



# HOWARD COUNTY HEALTH DEPARTMENT

67362

WS

DATE  
4/14/20

Received From

Allied Environmental Service, PHONE # 301-776-8370

For

Well Permit

CASH

CHECK

17400 Murray Ct.

NO.

22916

One Hundred Sixty

Dollars

\$

160.00

Received By

Shelia Deatty

C1 60516

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER

ST/CO USE ONLY

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

DATE RECEIVED MM DD YY

DATE WELL COMPLETED MM DD YY

Depth of Well (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER Sandberg, Scott & Jenny WELL SITE ADDRESS 47400 Nussery Ct TOWN Mt Airy, MD SUBDIVISION Nussery Acres SECTION LOT 3

WELL LOG

Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

Table with columns: DESCRIPTION (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Includes handwritten entries: Bin Clay (0-20), Red Clay (20-90), Bin Rock (90-110), Weathered Rock (110-118), Bin Rock (118-140), Grey Rock (140-330). Includes note '2 closed loops' at the bottom.

2 Loops GROUTING RECORD yes no WELL HAS BEEN GROUTED (Circle Appropriate Box) [Y] [N]

TYPE OF GROUTING MATERIAL (Circle one) CEMENT [CM] BENTONITE CLAY [BC] NO. OF BAGS 36 NO. OF POUNDS 1900 GALLONS OF WATER 900 DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 320 ft.

CASING RECORD casing types insert appropriate code below [ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE Nominal diameter top (main) casing (nearest inch)! Total depth of main casing (nearest foot)

OTHER CASING (if used) diameter inch depth (feet) from to

SCREEN RECORD screen type or open hole insert appropriate code below [ST] STEEL [BR] BRASS [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

DEPTH (nearest ft.) 1 2 3 4 5 6 7 8 9 11 15 17 21 23 24 26 30 32 36 38 39 41 45 47 51 SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) 56 60

NUMBER OF UNSUCCESSFUL WELLS: WELL HYDROFRACTURED [Y] [N]

CIRCLE APPROPRIATE LETTER A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED E ELECTRIC LOG OBTAINED P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. 1 M SD 1106 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. 1 D

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q

TELESCOPE CASING LOG INDICATOR OTHER DATA

C 3

PUMPING TEST

HOURS PUMPED (nearest hour) 8 9 PUMPING RATE (gal. per min.) 11 15 METHOD USED TO MEASURE PUMPING RATE WATER LEVEL (distance from land surface) BEFORE PUMPING 17 20 ft. WHEN PUMPING 22 25 ft. TYPE OF PUMP USED (for test) [A] air [P] piston [T] turbine [C] centrifugal [R] rotary [O] other (describe below) [J] jet [S] submersible

17400 NURSERY ROAD - WELLS NO DN 29

WELLS PER MINUTE (to nearest gallon) 31 35 PUMP HORSE POWER 37 41 PUMP COLUMN LENGTH (nearest ft.) 43 47 CASING HEIGHT (circle appropriate box and enter casing height) [ + ] above [ - ] below LAND SURFACE (nearest foot) 49 50 51

LATITUDE 39.35093 LONGITUDE 77.11901 (DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or state law.

04-346343

B 1 SEQUENCE NO. (MDE USE ONLY) **61484** STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL STATE PERMIT NUMBER **Ho-18-0196**

567362 please type **567362** fill in this form completely

1 2 3 4 5 6

Date Received (APA) **04/10/2020**

8 MM DD YY 13

OWNER INFORMATION

15 Last Name **Sandberg** Owner **Scott + Jenny** First Name **Scott** 34

36 Street or RFD **17400 Nursery Court** 55

57 Town **Mt Airy** 70 State **MD** 72 Zip **21771** 76

B 3 LOCATION OF WELL

8 COUNTY **Howard** 21

23 SUBDIVISION **Nursery Acres S2** 42

SECTION **44** 46 LOT **3** 48 50

52 NEAREST TOWN **Mt Airy** 71

DRILLER INFORMATION

Driller's Name **Marshal Arnette M S D 106** 76 License No. **81**

Firm Name **Allied Well Drilling**

Address **PO Box 129 Annapolis Junction MD 20700**

Signature **Marshal Arnette** Date **04/10/2020**

B 4 SOURCES OF DRILLING WATER

1. **Public**

2.

