**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](http://www.facebook.com/hocohealth)

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

RECEIPT DATE: 3/4/19**ONSITE SEWAGE DISPOSAL SYSTEM**P 564773APPROVAL DATE: 3/18/19 SEC**PERMIT: CONSTRUCTION**

A \_\_\_\_\_

PROPERTY ADDRESS: 15208 Torino WaySUBDIVISION: Fairlane FarmsLOT: 29

TAX ID: \_\_\_\_\_

CONTRACTOR: South Carroll BackhoeEMAIL: scbackhoe@comcast.comCONTRACTOR ADDRESS: 4410 Salem Bottom Road, Westminster, MD 21157PHONE: 410-596-3618PROPERTY OWNER: NV Homes

EMAIL: \_\_\_\_\_

OWNER ADDRESS: 9720 Patuxent Woods Drive, Columbia, MD 21046PHONE: 410-379-5956SEPTIC TANK SIZE (GALLONS): 2000TANK MANUFACTURER: Babylon Vault or equivalentPUMP MODEL: N/A

PUMP SIZE

N/APUMP TANK CAPACITY: N/A

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS: 5

APPLICATION RATE

1.2

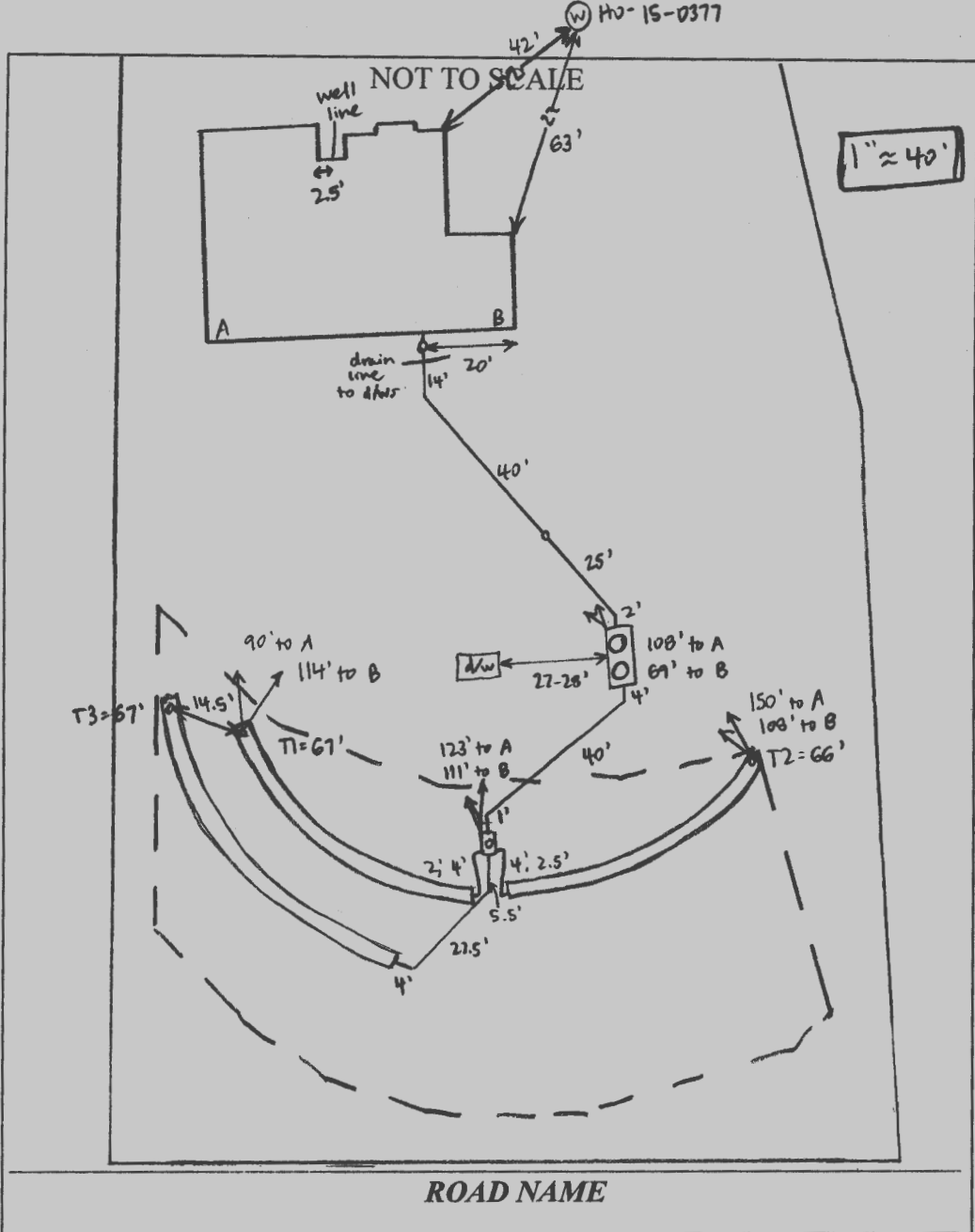
TRENCHES:	LINEAR FEET REQUIRED: <u>195.31</u>	INLET DEPTH: <u>1.5</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>7</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>5</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Install 3 trenches @ 65.10 FT	

ISSUED BY: Hank OswaldISSUE DATE: 3/4/19EXPIRATION DATE: 3/4/20**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

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'	1.5'	7'
NUMBER OF TRENCHES		3
TOTAL LENGTH		200'
ABSORPTION AREA		600' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA	
SEPTIC TANK 1 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	2-4-18

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:

3/8/19 Met S. Carroll on site for layout. Tank + SDA corners staked. Shot contour + laid out 3-65' trenches. D-box to be in middle of upper SDA line to reach trenches, move tank downhill and out of fill. Builder on site + OK with changes. (SC)

#### INSTALLATION:

3/13/19 House connection made. Tank set, 27-28' from edge of drywell (dug + left open by installers). (SC) 3/14/19 Pipe laid from house to tank and tank to D-box. T2 dug. S. Carroll adding stone 3' wide 7' bottom, 1.5' inlet. (SC) 3/15/18 T1 dug + S. Carroll adding stone 3' wide 1.5' inlet. (SC) 3/18/19 T3 finished + left open for inspection. Levelled speed levelers in D-box. (SC)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 3/18/19

## Oswald, Hank

---

**From:** Tony Fertitta <tonyf@fcc-eng.com>  
**Sent:** Friday, January 11, 2019 9:46 AM  
**To:** Oswald, Hank  
**Subject:** RE: BP Plan\_15208 Torino Way

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

ok thanks

---

**From:** Oswald, Hank [<mailto:hoswald@howardcountymd.gov>]  
**Sent:** Friday, January 11, 2019 9:29 AM  
**To:** Tony Fertitta  
**Subject:** BP Plan\_15208 Torino Way

Hi Tony:

The OSDS Plan has been approved. Please revise the permit plot plan with new elevations near tank to DILP.

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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---

**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: 15208 Torino Way**  
**Fairlane Farms, Lot 29**

**Date: January 7, 2019**

---

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

- 1.) Adjust tank location so it isn't within 25 feet of steep slopes (greater than 25 feet).
- 2.) Match elevations in septic profile to the list of elevations on plan. In addition, the invert out of the d-box cannot be lower than the invert into the trench
- 3.) Correct Trench detail depths (i.e. the trench invert is at 1.5 feet but it shows 2 foot of cover).
- 4.) 1<sup>st</sup> replacement coefficient of reduction should be  $(3+2)/3+1+(2 \times 4)$  but 0.417 is correct.  
Show correct #s in the equation.
- 5.) 2<sup>nd</sup> replacement coefficient of reduction should be  $(3+2)/3+1+(2 \times 2.5)$  but 0.55 is correct. Show correct #s in the equation.



