROXBURY FARM, LLC  
C/O COLUMBIA DEVELOPERS LLC  
6420 AUTUMN SKY WAY  
COLUMBIA, MARYLAND 21044  
410-730-3940

### BUILDER/DEVELOPER

COLUMBIA BUILDS  
P.O. BOX 99  
COLUMBIA, MARYLAND 21044  
410-730-3940

### SEPTIC SYSTEM RIVERCREST

LOT 3  
15427 RIVERCREST COURT

ZONED: RC-DEO PLAT NO.: 18208 THRU 18210  
TAX MAP NO.: 21 GRID NO.: 20 PARCEL NO.: 270  
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: AUGUST 31, 2022

SHEET 1 OF 1

### SEPTIC PROFILE

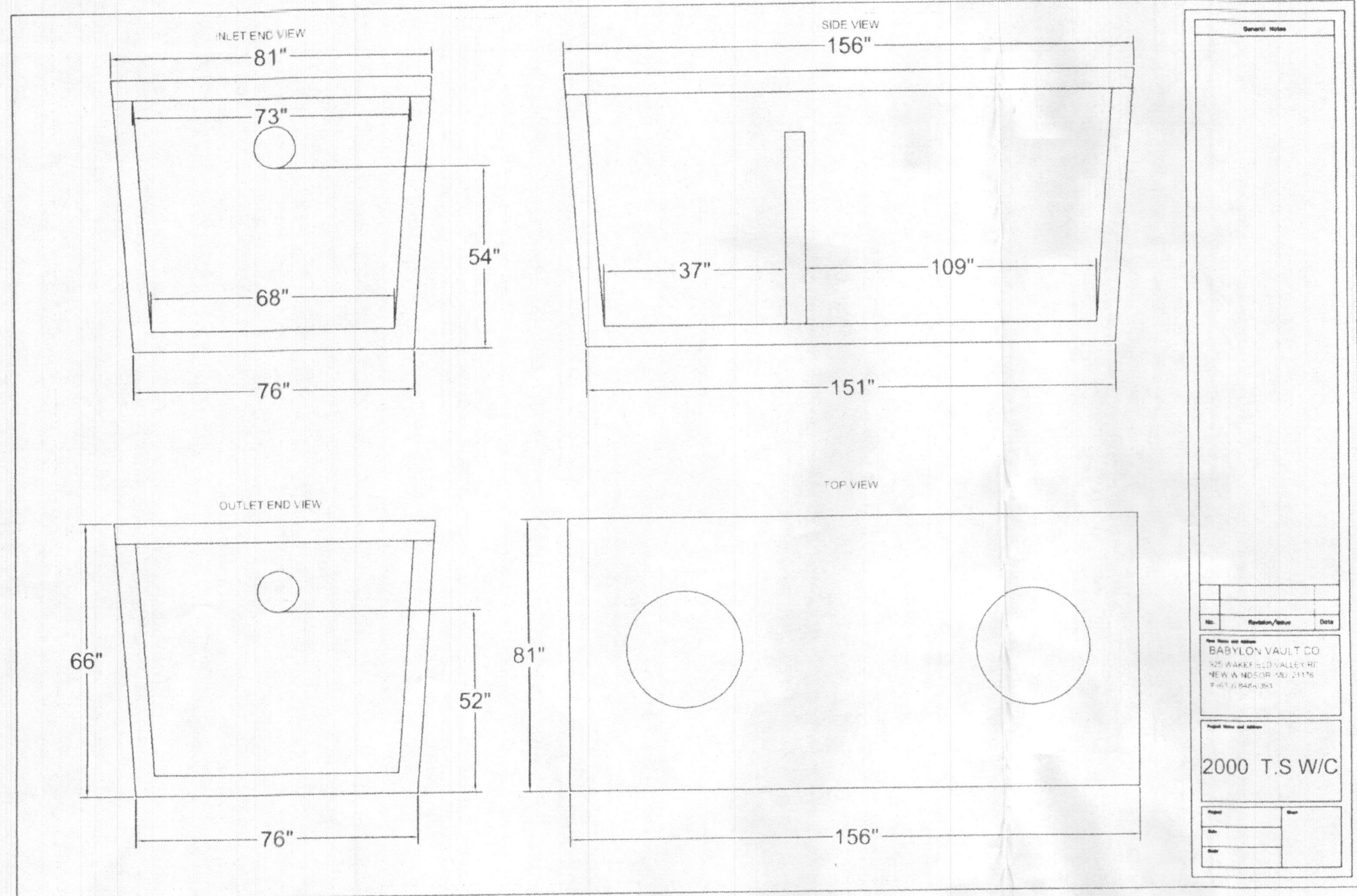
SCALE: 1"=50'