3.

11 STREET ADDRESS **17400 Nursery Ct** 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 37

DISTANCE FROM ROAD ENTER FT OR MI **38** 39

TAX MAP: **0002** BLK: \_\_\_\_\_ PARCEL **000**

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) **8** 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) **14** 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)

I INDUSTRIAL, COMMERCIAL, DEWATERING

P PUBLIC WATER SUPPLY WELL

T TEST, OBSERVATION, MONITORING

O OPEN LOOP GEOTHERMAL

C CLOSED LOOP GEOTHERMAL **2 loops**

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME **Howard** COUNTY NO. **21**

STATE SIGNATURE \_\_\_\_\_ INSERT S →

DATE ISSUED **04/23/2020** 41

CO SIGNATURE \_\_\_\_\_ EXP. DATE \_\_\_\_\_

APPROXIMATE DEPTH OF WELL **320** FEET 24 28

APPROXIMATE DIAMETER OF WELL **6** NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN

30 AIR-ROTary AIR-PERCussion ROTARY (Hydraulic Rotary)

37 CABLE REVerse-ROTary DRive-POINT

other \_\_\_\_\_

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

N THIS WELL WILL NOT REPLACE AN EXISTING WELL

Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39  S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS

D THIS WELL WILL DEEPEM AN EXISTING WELL

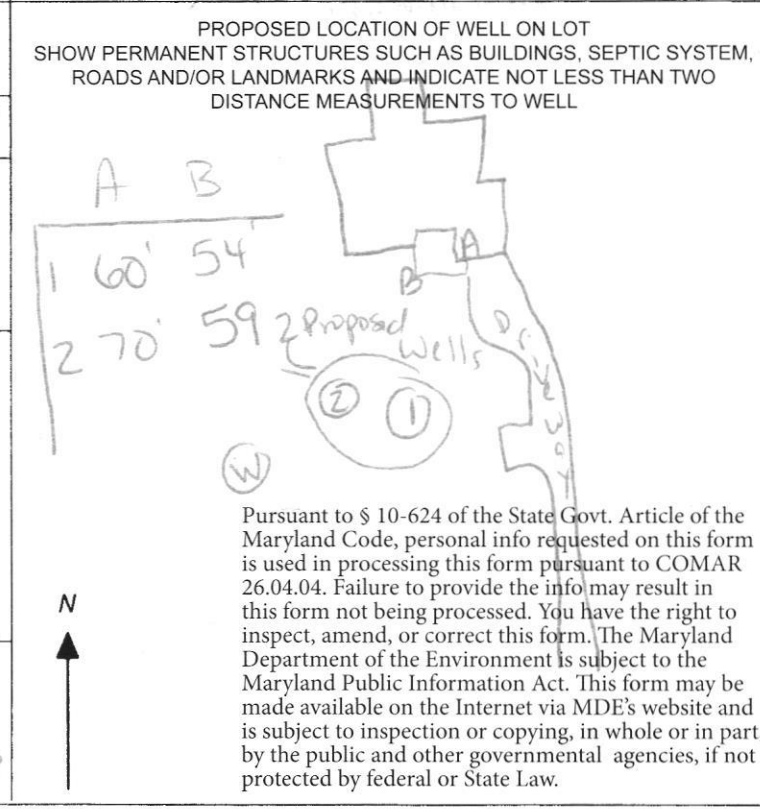
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) **41** \_\_\_\_\_ 52

Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROX. PERMIT NUMBER \_\_\_\_\_ G \_\_\_\_\_

PERMIT No. **Ho 18-0196**

70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

**CALL IN FOR INSPECTION**

FIELD WORK DATE: 10/16/2018

REVISION HISTORY: (REV 10/16/2018)

LOT 2

18093404  
LOCATION DRAWING  
LOT 3  
NURSERY ACRES  
HOWARD COUNTY, MARYLAND  
10-16-2018 SCALE 1"=100'

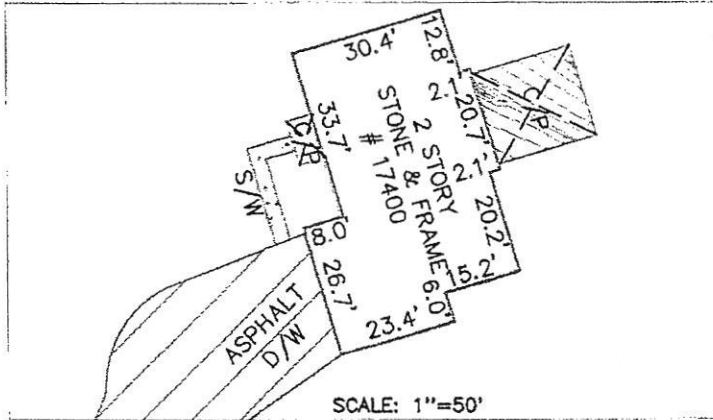
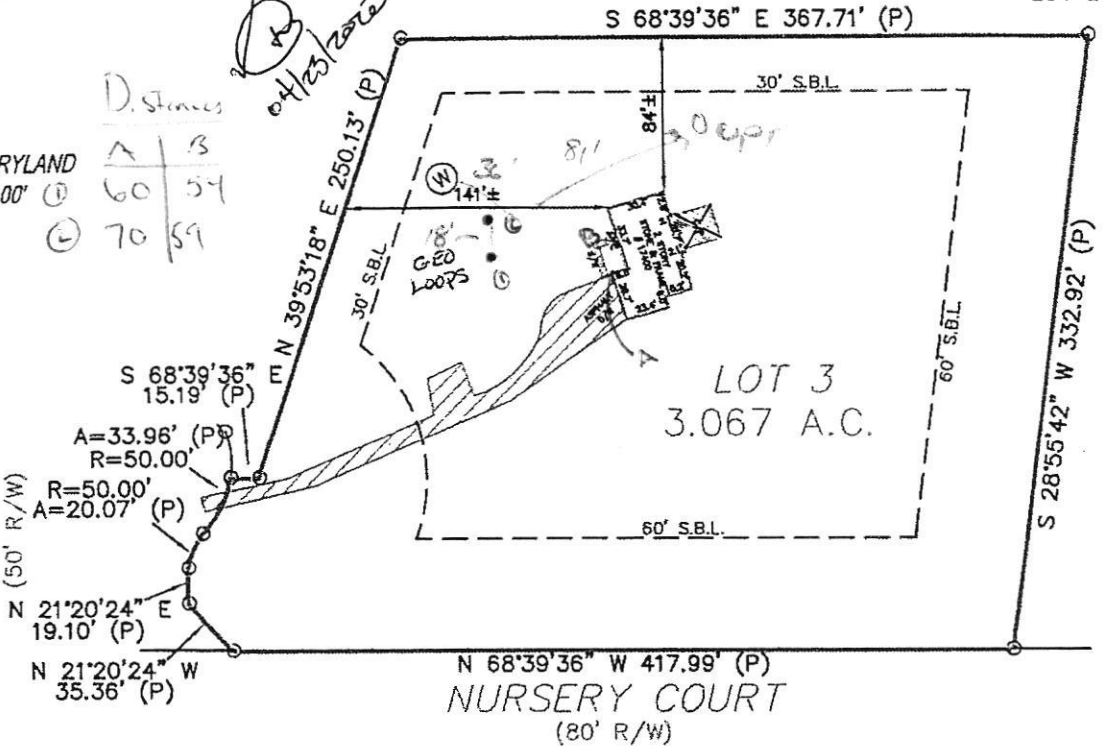
D. Stines

A	B
60	54
70	59

04/23/2018



NURSERY COURT  
(50' R/W)



GRAPHIC SCALE (In Feet)  
1 inch = 100' ft.

