



# HOWARD COUNTY HEALTH DEPARTMENT

67923

DATE  
7/13/20

Received From

PHONE #

CASH

CHECK

NO.  
40131

For

\$ 100.00

Received By

Dollars

*105*

*189-500*

*6700 Tom*

*W.C. Bennett / 9430*

*Howard Ave*

*One hundred and forty*

*J King*

C1 **63063** 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 Received **01/05/2021** DATE WELL COMPLETED **09/02/2020** Depth of Well **320** PERMIT NO. FROM "PERMIT TO DRILL WELL" **HO-20-0032**

OWNER **Dipietro Anthony** WELL SITE ADDRESS **9930 Delwood Avenue** TOWN **Columbia** SUBDIVISION **1101 Allview Estates** SECTION \_\_\_\_\_ LOT **6**

**WELL LOG**  
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET		check if water bearing
	FROM	TO	
Top Soil	0	1	
Silty Sand Light Brown	1	25	
Weathered Rock	25	35	
Rock. Mod. Hard. light grey	35	320	

Installed closed loop geothermal

**GROUTING RECORD** YES NO  Y  N

WELL HAS BEEN GROUTED (Circle Appropriate Box)

TYPE OF GROUTING MATERIAL (Circle one)  
CEMENT  BENTONITE CLAY

NO. OF BAGS **15** NO. OF POUNDS **750**  
GALLONS OF WATER **360**

DEPTH OF GROUT SEAL (to nearest foot)  
from **0** ft. to **320** ft.  
(enter 0 if from surface)

**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)

60 81 63 64 66 70

**OTHER CASING (if used)**

diameter inch depth (feet) from to

E A C H C A S I N G

**SCREEN RECORD**

screen type or open hole insert appropriate code below

ST STEEL  BR BRASS BRONZE  HO OPEN HOLE  PL PLASTIC  OT OTHER

**C 2** DEPTH (nearest ft.)

1 2

E 1 8 9 11 15 17 21  
A 23 24 26 30 32 36  
C 38 39 41 45 47 51  
S  
R  
E  
N

SLOT SIZE 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_

DIAMETER OF SCREEN \_\_\_\_\_ (NEAREST INCH)  
from \_\_\_\_\_ to \_\_\_\_\_

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

70 \_\_\_\_\_ 72 \_\_\_\_\_ 74 75 76 \_\_\_\_\_

TELESCOPE CASING LOG INDICATOR OTHER DATA

**C 3** **PUMPING TEST**

HOURS PUMPED (nearest hour) **N/A**

PUMPING RATE (gal. per min.) **N/A**

METHOD USED TO MEASURE PUMPING RATE **N/A**

WATER LEVEL (distance from land surface)  
BEFORE PUMPING **30** ft.  
WHEN PUMPING **N/A** 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

**PUMP INSTALLED**

DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES  NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29

CAPACITY: GALLONS 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 } LAND SURFACE  
 - below } **3** (nearest foot)

LATITUDE **39.189675**  
LONGITUDE **76.857793**  
(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.

NUMBER OF UNSUCCESSFUL WELLS: **0**

WELL HYDROFRACTURED YES NO  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. **MWD 598**  
DRILLERS SIGNATURE **Anthony Dipietro**  
(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. **D**

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

B 1 62920

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type 567923

STATE PERMIT NUMBER TAG-650 HO-20-0033 fill in this form completely 79

OWNER INFORMATION Date Received (APA) 07/31/20 Dipietro Anthony 9930 Delwood Avenue Columbia Md 21046

LOCATION OF WELL B 3 Howard 1101 Allview Estates Columbia

DRILLER INFORMATION Wesley Wolfe Chesapeake Geosystems Inc 6720 Ft Smallwood Rd Baltimore Md 21226

SOURCES OF DRILLING WATER 1. Public 9930 Delwood Ave ON WHICH SIDE OF ROAD DISTANCE FROM ROAD ENTER FT OR MI TAX MAP: 0036 PARCEL 0237

