







SITE NAME: PINE VALLEY & TESTON  
 BUILDER: GOLD PARK HOMES

WOB

TYPE: 4007 THE SUNCREST DATE: Feb-20  
 GFA: 2484 LO# 85232

HEATING CFM 1100 COOLING CFM 1100  
 TOTAL HEAT LOSS 57,470 TOTAL HEAT GAIN 36,738  
 AIR FLOW RATE CFM 19.14 AIR FLOW RATE CFM 29.94

AFUE = 96 %  
 INPUT (BTU/H) = 66,000  
 OUTPUT (BTU/H) = 64,000

\*LENNOX  
 EL296UH070XE368 70  
 FAN SPEED 0

DESIGN CFM = 1100  
 CFM @ .6" E.S.P.

furnace pressure 0.6  
 furnace filler 0.05  
 a/c coil pressure 0.2  
 available pressure for s/a & r/a 0.35  
 plenum pressure s/a 0.18  
 max s/a dif press. loss 0.02  
 min adjusted pressure s/a 0.16  
 r/a grille press. loss 0.17  
 r/a grille press. Loss 0.02  
 adjusted pressure r/a 0.15

ROOM #	ROOM NAME	MBR	ENS	BATH	BED-4	BED-3	BED-2	BED-1	4th	3rd	2nd	1st	Bas	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
1	MBR	1.76	2.21	1.29	2.31	1.47	1.50	1.47	0	0	0	11	7	5	0.00	0	0	0	0	0.00	0	0	0
2	ENS	3.4	4.2	2.5	2.63	2.17	2.01	2.17	0	0	0	4	2	1	0.00	0	0	0	0	0.00	0	0	0
3	BATH	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.00	0	0	0	0	0.00	0	0	0
4	BED-4	2.09	1.42	2.01	2.17	2.63	2.01	2.17	0	0	0	4	2	1	0.00	0	0	0	0.00	0	0	0	0
5	BED-3	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.00	0	0	0	0	0.00	0	0	0
6	BED-2	41	21	36	54	73	210	210	0	0	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
7	BED-1	150	230	240	150	150	204	283	0	0	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
8	ACTUAL DUCT LGH.	0.09	0.07	0.06	0.08	0.07	0.06	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.00	0	0	0	0	0.00	0	0	0
9	EQUIVALENT LENGTH	5	5	5	5	5	5	5	5	5	5	5	5	5	0.00	0	0	0	0	0.00	0	0	0
10	TOTAL EFFECTIVE LENGTH	250	308	213	206	224	213	206	224	213	206	224	213	206	0.00	0	0	0	0	0.00	0	0	0
11	ADJUSTED PRESSURE	463	316	441	477	403	477	403	477	403	477	403	477	403	0.00	0	0	0	0	0.00	0	0	0
12	HEATING VELOCITY (ft/min)	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	0.00	0	0	0	0	0.00	0	0	0
13	COOLING VELOCITY (ft/min)	5	5	5	5	5	5	5	5	5	5	5	5	5	0.00	0	0	0	0	0.00	0	0	0
14	ROUND DUCT SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	0.00	0	0	0	0	0.00	0	0	0
15	OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	0.00	0	0	0	0	0.00	0	0	0
16	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
17	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
18	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
19	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
20	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
21	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
22	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
23	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
24	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0
25	TRUNK	C	B	B	A	A	B	B	A	A	B	B	A	A	0.00	0	0	0	0	0.00	0	0	0

ROOM #	ROOM NAME	MBR	ENS	BATH	BED-4	BED-3	BED-2	BED-1	4th	3rd	2nd	1st	Bas	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
25	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
26	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
27	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
28	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
29	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
30	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
31	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
32	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
33	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
34	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
35	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
36	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
37	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
38	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
39	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
40	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
41	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
42	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
43	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
44	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
45	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
46	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
47	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
48	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
49	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
50	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
51	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
52	BAS	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	0.00	0	0	0	0	0.00	0	0	0
53	BAS																						

TYPE: 4007 THE SUNCREST  
 SITE NAME: PINE VALLEY & TESTON

LO # 85232  
 WOB

**RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY**

**COMBUSTION APPLIANCES** 9.32.3.1(1)

a)  Direct vent (sealed combustion) only

b)  Positive venting induced draft (except fireplaces)

c)  Natural draft, B-vent or induced draft gas fireplace

d)  Solid Fuel (including fireplaces)

e)  No Combustion Appliances

**HEATING SYSTEM**

Forced Air  Non Forced Air

Electric Space Heat

**HOUSE TYPE** 9.32.1(2)

I Type a) or b) appliance only, no solid fuel

II Type I except with solid fuel (including fireplaces)