ACCURACY=3±

**PLEASE NOTE**

This House Location Drawing is for informational purposes only. Per Maryland State Code it may not be relied upon to determine property boundaries and may not be used for building permits or construction.

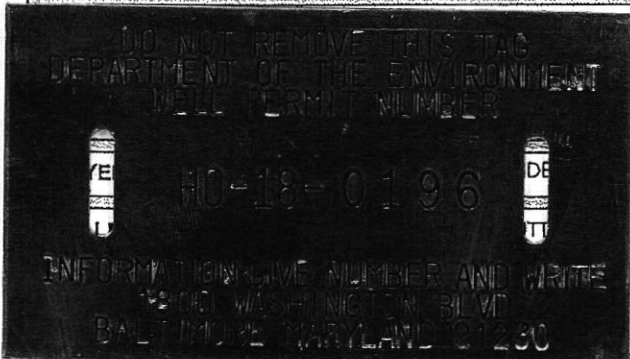


*William R. Hebert*  
EXPIRES 1-14-2019

APPROVED 04/23/2018

STAMPED BY DRILLER

HO-18-0198



A LICENSEE EITHER PERSONALLY PREPARED THIS DRAWING OR WAS IN RESPONSIBLE CHARGE OVER ITS PREPARATION AND THE SURVEYING WORK REFLECTED IN IT.

POWERED BY



www.surveystars.com

EXACTA

LB# 21535  
www.exactamd.com

GRADE

EACH BORE HOLE (TYP.)