WELL INFORMATION APPROX. PUMPING RATE N/A AVERAGE DAILY QUANTITY NEEDED

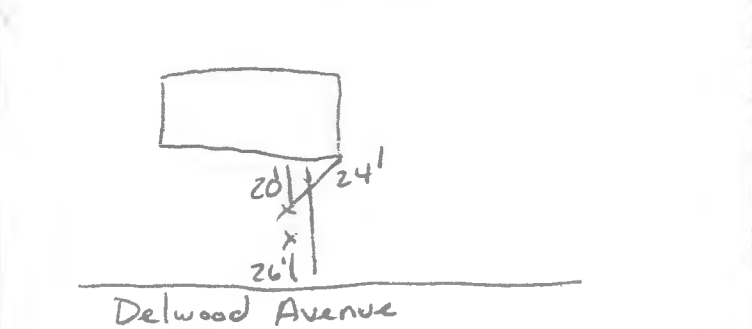
USE FOR WATER (CIRCLE APPROPRIATE BOX) D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) I INDUSTRIAL, COMMERCIAL, DEWATERING P PUBLIC WATER SUPPLY WELL T TEST, OBSERVATION, MONITORING O OPEN LOOP GEOTHERMAL C CLOSED LOOP GEOTHERMAL 2 Bores

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL Howard 13 COUNTY NAME COUNTY NO. DATE ISSUED 08/05/20 CO SIGNATURE Owen Thomas EXP. DATE 08/05/21

APPROXIMATE DEPTH OF WELL 320 FEET APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

PROPOSED LOCATION OF WELL ON LOT SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL

METHOD OF DRILLING (circle one) BORED (or Augered) JETTED Jetted & DRIVEN AIR-ROTARY AIR-PERCussion ROTARY (Hydraulic Rotary) CABLE REVerse-ROTary Drive-POINT other



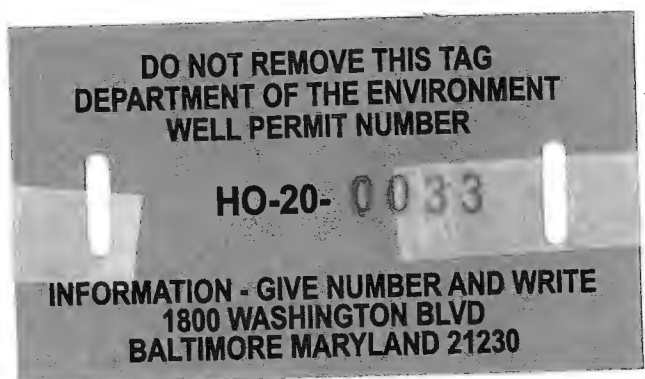
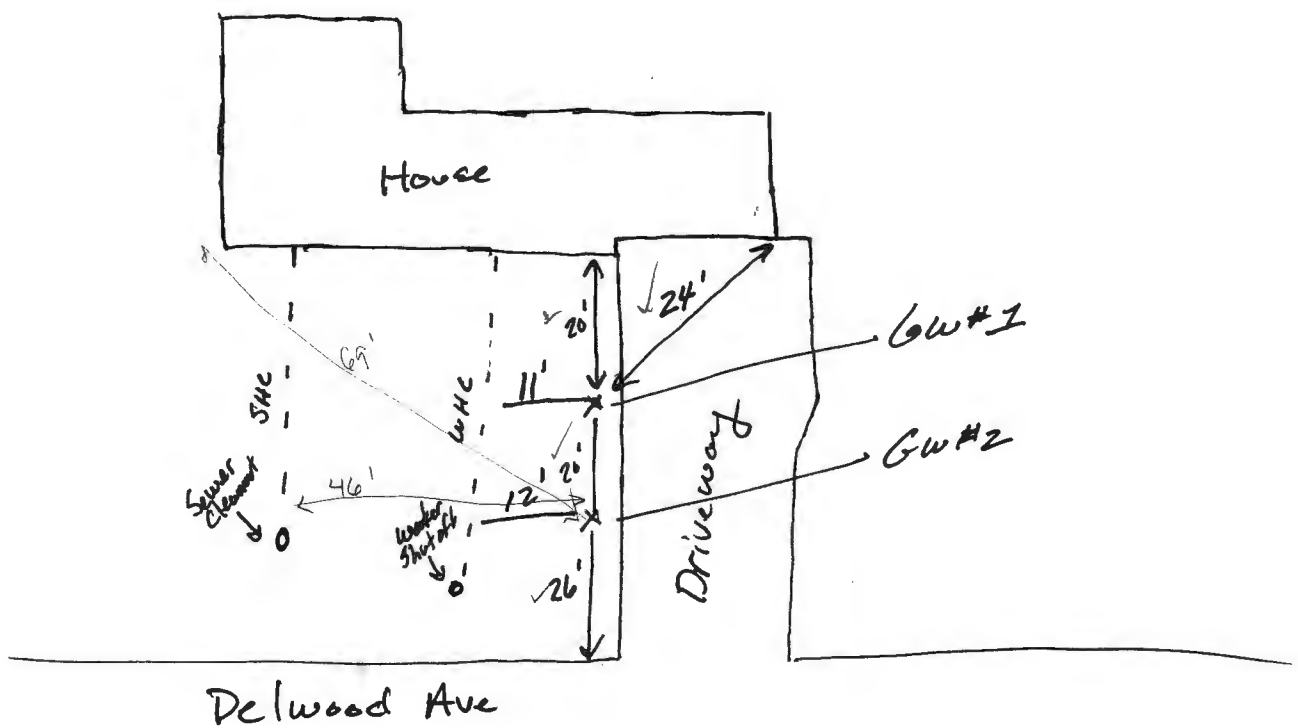
REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX) N THIS WELL WILL NOT REPLACE AN EXISTING WELL Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS D THIS WELL WILL DEEPEAN AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED

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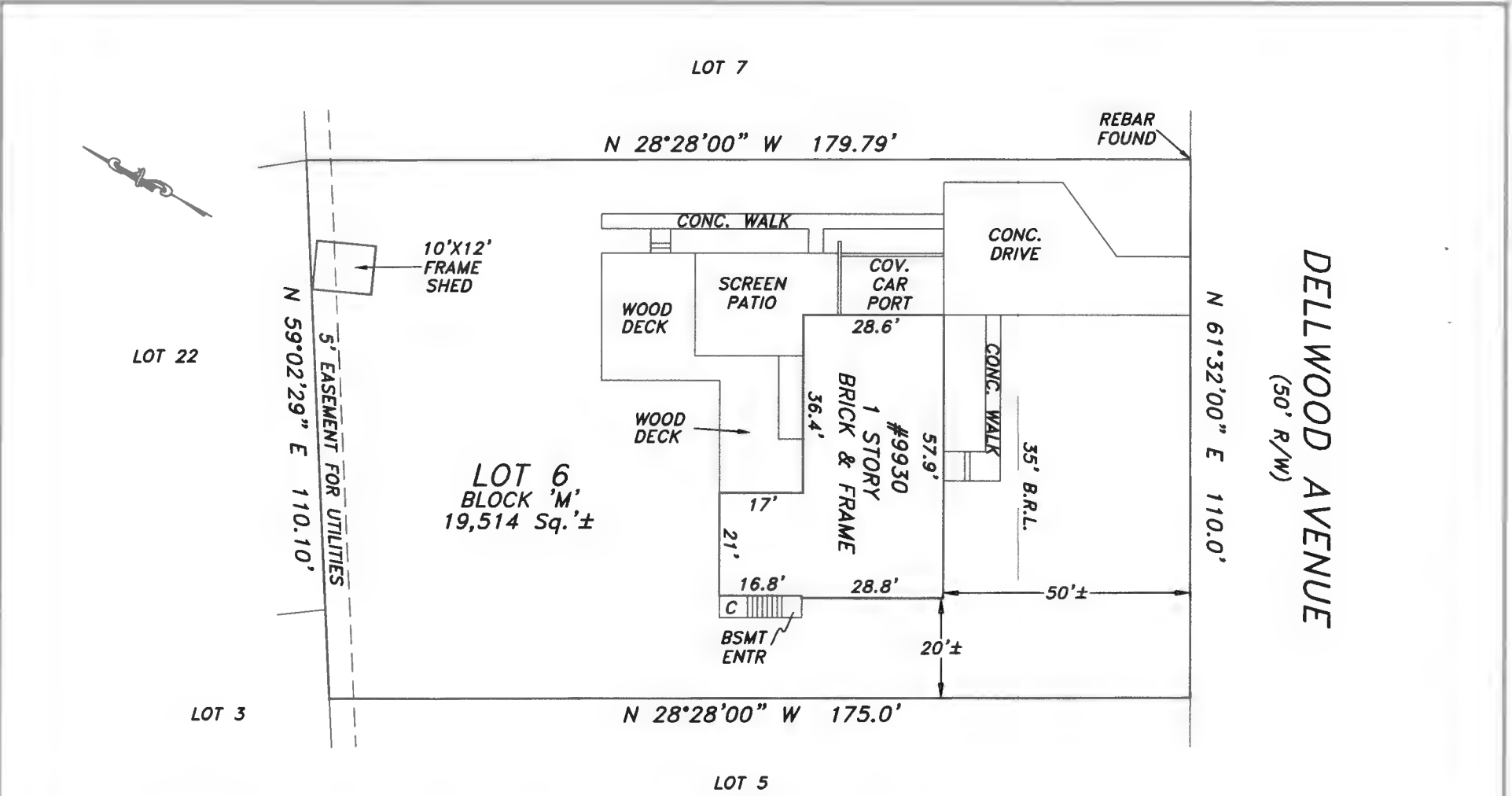
Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROP. PERMIT NUMBER G PERMIT No. HO-20-0033

