

**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: 11/7/2019 **ONSITE SEWAGE DISPOSAL SYSTEM** P 566447

APPROVAL DATE: 11/27/2019 **PERMIT: CONSTRUCTION** A \_\_\_\_\_

PROPERTY ADDRESS: 12259 Blue Sky Evening Way

SUBDIVISION: Fulton Woods LOT: 5 TAX ID: 1403313646

CONTRACTOR: Fogle's Septic Clean EMAIL: john@foglesinc.com

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville, MD 21784 PHONE: 410-795-5670

PROPERTY OWNER: BHBC EMAIL: dcarter@bhbcmd.com

OWNER ADDRESS: 6030 Daybreak Circle, Clarksville MD 21029 PHONE: 443-681-2400

SEPTIC TANK SIZE (GALLONS): 2000 TANK MANUFACTURER: Babylon Vault/equivalent

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>130</u>	INLET DEPTH: <u>3</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>9</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:	Install 3x32.5 ft trenches on contour at upper part of SDA. 4	

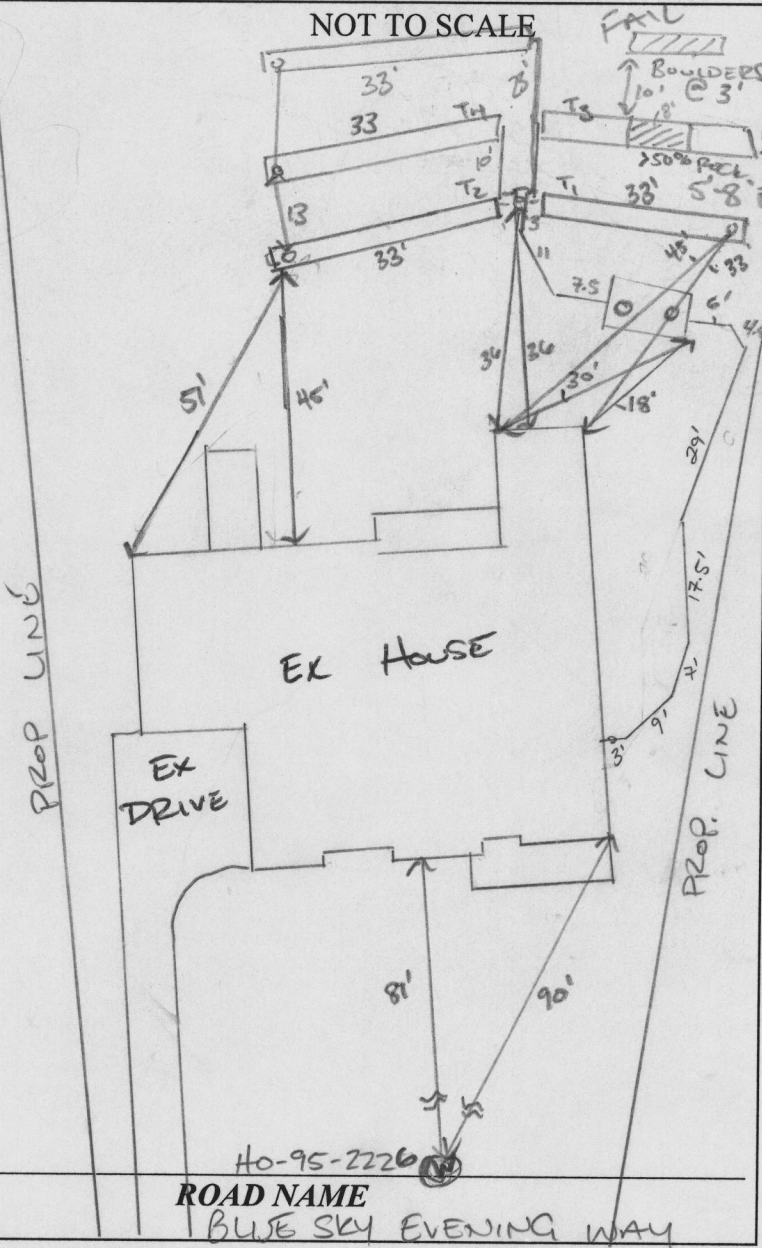
ISSUED BY: K. Wolf ISSUE DATE: 11/22/2019 EXPIRATION DATE: 11/22/2020

- 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.**

279189279189

NOT TO SCALE



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3	3	8
NUMBER OF TRENCHES 4		
TOTAL LENGTH 132 F		
ABSORPTION AREA 396 SF		
DISTRIBUTION BOX LEVEL SPEED		
DISTRIBUTION BOX BAFFLE YES		
DISTRIBUTION BOX PORT YES		

PRE-CONSTRUCTION:

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	
MANUFACTURER	BABILON
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	2'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT/DR
6" PORT LOC	-
WATERTIGHT TEST	-
SLOTTED	YES
DATE ON LID	10/03/2009

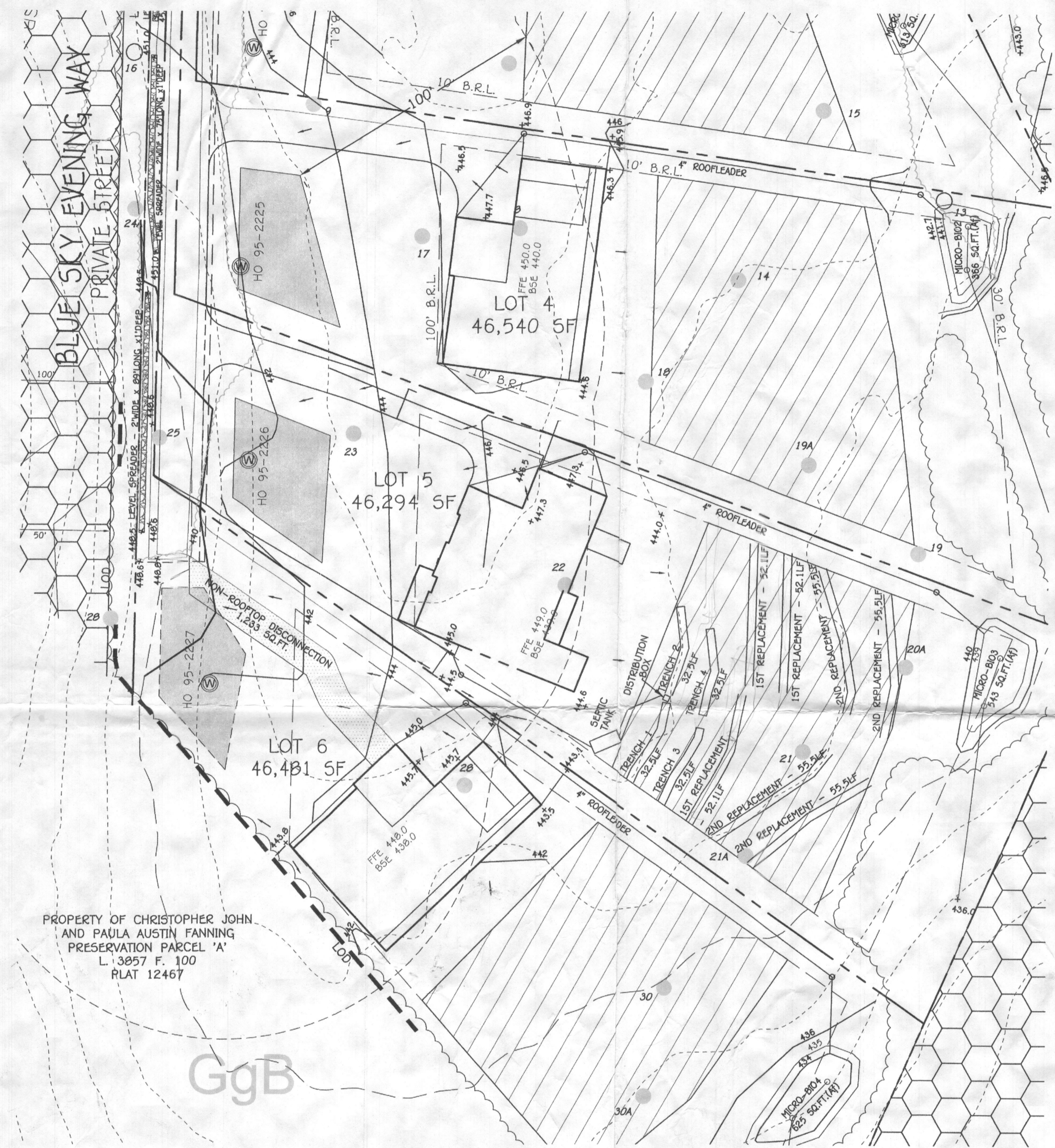
PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

11/22/2009 TANK, SDA, TRENCH STAKED. UPPER COR SDA BY STAIRS KNOCKED OVER. T2 + T4 TO REMAIN UNCHANGED; T1 + T3 STRAIGHTENED AND MOVED UP TO MAX SDA USAGE FOR FUTURE INSTALLS. CONTOUR CHECKED ~ 2"-3" FILL ON SDA. OK TO START (u)

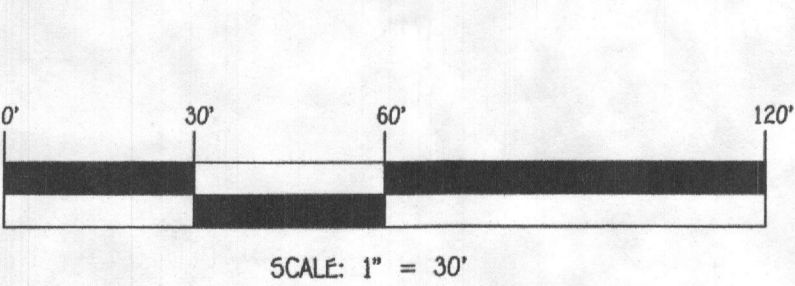
INSTALLATION:  
 11/25/2009 SHC INSTALLED, AND TANK PIT DUG, TANK TO ARRIVE LATE AFTERNOON. (u) 11/26/2009 (PM) INSR TANKS, D BOX SET. T3 HIT ROCK/REJECT TRENCH ~ 33% TRENCH 750% ROCK BOULDER. INVESTIGATE 10' BELOW TRENCH FOR REP. (PM) BOULDERS START 20' FAIL. REP TRENCH BELOW T4 DUE TO D BOX AND T1 CONFIG. (u)  
 D BOX LEVELED w/ SPEED LEVELS. (u)

FINAL INSPECTOR [Signature] DATE OF APPROVAL 11/27/2009

1. ANY CHANGE TO THE LOCATIONS OR DEPTHS OF 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-95-2226 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.



PROPERTY OF CHRISTOPHER JOHN AND PAULA AUSTIN FANNING PRESERVATION PARCEL 'A' L 3897 F. 100 PLAT 12467

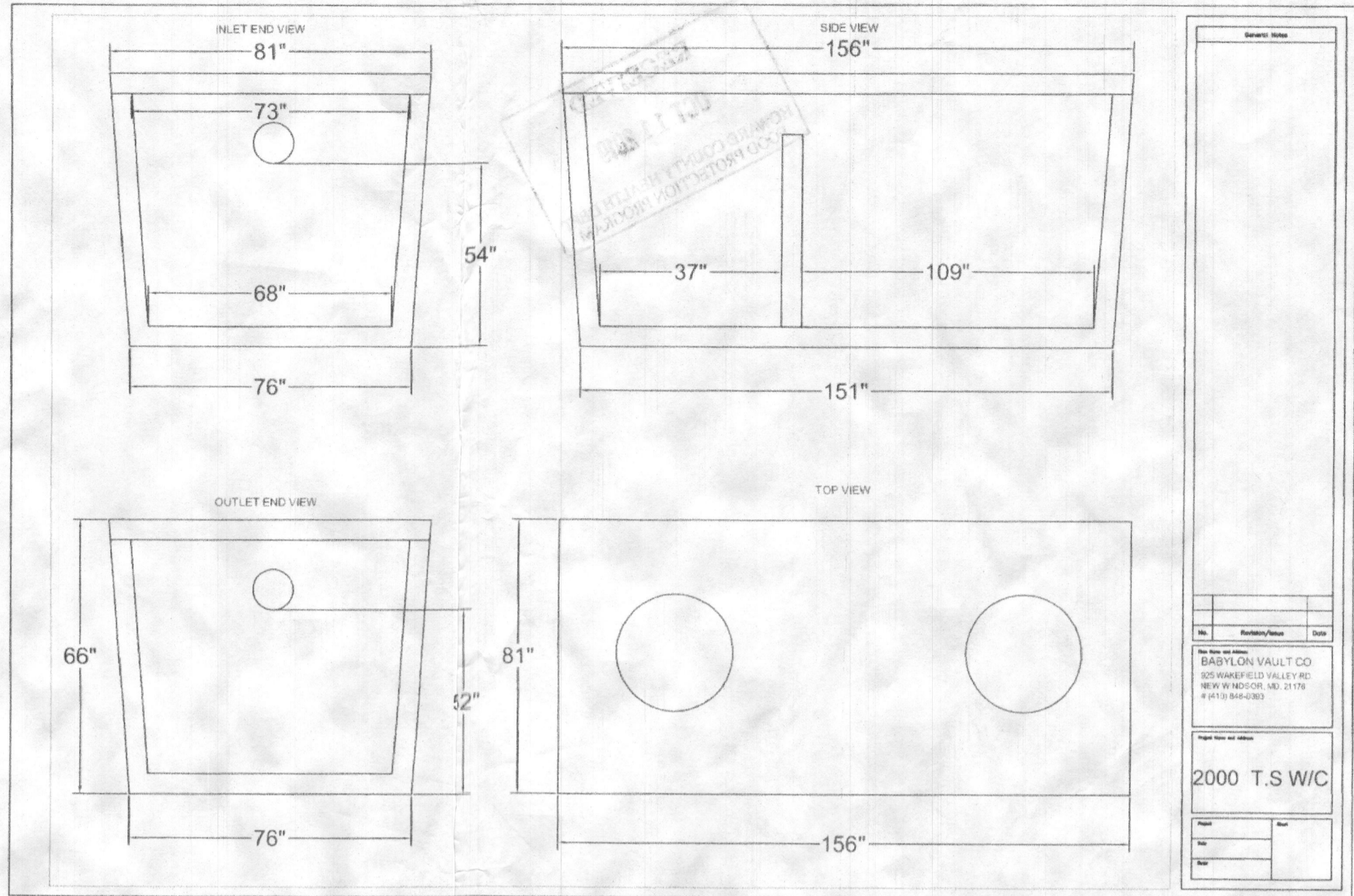


**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK  
 ELLETTT CITY, MARYLAND 21042  
 (410) 461-2999

**OWNER/DEVELOPER**  
 IN HOMES  
 9720 PATUXENT WOODS DRIVE  
 COLUMBIA, MD 21046  
 410-378-9956



**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. 38386, EXPIRATION DATE: 01/12/2020  
*Signature* *Date 10/10/19*  
 Signature Of Professional Engineer DATE