CHIMNEY

HORIZONTAL BURY

DEPTH 4 FT

FOR CONT. SEE PLANS

HORIZONTAL PIPING

BORE DEPTH

TAPE

5 TO 10 FOOT SECTION OF REBAR TO GUIDE TUBE INTO BORE DURING INSTALLATION

ANCHOR FITTING TO PREVENT U-TUBE FROM SURFACING AFTER INSTALLATION

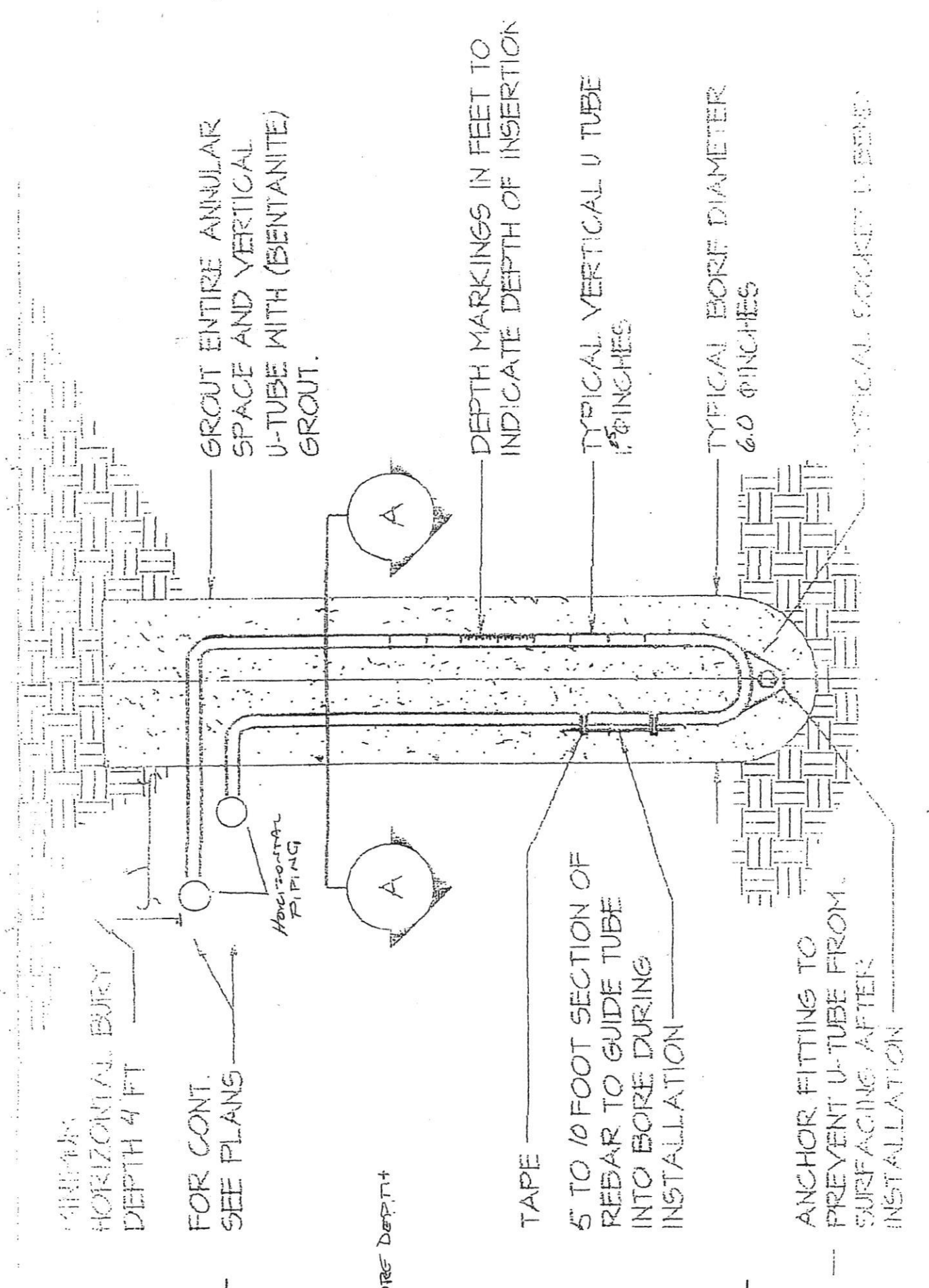
GROUT ENTIRE ANNULAR SPACE AND VERTICAL U-TUBE WITH (BENTANITE) GROUT.

DEPTH MARKINGS IN FEET TO INDICATE DEPTH OF INSERTION

TYPICAL VERTICAL U TUBE 1.5" PINCHES

TYPICAL BORE DIAMETER 6.0 PINCHES

TYPICAL SOCKET U-BEND



## HOWARD COUNTY GROUTING PROCEDURE

Boreholes will be grouted from the bottom to the top via a tremie pipe and positive displacement pump. Bentonite grout, known as Quik-Grout will be used according to the manufacturer's specifications to achieve a consistency of at least 20% solids (24 gallons potable water/50 lb. sack of grout) and a permeability no more than  $2.5 \text{ E}(-08) \text{ cm/sec}$ . Grouting will be completed immediately after installing the geothermal loop and no later than twenty-four (24) hours after installing the geothermal loop. Open boreholes/annular space will be protected as necessary to prevent the entry of surface water or pollutants.

