



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:

8-2-18

## ONSITE SEWAGE DISPOSAL SYSTEM

P

563970

APPROVAL DATE:

9/10/18 SEC

## PERMIT: CONSTRUCTION

A

PROPERTY ADDRESS: 1024 Thunderbird Drive

SUBDIVISION: Fairlane Farms

LOT: 40

TAX ID:

CONTRACTOR: South Carroll Backhoe

EMAIL: [scbackhoe@comcast.com](mailto:scbackhoe@comcast.com)

CONTRACTOR ADDRESS: 4410 Salem Bottom Road, Westminster, MD 21157

PHONE: 410-596-3618

PROPERTY OWNER: NV Homes

EMAIL:

OWNER ADDRESS: 9720 Patuxent Woods Drive, Columbia, MD 21046

PHONE: 410-379-5956

SEPTIC TANK SIZE (GALLONS): 2000

TANK MANUFACTURER: Babylon Vault or equivalent

PUMP MODEL: N/A

PUMP SIZE

N/A

PUMP TANK CAPACITY: N/A

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS: 5

APPLICATION RATE

1.2

TRENCHES:

LINEAR FEET REQUIRED: 87.50

INLET DEPTH: 4

TRENCH WIDTH: 3

MAXIMUM BOTTOM DEPTH: 8

MINIMUM SPACE

BETWEEN TRENCHES: 10

EFFECTIVE AREA BEGINNING DEPTH: 4

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: Hank Oswald

ISSUE DATE:

8-2-18

EXPIRATION DATE:

8-2-19

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

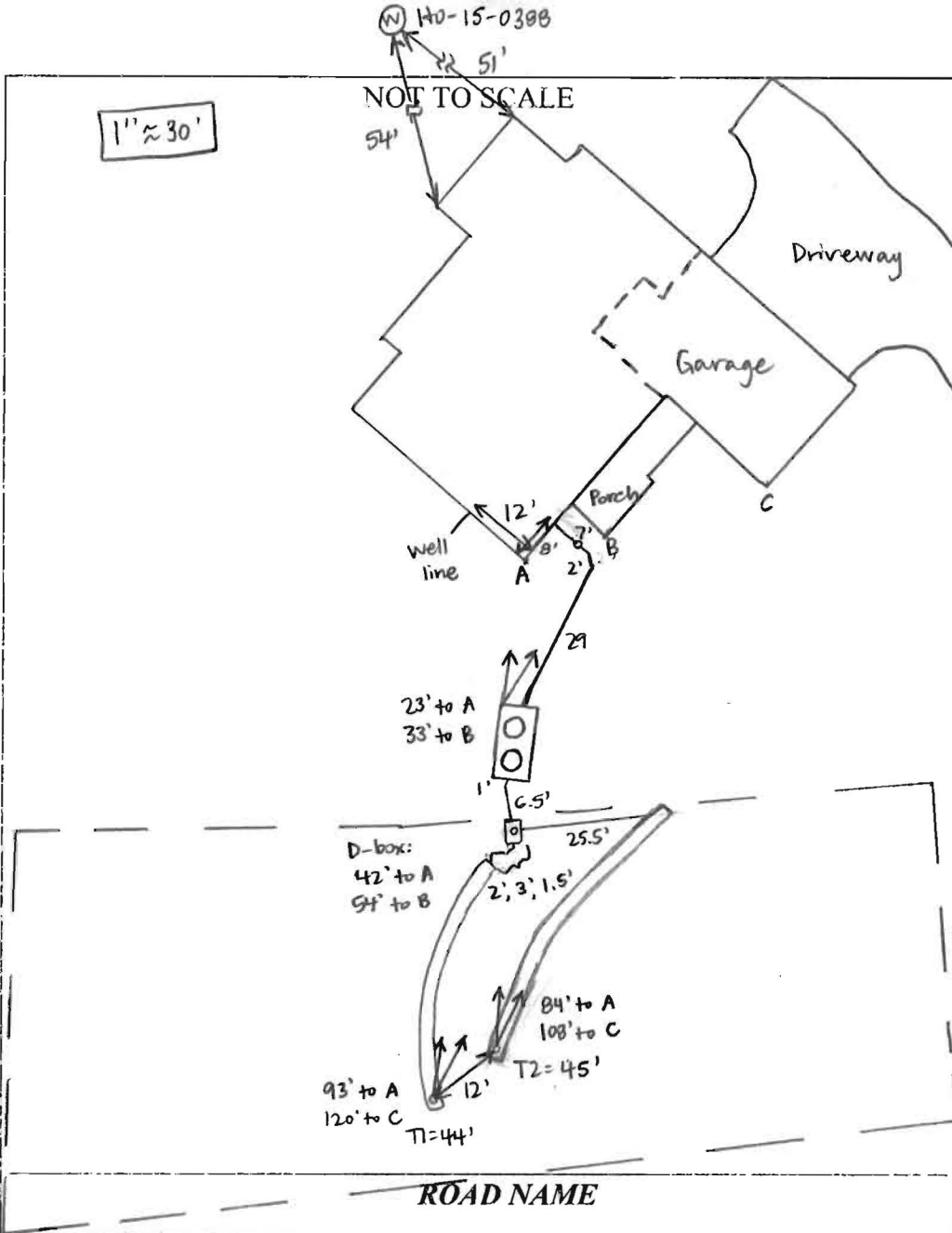
N/A

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
3'	4'	8'
NUMBER OF TRENCHES	2	
TOTAL LENGTH	89'	
ABSORPTION AREA	267' + SIDEWALL	
DISTRIBUTION BOX LEVEL	YES	
DISTRIBUTION BOX BAFFLE	YES	
DISTRIBUTION BOX PORT	YES	

# SEPTIC TANK DATA

SEPTIC TANK I LEVEL	YES	
MANUFACTURER	BABYLON	
CAPACITY	2000	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	6-18-17	

# RUMP/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:

8/29/18 Met S. Carroll on site for layout. Tank + SDA corners staked. Shot contours - differs slightly than shown on plan. Trench ends closest to the house are closer, shapes of trenches are different. Laid out 2 x 44' trenches at highest part of SDA. Keep D-box closer to house to avoid laying pipe over perc hole. (SC)

INSTALLATION: 8/31/18 On site while tank was set. No obvious cracks on bottom or sides of tank. (SC)

9/4/18 Trenches complete + left open for inspection. 3' wide, 3-3.5' to stone. Pipe laid from house to tank, need house connection. Levelled speed levelers in D-box. (SC) 9/10/18 House connection made. (SC)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 9/10/18

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

**TO:** Fisher, Collins & Carter, Inc.  
10272 Baltimore National Pike  
Ellicott City, MD 21042

**FROM:** Hank Oswald, L.E.H.S.  
Well & Septic Program

**RE:** 1024 Thunderbird Drive  
Fairlane Farms, Lot 40

**Date:** April 24, 2018

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The OSDS Plan for 1024 Thunderbird Drive has been reviewed with the following comments:

- 1.) Application rates are incorrect. Should be 1.2 not 0.8. Please review septic specs and make changes to calculations as necessary.
- 2.) Initial trench detail and trench elevations are incorrect (i.e. bottom trench elevation 603.8?)
- 3.) Septic profile elevations do not match adjacent list of elevations
- 4.) Move d-box to center and split trenches. Adjust trench lengths according to new calculations.

## Oswald, Hank

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**From:** Oswald, Hank  
**Sent:** Wednesday, April 25, 2018 1:48 PM  
**To:** 'Tony Fertitta'  
**Subject:** OSDS Plan\_1024 Thunderbird Drive  
**Attachments:** OSDS Memo To FCC\_\_2018.pdf

Hi Tony:

Please see attached memo regarding the OSDS Plan for 1024 Thunderbird Drive. Please contact me with any questions.

Thanks,

Hank

Hank Oswald  
Licensed Environmental Health Specialist  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

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**FISHER, COLLINS  
& CARTER, INC.**

**CIVIL ENGINEERING CONSULTANTS  
and LAND SURVEYORS**

**Transmittal**

Terrell A. Fisher, P.E., L.S.  
Earl D. Collins, P.E.  
Charles J. Crovo, Sr., P.E., L.S.