FFE 448.0  
BSE 439.0  
INV. OUT OF HOUSE = 444.55  
PROP. GROUND AT CLEANOUT #1 45.9  
INV. INTO CLEANOUT = 444.39  
INV. OUT OF CLEANOUT = 444.29  
EX. GROUND AT SEPTIC TANK = 441.17  
PROP. GRADE ABOVE SEPTIC TANK 16  
TOP OF SEPTIC TANK = 445.0  
INTO SEPTIC TANK = 444.0  
INV. OUT OF SEPTIC TANK = 443.7  
PROP. GROUND AT CLEANOUT #1 45.5  
INV. INTO CLEANOUT = 441.17  
EX. GROUND AT DISTRIBUTION BOX 441.17  
INV. INTO DISTRIBUTION BOX = 441.17  
INV. OUT OF DISTRIBUTION BOX = .0

Approved Septic System Plan  
Howard County Health Department  
Signature: [Signature] Date: 10/1/2022

\* Approved for 4 BRs





### INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 4 BEDROOMS  
LOADING RATE = 4 BEDROOMS X 150 GPD/BEDROOM = 600 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 1 FEET  
SF OF DRAINFIELD = 600 GPD / 0.8 = 750 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+2(1)) = 0.833$   
TRENCH LENGTH = 250 SF x 0.833 = 208.33 FEET  
(USE 4 TRENCHES AT 52.08 L.F.)  
TRENCH SPACING =  $2D+W = (2(1) + 3) = 5'$  USE 10'

### 1ST REPLACEMENT SYSTEM

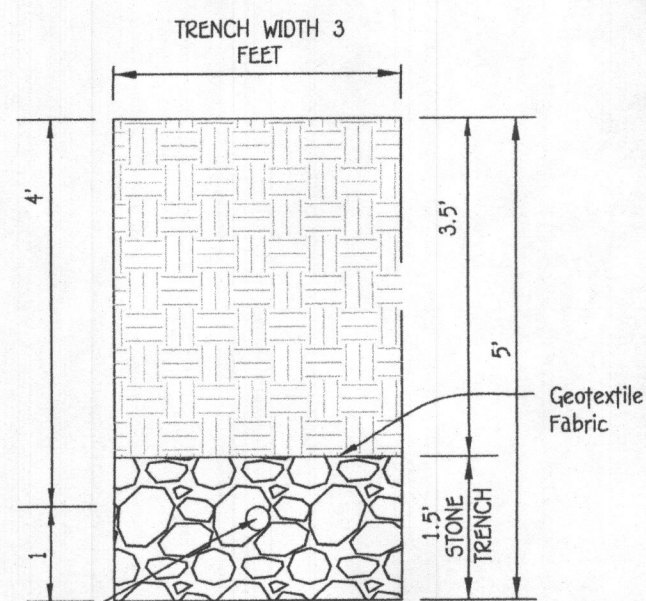
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 4 BEDROOMS  
LOADING RATE = 4 BEDROOMS X 150 GPD/BEDROOM = 600 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 6 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 600 GPD / 1.2 = 500 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+2(3)) = 0.500$   
TRENCH LENGTH = 166.67 SF x 0.500 = 83.33 FEET  
(USE 2 TRENCHES AT 41.67 L.F.)  
TRENCH SPACING =  $2D+W = (2(3) + 3) = 9'$  USE 10'

### 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 4 BEDROOMS  
LOADING RATE = 4 BEDROOMS X 150 GPD/BEDROOM = 600 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 6 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 600 GPD / 1.2 = 500 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+2(3)) = 0.500$   
TRENCH LENGTH = 166.67 SF x 0.500 = 83.33 FEET  
(USE 2 TRENCHES AT 41.67 L.F.)  
TRENCH SPACING =  $2D+W = (2(3) + 3) = 9'$  USE 10'