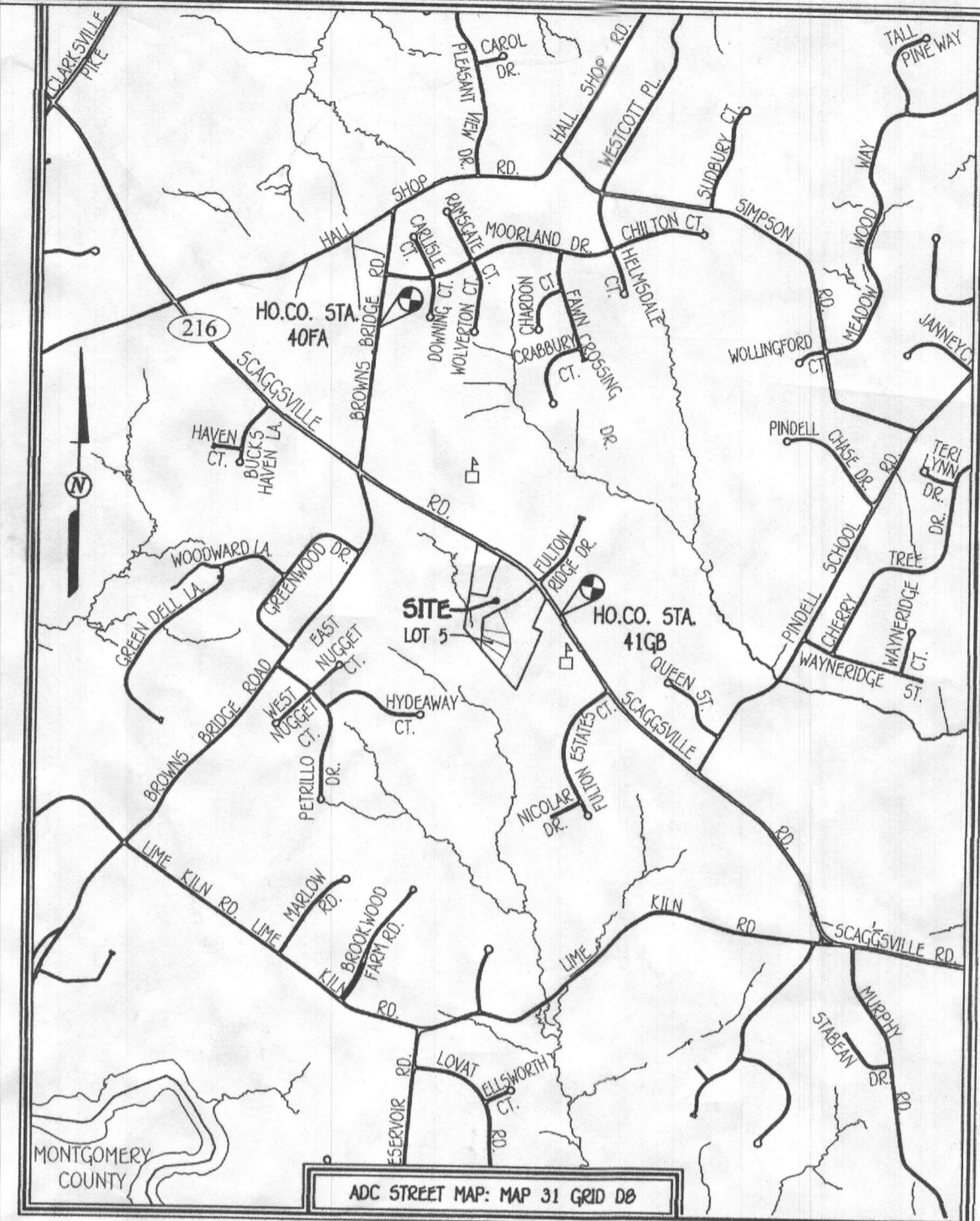
**TRENCH DATA**

**TRENCH 1:**  
 EX. GROUND ABOVE = 444.0  
 INV. IN = 440.81  
 BOTTOM TRENCH = 432.0

**TRENCH 2:**  
 EX. GROUND ABOVE = 444.0  
 INV. IN = 440.81  
 BOTTOM TRENCH = 432.0

**TRENCH 3:**  
 EX. GROUND ABOVE = 443.3  
 INV. IN = 440.11  
 BOTTOM TRENCH = 435.3

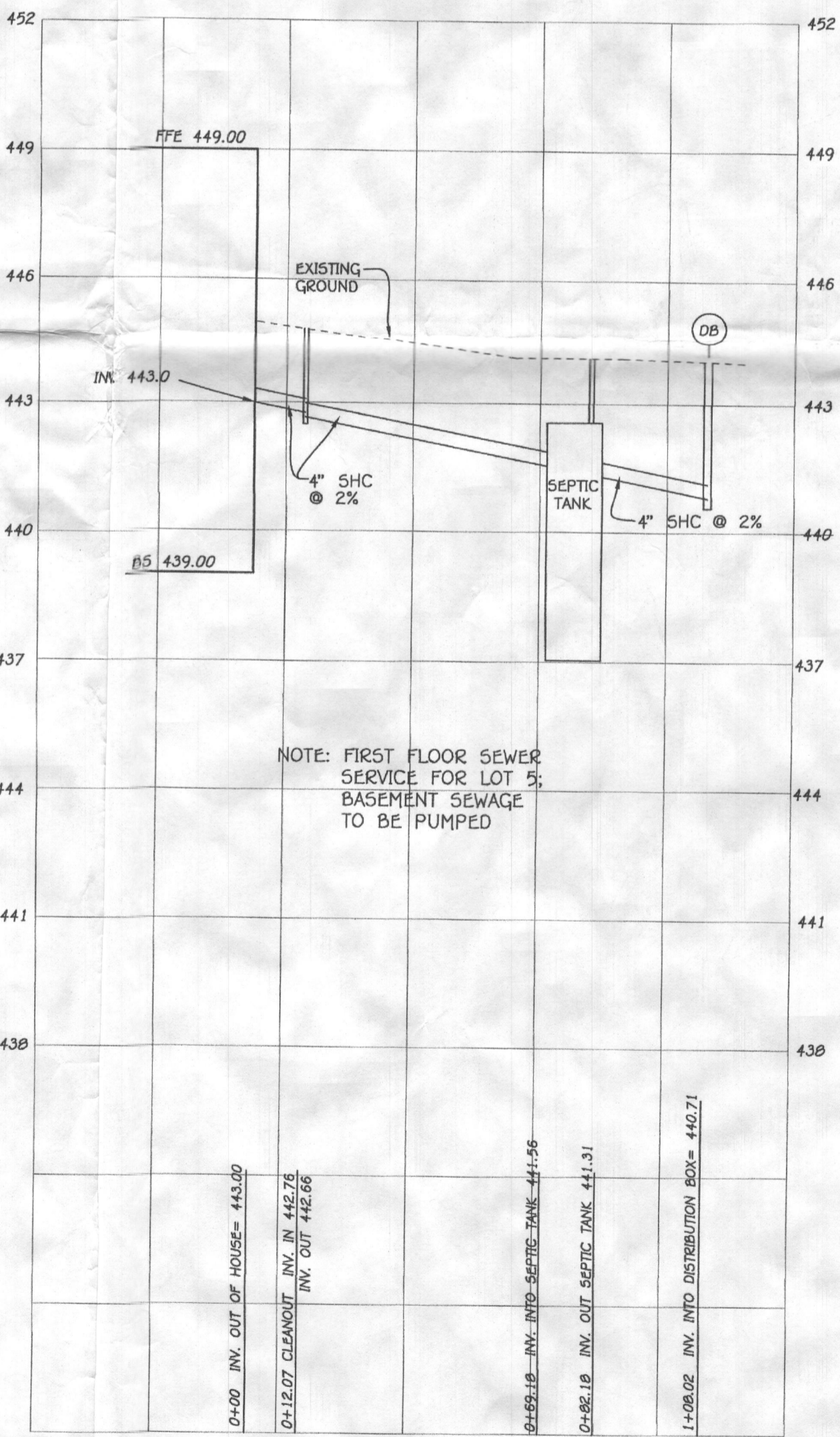
**TRENCH 4:**  
 EX. GROUND ABOVE = 443.3  
 INV. IN = 440.11  
 BOTTOM TRENCH = 435.3



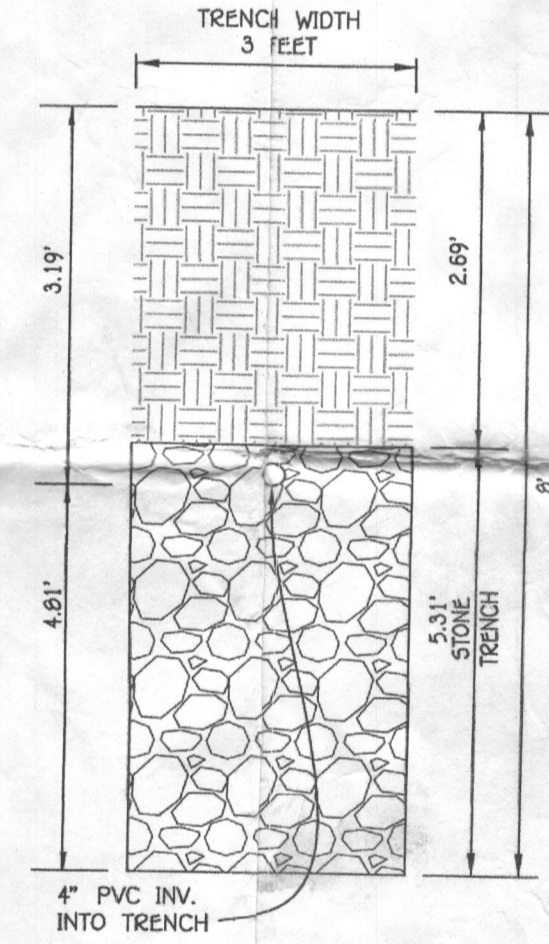
**VICINITY MAP**  
 SCALE: 1" = 2,000'

Approved Septic System Plan  
 Howard County Health Department  
*Signature* *Date 10/19/2019*  
 Signature Date

FFE 449.0
BSE 439.0
PROP. GROUND AT CLEANOUT #1 = 444.3
INV. INTO CLEANOUT = 442.76
INV. OUT OF CLEANOUT = 442.66
EX. GROUND AT SEPTIC TANK = 444.3
PROP. GRADE ABOVE SEPTIC TANK = 444.3
TOP OF SEPTIC TANK = 442.56
INV. INTO SEPTIC TANK = 441.56
INV. OUT OF SEPTIC TANK = 441.31
EX. GROUND AT DISTRIBUTION BOX = 444.0
INV. INTO DISTRIBUTION BOX = 440.81
INV. OUT OF DISTRIBUTION BOX = 440.71



**SEPTIC PROFILE**  
 SCALE: 1" = 30'



**INITIAL TRENCH DETAIL**  
 SCALE: 1" = 15'

**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 = 8 FEET  
 TRENCH WIDTH (W) = 3 FEET  
 EFFECTIVE DEPTH (D) = 4 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+(2x4)) = .416  
 TRENCH LENGTH = 312.59 SF x 0.416 = 130.0 FEET  
 (USE 4 TRENCHES AT 32.50 L.F.)  
 TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