Paul W. Kriebel, P.E.  
Mark L. Robel, P.L.S.  
Aldo M. Vitucci, P.E.  
Frank Manalansan II, L.S.  
Stephanie Tuite, RLA, P.E., LEED AP BD&C

Via: ☐ Fax ☐ Mail ☒ Messenger ☐ E-Mail ☐ To Be Picked Up  
☐ Fax (original to follow via U.S. Mail)

To: <b>Bureau of Environmental Health</b> <b>8930 Stanford Blvd.</b> <b>Columbia, Maryland 21046-4544</b>	Attn: <b>Hank</b> Fax: Phone: <b>410-313-2640</b>
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From: <b>Tony Fertitta</b>	CC:
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Re: <b>Fairlane Farms, Lot 40</b>	W.O.# <b>05106-3003</b>
Date: <b>April 23, 2018</b>	Pages: <b>0</b> <b>Page(s) Including this cover</b>

We are forwarding:	<input checked="" type="checkbox"/> Prints	<input type="checkbox"/> Copy of Letter	<input type="checkbox"/> Specifications	<input type="checkbox"/> Shop drawings	<input type="checkbox"/> Other
	<input type="checkbox"/> Urgent	<input type="checkbox"/> For your use	<input type="checkbox"/> As requested	<input checked="" type="checkbox"/> For Review & Comment	

Remarks:

**Re: Fairlane Farm, Lot 40, 1024 Fairlane Rd.**

**Here are 3 new copies of the OSDS for Lot 24 for your review. Please let me know if you have any questions.**

**Thank You,**

**Tony.**

**Fisher, Collins, & Carter, Inc. Ph. 410-461-2855**

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Twitter: HowardCoHealthDep

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

### SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

Address: Thunderbird Dr

Subdivision: Fairlane Farm Lot: 40

Initial system: Application rate: 1.2 Effective area beginning depth: 4' Bottom maximum depth: 8'

1<sup>st</sup> Replacement: Application rate: 1.2 Effective area beginning depth: 4' Bottom maximum depth: 8'

2<sup>nd</sup> Replacement: Application rate: 1.2 Effective area beginning depth: 4' Bottom maximum depth: 8'

Design Flow = 150 gallons per day per bedroom

Design flow ÷ application rate = square footage of drainfield required

Linear length of trench required = drainfield square footage x sidewall reduction percentage ÷ trench width

Sidewall reduction credit formula:

$$\frac{W + 2}{W + 1 + 2D} \times 100 = \text{Percent of length of standard trench where } W = \text{trench width and } D = \text{depth between effective area beginning depth and trench bottom.}$$

Standard design requirements:

- All trenches must be equal length unless low pressure dosed
- All trenches must be on contour
- Minimum trench spacing: 10' for all trenches utilizing sidewall reduction credit. Additional spacing may be necessary for any trench using over 3.5' of effective sidewall. In those cases, the spacing formula is  $2D + W$  up to a maximum spacing of 18'.
- Minimum trench spacing for trenches with no sidewall credit (bottom area only) is 6' for a 2' wide trench and 9' for a 3' wide trench (spacing is measured edge to edge)
- Maximum trench length is 100'
- Maximum pipe depth is 4'

Additional requirements:


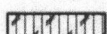
Approved: Hank Oswald Date: 1/30/18

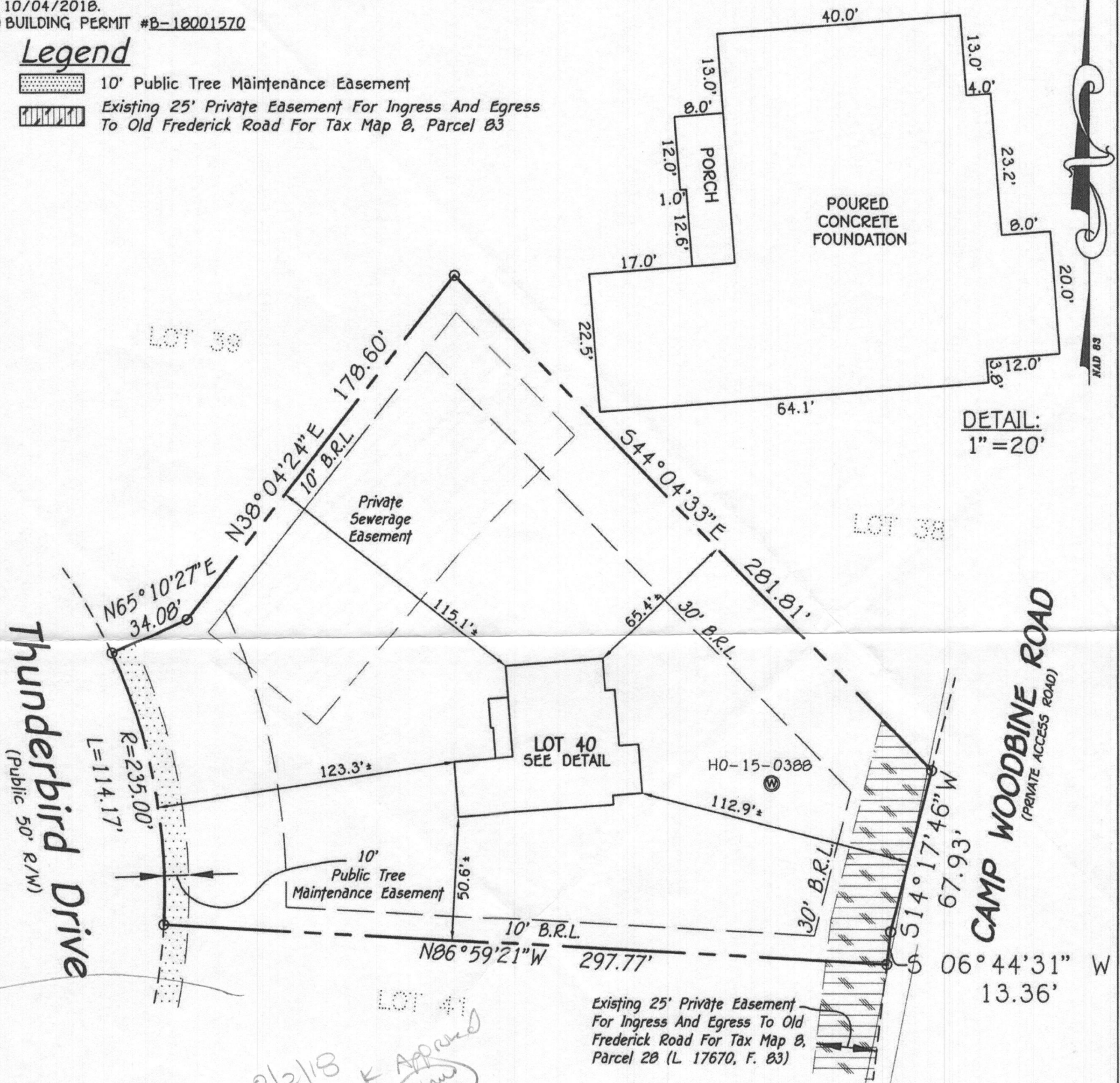


## GENERAL NOTES:

- 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. 24027C0035D EFFECTIVE 11-06-2013.
- 3) THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 1'.
- 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-15-0300) 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 PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 339, EXPIRATION DATE 10/04/2018.
- 7) BUILDING PERMIT #B-18001570

### Legend

-  10' Public Tree Maintenance Easement
-  Existing 25' Private Easement For Ingress And Egress To Old Frederick Road For Tax Map B, Parcel B3



#1024 THUNDERBIRD DRIVE  
B.R.L. = BUILDING RESTRICTION LINE  
TOP OF FOUNDATION ELEVATION = 613.1'±

LOT 40  
FAIRLANE FARM  
PHASE TWO  
RESUBDIVISION PLAT-LOTS 19 THRU 44, AND  
NON-BUILDABLE PRESERVATION PARCELS 'I' THRU 'N',  
& REVISION PLAT-BUILDABLE PRESERVATION PARCEL 'A'  
PLAT NOS. 24367 THRU 24372  
FOURTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461 - 2855

Drawing Name:



PROPERTY LINE SURVEYOR  
REG. #339

DATE

## HOUSE LOCATION DRAWING

FOUNDATION LOCATION: 7/11/18  
FINAL LOCATION:  
BOUNDARY SURVEY:

SCALE: 1"=50'  
DATE: 7/18/18  
DRAWN BY: MD  
CHECKED BY: MLR  
PROJECT No.: 05106-3003



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 HO-15-0300 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. 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.