DEPARTMENT OF INSPECTIONS, LICENSES & PERMITS 3430 COURT HOUSE DRIVE ELLICOTT CITY, MD 21043 PERMITS (410) 313-2455 INSPECTIONS (410) 313-1850	<b>HOWARD COUNTY          RESIDENTIAL          HEATING-VENTILATION-AIR          CONDITIONING AND          REFRIGERATION PERMIT          APPLICATION</b>	HVACR PERMIT # <b>M20000285</b> BUILDING PERMIT #
---	---	--

BUILDING ADDRESS: 17400 Nursery Ct. Mt. Airy, MD 21771 SUBDIVISION: 1002 CENSUS TRACT: SECTION: AREA: LOT: 3 TAX MAP: PARCEL: 0007 BLOCK: ZONE: PROPERTY ID: 04346343 MAP COORDINATES: TYPE OF IMPROVEMENTS: HVAC USE: Residential	OWNERS NAME: Sandberg, Scott + Jenny ADDRESS: 17400 Nursery Court CITY: Mount Airy STATE: Maryland ZIP CODE: 21771 HOME PHONE: 240-839-8848 WORK PHONE:
--	--

CHECK ONE	HOW MANY	COMPANY NAME: Ground Loop Heating & Air Cond., Inc.
SINGLE FAMILY DWELLING <input checked="" type="checkbox"/>	1 ZONES	LICENSEE NAME: Michael E. Cullum
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	___ ZONES	ADDRESS: 1701 Whiteford Road
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	___ ROOMS	CITY: Darlington
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) <input type="checkbox"/>	___ ROOMS	STATE: MD ZIP CODE: 21034 PHONE: 410-836-1706 HVACR LICENSE NO: 6539

New

Heating and Air Conditioning  Heating System Only  Other Work (Describe):

Geo Thermal System  Ductless Mini Splits  Thru The Wall Systems

Replacement

Heating  Heating and Air Conditioning

Heating and Air Conditioning

**EQUIPMENT:  
WATER FURNACE 4-TON  
NDV049**

Additions and Alterations

Heating  Air Conditioning  Heating and Air Conditioning

\*\*\*\*Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required\*\*\*\*

<b>Zones</b> Permit Fee = # of Zones x \$40 = <u>\$40.00</u> Technology Fee (10% of Permit Fee) = <u>\$4.00</u> Plus Application Fee <u>\$50.00</u> Total Fees Due = <u>\$94.00</u>	<b>Rooms</b> Permit Fee = # of Rooms x \$80 = _____ Technology Fee (10% of Permit Fee) = _____ Plus Application Fee \$50 <u>\$50.00</u> Total Fees Due = _____
---	--

I HAVE CAREFULLY EXAMINED AND READ THIS APPLICATION AND KNOW IT IS TRUE AND CORRECT. THE WORK DESCRIBED HEREIN WILL BE PERFORMED BY A STATE HVACR LICENSED PERSON(S), AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY THE STATE OF MARYLAND.