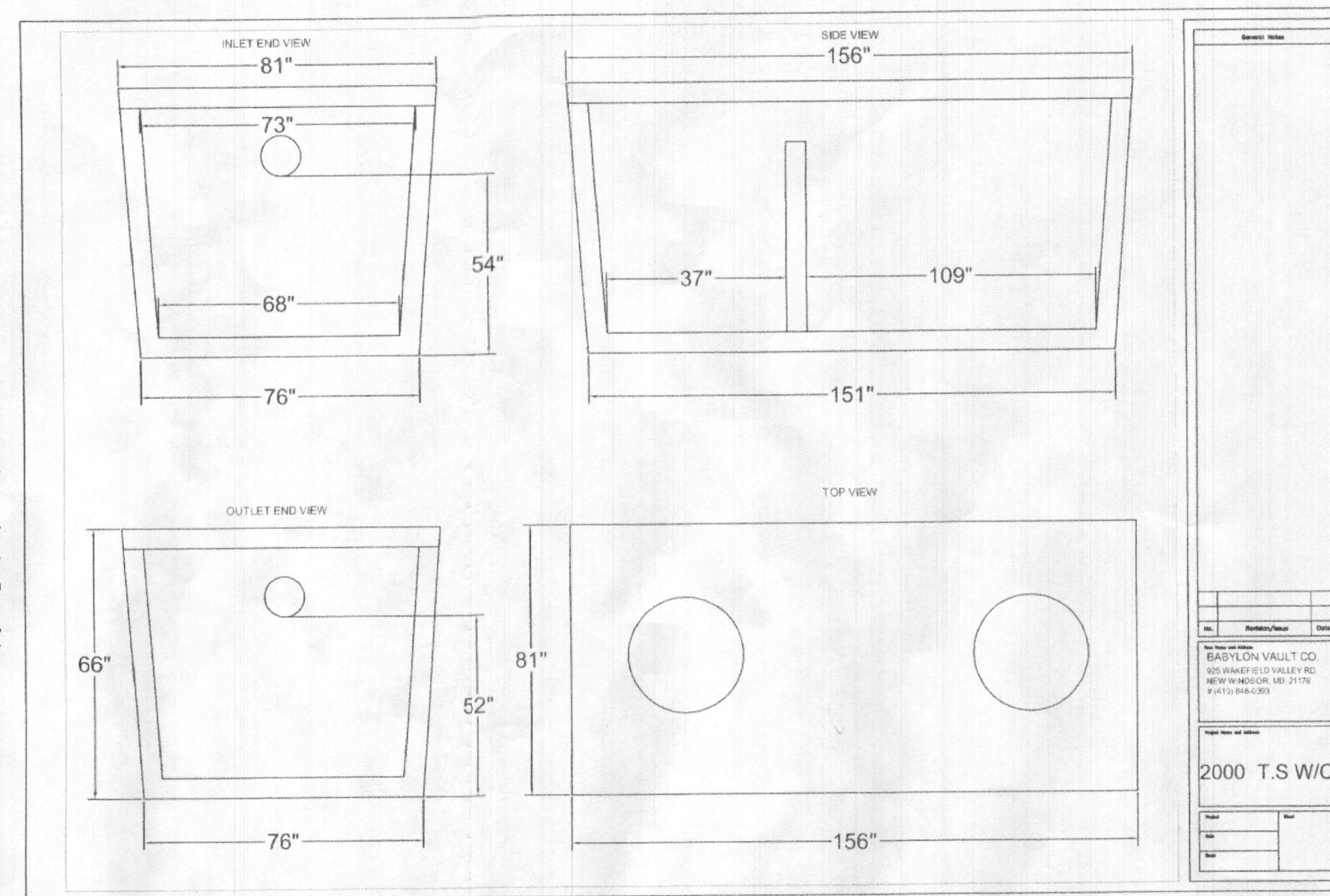
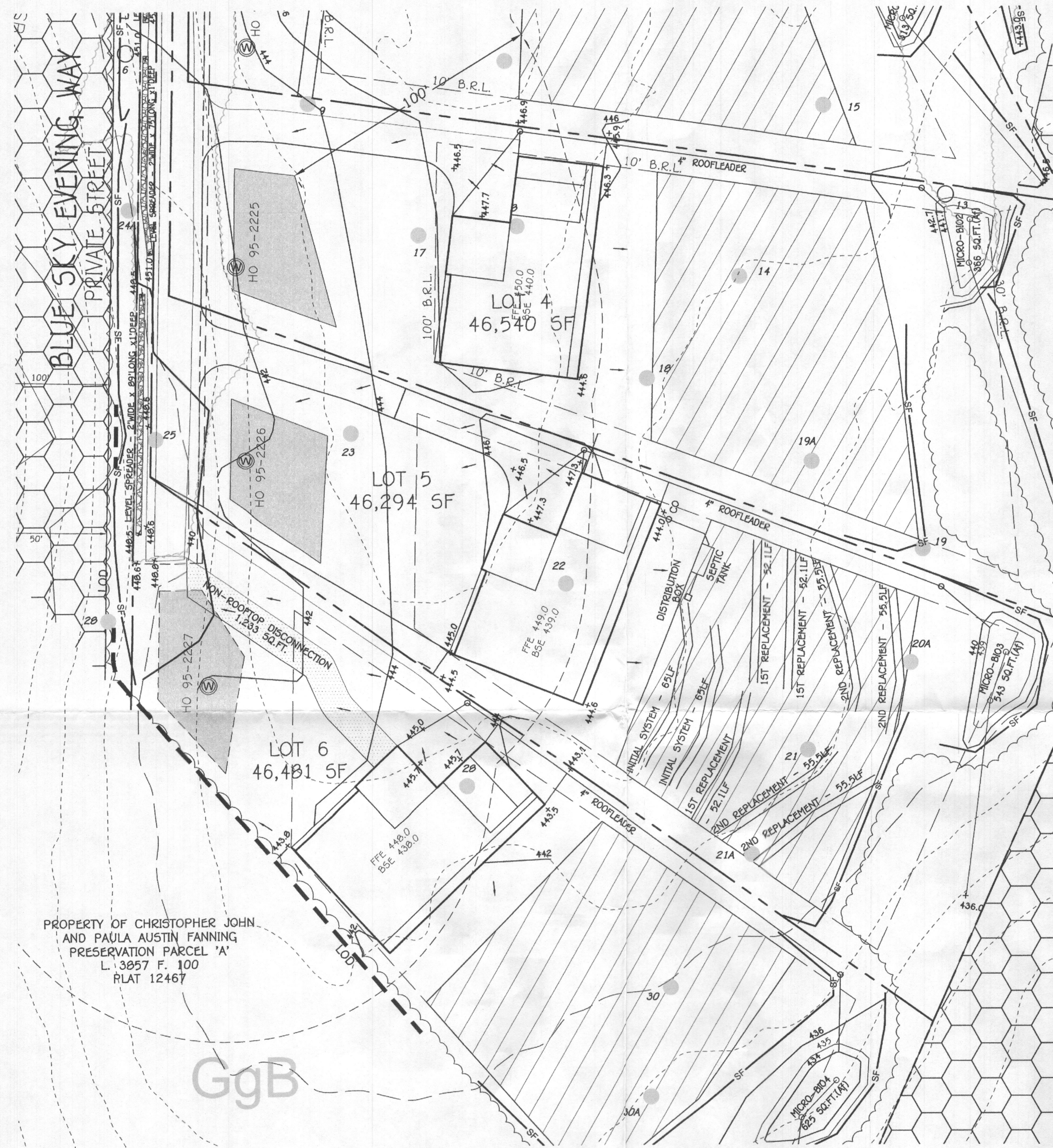
**1ST REPLACEMENT SYSTEM**  
 SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS  
 LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
 APPLICATION RATE = 0.8  
 EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
 TRENCH DEPTH = 7 FEET  
 TRENCH WIDTH (W) = 3 FEET  
 EFFECTIVE DEPTH (D) = 3 FEET  
 SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
 COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x3)) = .5  
 TRENCH LENGTH = 312.59 SF x 0.5 = 156.25 FEET  
 (USE 3 TRENCHES AT 52.1 L.F.)  
 TRENCH SPACING = 2D+W = ((2x3) + 3) = 9' USE 10'

**2ND REPLACEMENT SYSTEM**  
 SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS  
 LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
 APPLICATION RATE = 0.8  
 EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
 TRENCH DEPTH = 5.5 FEET  
 TRENCH WIDTH (W) = 3 FEET  
 EFFECTIVE DEPTH (D) = 1.5 FEET  
 SF OF DRAINFIELD = 750 GPD / 0.8 = 750 SF  
 COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x1.5)) = .71  
 TRENCH LENGTH = 312.59 SF x 0.71 = 221.88 FEET  
 (USE 4 TRENCHES AT 55.5 L.F.)  
 TRENCH SPACING = 2D+W = ((2x1.5) + 3) = 9' USE 10'

**SEPTIC SYSTEM  
 INSTALLATION SITE PLAN  
 FULTON WOODS  
 LOT 5  
 12259 BLUE SKY EVENING WAY  
 ZONED RR-DEO**

TAX MAP No. 41 GRID No. 13 PARCEL No. 199  
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: OCTOBER, 2019

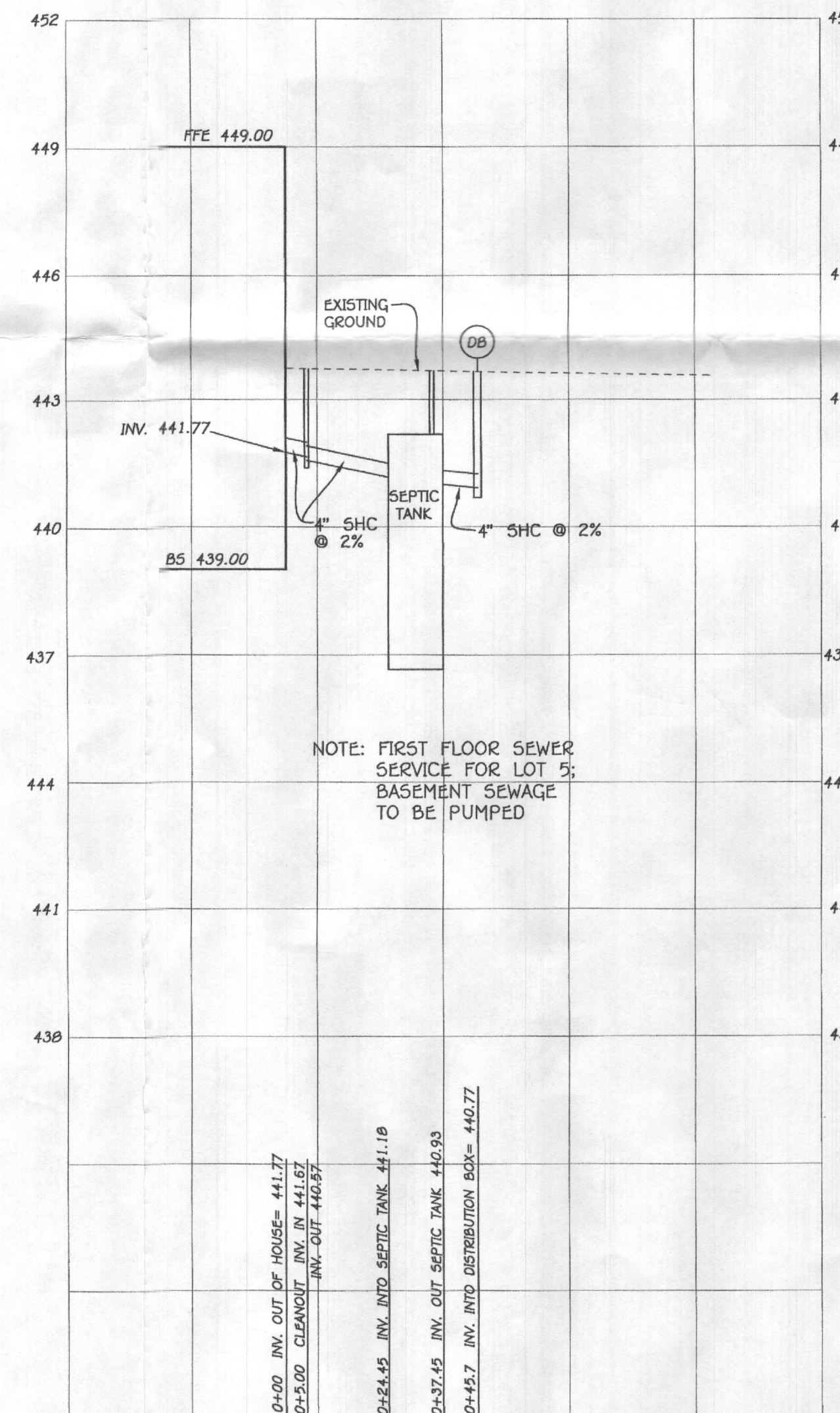
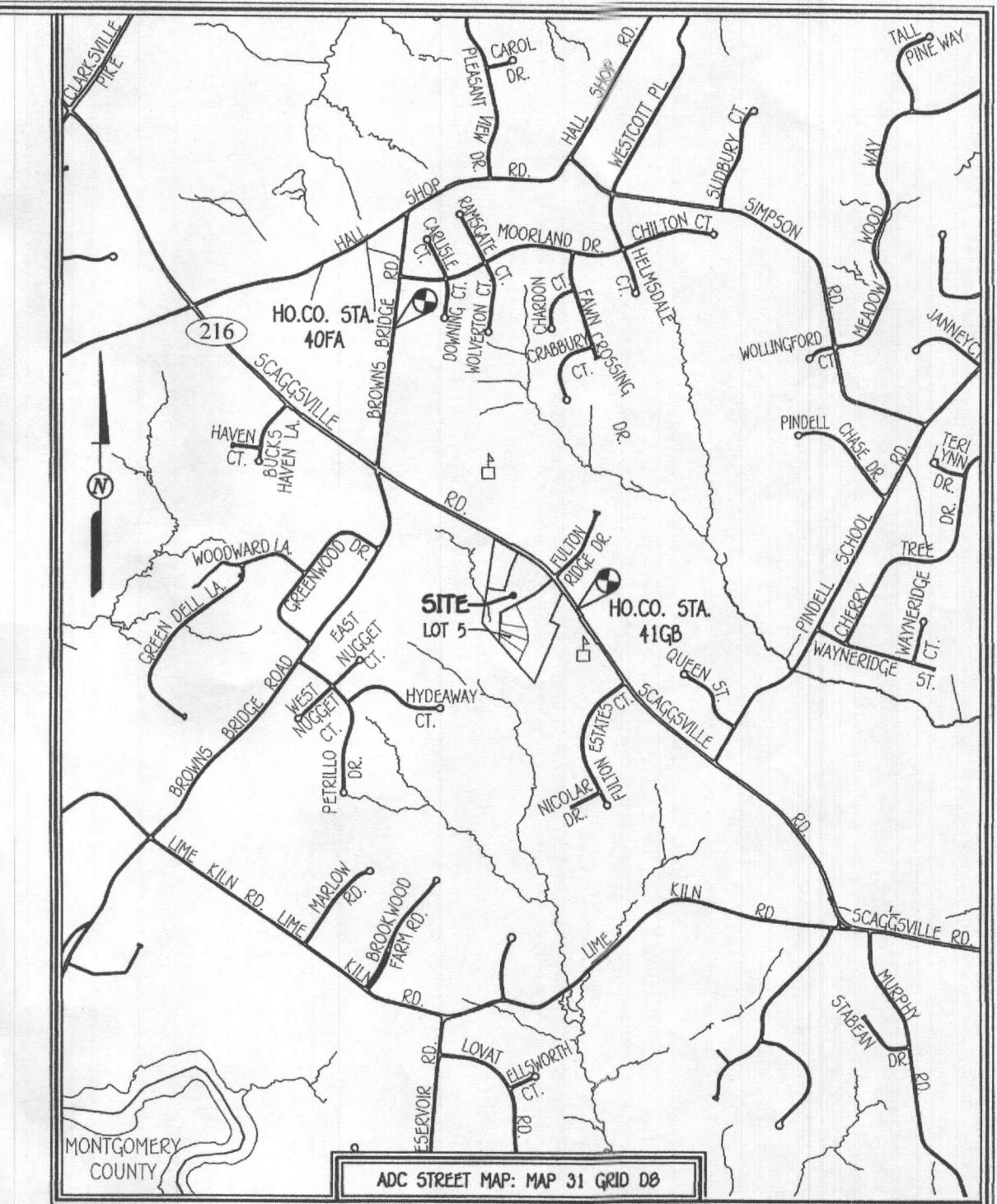
1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL HO-95-2226 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.