NOTE: NO GRAVITY SEWER SERVICE FOR LOT 40



PLAN

SCALE: 1" = 30'



PROFESSIONAL CERTIFICATION

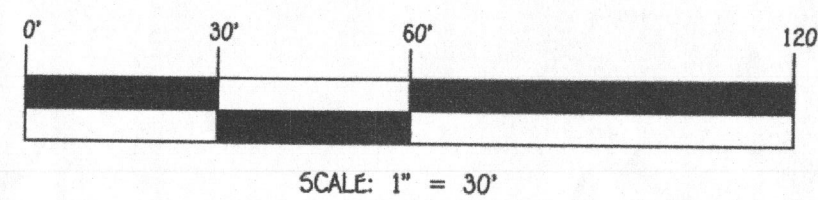
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2019.

Signature of Professional Engineer

4/21/18  
DATE

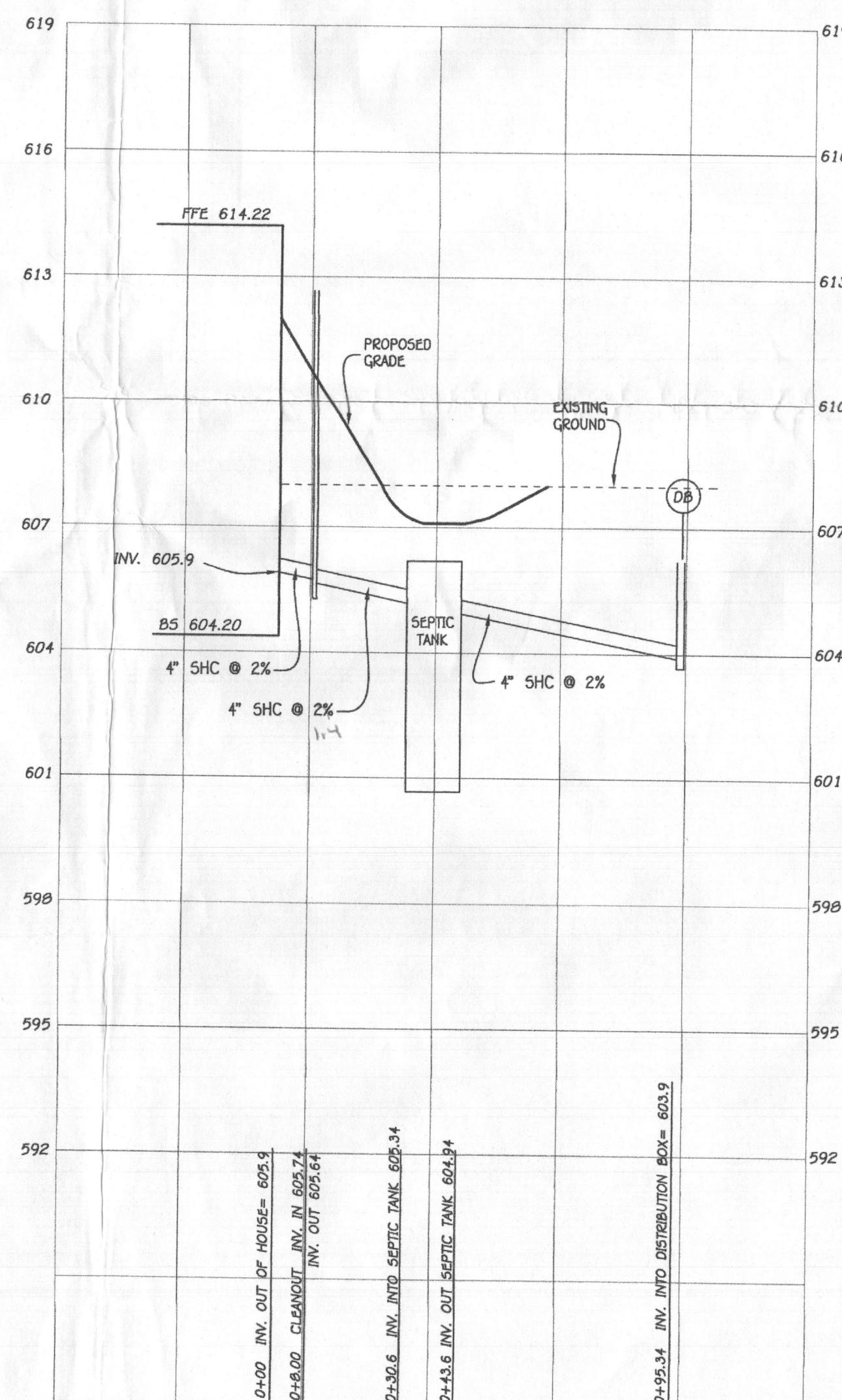
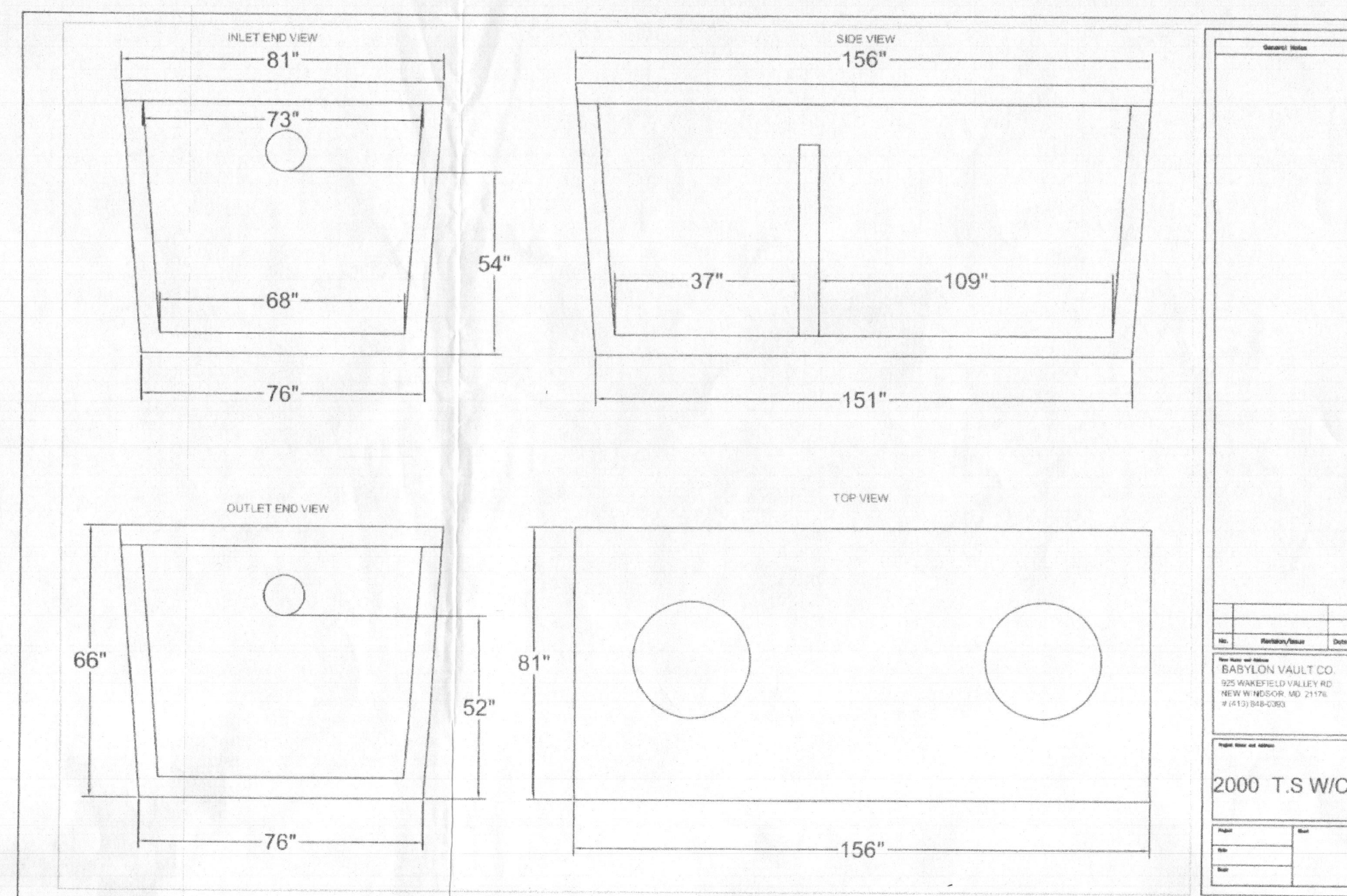
OWNER/DEVELOPER