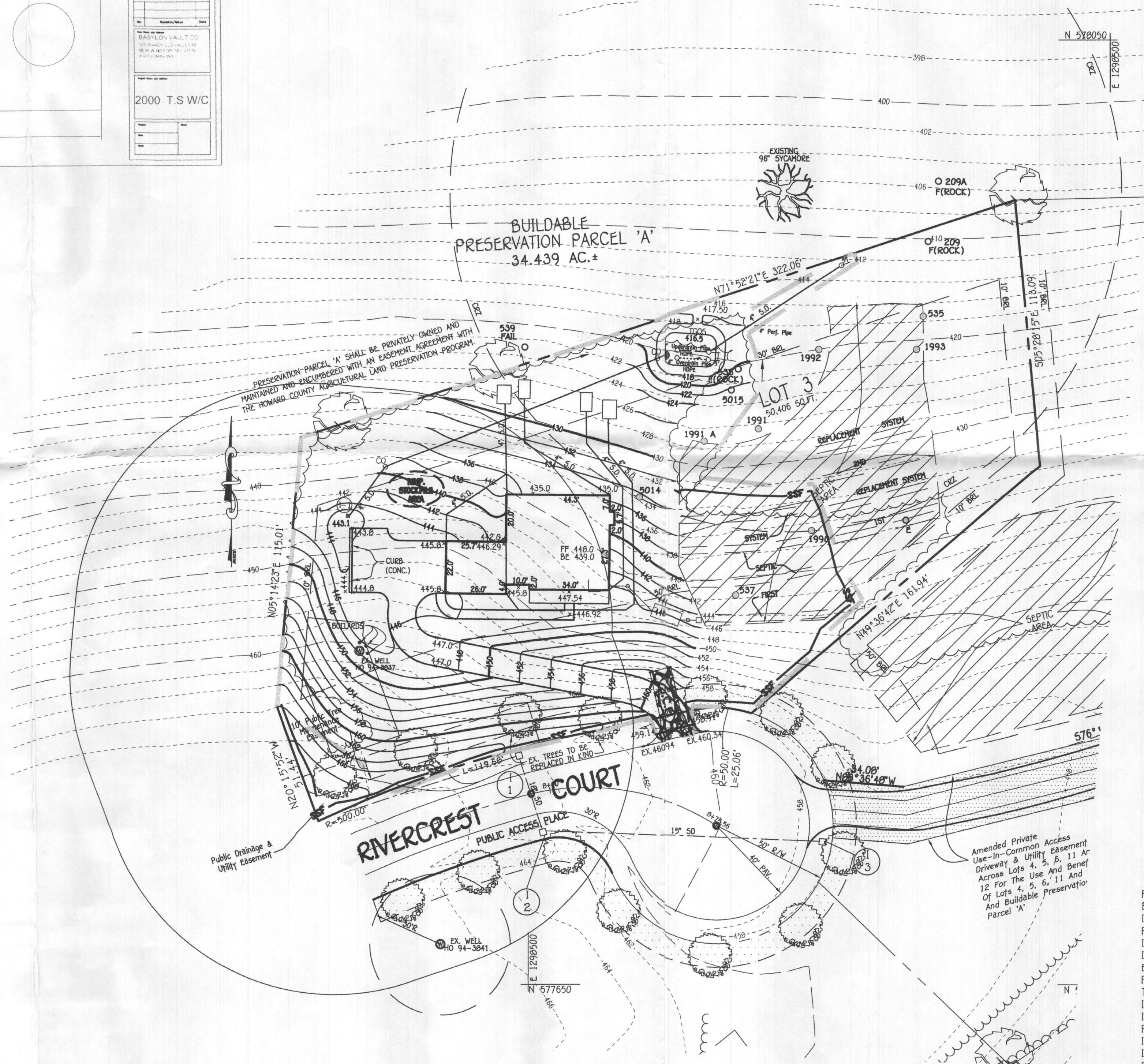
#### TRENCH DATA:

TRENCH 1:  
EX. GROUND ABOVE = 444  
INV. IN = 440  
BOTTOM TRENCH = 439  
TRENCH 2:  
EX. GROUND ABOVE = 440  
INV. IN = 436  
BOTTOM TRENCH = 435  
TRENCH 3:  
EX. GROUND ABOVE = 438  
INV. IN = 434  
BOTTOM TRENCH = 433.0  
TRENCH 4:  
EX. GROUND ABOVE = 435  
INV. IN = 431  
BOTTOM TRENCH = 430.0



4" PVC INV. INTO TRENCH

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. THE WELL HO-94-3837 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
4. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.