**TRENCH DATA:**

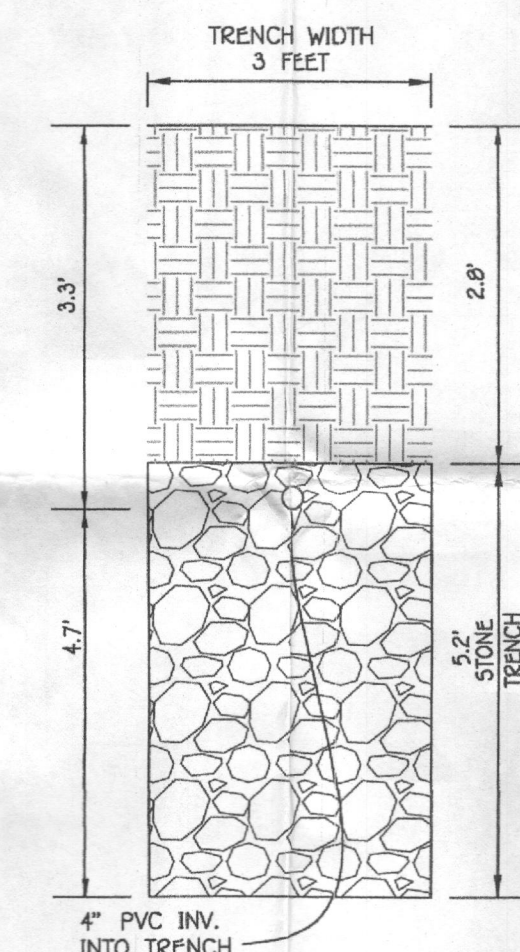
TRENCH 1:  
EX. GROUND ABOVE = 444.0  
INV. IN = 440.67  
BOTTOM TRENCH = 432.0

TRENCH 2:  
EX. GROUND ABOVE = 443.3  
INV. IN = 440.0  
BOTTOM TRENCH = 435.3



**SEPTIC PROFILE**

SCALE: 1" = 30'



**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 = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = .416$   
TRENCH LENGTH = 312.50 SF x 0.416 = 130.0 FEET  
(USE 2 TRENCHES AT 65.0 L.F.)  
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

**1ST REPLACEMENT 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 = 7 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2x3)) = .5$   
TRENCH LENGTH = 312.50 SF x 0.5 = 156.25 FEET  
(USE 3 TRENCHES AT 52.1 L.F.)  
TRENCH SPACING = 2D+W = ((2x3) + 3) = 9' USE 10'

FFE 449.0  
BSE 439.0  
INV. OUT OF HOUSE = 439.6  
PROP. GROUND AT CLEANOUT #1 = 443.9  
INV. INTO CLEANOUT = 439.5  
INV. OUT OF CLEANOUT = 439.4  
EX. GROUND AT SEPTIC TANK = 443.8  
PROP. GRADE ABOVE SEPTIC TANK = 443.8  
TOP OF SEPTIC TANK = 440.01  
INV. INTO SEPTIC TANK = 439.01  
INV. OUT OF SEPTIC TANK = 438.76  
EX. GROUND AT DISTRIBUTION BOX = 444.0  
INV. INTO DISTRIBUTION BOX = 438.6  
INV. OUT OF DISTRIBUTION BOX = 438.5

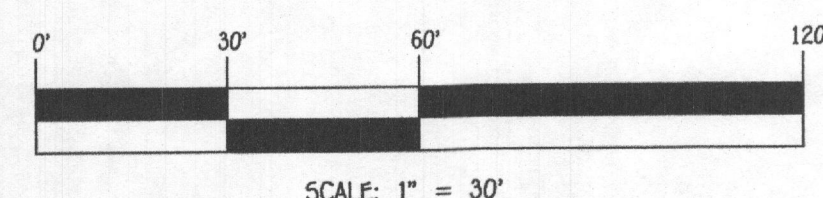
Approved Septic System Plan  
Howard County Health Department  
Signature: [Signature] Date: 8/16/2019  
Superseded by 10/18/2019

**2ND REPLACEMENT SYSTEM**

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 5.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 1.5 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 750 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2x1.5)) = .71$   
TRENCH LENGTH = 312.50 SF x 0.71 = 221.88 FEET  
(USE 4 TRENCHES AT 55.5 L.F.)  
TRENCH SPACING = 2D+W = ((2x1.5) + 3) = 9' USE 10'

SEPTIC SYSTEM  
INSTALLATION SITE PLAN  
FULTON WOODS  
LOT 5  
12259 BLUE SKY EVENING WAY  
ZONED RR-DEO

TAX MAP No. 41 GRID No. 13 PARCEL No. 199  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JULY, 2019



**PLAN**

SCALE: 1" = 30'

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CONTINENTAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21114  
(410) 461-2895