III Any Type c) appliance

IV Type I, or II with electric space heat

Other: Type I, II or IV no forced air

**SYSTEM DESIGN OPTIONS** O.N.H.W.P.

1 Exhaust only/Forced Air System

2 HRV with Ducting/Forced Air System

3 HRV Simplified/connected to forced air system

4 HRV with Ducting/non forced air system

Part 6 Design

**TOTAL VENTILATION CAPACITY** 9.32.3.3(1)

Basement + Master Bedroom	2	@ 21.2 cfm	42.4	cfm
Other Bedrooms	3	@ 10.6 cfm	31.8	cfm
Kitchen & Bathrooms	5	@ 10.6 cfm	53	cfm
Other Rooms	4	@ 10.6 cfm	42.4	cfm
Table 9.32.3.A.		TOTAL	169.6	cfm

**PRINCIPAL VENTILATION CAPACITY REQUIRED** 9.32.3.4.(1)

1	Bedroom	31.8	cfm
2	Bedroom	47.7	cfm
3	Bedroom	63.6	cfm
4	Bedroom	79.5	cfm
5	Bedroom	95.4	cfm
	<b>TOTAL</b>	<b>79.5</b>	<b>cfm</b>

**SUPPLEMENTAL VENTILATION CAPACITY** 9.32.3.5.

Total Ventilation Capacity	169.6	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	90.1	cfm

**PRINCIPAL EXHAUST FAN CAPACITY**

Model: VANEE 65H Location: BSMT

79.5 cfm 3.0 sones  HVI Approved

**PRINCIPAL EXHAUST HEAT LOSS CALCULATION**

CFM	ΔT °F	FACTOR	% LOSS
79.5 CFM	X 76 F	X 1.08	X 0.25

**SUPPLEMENTAL FANS** PANASONIC

Location	Model	cfm	HVI	Sones
ENS	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3
BATH	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3
ENS-2/3	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3
W/R	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3

**HEAT RECOVERY VENTILATOR** 9.32.3.11.

Model: VANEE 65H

155 cfm high 64 cfm low

75 % Sensible Efficiency  HVI Approved  
 @ 32 deg F ( 0 deg C)

**LOCATION OF INSTALLATION**

Lot: Concession

Township: Plan:

Address:

Roll # Building Permit #

**BUILDER:** GOLD PARK HOMES

Name:

Address:

City:

Telephone #: Fax #:

**INSTALLING CONTRACTOR**

Name:

Address:

City:

Telephone #: Fax #:

**DESIGNER CERTIFICATION**

I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.

Name: HVAC Designs Ltd.

Signature: *Michael O'Rourke*

HRAI # 001820

Date: February-20

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C. 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669 *Michael O'Rourke* MICHAEL O'ROURKE

<b>CSA F280-12 Residential Heat Loss and Heat Gain Calculations</b> Formula Sheet (For Air Leakage / Ventilation Calculation)																																																					
LO#: 85232      Model: 4007 THE SUNCREST Builder: GOLD PARK HOMES	Date: 02/04/2020																																																				
<b>Air Change &amp; Delta T Data</b>																																																					
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<b>5.2.3.1 Heat Loss due to Air Leakage</b>																																																					
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$																																																					
0.407      x      285.53      x      42 °C      x      1.2      =      5886 W	=      20084 Btu/h																																																				
<b>5.2.3.2 Heat Loss due to Mechanical Ventilation</b>																																																					
$HL_{nairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																					
80 CFM      x      76 °F      x      1.08      x      0.25      =      1631 Btu/h	=      275 Btu/h																																																				
<b>5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)</b>																																																					
$HL_{airv} = Level\ Factor \times HL_{airbv} \times \{ (HL_{qger} + HL_{bger}) \div (HL_{qlevel} + HL_{blevel}) \}$																																																					
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairstv Air Leakage + Ventilation Heat Loss (Btu/h)</th> <th>Level Conductive Heat Loss: (HL<sub>level</sub>)</th> <th>Air Leakage Heat Loss Multiplier (LF x HL<sub>airbv</sub> / HL<sub>level</sub>)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center;">20,084</td> <td>9,105</td> <td>1.103</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>13,754</td> <td>0.438</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>13,479</td> <td>0.298</td> </tr> <tr> <td>4</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> <tr> <td>5</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> </tbody> </table>	Level	Level Factor (LF)	HLairstv Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL <sub>level</sub> )	Air Leakage Heat Loss Multiplier (LF x HL <sub>airbv</sub> / HL <sub>level</sub> )	1	0.5	20,084	9,105	1.103	2	0.3	13,754	0.438	3	0.2	13,479	0.298	4	0	0	0.000	5	0	0	0.000	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"><b>6.2.6 Sensible Gain due to Air Leakage</b></td> </tr> <tr> <td colspan="2"> <math display="block">HG_{salsb} = LR_{aire} \times \frac{V_b}{3.6} \times DTD_c \times 1.2</math> </td> </tr> <tr> <td style="text-align: right;">                 =      0.137      x      285.53      x      7 °C      x      1.2      =      333 W             </td> <td style="text-align: right;">                 =      1135 Btu/h             </td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>6.2.7 Sensible heat Gain due to Ventilation</b></td> </tr> <tr> <td colspan="2"> <math display="block">HL_{nairb} = PVC \times DTD_h \times 1.08 \times (1 - E)</math> </td> </tr> <tr> <td style="text-align: right;">                 80 CFM      x      13 °F      x      1.08      x      0.25      =      275 Btu/h             </td> <td style="text-align: right;">                 =      275 Btu/h             </td> </tr> </table>	<b>6.2.6 Sensible Gain due to Air Leakage</b>		$HG_{salsb} = LR_{aire} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$		=      0.137      x      285.53      x      7 °C      x      1.2      =      333 W	=      1135 Btu/h	<b>6.2.7 Sensible heat Gain due to Ventilation</b>		$HL_{nairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$		80 CFM      x      13 °F      x      1.08      x      0.25      =      275 Btu/h	=      275 Btu/h														
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\*HL<sub>airbv</sub> = Air leakage heat loss + ventilation heat loss  
 \*For a balanced or supply only ventilation system HL<sub>airv</sub> = 0

