

Department of Inspections Licenses and Permits 3430 Court House Drive Ellicott City, MD 21043 Permits (410) 313-2455 Opt. #4 Inspections (410) 313-1840	HOWARD COUNTY RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION	HVACR PERMIT # <u>m24001409</u> BUILDING PERMIT # <div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> System for 3 geo bores </div>
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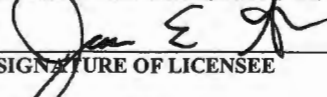
SITE BUILDING ADDRESS: 2070 Woodbine Rd Woodbine, MD 21797 SUBDIVISION: TYPE OF IMPROVEMENTS: Installation of (1 ea.) geothermal heat pump. USE:	SUITE/APT: 	OWNERS NAME: Kelly Castano ADDRESS: 2070 Woodbine Rd CITY: Woodbine STATE: MD ZIP CODE: 21797 HOME PHONE: 856-404-2673 CELL PHONE: 856-404-2673 <div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> Approved 12/18/24 <i>JEA</i> </div>
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<u>CHECK ONE</u>	<u>HOW MANY</u>	
SINGLE FAMILY DWELLING <input checked="" type="checkbox"/>	1	COMPANY NAME: Total Comfort Heating & AC, Inc. LICENSEE NAME: James E. Aaron ADDRESS: 12009 Margaret Dr CITY: Hagerstown STATE: MD ZIP CODE: 21742 PHONE: 301-745-3700 HVACR LICENSE NO: 5833-01
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	___	
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	___	
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) <input type="checkbox"/>	___	

<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 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 <div style="border: 1px solid black; padding: 5px; font-size: small;"> Installation of Water Furnace geothermal heat pump to serve existing addition. Re-use existing duct system. Model Number: W5AV036BD1A12CTL2D11. Installation of vertical closed loop ground looping system. Well Drilling. Well permit # HO-22-0168. </div> <p style="text-align: center;">**Make and Model of Equipment is required**</p> <p>****Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required****</p>		

<u>Zones</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>	<u>Rooms</u> Permit Fee = # of Rooms x \$80 = _____ Technology Fee (10% of Permit Fee) = _____ Plus Application Fee \$50 <u>\$50.00</u> Total Fees Due = _____
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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 _____ DATE 12/4/2024
 James E. Aaron
 PRINT NAME OF LICENSEE _____
 jim@tchvac.net
 Email Address _____

Validation

Check Number: 11383

Money Order#: _____

Invoice Number: 823791

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

M24001409



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: CASTANO RESIDENCE
 2070 WOODBINE RD., WOODBINE, MD

Design Information

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

HEATING EQUIPMENT

COOLING EQUIPMENT

Make WaterFurnace
 Trade ENVISION2 SERIES
 Model NBV/NBH036**3*0
 AHRI ref 5296005

Efficiency 3.9 COP
 Heating input 7.5 kW
 Heating output 25606 Btuh
 Temperature rise 20 °F
 Actual air flow 1200 cfm
 Air flow factor 0.054 cfm/Btuh
 Static pressure 0 in H2O
 Space thermostat
 Capacity balance point = 0 °F

Make WaterFurnace
 Trade ENVISION2 SERIES
 Cond NBV/NBH036**3*0
 Coil
 AHRI ref 5296005

Efficiency 17.42 EER
 Sensible cooling 22170 Btuh
 Latent cooling 9501 Btuh
 Total cooling 31671 Btuh
 Actual air flow 1200 cfm
 Air flow factor 0.071 cfm/Btuh
 Static pressure 0 in H2O
 Load sensible heat ratio 0.86

Backup:
 Input = 7 kW, Output = 22261 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
1ST FOOR ADDITION	676	11261	9687	607	<i>686</i>
BASEMENT ADDITION	676	11000	7268	593	<i>514</i>
Entire House	1352	22261	16955	1200	<i>1200</i>
Other equip loads		0	0		
Equip. @ 0.96 RSM			16345		
Latent cooling			2782		
TOTALS	1352	22261	19127	1200	1200

Bold/italic values have been manually overridden

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

B 1	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type	STATE PERMIT NUMBER HC - 22 - 0128 70 fill in this form completely 79
	1 2 3 6		