**PLAN**  
SCALE: 1" = 30'

### 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. 20748, EXPIRATION DATE: 02/22/2023.

Signature Of Professional Engineer

9/3/22  
DATE

### OWNER

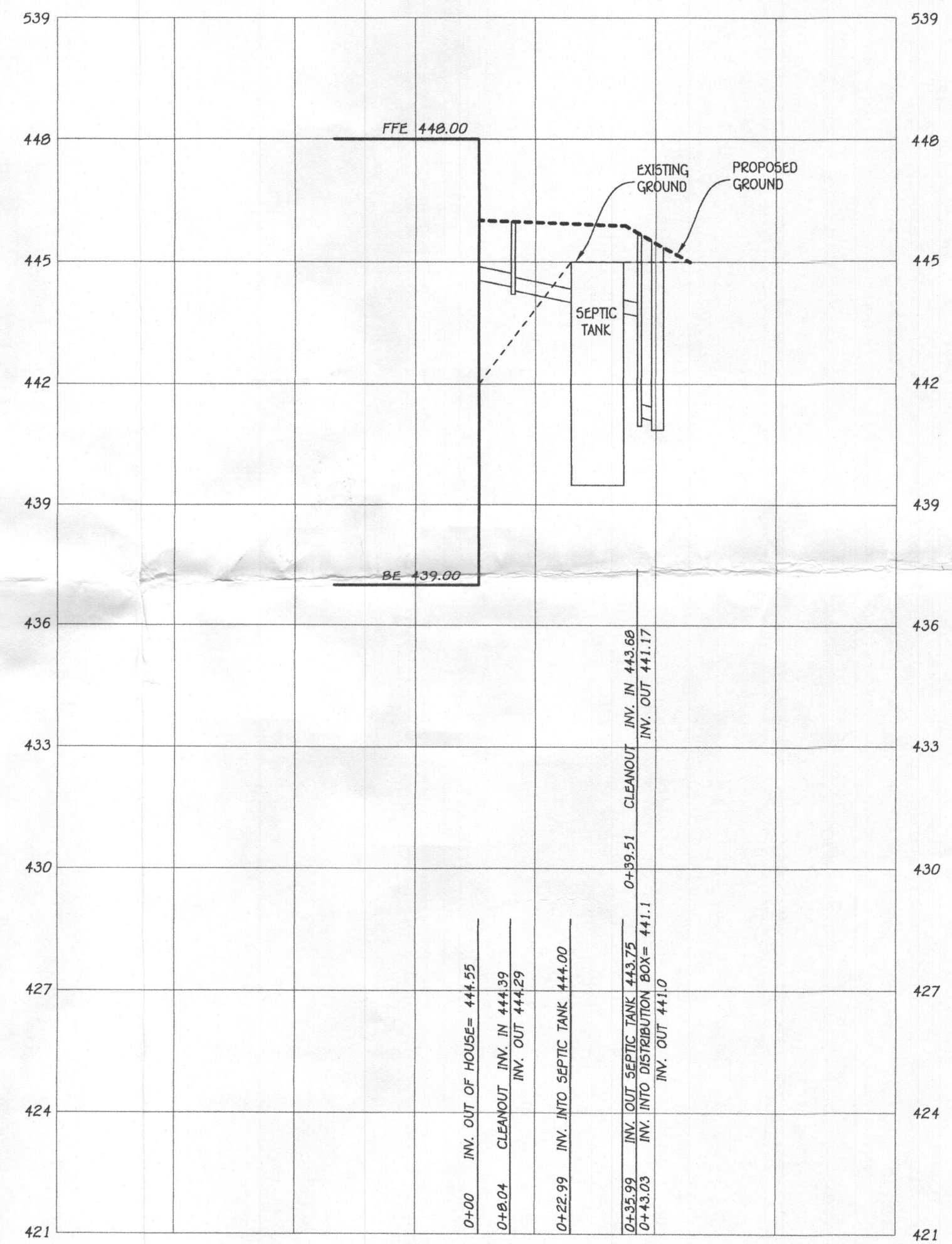
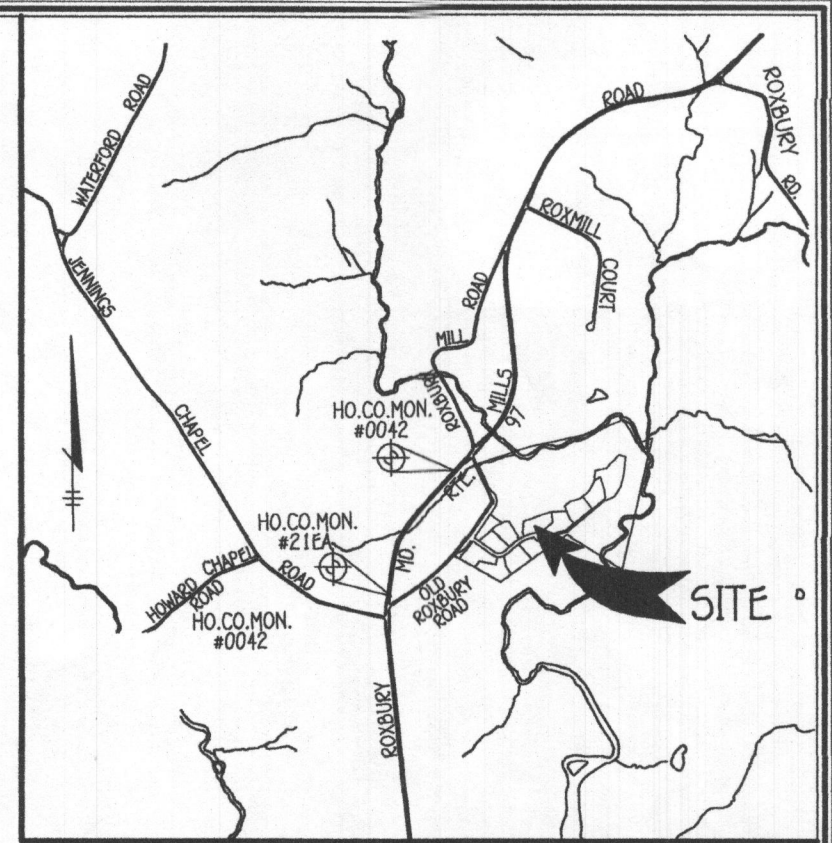
ROXBURY FARM, LLC  
C/O COLUMBIA DEVELOPERS LLC  
6420 AUTUMN SKY WAY  
COLUMBIA, MARYLAND 21044  
410-730-3940