OWNER/DEVELOPER  
NV HOMES  
9720 PATRICK WOODS DRIVE  
COLUMBIA, MD 21046  
410-379-9956

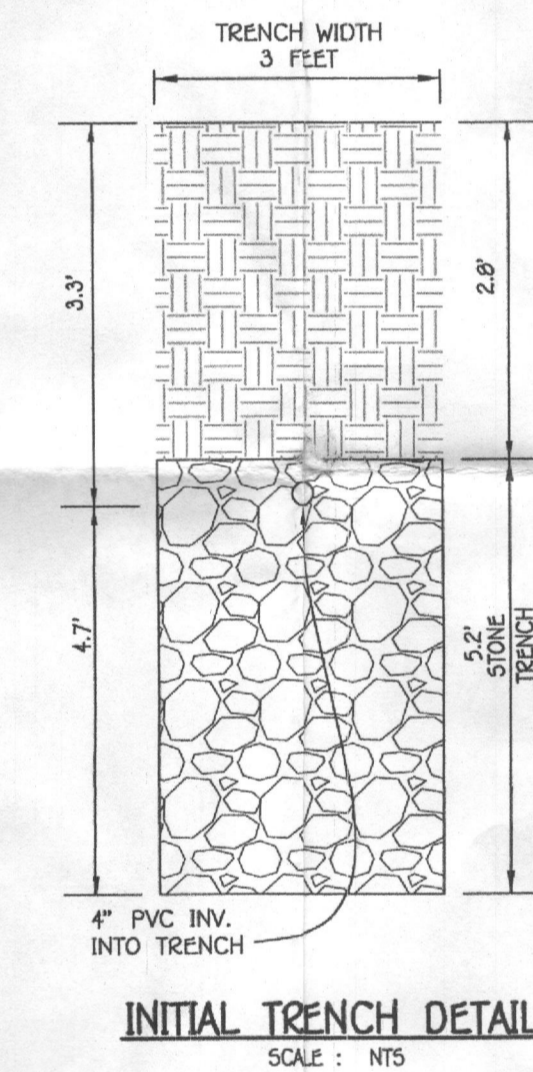
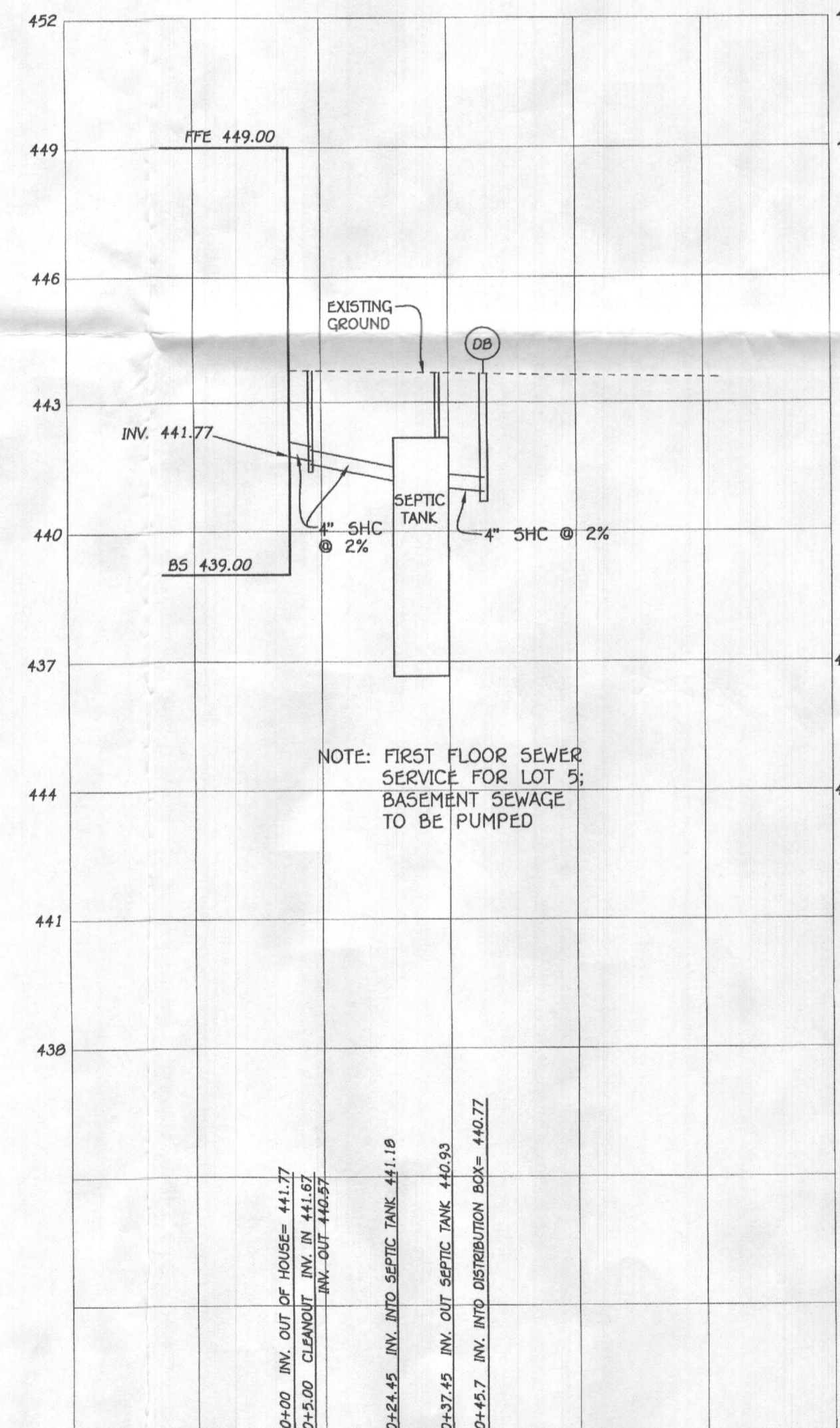
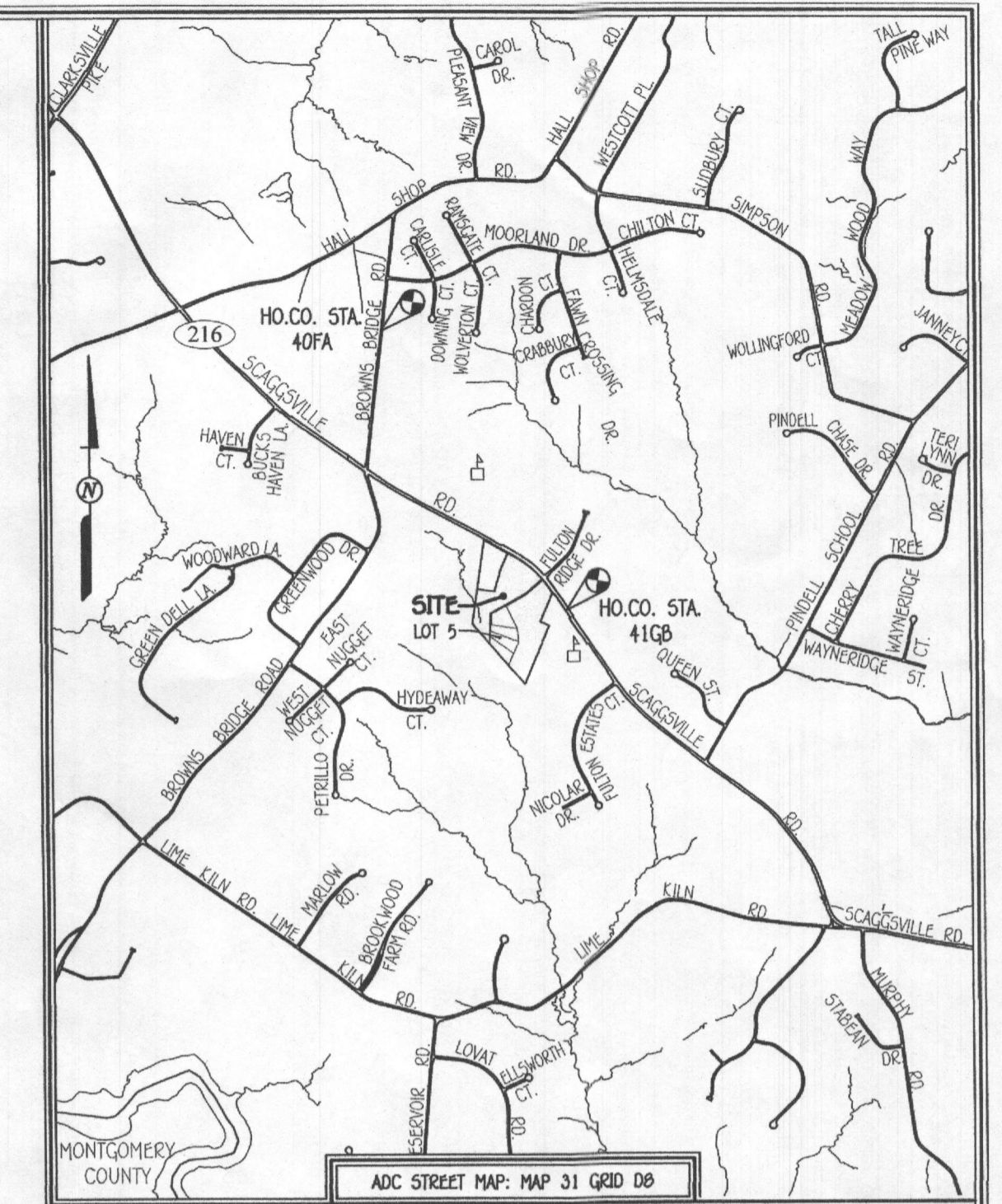
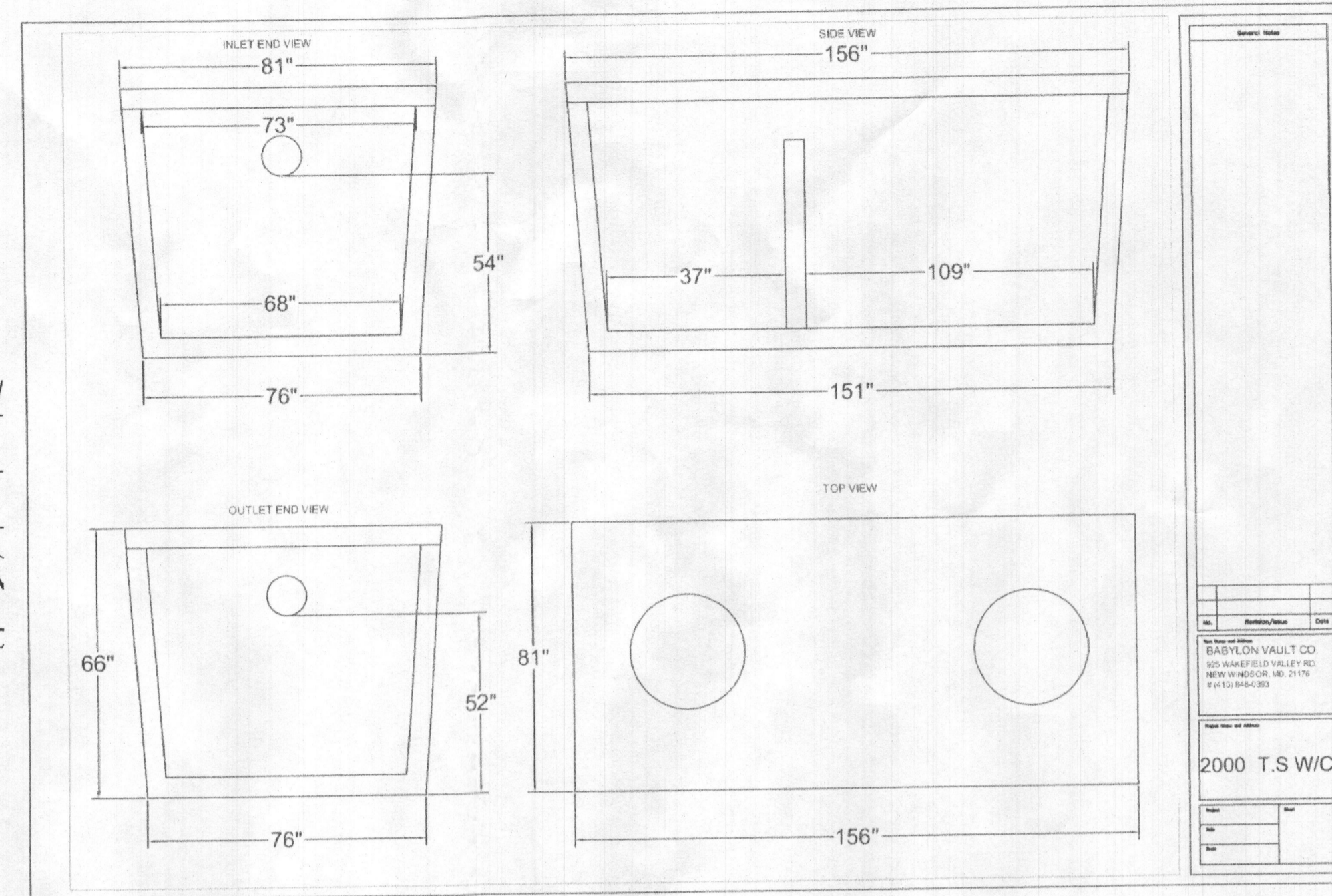
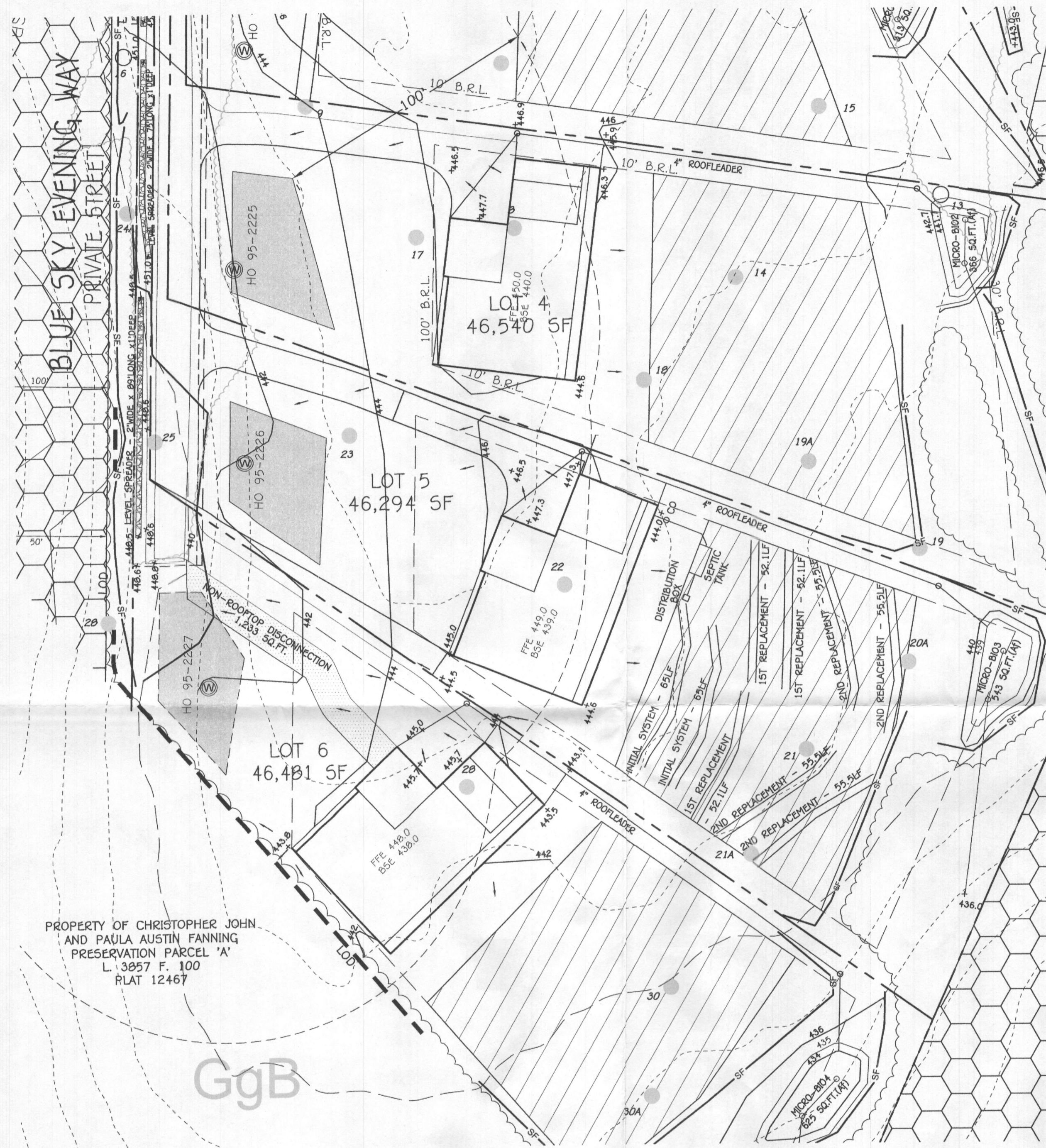


**PROFESSIONAL CERTIFICATION**

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. 38386, EXPIRATION DATE: 01/12/2020

Stephanie Jute 8/15/19  
Signature Of Professional Engineer DATE

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-95-2226 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.



FFE 449.0  
 BSE 439.0  
 INV. OUT OF HOUSE = 439.6  
 PROP. GROUND AT CLEANOUT #1 = 443.9  
 INV. INTO CLEANOUT = 439.5  
 EX. GROUND AT SEPTIC TANK = 443.8  
 PROP. GRADE ABOVE SEPTIC TANK = 443.8  
 TOP OF SEPTIC TANK = 440.01  
 INV. INTO SEPTIC TANK = 439.01  
 INV. OUT OF SEPTIC TANK = 438.76  
 EX. GROUND AT DISTRIBUTION BOX = 444.0  
 INV. INTO DISTRIBUTION BOX = 438.6  
 INV. OUT OF DISTRIBUTION BOX = 438.5

Approved Septic System Plan  
 Howard County Health Department  
 Signature: [Signature] Date: 3/16/2019

Superseded by 10/18/2019

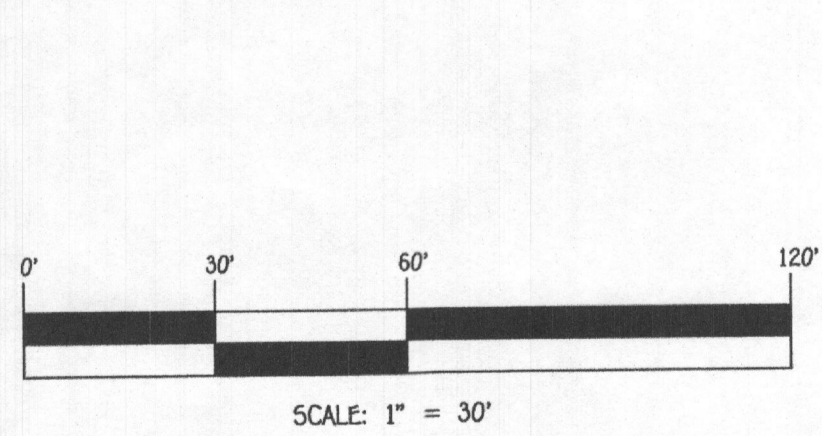
**INITIAL SYSTEM**  
 SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS  
 LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
 APPLICATION RATE = 0.8  
 EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
 TRENCH DEPTH = 8 FEET  
 TRENCH WIDTH (W) = 3 FEET  
 EFFECTIVE DEPTH (D) = 4 FEET  
 SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
 COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = 4/16  
 TRENCH LENGTH = 312.50 SF x 0.416 = 130.0 FEET (USE 2 TRENCHES AT 65.0 LF.)  
 TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

**2ND REPLACEMENT SYSTEM**  
 SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS  
 LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
 APPLICATION RATE = 0.8  
 EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
 TRENCH DEPTH = 5.5 FEET  
 TRENCH WIDTH (W) = 3 FEET  
 EFFECTIVE DEPTH (D) = 1.5 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+(2x1.5)) = 7/11  
 TRENCH LENGTH = 312.50 SF x 0.71 = 221.88 FEET (USE 4 TRENCHES AT 55.5 LF.)  
 TRENCH SPACING = 2D+W = ((2x1.5) + 3) = 6' 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 = 0.8  
 EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
 TRENCH DEPTH = 7 FEET  
 TRENCH WIDTH (W) = 3 FEET  
 EFFECTIVE DEPTH (D) = 3 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+(2x3)) = 5/11  
 TRENCH LENGTH = 312.50 SF x 0.5 = 156.25 FEET (USE 3 TRENCHES AT 52.1 LF.)  
 TRENCH SPACING = 2D+W = ((2x3) + 3) = 9' USE 10'

SEPTIC SYSTEM  
 INSTALLATION SITE PLAN  
 FULTON WOODS  
 LOT 5  
 12259 BLUE SKY EVENING WAY  
 ZONED RR-DEO

TAX MAP No. 41 GRID No. 13 PARCEL No. 199  
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: A5 SHOWN DATE: JULY, 2019