OWNER INFORMATION

Date Received (APA) _____
8 MM DP YY 13

15 Last Name Owner First Name 34
20 10 Woodbine
36 Street or RFD 55
Woodbine MD 21710
57 Town 70 State 72 Zip 76

LOCATION OF WELL

B 3

Howard
8 COUNTY 21

23 SUBDIVISION 42

SECTION 44 46 LOT 48 50
Woodbine
52 NEAREST TOWN 71

DRILLER INFORMATION

Driller's Name MWD 598
76 License No. 81

Firm Name
Address
Signature Date

SOURCES OF DRILLING WATER

1. 2010
2. 3. 4.

2010 Woodbine
STREET ADDRESS 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

NORTH N
WEST W EAST E
SOUTH S

34 37
DISTANCE FROM ROAD
ENTER FT OR MI 38 39

TAX MAP (W7) BLK: _____ PARCEL 011

WELL INFORMATION

B 2

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

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

USE FOR WATER (CIRCLE APPROPRIATE BOX)

22

DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)

INDUSTRIAL, COMMERCIAL, DEWATERING

PUBLIC WATER SUPPLY WELL

TEST, OBSERVATION, MONITORING

OPEN LOOP GEOTHERMAL

CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME COUNTY NO.

STATE SIGNATURE INSERT S 41

DATE ISSUED 3/27/25
43 MM DO YY 48

CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 320 FEET
24 28

APPROXIMATE DIAMETER OF WELL 6 INCH
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)

39

THIS WELL WILL NOT REPLACE AN EXISTING WELL

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

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

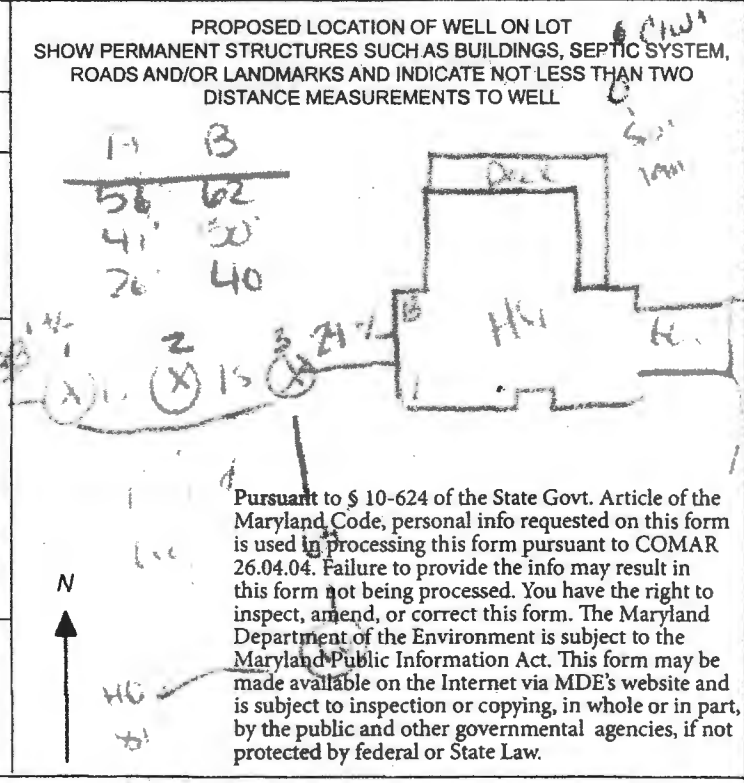
THIS WELL WILL DEEPEAN AN EXISTING WELL

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)

APPROP. PERMIT NUMBER _____ G _____

PERMIT No. HC - 22 - 0128
70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