### BUILDER/DEVELOPER

COLUMBIA BUILDERS  
P.O. BOX 999  
COLUMBIA, MARYLAND 21044  
410-730-3940

### LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- EXISTING TREE LINE
- SOIL LINES AND TYPES
- ⊙ DENOTES EXISTING WELL
- DENOTES PASSED PERC
- DENOTES FAILED PERC



FFE 448.0  
BSE 439.0  
INV. OUT OF HOUSE = 444.55  
PROP. GROUND AT CLEANOUT #1 = 445.9  
INV. INTO CLEANOUT = 444.39  
INV. OUT OF CLEANOUT = 444.29  
EX. GROUND AT SEPTIC TANK = 442  
PROP. GRADE ABOVE SEPTIC TANK = 446  
TOP OF SEPTIC TANK = 445.0  
INTO SEPTIC TANK = 444.0  
INV. OUT OF SEPTIC TANK = 443.75  
PROP. GROUND AT CLEANOUT #1 = 445.5  
INV. INTO CLEANOUT = 443.68  
INV. OUT OF CLEANOUT = 441.17  
EX. GROUND AT DISTRIBUTION BOX = 445  
INV. INTO DISTRIBUTION BOX = 441.1  
INV. OUT OF DISTRIBUTION BOX = 441.0

Approved Septic System Plan  
Howard County Health Department  
Signature: *[Signature]* Date: 10/14/2022

★ Approval for *SPB*  
4PRs

### SEPTIC SYSTEM RIVERCREST

LOT 3  
15427 RIVERCREST COURT

ZONED: RC-DEO PLAT NO.: 18208 THRU 18210  
TAX MAP NO.: 21 GRID NO.: 20 PARCEL NO.: 270  
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: AUGUST 31, 2022  
SHEET 1 OF 1

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENARY SQUARE OFFICE PARK - 10776 BALDWIN NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2099