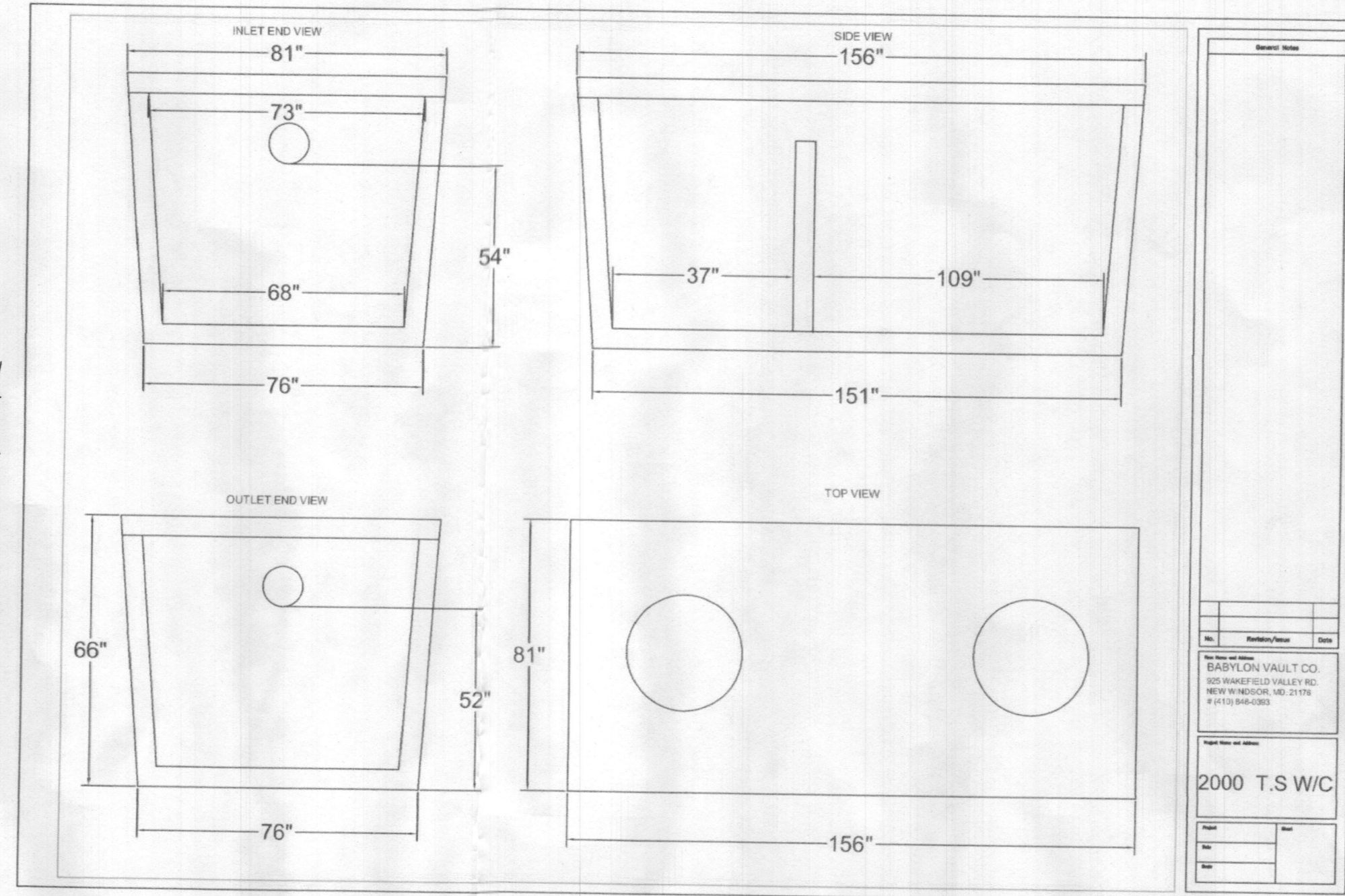
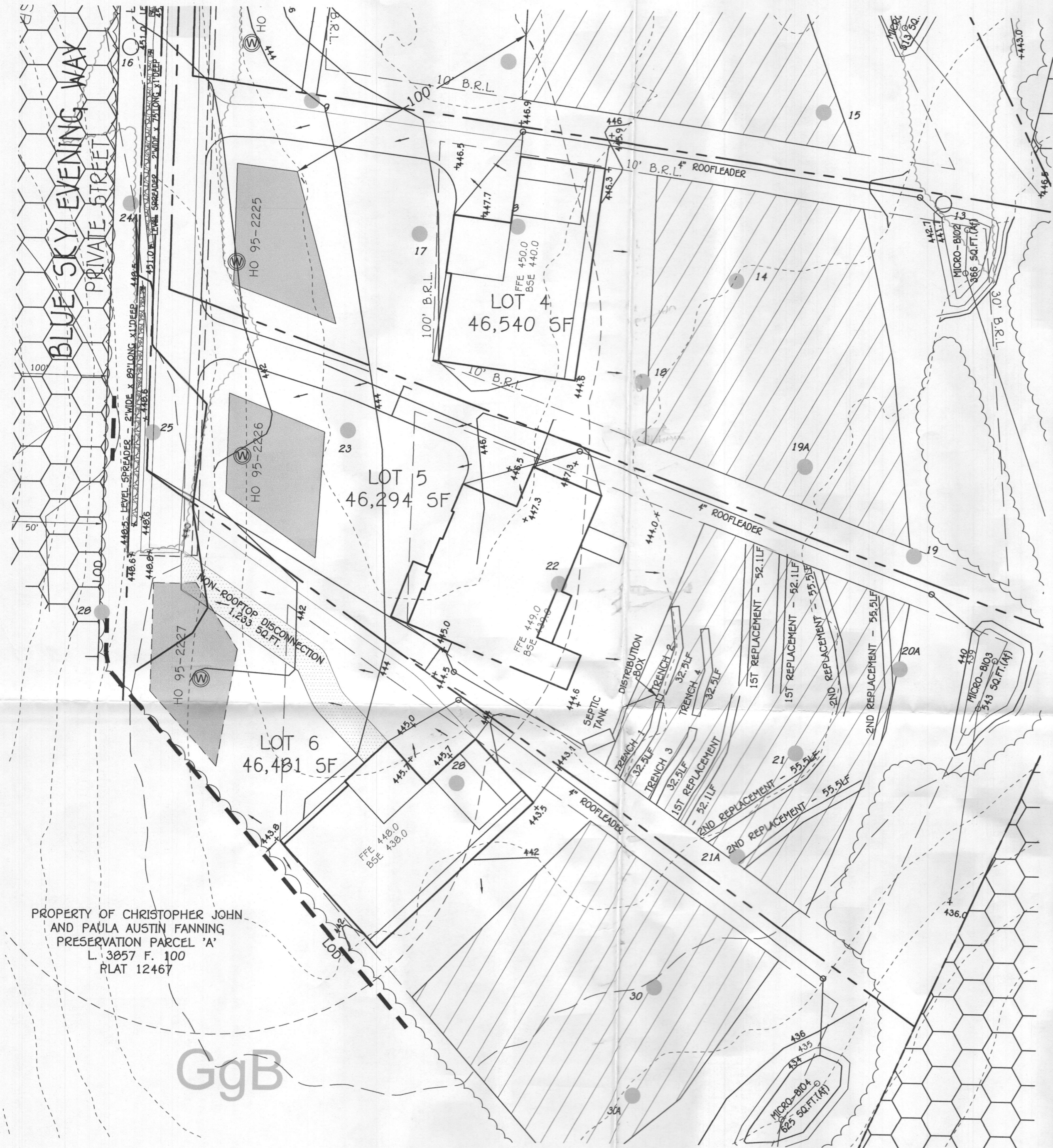
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELKJETT CITY, MARYLAND 21042  
 (410) 461-2895

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

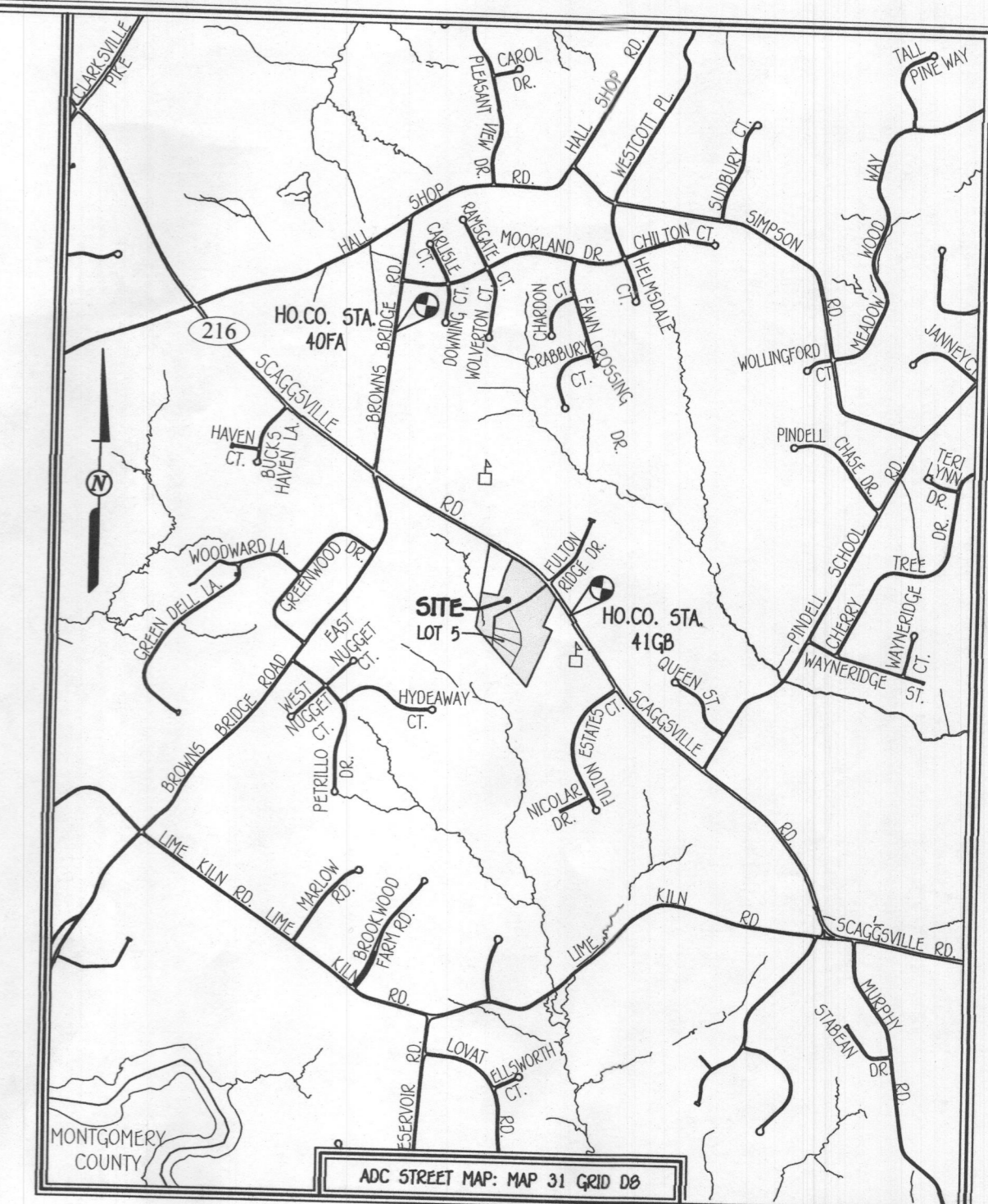


PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2020  
 Signature: Stephen J. [Signature] 8/15/19  
 DATE

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-95-2226 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.



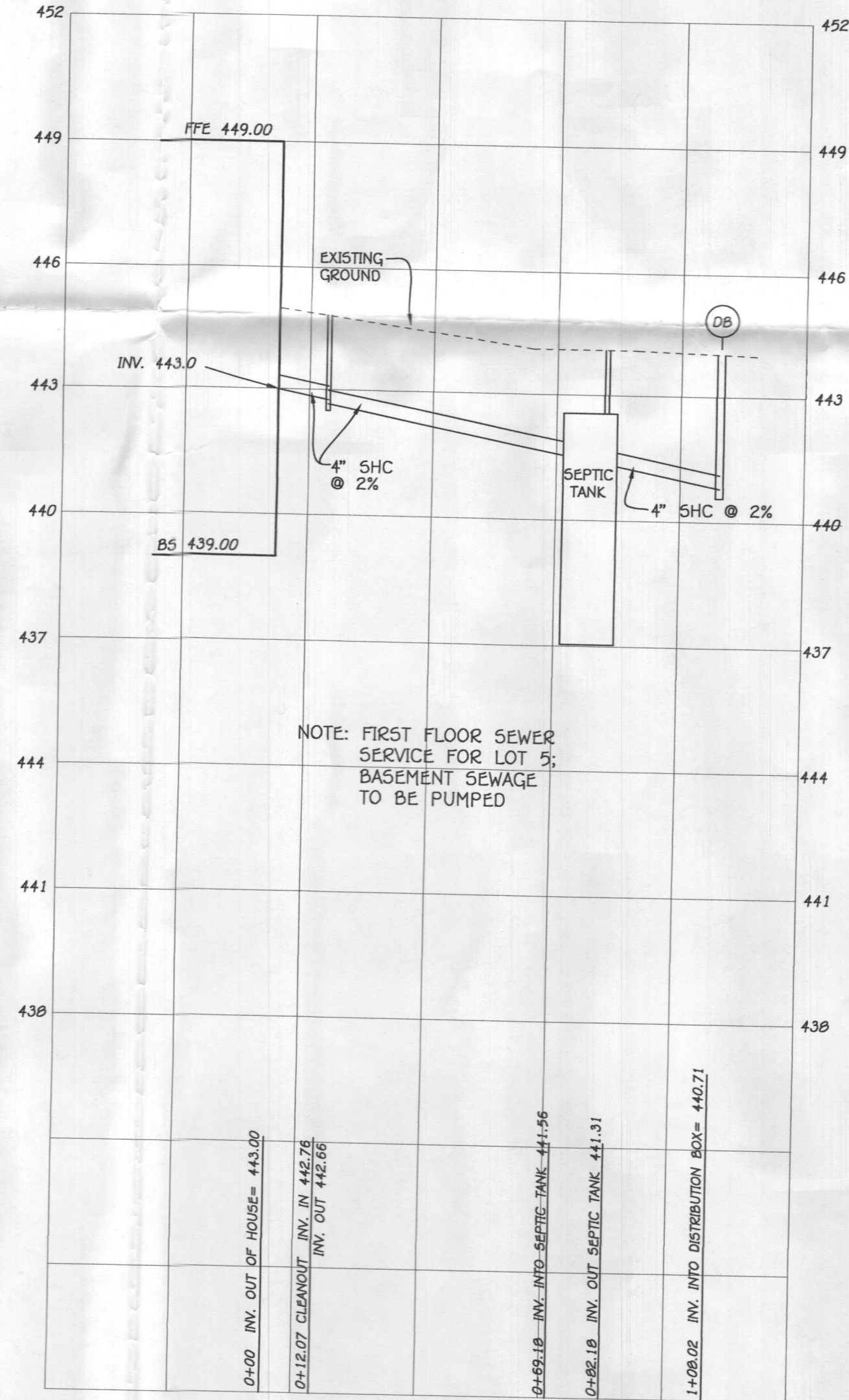
- TRENCH DATA:**
- TRENCH 1:  
EX. GROUND ABOVE = 444.0  
INV. IN = 440.81  
BOTTOM TRENCH = 432.0
  - TRENCH 2:  
EX. GROUND ABOVE = 444.0  
INV. IN = 440.81  
BOTTOM TRENCH = 432.0
  - TRENCH 3:  
EX. GROUND ABOVE = 443.3  
INV. IN = 440.11  
BOTTOM TRENCH = 435.3
  - TRENCH 4:  
EX. GROUND ABOVE = 443.3  
INV. IN = 440.11  
BOTTOM TRENCH = 435.3