**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: **Bureau of Environmental Health**  
**8930 Stanford Blvd.**  
**Columbia, Maryland 21046-4544**

Attn: **Hank**  
Fax:  
Phone: **410-313-2640**

From: **Tony Fertitta**

CC:

Re: **Fairlane Farms, Lot 29**

W.O.# **05106-3003**

Date: **January 8, 2019**

Pages: **0** **Page(s) Including this cover**

We are forwarding: ☒ Prints ☐ Copy of Letter ☐ Specifications ☐ Shop drawings ☐ Other  
☐ Urgent ☐ For your use ☐ As requested ☒ For Review & Comment

Remarks:

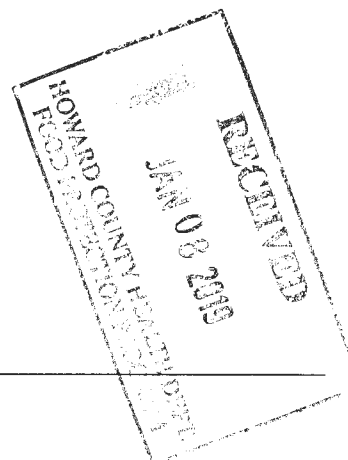
**Re: Fairlane Farm, Lot 29, 15208 Torino Way.**

**Here are 3 new copies of the OSDS for Lot 29 for your review. Please let me know if you have any questions.**

**Thank You,**

**Tony.**

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



**CONFIDENTIALITY NOTICE**

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## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Monday, January 07, 2019 2:25 PM  
**To:** 'Tony Fertitta'  
**Subject:** OSDS Plan\_15208 Torino Way\_Lot 29  
**Attachments:** OSDS Memo To FCC\_\_2018.pdf

Hi Tony:

Attached, please find plan review comments for 15208 Torino Way, Lot 29.

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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## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Wednesday, January 02, 2019 9:42 AM  
**To:** 'Tony Fertitta'  
**Subject:** Fairlane Farms\_Lot 29  
**Attachments:** OSDS Memo To FCC\_\_2019.pdf

Hi Tony:

Happy New Year to you. Attached, please find plan review comments to the OSDS Plan for Fairlane Farms, Lot 29.

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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**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: 15208 Torino Way**  
**Fairlane Farms, Lot 29**

**Date: January 2, 2019**

---

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

- 1.) Septic Profile doesn't match grading on plan and list of elevations. In addition, the length of pipe between 1<sup>st</sup> cleanout and tank in profile doesn't match length of pipe on plan.
- 2.) Raise d- box. The d-box may not be 5 feet in ground.
- 3.) Raise trench inverts to a minimum depth of 18 inches while maintaining at least 2% fall between tank and d- box.
- 4.) Initial trench reduction credit calculation should be 2 not 3 feet but 0.625 is correct.
- 5.) 1<sup>st</sup> replacement trench spacing calculation should be 11 feet (not 10).
- 6.) 2<sup>nd</sup> replacement reduction credit should be 0.55 (not 1.2). Trench spacing calculation, D = 2.5 (not 2) but 10 feet is correct.

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

**CIVIL ENGINEERING CONSULTANTS  
and LAND SURVEYORS**

# Transmittal

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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: **Bureau of Environmental Health**  
**8930 Stanford Blvd.**  
**Columbia, Maryland 21046-4544**

Attn: **Hank**  
Fax:  
Phone: **410-313-2640**

From: **Tony Fertitta**

CC:

Re: **Fairlane Farms, Lot 29**

W.O.# **05106-3003**

Date: **December 28, 2018**

Pages: **0** **Page(s) Including this cover**

We are forwarding: ☒ Prints ☐ Copy of Letter ☐ Specifications ☐ Shop drawings ☐ Other  
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Remarks:

**Re: Fairlane Farm, Lot 29, 15208 Torino Way.**

**Here are 3 new copies of the OSDS for Lot 29 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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**FISHER, COLLINS  
& CARTER, INC.**

**CIVIL ENGINEERING CONSULTANTS  
and LAND SURVEYORS**

# Transmittal

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To: **Bureau of Environmental Health**  
**8930 Stanford Blvd.**  
**Columbia, Maryland 21046-4544**

Attn: **Hank**  
Fax:  
Phone: **410-313-2640**

From: **Tony Fertitta**

CC:

Re: **Fairlane Farms, Lot 29**

W.O.# **05106-3003**

Date: **January 2, 2019**

Pages: **0** Page(s) Including this cover

We are forwarding: ☒ Prints ☐ Copy of Letter ☐ Specifications ☐ Shop drawings ☐ Other  
☐ Urgent ☐ For your use ☐ As requested ☒ For Review & Comment

Remarks:

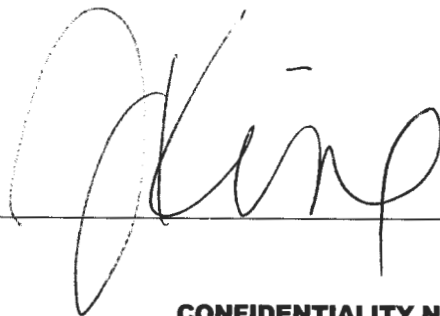
**Re: Fairlane Farm, Lot 29, 15208 Torino Way.**

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**Thank You,**

**Tony.**

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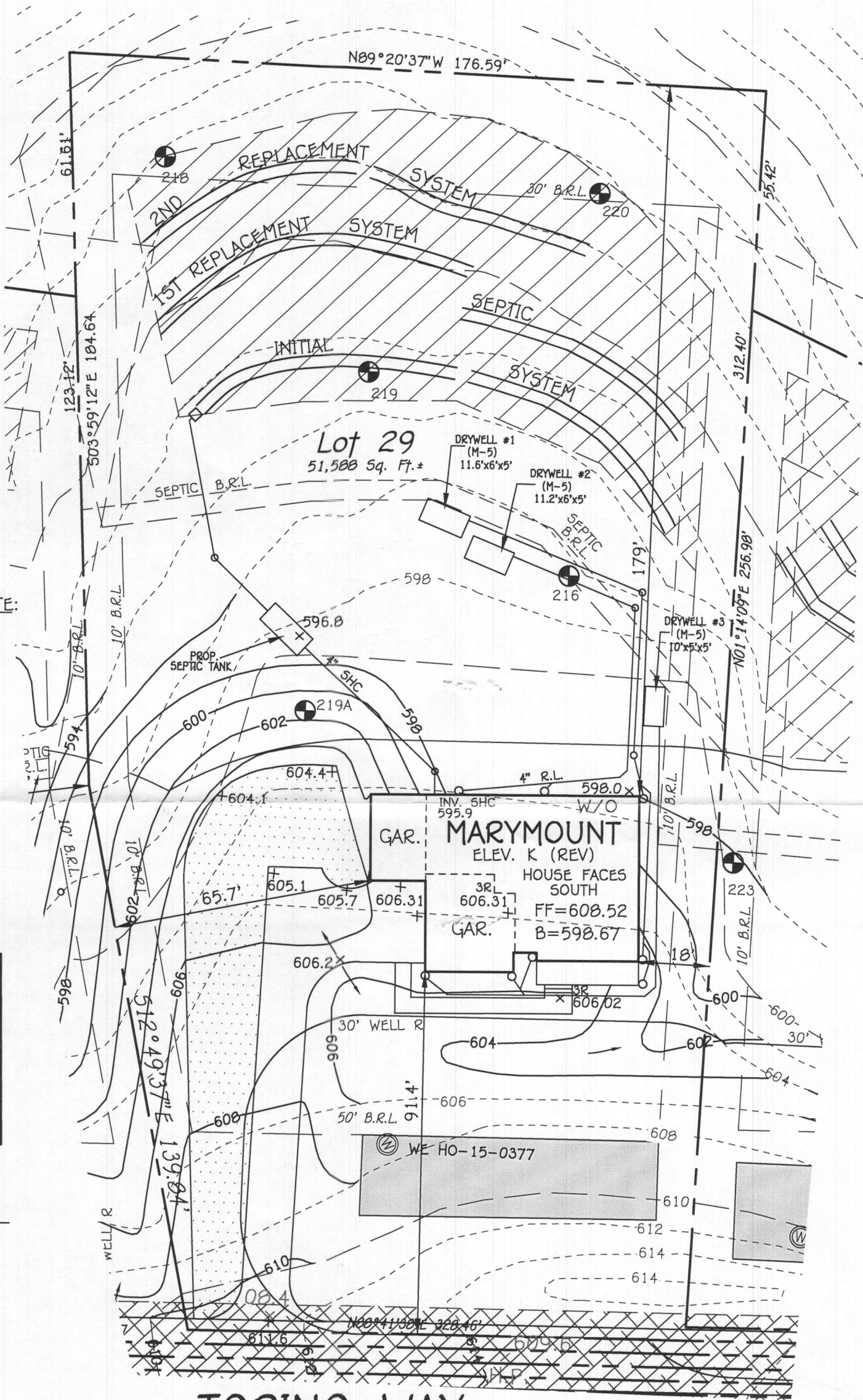
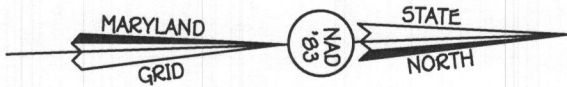


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NOTE: THE EXISTING WELL SHOWN ON THIS PLAN, HO-15-0377, HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.