### HEAT LOSS AND GAIN SUMMARY SHEET

<b>MODEL:</b> 4007 THE SUNCREST	<b>WOB</b>	<b>BUILDER:</b> GOLD PARK HOMES
<b>SFQT:</b> 2494	<b>LO#</b> 85232	<b>SITE:</b> PINE VALLEY & TESTON

#### DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

#### BUILDING DATA

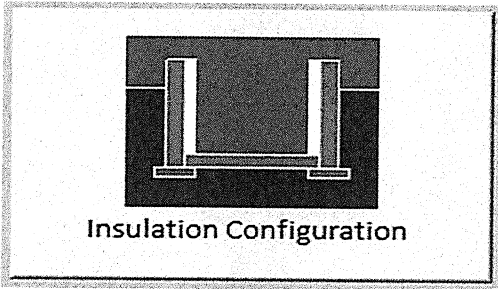
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	36300.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 58.0 ft	WIDTH: 30.0 ft	EXPOSED PERIMETER:	124.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	52.0 ft

2012 OBC - COMPLIANCE PACKAGE		
Component	Compliance Package	
	A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669  
 MICHAEL O'ROURKE

# Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

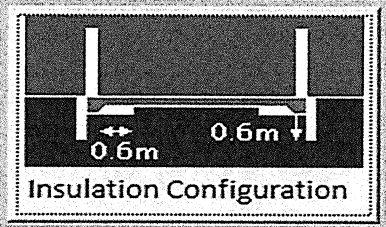
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	6.4	 <p>Insulation Configuration</p>
Floor Width (m):	9.1	
Exposed Perimeter (m):	37.8	
Wall Height (m):	3.0	
Depth Below Grade (m):	1.84	
Window Area (m <sup>2</sup> ):	1.1	
Door Area (m <sup>2</sup> ):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
<b>Heating Load (Watts):</b>	<b>711</b>	

TYPE: 4007 THE SUNCREST  
 LO# 85232

WOB

## Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	3.4	 <p style="text-align: center;">Insulation Configuration</p>
Width (m):	9.1	
Exposed Perimeter (m):	15.8	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):	204	