**VICINITY MAP**  
SCALE: 1" = 2,000'

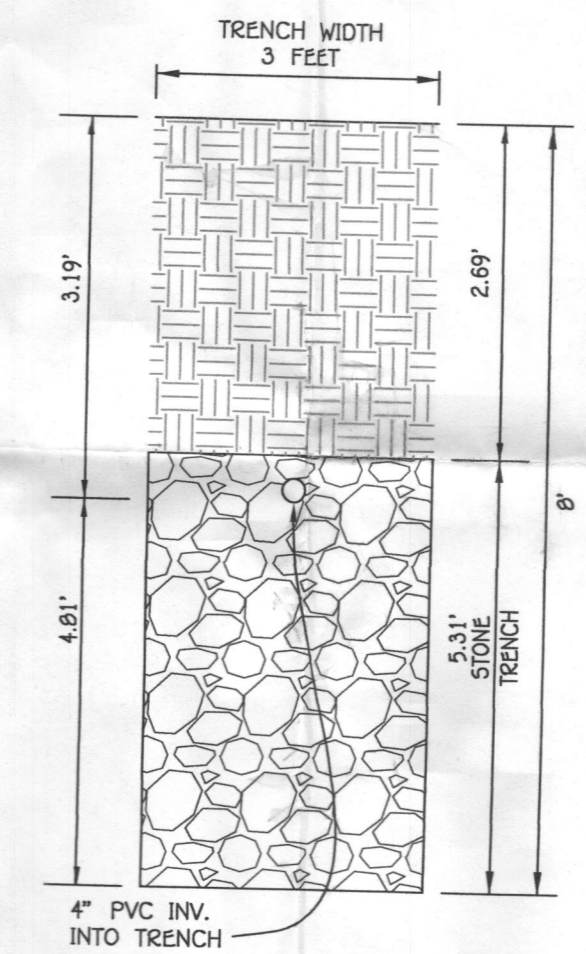
Approved Septic System Plan  
Howard County Health Department  
Signature: *[Signature]* Date: 10/18/2019

- FFE 449.0
- BSE 439.0
- INV. OUT OF HOUSE = 443.0
- PROP. GROUND AT CLEANOUT #1 = 444.3
- INV. INTO CLEANOUT = 442.76
- INV. OUT OF CLEANOUT = 442.66
- EX. GROUND AT SEPTIC TANK = 444.3
- PROP. GRADE ABOVE SEPTIC TANK = 444.3
- TOP OF SEPTIC TANK = 442.56
- INV. INTO SEPTIC TANK = 441.56
- INV. OUT OF SEPTIC TANK = 441.31
- EX. GROUND AT DISTRIBUTION BOX = 444.0
- INV. INTO DISTRIBUTION BOX = 440.81
- INV. OUT OF DISTRIBUTION BOX = 440.71



NOTE: FIRST FLOOR SEWER SERVICE FOR LOT 5; BASEMENT SEWAGE TO BE PUMPED

**SEPTIC PROFILE**  
SCALE: 1" = 30'

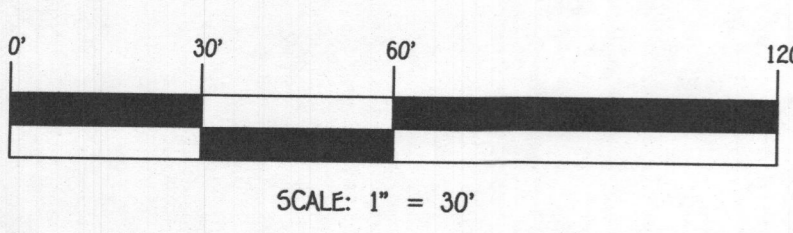


**INITIAL TRENCH DETAIL**  
SCALE: NTS

**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 = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 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+(2x4)) = 4/16 = 0.25  
TRENCH LENGTH = 312.50 SF x 0.416 = 130.0 FEET  
(USE 4 TRENCHES AT 32.50 L.F.)  
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

**2ND REPLACEMENT SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 5.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 1.5 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+(2x1.5)) = 5/7  
TRENCH LENGTH = 312.50 SF x 0.71 = 221.88 FEET  
(USE 4 TRENCHES AT 55.5 L.F.)  
TRENCH SPACING = 2D+W = ((2x1.5) + 3) = 6' USE 10'

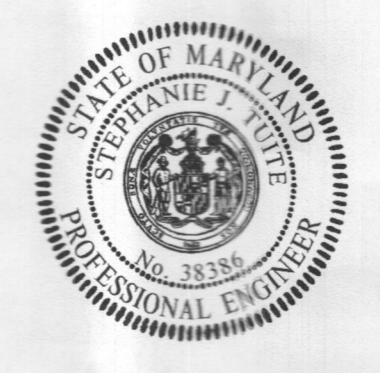
**1ST REPLACEMENT SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 7 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x3)) = 5/11  
TRENCH LENGTH = 312.50 SF x 0.5 = 156.25 FEET  
(USE 3 TRENCHES AT 52.1 L.F.)  
TRENCH SPACING = 2D+W = ((2x3) + 3) = 9' USE 10'



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

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2899

**OWNER/DEVELOPER**  
NY HOMES  
9720 PATENTWOODS DRIVE  
COLUMBIA, MD 21046  
410-379-9996

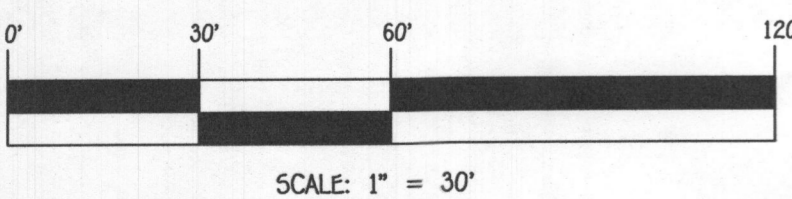
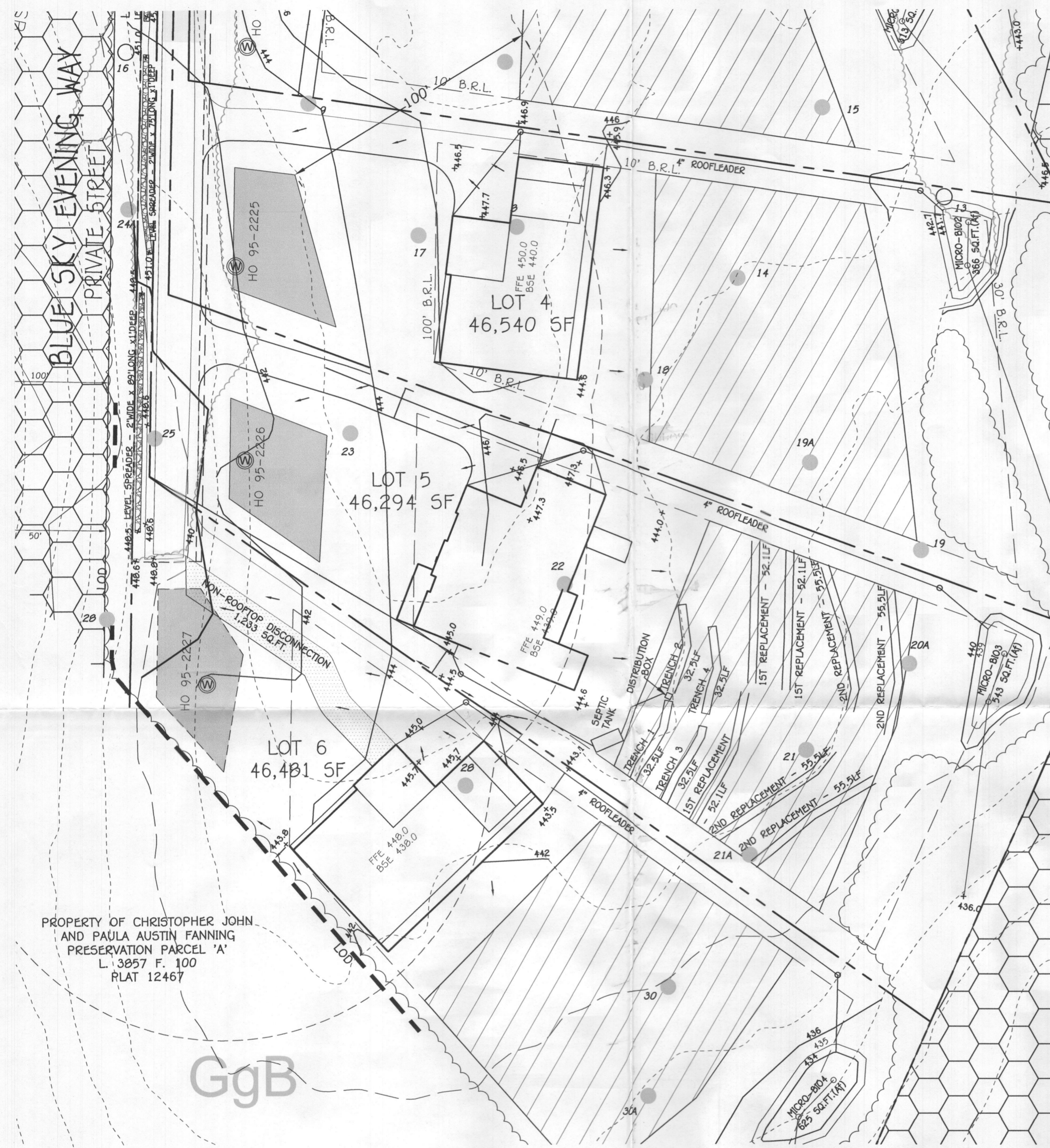


**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2022  
*Stephanie Jente* 10/18/19  
Signature of Professional Engineer DATE

**SEPTIC SYSTEM  
INSTALLATION SITE PLAN  
FULTON WOODS  
LOT 5  
12259 BLUE SKY EVENING WAY  
ZONED RR-DEO**

TAX MAP No. 41 GRID No. 13 PARCEL No. 199  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: A5 SHOWN DATE: OCTOBER, 2019

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-95-2226 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.