STORMWATER MANAGEMENT NOTE:

STORMWATER MANAGEMENT FOR LOT 29 IS BEING PROVIDED BY A COMBINATION OF NON-ROOFTOP DISCONNECTION (N-2) FOR THE DRIVEWAY AREA AND THREE DRYWELLS (M-5).

① DENOTES WHICH DRYWELL CONVEYED TO

② 308 S.F.	② 188 S.F.	② 476 S.F.	① 500 S.F.
③ 257 S.F.	③ 263 S.F.	③ 313 S.F.	① 319 S.F.
① 155 S.F.			

PROPOSED HOUSE  
DOWNSPOUT DRAINAGE AREAS

SCALE: 1"=30'

TORINO WAY

PLAN

SCALE: 1" = 30'

PERMIT SITE PLAN  
LOT 29

15208 TORINO WAY

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: NOVEMBER 8, 2018

SHEET 1 OF 1

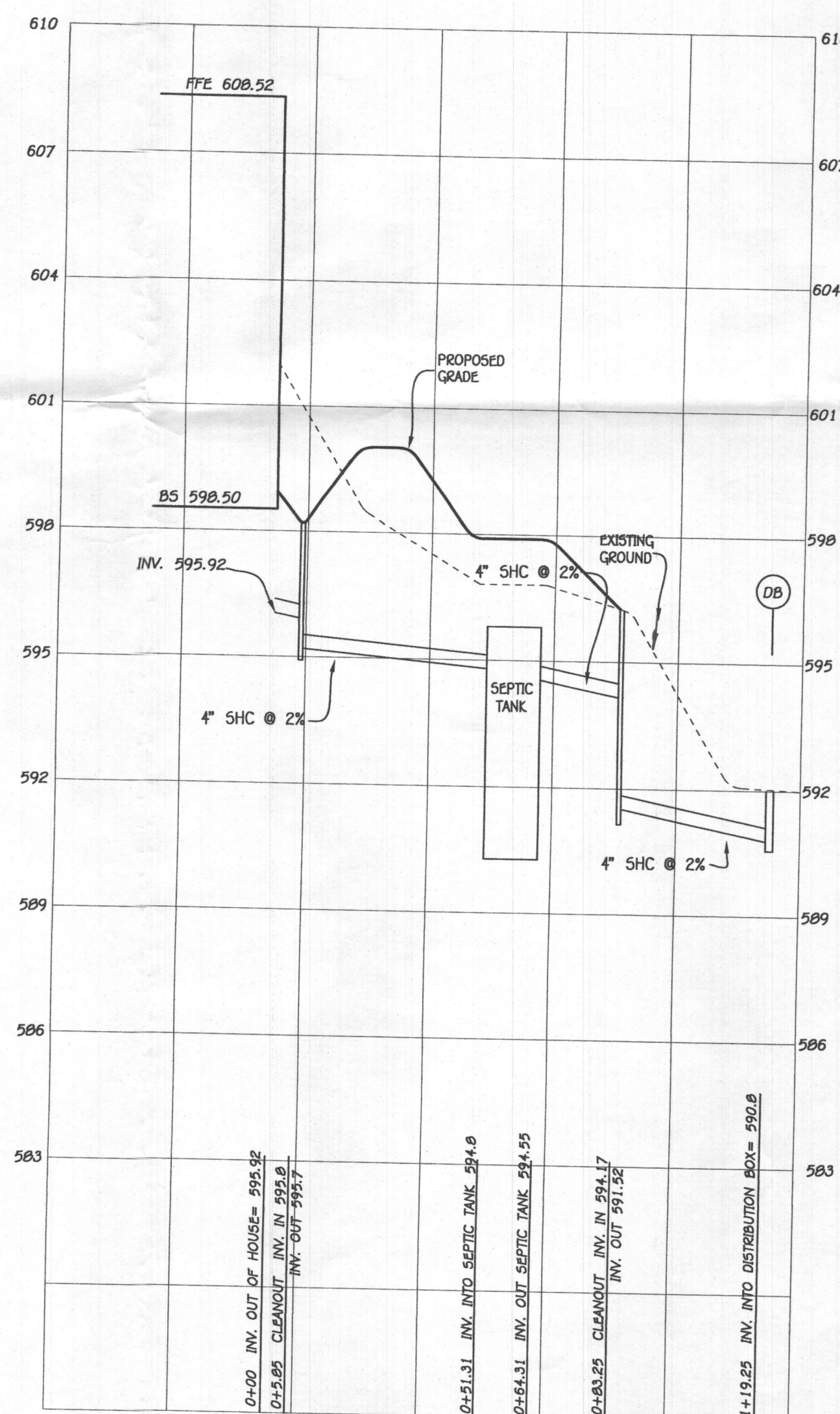
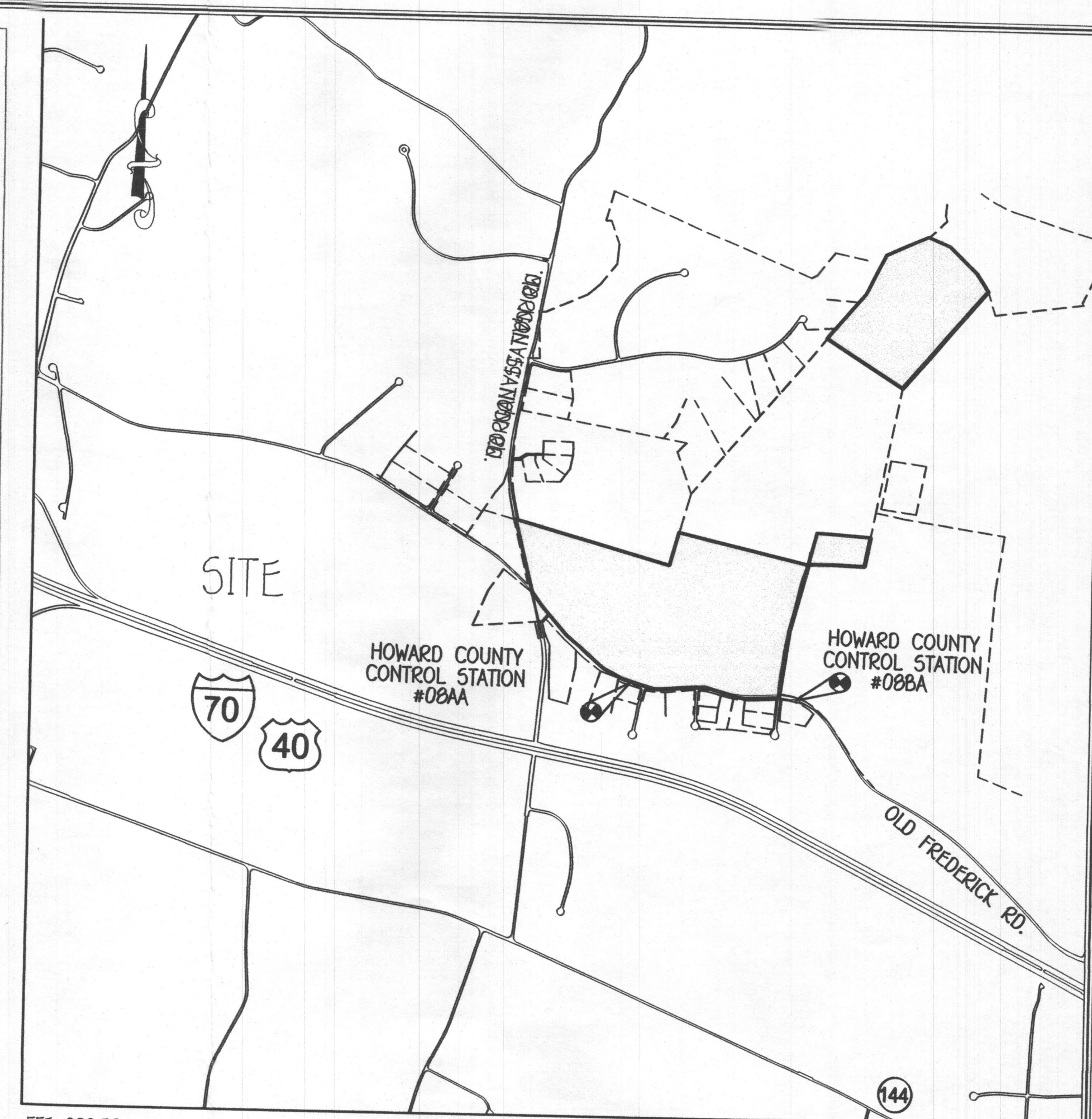
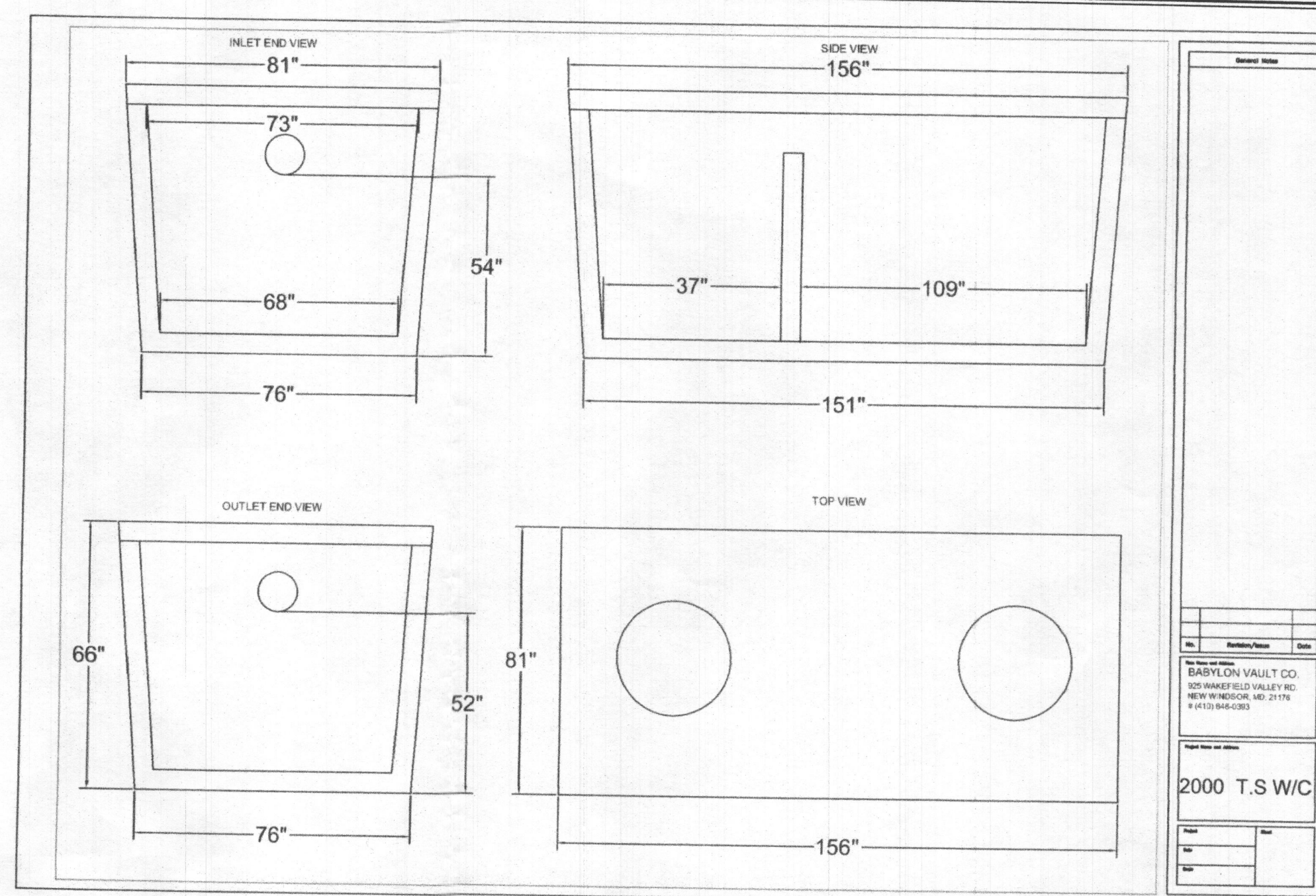
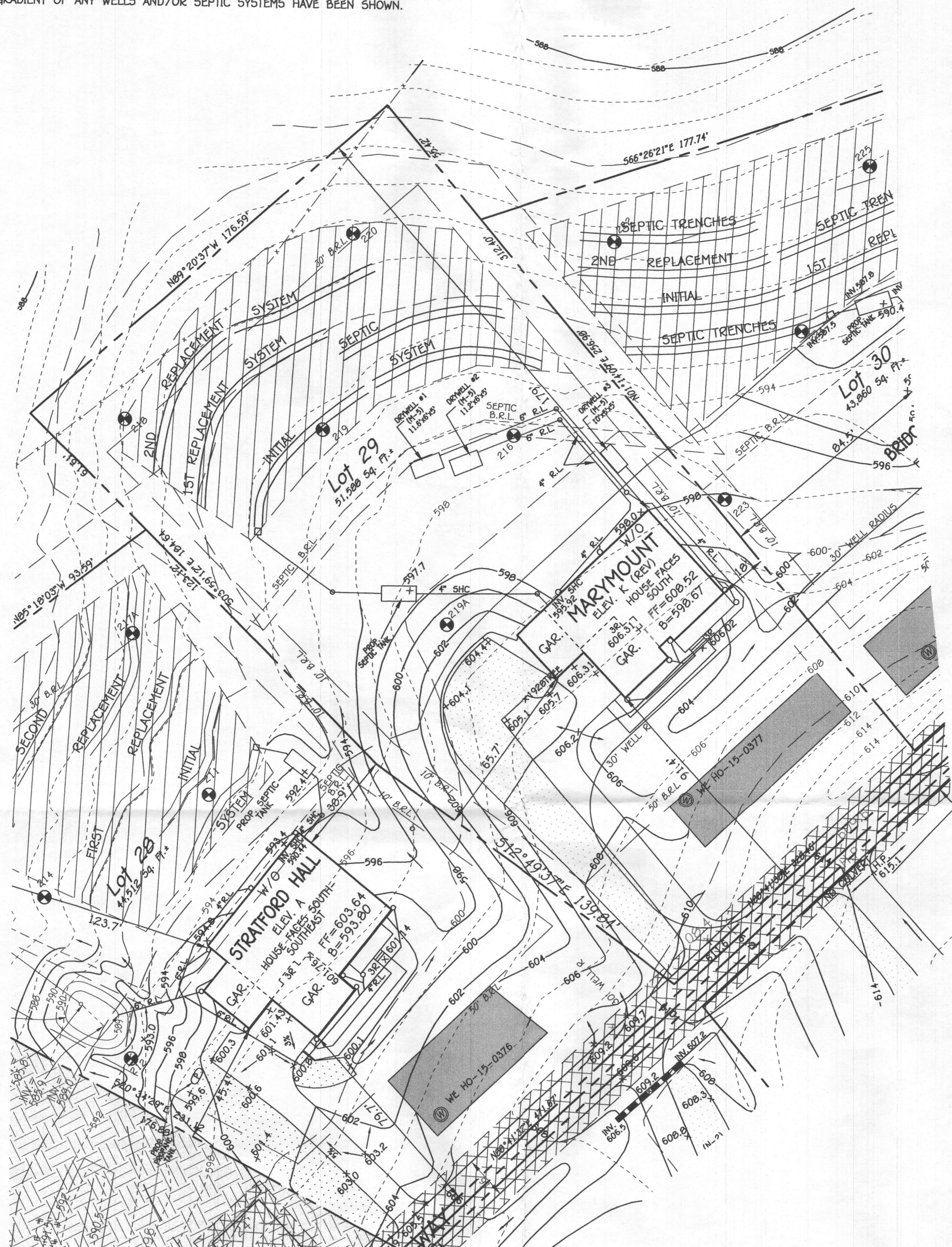
FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
(410) 461 - 2855

OWNER/DEVELOPER

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



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-15-0377 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.