SPECIAL CONDITIONS NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

Dipietro Residence  
 9930 Delwood Avenue  
 Columbia Md 21046  
 2 wells @ 320' each  
 1.25" closed loop geothermal



Approved  
 8/5/2020 (ST)  
 Stated by driller



NOTE: THE SHED APPEARS TO LIE WITHIN THE 5' UTILITY EASEMENT.

The purpose of this drawing is to locate, describe, and represent the positions of buildings and substantial improvements affecting the property shown hereon, being known as:  
 LOT 6, BLOCK 'M', ALLVIEW ESTATES,  
 RAUCK TRACT  
 recorded among the land records of Howard County, Maryland in  
 Plat Book 5, page 21

PREPARED FOR:

This is page one of a two page document. The advice found on the affixed page is an integral part of this drawing, and is not valid without all pages.

James Carl Hudgins  
 Property Line Surveyor #96  
 Expiration Date: 3/11/2022

**LOCATION DRAWING**  
 9930 DELLWOOD AVENUE  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

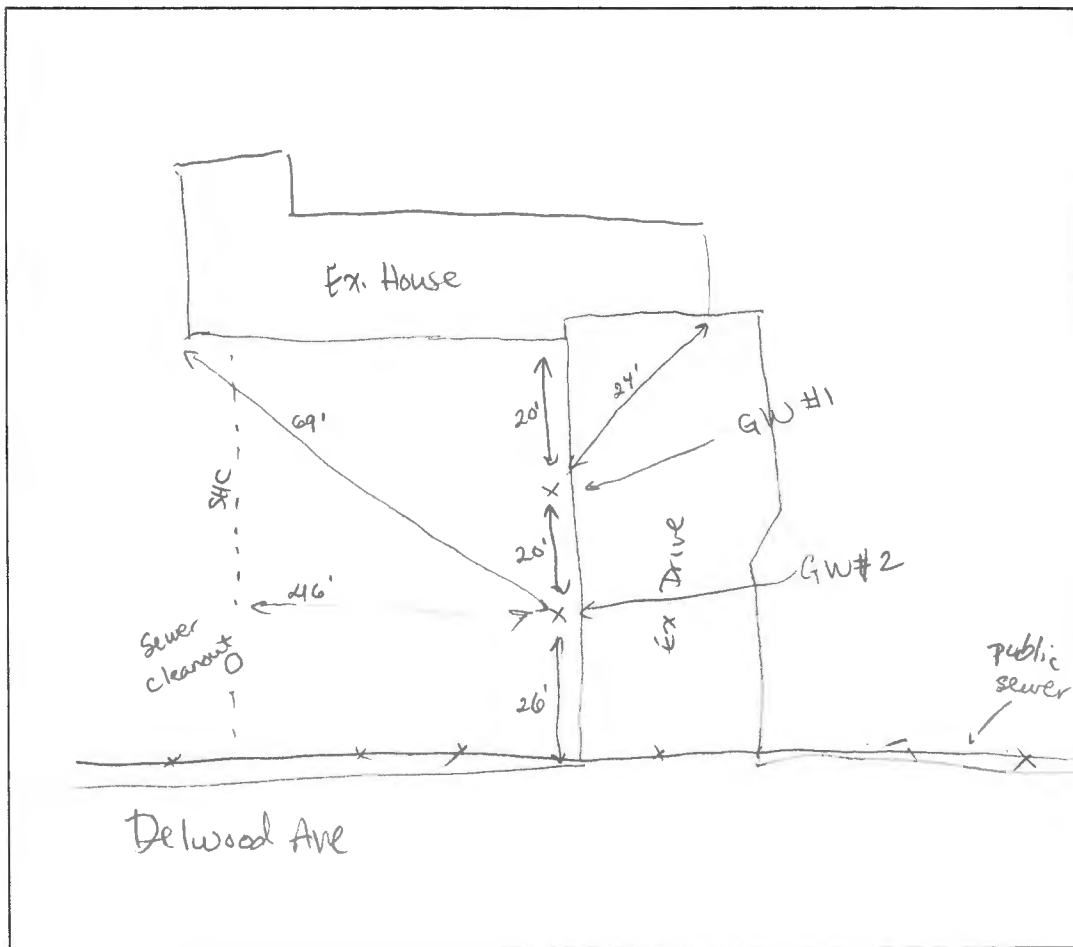
NTT Associates, Inc.  
 16205 Old Frederick Rd.  
 Mt. Airy, Maryland 21771  
 Phone: (410) 442-2031  
 Fax: (410) 442-1315  
 www.nttsurveyors.com