INV HOMES  
9720 PATUXENT WOODS DRIVE  
COLUMBIA, MD 21046  
410-379-5956

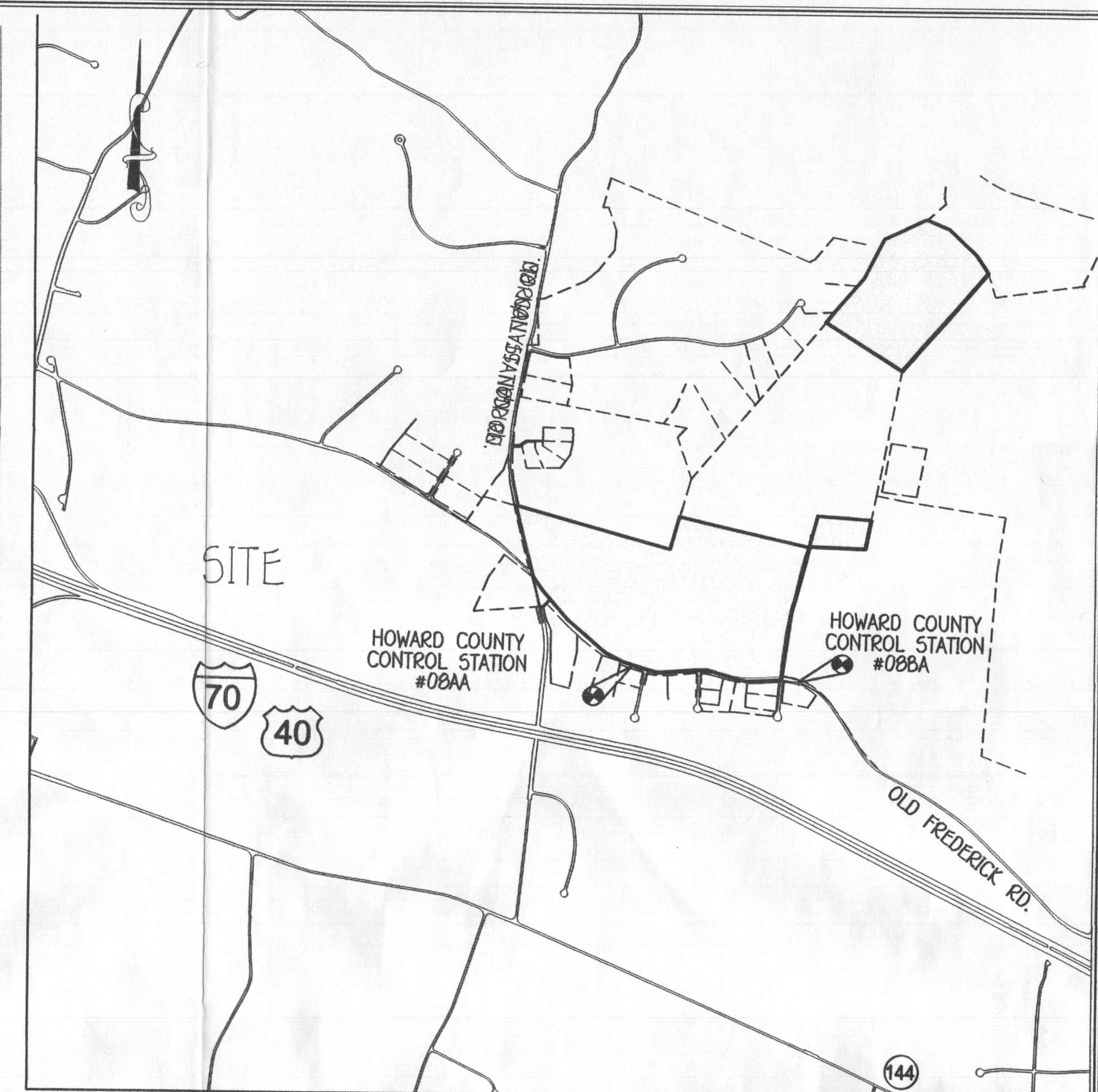


SCALE: 1" = 30'