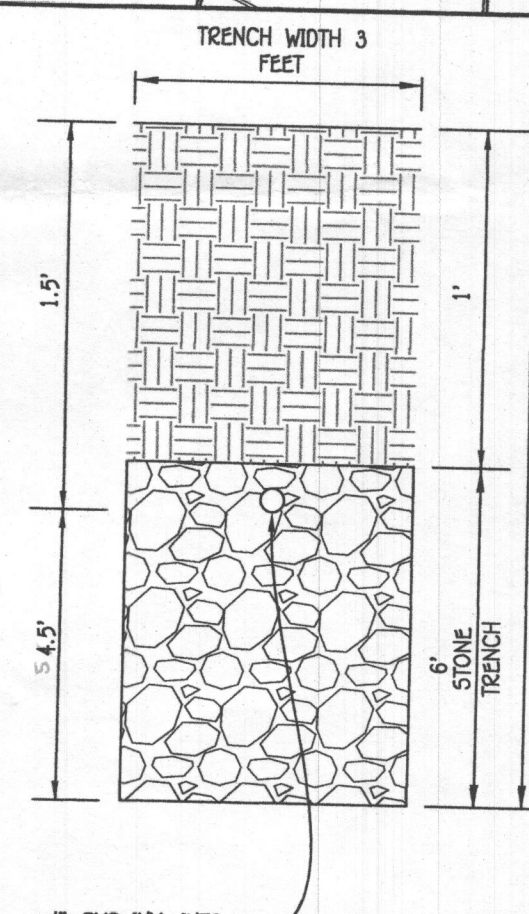


FFE 608.52  
BSE 590.50  
INV. OUT OF HOUSE = 595.92  
PROP. GROUND AT CLEANOUT #1 = 597.6  
INV. INTO CLEANOUT = 595.8  
INV. OUT OF CLEANOUT = 595.7  
EX. GROUND AT SEPTIC TANK = 596.8  
PROP. GRADE ABOVE SEPTIC TANK = 597.7  
TOP OF SEPTIC TANK = 595.8  
INV. INTO SEPTIC TANK = 594.8  
INV. OUT OF SEPTIC TANK = 594.55  
GROUND AT CLEANOUT #2 = 595  
PROP. INTO CLEANOUT = 594.17  
PROP. INV. OUT OF CLEANOUT = 591.52  
EX. GROUND AT DISTRIBUTION BOX = 592.3  
INV. INTO DISTRIBUTION BOX = 590.8  
INV. OUT OF DISTRIBUTION BOX = 590.7

**VICINITY MAP**  
SCALE: 1" = 1200'

TRENCH DATA:

TRENCH 1:  
EX. GROUND ABOVE = 592.3  
INV. IN = 590.7  
BOTTOM TRENCH = 505.3  
  
TRENCH 2:  
EX. GROUND ABOVE = 592.3  
INV. IN = 590.7  
BOTTOM TRENCH = 505.3  
  
TRENCH 2:  
EX. GROUND ABOVE = 590.4  
INV. IN = 500.9  
BOTTOM TRENCH = 503.4



#### INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS (PERMIT FOR 4 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 5 FEET  
TRENCH DEPTH = 7 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 2 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 2)) = 0.625$   
TRENCH LENGTH = 208.33 SF x 0.625 = 195.31 FEET  
(USE 3 TRENCHES AT 65.10 L.F.)  
TRENCH SPACING = 20+W = ((2+2) + 3) = 7' USE 10'

#### 1ST REPLACEMENT SYSTEM

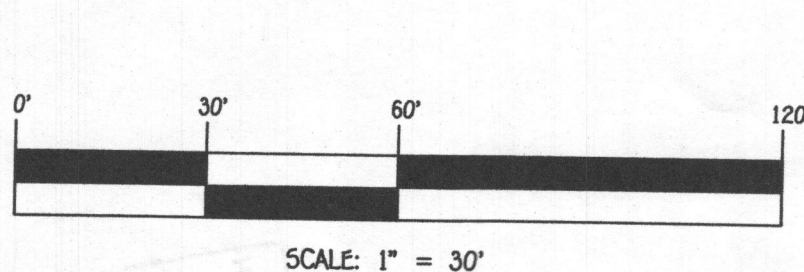
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS (PERMIT FOR 4 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 7 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 625 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 4)) = 0.417$   
TRENCH LENGTH = 208.33 SF x 0.417 = 86.88 FEET  
TRENCH SPACING = 20+W = ((2+4) + 3) = 11' USE 11'

#### 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS (PERMIT FOR 4 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 5.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 5.2 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 5.2)) = 0.55$   
TRENCH LENGTH = 208.33 SF x 0.55 = 115.83 FEET  
(USE 2 TRENCHES AT 57.92 L.F.)  
TRENCH SPACING = 20+W = ((2+2) + 3) = 7' USE 10'

SEPTIC SYSTEM  
INSTALLATION SITE PLAN  
LOT 29  
15208 TORINO WAY  
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: January 8, 2019  
SHEET 1 OF 1



FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10772 BALDWIN NATIONAL PIKE  
ELK LUTHER CITY, MARYLAND 21042  
(410) 461-2899