Scale:	1" = 30'
Date:	4/27/2020
Field By:	SLM
Drawn By:	SLM
File No.:	286501HIRS
Page No.:	1 of 2

**SITE INSPECTION SHEET**

OWNER: Anthony Dipietro PHONE #: \_\_\_\_\_  
ADDRESS: 9935 Delwood Avenue CONTRACTOR: Chesapeake Geosystems  
Columbia, MD 21046 WELL TAG #: \_\_\_\_\_  
SUBDIVISION: Allview Estates LOT: C COUNTY #: Howard  
PROPOSAL: 2 geo bores @ 320' each, 1.25" closed loop geothermal

**LOCATION DIAGRAM**



COMMENTS: Driller confirmed that the sewer pipe to the  
house is made of cast iron.

DATE: 8/5/2020 INSPECTOR: Dwan Thomas

# WELL SCHEMATIC FORM

**GROUND SURFACE**

**PERMANENT OUTER CASING (if area contaminated)**

MATERIAL \_\_\_\_\_

DIAMETER \_\_\_\_\_

LENGTH \_\_\_\_\_

DEPTH INTO CONFINING UNIT \_\_\_\_\_

**PERMANENT OUTER CASING**

**TUBE CASING (if not regular, single loop)**

ATTACH HORIZONTAL SCHEMATIC \_\_\_\_\_

NUMBER OF TUBES PER BOREHOLE \_\_\_\_\_

DIAMETER OF TUBES \_\_\_\_\_

MATERIAL \_\_\_\_\_

SHAPE AND LENGTH \_\_\_\_\_

TUBE CONNECTION METHOD \_\_\_\_\_

TUBE CONNECTION MATERIAL \_\_\_\_\_

**CONFINING UNIT**

**LOOP PIPE CASING (regular, single loop)**

MATERIAL HDPE? YES  NO

DIAMETER 1.25"

LENGTH 320

**GROUT**

MATERIAL Bentonite

PERMEABILITY  $2.5 \times 10^{-8}$

WATER / GROUT RATIO 24 / 50

PERCENT SOLIDS 20%

TREMIE GROUTED FROM BOTTOM OF BOREHOLE? YES  NO

USING A POSITIVE DISPLACEMENT PUMP? YES  NO

DEPTH TO THE BOTTOM OF HOLE 320

DIAMETER OF BOREHOLE 6"

WELL ADDRESS  
9930 Delwood Avenue  
Columbia Md 21046

LOT NUMBER: 6

SQUARE NUMBER: \_\_\_\_\_

WELL OWNER:  
Anthony Dipietro

OWNER ADDRESS:  
9930 Delwood Ave  
Columbia Md 21046

\_\_\_\_\_

\_\_\_\_\_

<b>Department of Inspections Licenses and Permits</b>  3430 Court House Drive Ellicott City, MD 21043  Permits (410) 313-2455 Opt. #4 Inspections (410) 313-1840	<b>HOWARD COUNTY RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION</b>	HVACR PERMIT # <u>ma0000862</u>  BUILDING PERMIT #
--	--	--

SITE BUILDING ADDRESS: <u>9930 Dellwood Ave.</u> SUITE/APT: _____  SUBDIVISION: _____  TYPE OF IMPROVEMENTS: <u>Install a geothermal system.</u> USE: _____	OWNERS NAME: <u>Elaine Dipietro</u> ADDRESS: <u>9930 Dellwood Ave.</u> CITY: <u>Columbia</u> STATE: <u>MD</u> ZIP CODE: <u>21046</u> HOME PHONE: <u>240-354-4544</u> CELL PHONE: _____
---	---