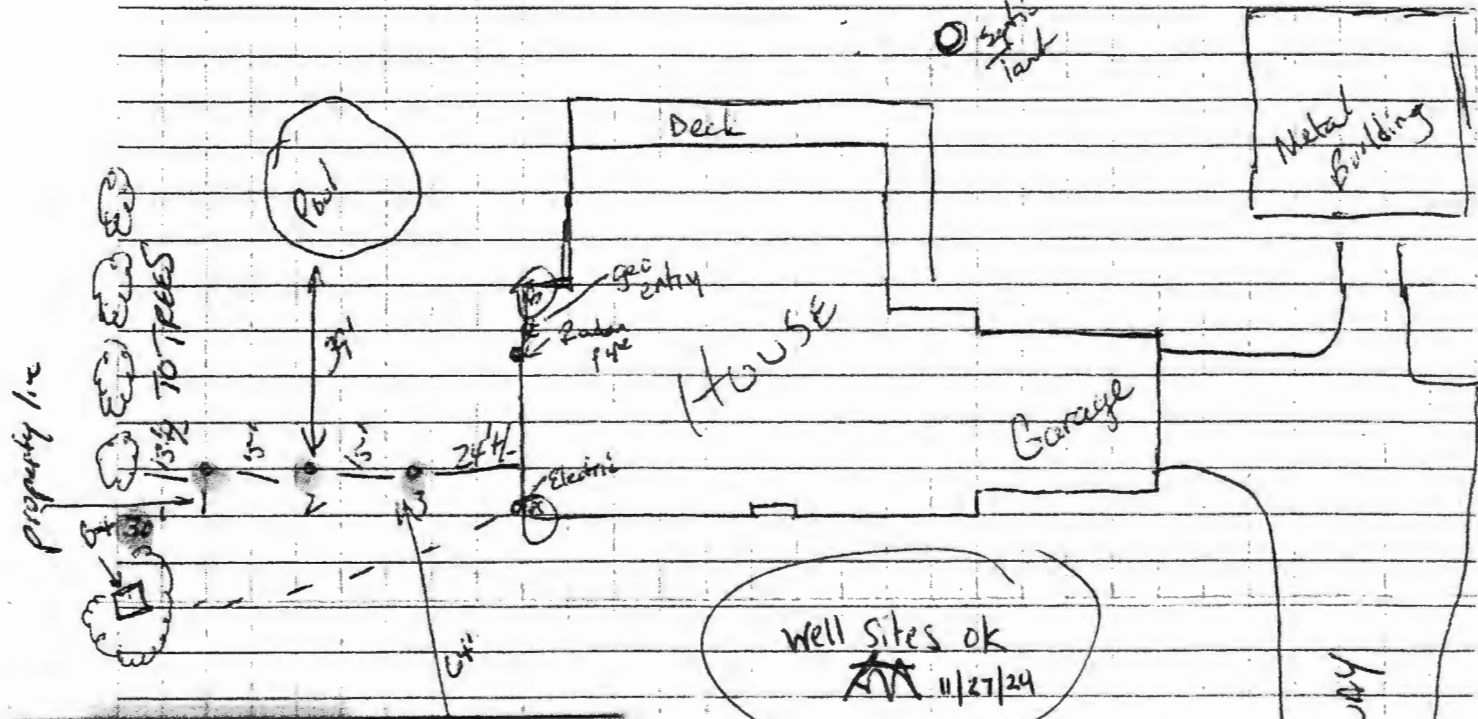
XL

A.G.
56'62"
41'50"
24'40"



2070 Woodbine Rd
Woodbine Md
3 wells @ 320 each
closed loop geothermal

SITE PLAN



DO NOT REMOVE THIS TAG
DEPARTMENT OF THE ENVIRONMENT
WELL PERMIT NUMBER

HO-22-0168

INFORMATION - GIVE NUMBER AND WRITE
1800 WASHINGTON BLVD
BALTIMORE MARYLAND 21230

HoCo Health Depart
NOV 27 2024
Environmental Health

Sediment Control Protocol: SILT FENCE

Distance From House: 24' +/-
 From Septic: 97' +/-
 From Sewer: N/A
 From Property Line: 13' +/- TO TREES, 30' TO P.L.
 From Street: 300' +/-

Trees Nearby: NO
 Utility Issues: behind Electric
 Mats Needed: Yes
 Access For H/U: Yes
 Neighboring Tags: [REDACTED]

Comments: Take Black Top driveway to left of gravel driveway

Person Completing Form: Was Wolf

Well tag for geo bores HO-22-0168