OWNER/DEVELOPER  
NV HOMES  
9720 PATUXENT WOODS DRIVE  
COLUMBIA, MD 21046  
410-379-5956



#### PROFESSIONAL CERTIFICATION

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

*Michael J. Viteri*  
Signature Of Professional Engineer

1/8/19  
DATE

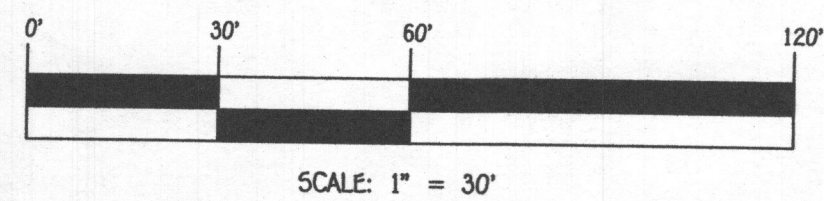
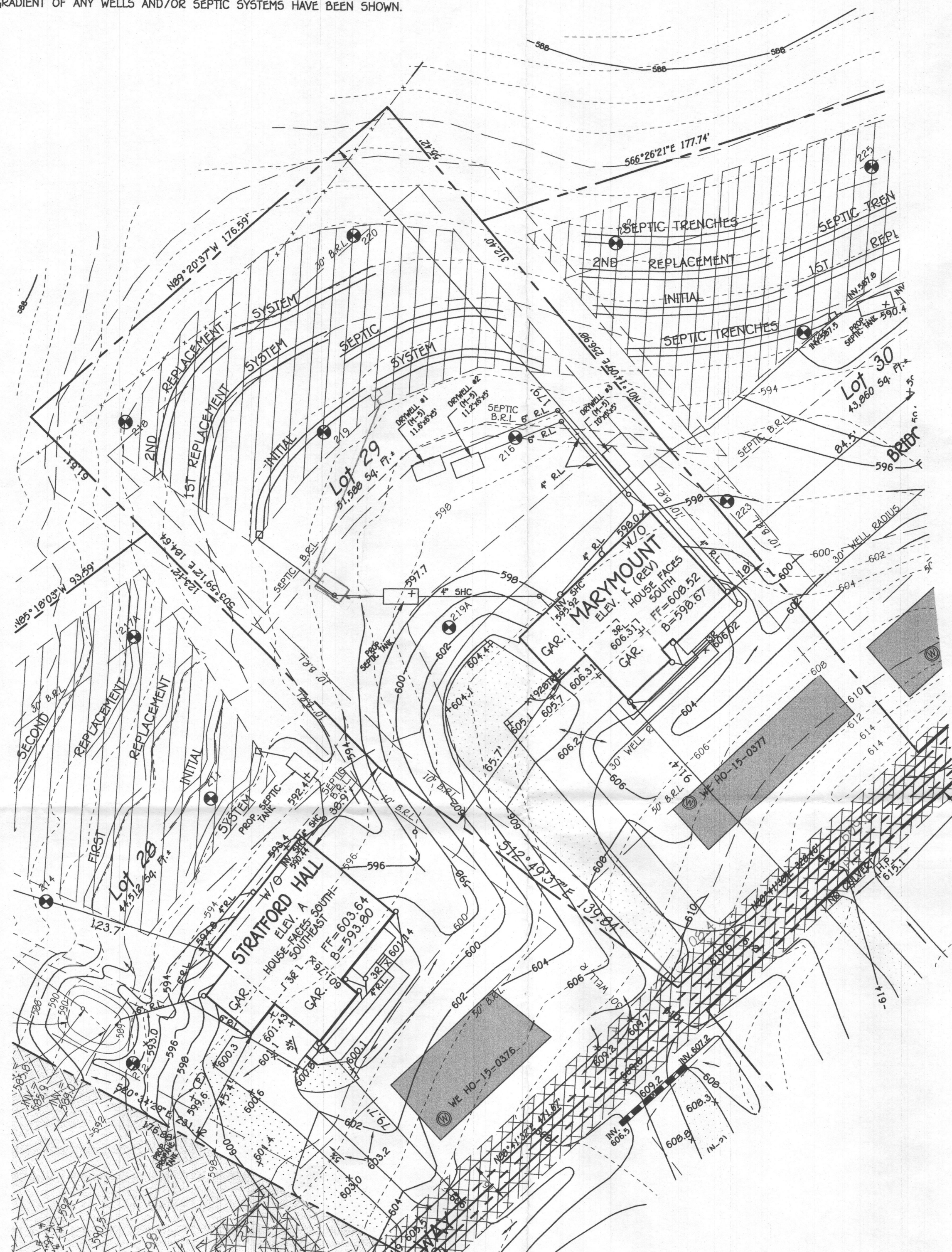
SEPTIC PROFILE  
SCALE: 1"=30'

#### ADDRESS CHART

LOT NUMBER	STREET ADDRESS
29	15208 TORINO WAY



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-15-0377 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.



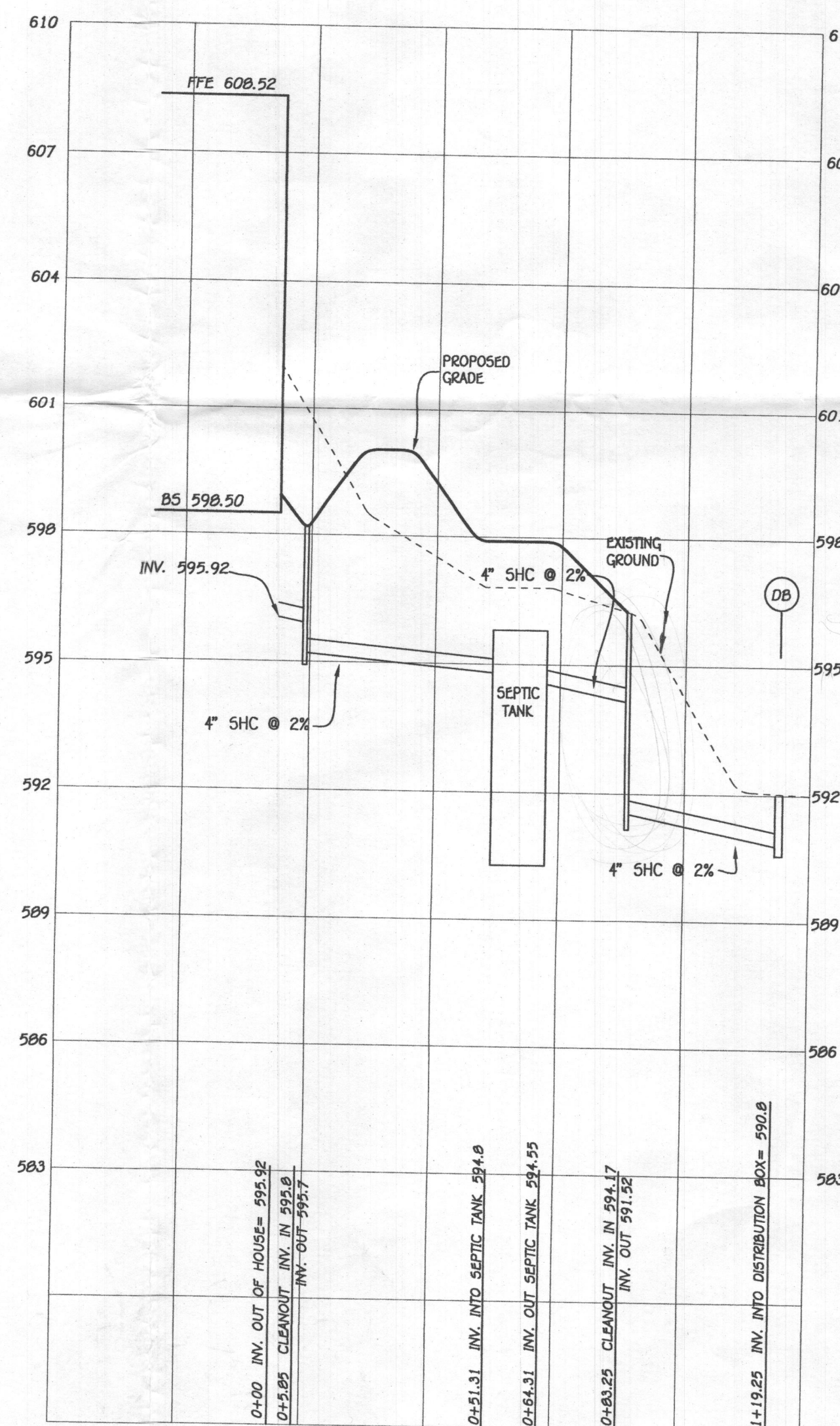
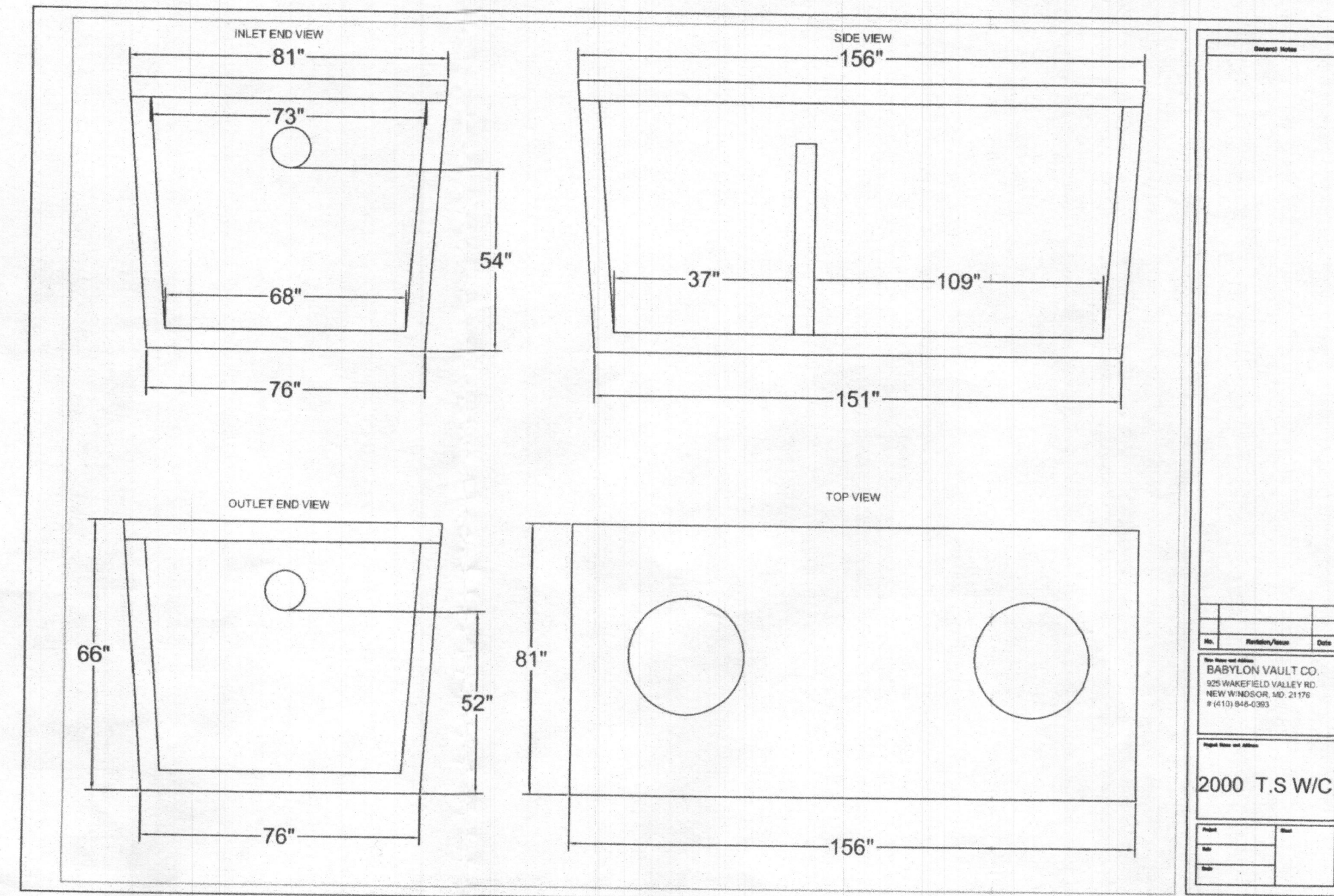
FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CONTINENTAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2895