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2005



SEPTIC PROFILE  
SCALE: 1" = 30'



VICINITY MAP

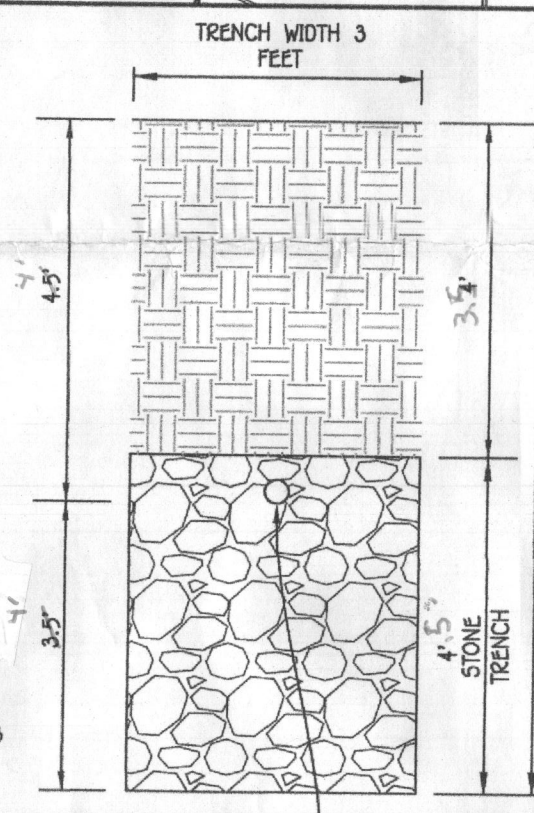
SCALE: 1" = 1200'

FFE 614.22  
BSE 604.20  
INV. OUT OF HOUSE = 604.93  
PROP. GROUND AT CLEANOUT #1 = 611.8  
INV. INTO CLEANOUT = 604.89  
INV. OUT OF CLEANOUT = 604.79  
EX. GROUND AT SEPTIC TANK = 607.1  
PROP. GRADE ABOVE SEPTIC TANK = 607.3  
TOP OF SEPTIC TANK = 605.34  
INV. INTO SEPTIC TANK = 604.34  
INV. OUT OF SEPTIC TANK = 604.09  
EX. GROUND AT DISTRIBUTION BOX = 607.8  
INV. INTO DISTRIBUTION BOX = 603.9  
INV. OUT OF DISTRIBUTION BOX = 603.8

TRENCH DATA:

TRENCH 1:  
EX. GROUND ABOVE = 607.8  
INV. IN = 603.8  
BOTTOM TRENCH = 599.8

TRENCH 2:  
EX. GROUND ABOVE = 607.8  
INV. IN = 603.8  
BOTTOM TRENCH = 599.8



INITIAL TRENCH DETAIL

SCALE: 1" = 2'

INITIAL 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 4 FEET  
TRENCH DEPTH = 0 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 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+(2x4))=.42  
TRENCH LENGTH = 208.33 SF x .42 = 87.50 FEET  
(USE 2 TRENCHES AT 43.75 L.F.)  
TRENCH SPACING = 20+W = ((2x2) + 3) = 7' 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 4 FEET  
TRENCH DEPTH = 0 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 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+(2x4))=.42  
TRENCH LENGTH = 208.33 SF x .42 = 87.50 FEET  
(USE 2 TRENCHES AT 43.75 L.F.)  
TRENCH SPACING = 20+W = ((2x2) + 3) = 7' USE 10'

SEPTIC SYSTEM  
INSTALLATION SITE PLAN

LOT 40

1024 THUNDERBIRD DRIVE

FAIRLANE FARMS

PHASE TWO

ZONED: RC-DEO

TAX MAP NO.: 8 GRID NO.: 2 PARCEL NO.: 8  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1"=30' DATE: APRIL 26, 2017  
SHEET 1 OF 1

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
40	1024 THUNDERBIRD DRIVE