Michael Cullum 4-8-20  
 SIGNATURE OF LICENSEE DATE

MICHAEL CULLUM  
 PRINT NAME OF LICENSEE

emilie@groundloop.com  
 Email Address

**Validation**

Check Number: 26183

Cash: PT

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

Word doc: T:\Updated Forms\hvac application Rev:10.2009

**\* Vertical Loops  
(2bores @ 320'd**

*Michael Cullum*  
 Signature

04/24/2020  
 Date

111 < 0000283

PROPERTY ADDRESS: 17400 NURSERY COURT

MOUNT AIRY, MARYLAND 21171

SURVEY NUMBER: 1809.3404

FIELD WORK DATE: 10/16/2018

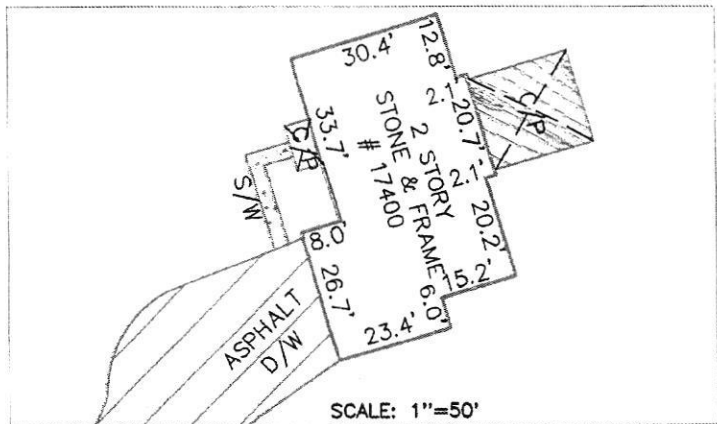
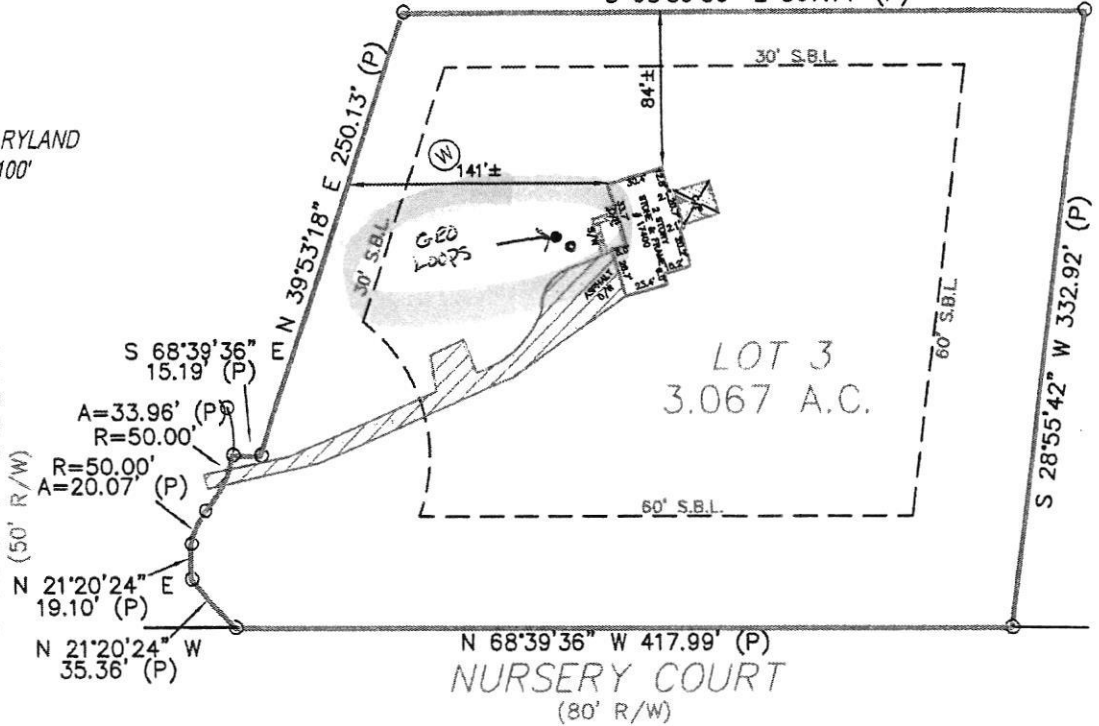
REVISION HISTORY: (REV. 10/16/2018)

LOT 2

18093404  
LOCATION DRAWING  
LOT 3  
NURSERY ACRES  
HOWARD COUNTY, MARYLAND  
10-16-2018 SCALE 1"=100'



NURSERY COURT  
(50' R/W)



GRAPHIC SCALE (In Feet)  
1 inch = 100' ft.

ACCURACY=3±

**PLEASE NOTE**

This House Location Drawing is for informational purposes only. Per Maryland State Code it may not be relied upon to determine property boundaries and may not be used for building permits or construction.