OWNER/DEVELOPER  
NV HOMES  
9720 PATUXENT WOODS DRIVE  
COLUMBIA, MD 21046  
410-379-5956

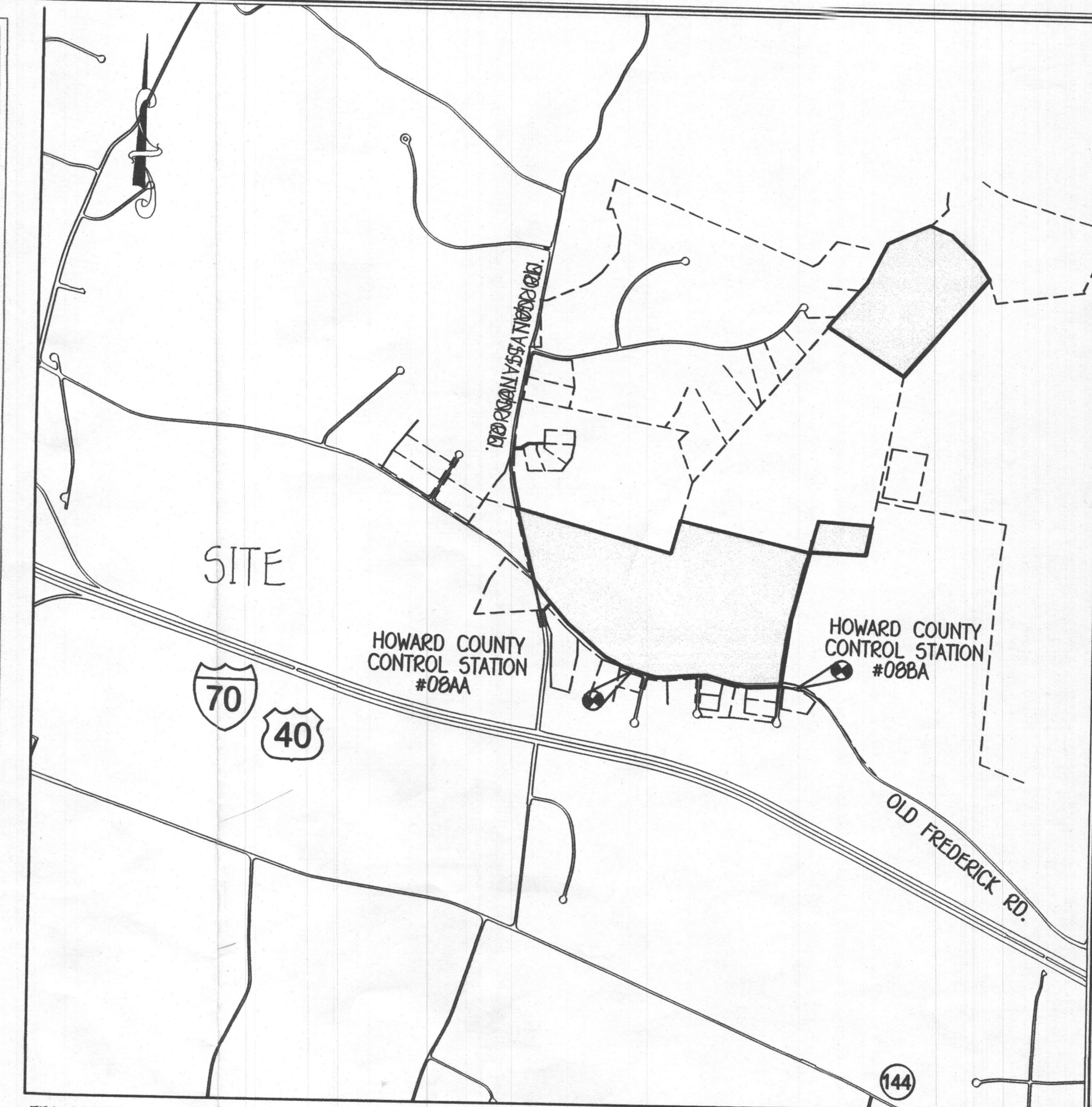


PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME  
AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF  
THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 12/22/2019.

Signature of Professional Engineer  
1/8/19  
DATE



SEPTIC PROFILE  
SCALE: 1"=30'



FFE 608.52  
BSE 598.50  
INV. OUT OF HOUSE = 595.92  
PROP. GROUND AT CLEANOUT #1 = 597.6  
INV. INTO CLEANOUT = 595.8  
EX. GROUND AT SEPTIC TANK = 596.8  
PROP. GRADE ABOVE SEPTIC TANK = 597.7  
TOP OF SEPTIC TANK = 594.8  
INV. INTO SEPTIC TANK = 594.8  
INV. OUT OF SEPTIC TANK = 594.55  
GROUND AT CLEANOUT #2 = 595  
PROP. INTO CLEANOUT = 594.17  
PROP. INV. OUT OF CLEANOUT = 591.52  
EX. GROUND AT DISTRIBUTION BOX = 592.3  
INV. INTO DISTRIBUTION BOX = 590.8  
INV. OUT OF DISTRIBUTION BOX = 590.7

Approved Septic System Plan  
Howard County Health Department  
Signature: Hank Oswald  
Date: 1/8/19

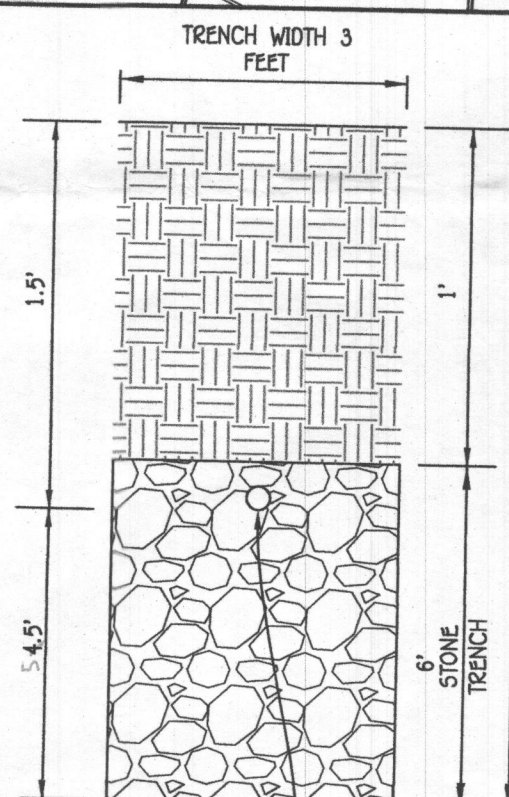
VICINITY MAP  
SCALE: 1" = 1200'