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21142  
(410) 461-2995

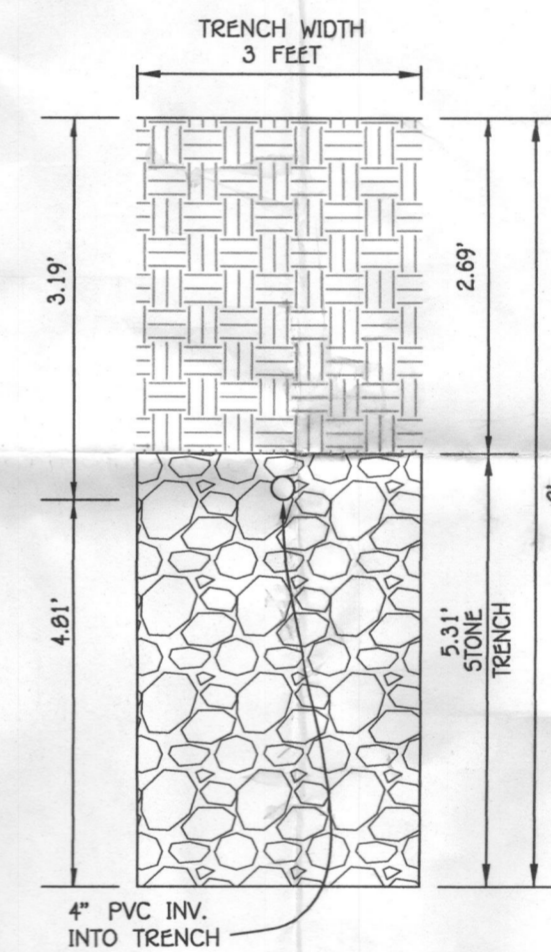
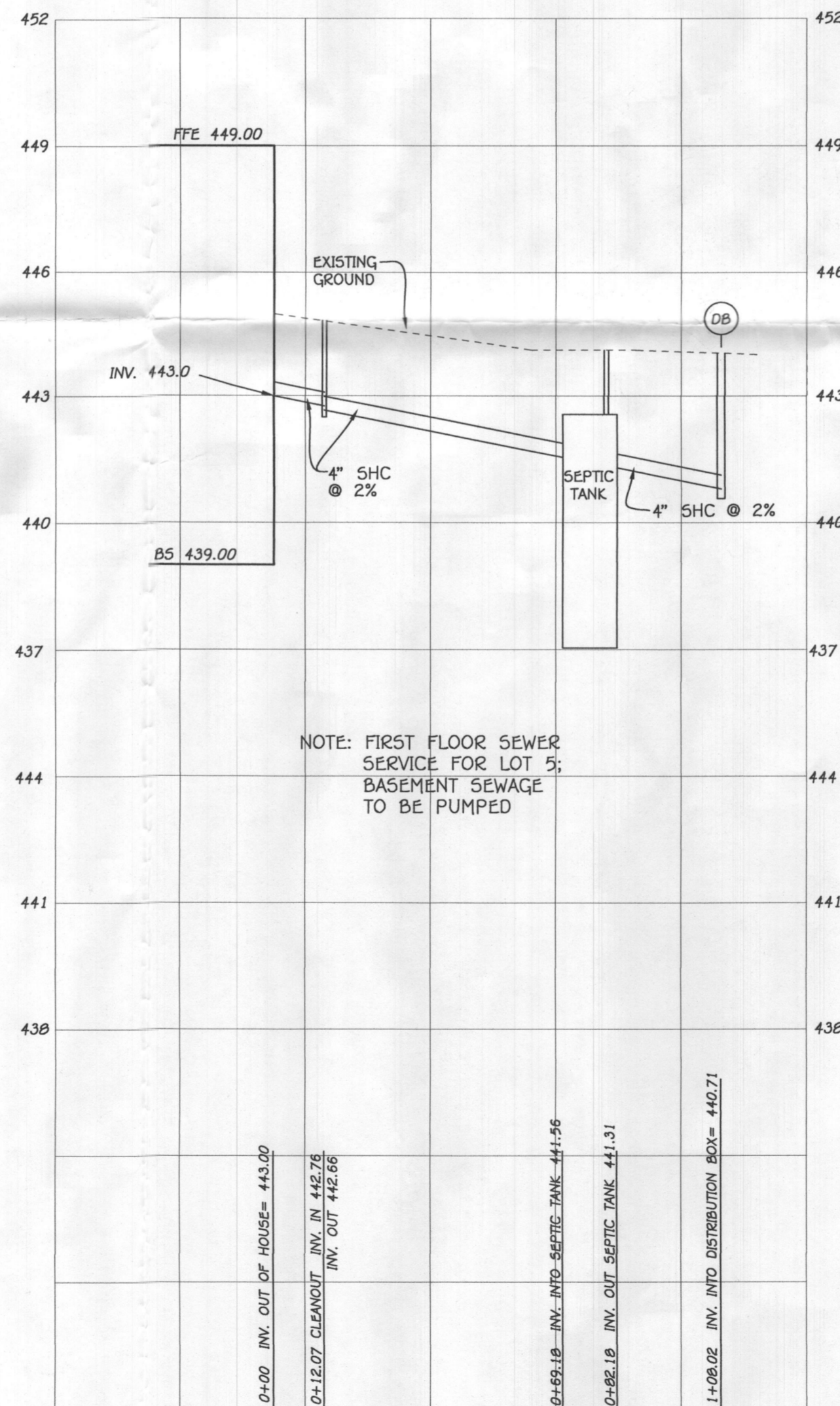
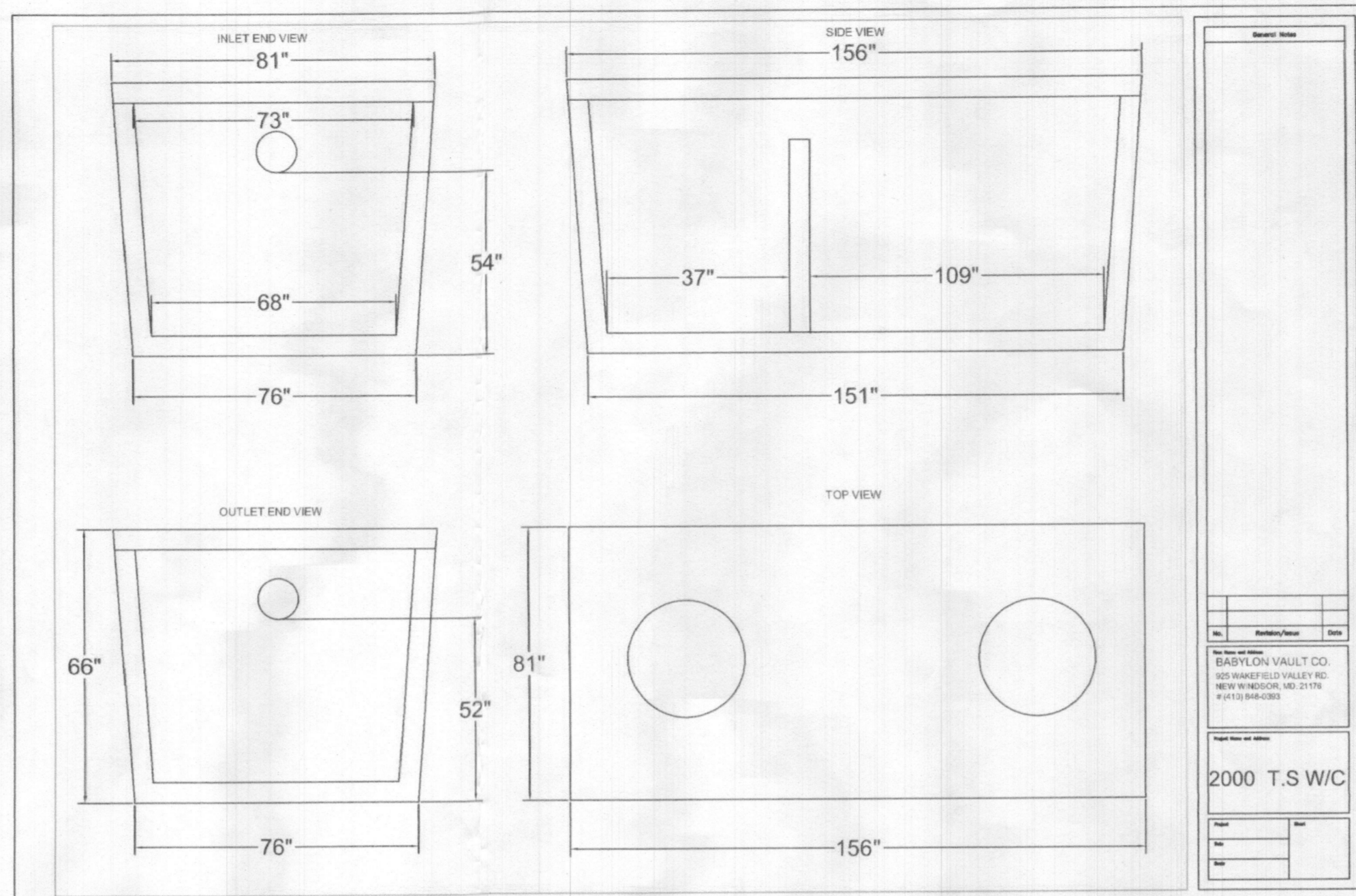
**OWNER/DEVELOPER**  
NV HOMES  
9720 PATRUMENT WOODS DRIVE  
COLUMBIA, MD 21046  
410-379-9956



**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. 38386, EXPIRATION DATE: 01/12/2020

*Stephanie Jutte* 10/10/19  
Signature of Professional Engineer DATE



**INITIAL SYSTEM**

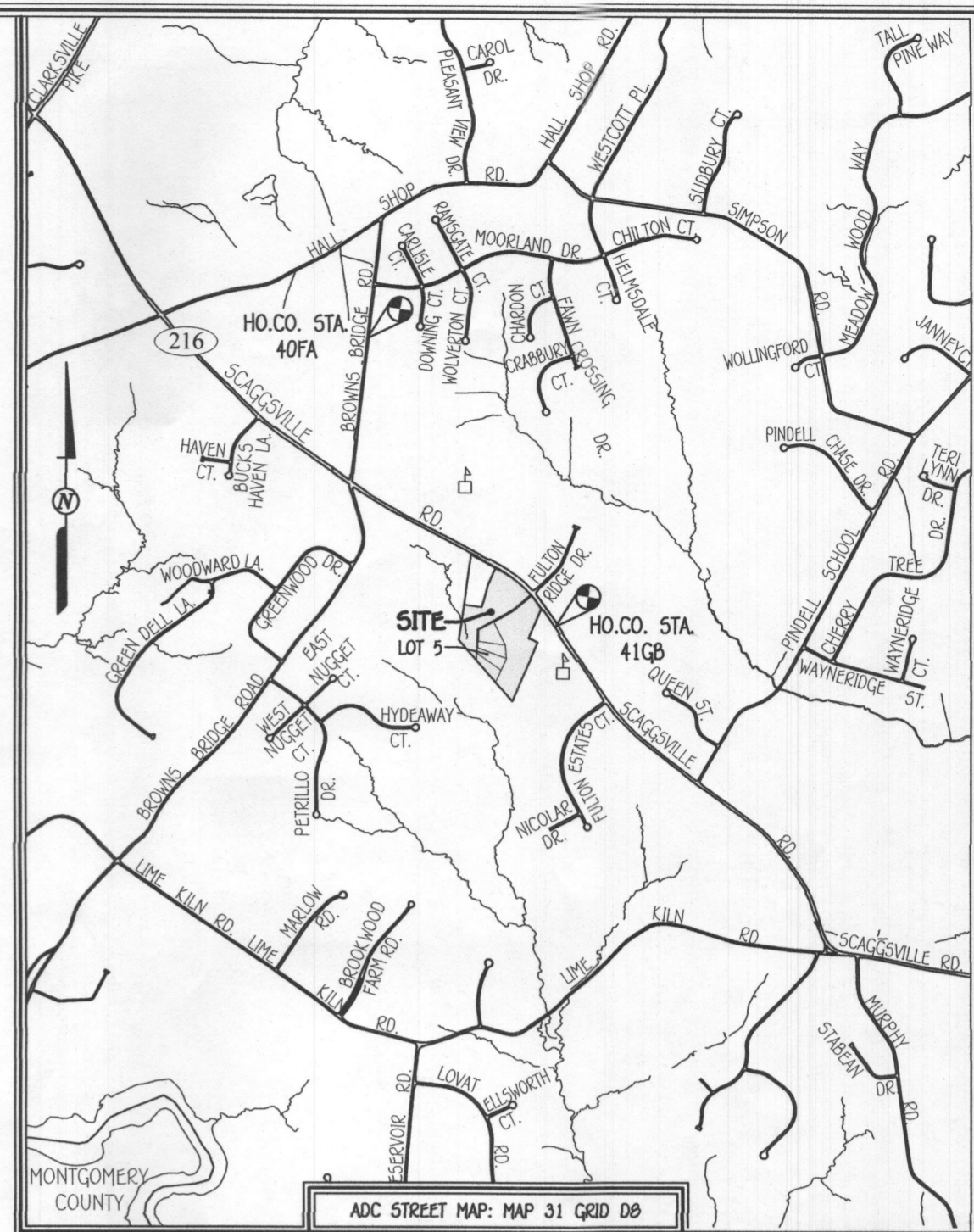
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = 4/16 = 0.25  
TRENCH LENGTH = 312.50 SF x 0.416 = 130.0 FEET (USE 4 TRENCHES AT 32.50 L.F.)  
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

**1ST REPLACEMENT 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 = 7 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3 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+(2x3)) = 5/11  
TRENCH LENGTH = 312.50 SF x 0.5 = 156.25 FEET (USE 3 TRENCHES AT 52.1 L.F.)  
TRENCH SPACING = 2D+W = ((2x3) + 3) = 9' USE 10'

**2ND REPLACEMENT SYSTEM**

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 5.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 1.5 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 750 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x1.5)) = 7/7 = 1.0  
TRENCH LENGTH = 312.50 SF x 0.71 = 221.88 FEET (USE 4 TRENCHES AT 55.5 L.F.)  
TRENCH SPACING = 2D+W = ((2x1.5) + 3) = 6' USE 10'



Approved Septic System Plan  
Howard County Health Department  
*Stephanie Jutte* 10/18/2019  
Signature Date

FFE 449.0  
BSE 439.0  
INV. OUT OF HOUSE = 443.0  
PROP. GROUND AT CLEANOUT #1 = 444.3  
INV. INTO CLEANOUT = 442.76  
INV. OUT OF CLEANOUT = 442.66  
EX. GROUND AT SEPTIC TANK = 444.3  
PROP. GRADE ABOVE SEPTIC TANK = 444.3  
TOP OF SEPTIC TANK = 442.56  
INV. INTO SEPTIC TANK = 441.56  
INV. OUT OF SEPTIC TANK = 441.31  
EX. GROUND AT DISTRIBUTION BOX = 444.0  
INV. INTO DISTRIBUTION BOX = 440.81  
INV. OUT OF DISTRIBUTION BOX = 440.71

**SEPTIC SYSTEM  
INSTALLATION SITE PLAN  
FULTON WOODS  
LOT 5  
12259 BLUE SKY EVENING WAY  
ZONED RR-DEO**

TAX MAP No. 41 GRID No. 13 PARCEL No. 199  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: OCTOBER, 2019

I:\2019\1818025\Engineering\Drawings\18025 LOT 5 Septic Permits.dwg, Layout1, 11