*William R. Rutter*  
EXPIRES 1-14-2019

POINTS OF INTEREST:  
NONE VISIBLE

CLIENT NUMBER: 70260-18F

DATE: 10/16/18

POWERED BY:

BUYER: SCOTT SANDBERG AND JENNY M. SANDBERG

SELLER: M. JEREMY RUTTER AND SHEILA M. RUTTER

CERTIFIED TO:  
SCOTT SANDBERG AND JENNY M. SANDBERG; VILLAGE SETTLEMENTS INC



www.surveystars.com

A LICENSEE EITHER PERSONALLY PREPARED THIS DRAWING OR WAS

EXACTA

LB# 21535

www.exactamd.com

M20000285

WaterFurnace Energy Analysis				
ASHRAE Single Zone Load Calculation Ver. 8.3				
Dealer-	Ground Loop Heating & Air Cond 1701 Whiteford Rd Darlington Md 21034	Client-	sandburg	
Design Conditions-	Winter	Summer	Daily	
Outside Temp:	12 ° F	92 ° F	Range:	
Inside Temp:	70 ° F	72 ° F	23	
Difference:	58 ° F	20 ° F	° F	
General Information-				
Glass Type:	0 Clear	Exposed Ducts:	15%	
Roof Color:	0 Dark	Duct Loss Factor:	0.15	
Occupancy:	4 People	Duct Gain Factor:	0.15	
Light/Appliance:	2000 btuh			
Infiltration Evaluation:	Qty	Code		
Fireplace:	1	1	Std-Damper	
Fans/Vents:	3	1	W/ Damper	
Attic Access:	0	1		
Window AC:	0	0		
Fossil Furnace:	0	0		
Fossil DHW Heater:	0	0		
Exposed Duct System:	0	0	Poorly Sealed	
Building # Stories:		1		
Wind Shielding:		2	Moderate	
<b>BUILDING LOAD SUMMARY - WHOLE HOUSE</b>				
		AREA	LOSS	GAIN
<b>WALLS/PARTITIONS-</b>				
EXT. WALL- R13		1127	7762	2552
CONCR-4' BEL GRD-R11		1152	4009	
EXT. WALL- R13		1152	7933	2608
<b>WINDOWS/DOORS-</b>				
D.H./SLDG-WOOD-DOUBLE		116	5960	3489
D.H./SLDG-WOOD-DOUBLE				
DOOR-WOOD-STRM		21	669	206
SLDG DR-WOOD-DOUBLE		32	1932	925
<b>CEILINGS/FLOORS-</b>				
FRAME CEILING-R30		1260	3283	1990
FRAME FLOOR-R13		1260	6425	1654
PEOPLE				1200
LIGHT/APPLIANCE				2000
EXPOSED DUCT SYSTEM	15%		854	374
MOISTURE REMOVAL				5099
OTHER LOSS/GAIN-			0	0
<b>TOTAL LOAD (BTU/HR)</b>			<b>38828</b>	<b>22097</b>



EAST			SOUTH					WEST						
HEIGHT	LENGTH	EXPOSE	HEIGHT	LENGTH	EXPOSE	HEIGHT	LENGTH	EXPOSE	HEIGHT	LENGTH	EXPOSE	HEIGHT	LENGTH	EXPOSE
9	30	0	9	42	0	9	30	0	9	30	0	9	30	0
8	30	0	8	42	0	8	30	0	8	30	0	8	30	0
8	30	0	8	42	0	8	30	0	8	30	0	8	30	0
HEIGHT	WIDTH	DIRECT	SHADE	WALL	HEIGHT	WIDTH	DIRECT	SHADE	WALL	HEIGHT	WIDTH	DIRECT	SHADE	WALL
2.5	8	3	1	1	2.5	14	5	1	1	2.5	4	3	1	1
					4	8	5	1	1					
LENGTH	WIDTH	EXPOSE	LENGTH	WIDTH	EXPOSE	LENGTH	WIDTH	EXPOSE	LENGTH	WIDTH	EXPOSE	LENGTH	WIDTH	EXPOSE