<u>CHECK ONE</u>	<u>HOW MANY</u>	COMPANY NAME: <u>Total Comfort Htg &amp; A/C</u>
SINGLE FAMILY DWELLING <input type="checkbox"/>	<u>1</u> ZONES	LICENSEE NAME: <u>James E. Aaron</u>
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	_____ ZONES	ADDRESS: <u>12009 Margaret Drive</u>
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	_____ ROOMS	CITY: <u>Hagerstown</u>
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) <input type="checkbox"/>	_____ ROOMS	STATE: <u>MD</u> ZIP CODE: <u>21742</u> PHONE: <u>301-745-3700</u> HVACR LICENSE NO: <u>5833-01</u>

<u>New Construction</u> <input type="checkbox"/> Heating and Air Conditioning <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Heating	<u>Additions and Alterations</u> <input type="checkbox"/> Heating <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Heating and Air Conditioning	<input checked="" type="checkbox"/> Geo Thermal System <input type="checkbox"/> Gas Conversion (Make and Model of Equipment) <input type="checkbox"/> Ductless Mini Splits <input type="checkbox"/> Thru The Wall Systems <input type="checkbox"/> Other Work (Describe):
<u>Replacement</u> <input type="checkbox"/> Heating <input type="checkbox"/> Air Conditioning <input checked="" type="checkbox"/> Heating and Air Conditioning	<u>Remove existing HVAC equipment &amp; install (1) Water-Furnace geothermal system, model: NUV 048 (4 ton)</u>  <b>**Make and Model of Equipment is required**</b> <b>****Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required****</b>	

<u>Zones</u>	<u>Rooms</u>
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>	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 HVAC LICENSED PERSON(S), AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY THE STATE OF MARYLAND.

SIGNATURE OF LICENSEE: James E. Aaron DATE: 11/18/2020  
 PRINT NAME OF LICENSEE: James E. Aaron  
 Email Address: Jim@tchvac.net

<b>Validation</b>	
Approved Signer: _____ Signature: _____	Select Number: <u>9659</u> Invoice Number: <u>1040478</u> Date: <u>12/04/2020</u>

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

M2000802



**Load Short Form**  
**Entire House**  
**TOTAL COMFORT HTG. & A/C, INC.**

Job:  
 Date: 2016  
 By:

12009 MARGARET DRIVE, HAGERSTOWN, MD 21742 Phone: 301-745-3700

**Project Information**

For: **DIPIETRO RESIDENCE**  
 9930 DELLWOOD AVE., COLUMBIA, MD

**Design Information**

	Htg	Clg	Infiltration	
Outside db (°F)	12	91	Method	Simplified
Inside db (°F)	70	75	Construction quality	Semi-loose
Design TD (°F)	58	16	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	25	24		

**HEATING EQUIPMENT**

Make WaterFurnace  
 Trade ENVISION2 SERIES  
 Model NBV/NBH048\*\*4\*0  
 AHRI ref 5315755

Efficiency 3.79 COP  
 Heating input 11.2 kW  
 Heating output 38200 Btuh  
 Temperature rise 24 °F  
 Actual air flow 1500 cfm  
 Air flow factor 0.032 cfm/Btuh  
 Static pressure 0.50 in H2O  
 Space thermostat  
 Capacity balance point = 0 °F

**COOLING EQUIPMENT**

Make WaterFurnace  
 Trade ENVISION2 SERIES  
 Cond NBV/NBH048\*\*4\*0  
 Coil  
 AHRI ref 5315755

Efficiency 16.02 EER  
 Sensible cooling 31867 Btuh  
 Latent cooling 13657 Btuh  
 Total cooling 45524 Btuh  
 Actual air flow 1500 cfm  
 Air flow factor 0.065 cfm/Btuh  
 Static pressure 0.50 in H2O  
 Load sensible heat ratio 0.87

Backup:  
 Input = 14 kW, Output = 46854 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
FIRST FLOOR	2160	32250	21605	1032	<b>1403</b>
BASEMENT	2160	14604	1495	468	<b>97</b>
Entire House	4320	46854	23100	1500	<b>1500</b>
Other equip loads		0	0		
Equip. @ 0.96 RSM			22268		
Latent cooling			3350		
<b>TOTALS</b>	<b>4320</b>	<b>46854</b>	<b>25618</b>	<b>1500</b>	<b>1500</b>

*Bold/italic values have been manually overridden*

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