TRENCH DATA:

TRENCH 1:  
EX. GROUND ABOVE = 592.3  
INV. IN = 590.7  
BOTTOM TRENCH = 585.3

TRENCH 2:  
EX. GROUND ABOVE = 592.3  
INV. IN = 590.7  
BOTTOM TRENCH = 585.3

TRENCH 2:  
EX. GROUND ABOVE = 590.4  
INV. IN = 588.9  
BOTTOM TRENCH = 583.4



INITIAL TRENCH DETAIL  
SCALE: 1"=2'

#### INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR  
5 BEDROOMS (PERMIT FOR 4 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 5 FEET  
TRENCH DEPTH = 7 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 2 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+(2x2))=0.625  
TRENCH LENGTH = 208.33 SF x 0.625 = 195.31 FEET  
(USE 3 TRENCHES AT 65.10 L.F.)  
TRENCH SPACING = 2D+W = ((2x2) + 3) = 7' USE 10'

#### 1ST REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR  
5 BEDROOMS (PERMIT FOR 4 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 7 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))=0.417  
TRENCH LENGTH = 208.33 SF x 0.417 = 86.88 FEET  
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

#### 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR  
5 BEDROOMS (PERMIT FOR 4 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 5.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 5.2 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  
(W+2)/(W+1+2D)=(3+2)/(3+1+(2x5.5))=0.55  
TRENCH LENGTH = 208.33 SF x 0.55 = 115.83 FEET  
(USE 2 TRENCHES AT 57.92 L.F.)  
TRENCH SPACING = 2D+W = ((2x5.5) + 3) = 7' USE 10'

SEPTIC SYSTEM  
INSTALLATION SITE PLAN

LOT 29

15208 TORINO WAY

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: January 8, 2019  
SHEET 1 OF 1

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
29	15208 TORINO WAY



# 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 1.0'.
- 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-15-0377 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 10/04/2020.
- 7) BUILDING PERMIT #B-18004107

## Legend

- Public Stormwater Management, Access, Drainage & Utility Easement
- 10' Public Tree Maintenance Easement
- Public Drainage & Utility Easement

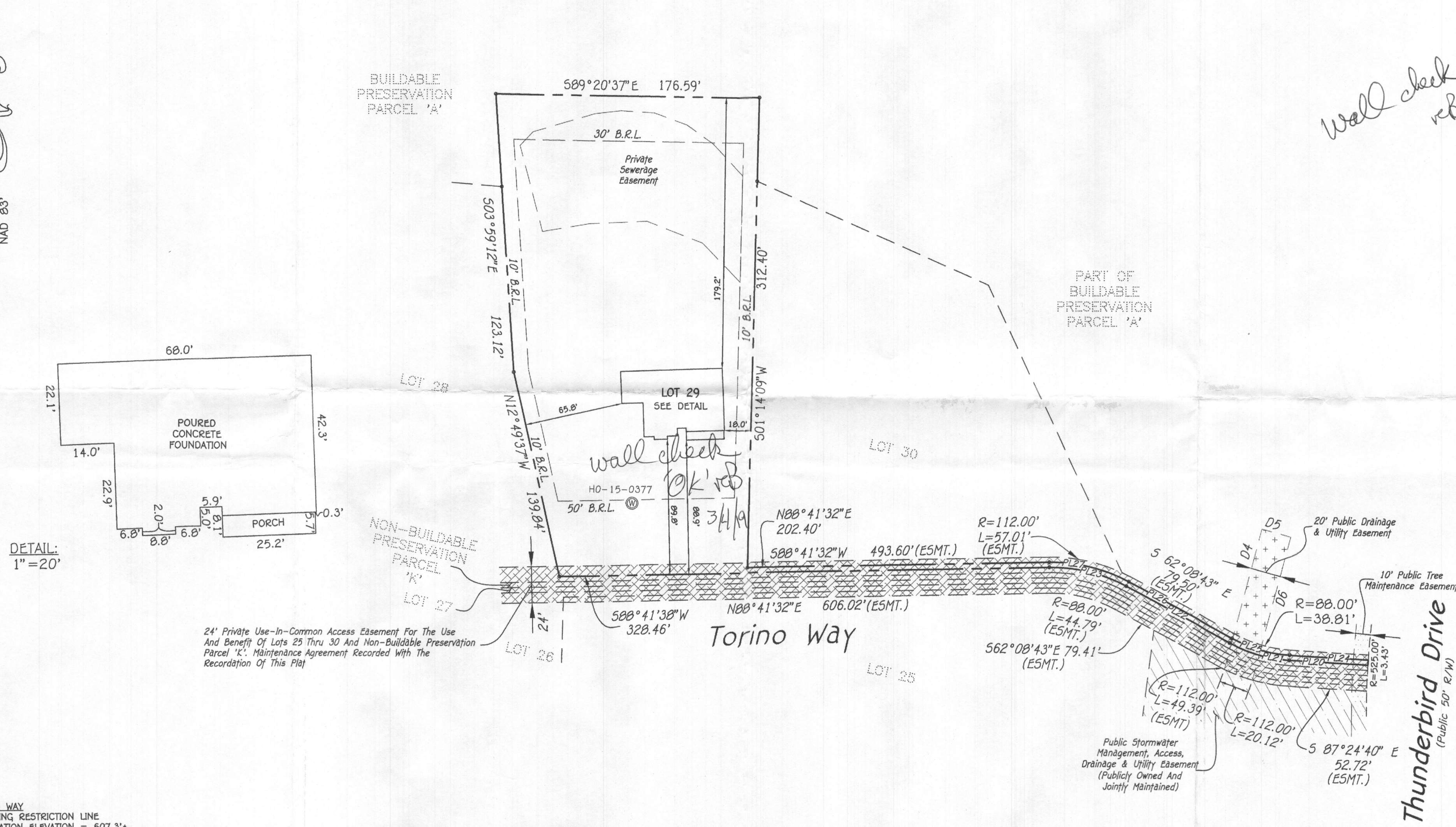
## Public And Private Drainage & Utility Easement Line Table

LINE	BEARING	LENGTH
D4	N14°40'57"E	96.43'
D5	S75°19'03"E	20.00'
D6	S14°40'57"W	98.31'

## Property Line Metes And Bounds Line Table

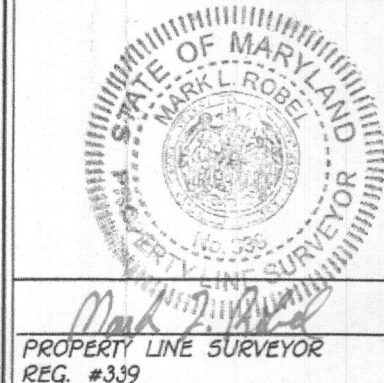
LINE	BEARING	LENGTH
PL20	N87°24'40"W	52.61'
PL21	R=94.86'	L=41.83'
PL22	N62°08'43"W	79.41'
PL23	R=105.14'	L=53.51'
PL24	N87°24'40"W	52.65'
PL25	R=91.43'	L=40.32'
PL26	S62°08'43"E	79.50'
PL27	R=108.57'	L=55.26'

Wall check 'OK'  
reb 3/4/19



#15208 TORINO WAY  
B.R.L. = BUILDING RESTRICTION LINE  
TOP OF FOUNDATION ELEVATION = 607.3'

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE



## HOUSE LOCATION DRAWING

FOUNDATION LOCATION: 2/4/19  
FINAL LOCATION:  
BOUNDARY SURVEY:

SCALE: 1"=50'  
DATE: 2/5/19  
DRAWN BY: MD  
CHECKED BY: MLR  
PROJECT No.: 05106-3003

LOT 29  
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