TYPE: 4007 THE SUNCREST  
 LO# 85232

WOB



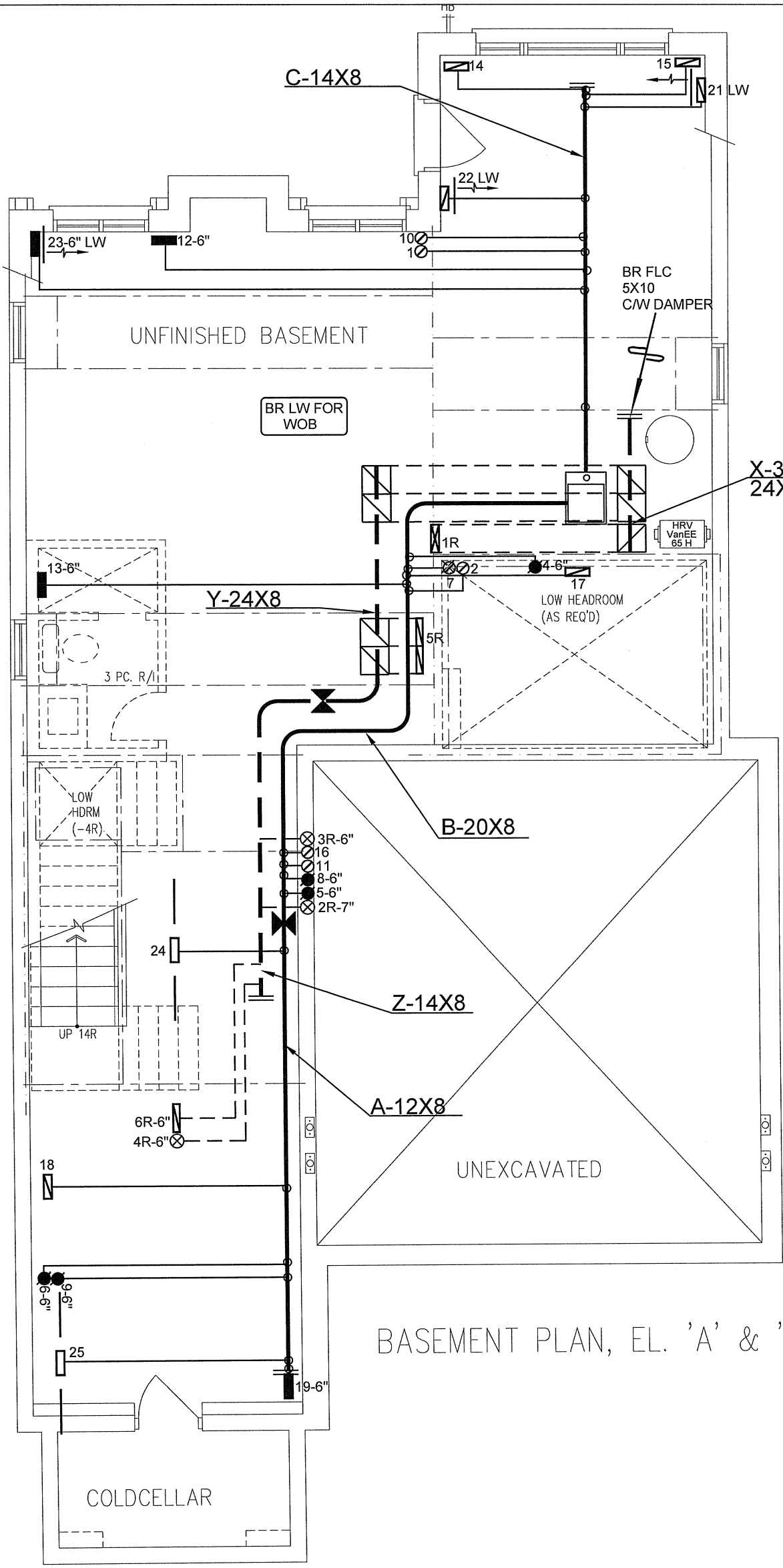
# Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description			
Province:	Ontario		
Region:	Vaughan (Woodbridge)		
Weather Station Location:	Open flat terrain, grass		
Anemometer height (m):	10		
Local Shielding			
Building Site:	Suburban, forest		
Walls:	Heavy		
Flue:	Heavy		
Highest Ceiling Height (m):	9.14		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m <sup>3</sup> ):	1027.9		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1370.2 cm <sup>2</sup>	
	3.57	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust	
	37.5	37.5	
Flue Size			
Flue #:	#1	#2	#3 #4
Diameter (mm):	0	0	0 0
Natural Infiltration Rates			
<b>Heating Air Leakage Rate (ACH/H):</b>	<b>0.407</b>		
<b>Cooling Air Leakage Rate (ACH/H):</b>	<b>0.137</b>		

TYPE: 4007 THE SUNCREST  
 LO# 85232

WOB



BASEMENT PLAN, EL. 'A' & 'B'

**WOB**  
**CSA-F280-12**  
**PACKAGE A1**

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.3.2.5 OF THE BUILDING CODE.  
*Michael O'Rourke*  
 Michael O'Rourke, BCIN# 19669  
 HVAC DESIGNS LTD.

HVAC LEGEND						3.				
— □ —	SUPPLY AIR GRILLE	— ■ —	6" SUPPLY AIR BOOT ABOVE	— ▨ —	14"x8" RETURN AIR GRILLE	— ▩ —	RETURN AIR STACK ABOVE	1.		
— ■ —	SUPPLY AIR GRILLE 6" BOOT	○	SUPPLY AIR STACK FROM 2nd FLOOR	— ▨ —	30"x8" RETURN AIR GRILLE	— ▩ —	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
— ▨ —	SUPPLY AIR BOOT ABOVE	●	6" SUPPLY AIR STACK 2nd FLOOR	— ▨ —	FRA- FLOOR RETURN AIR GRILLE	— ▩ —	REDUCER	REVISIONS		

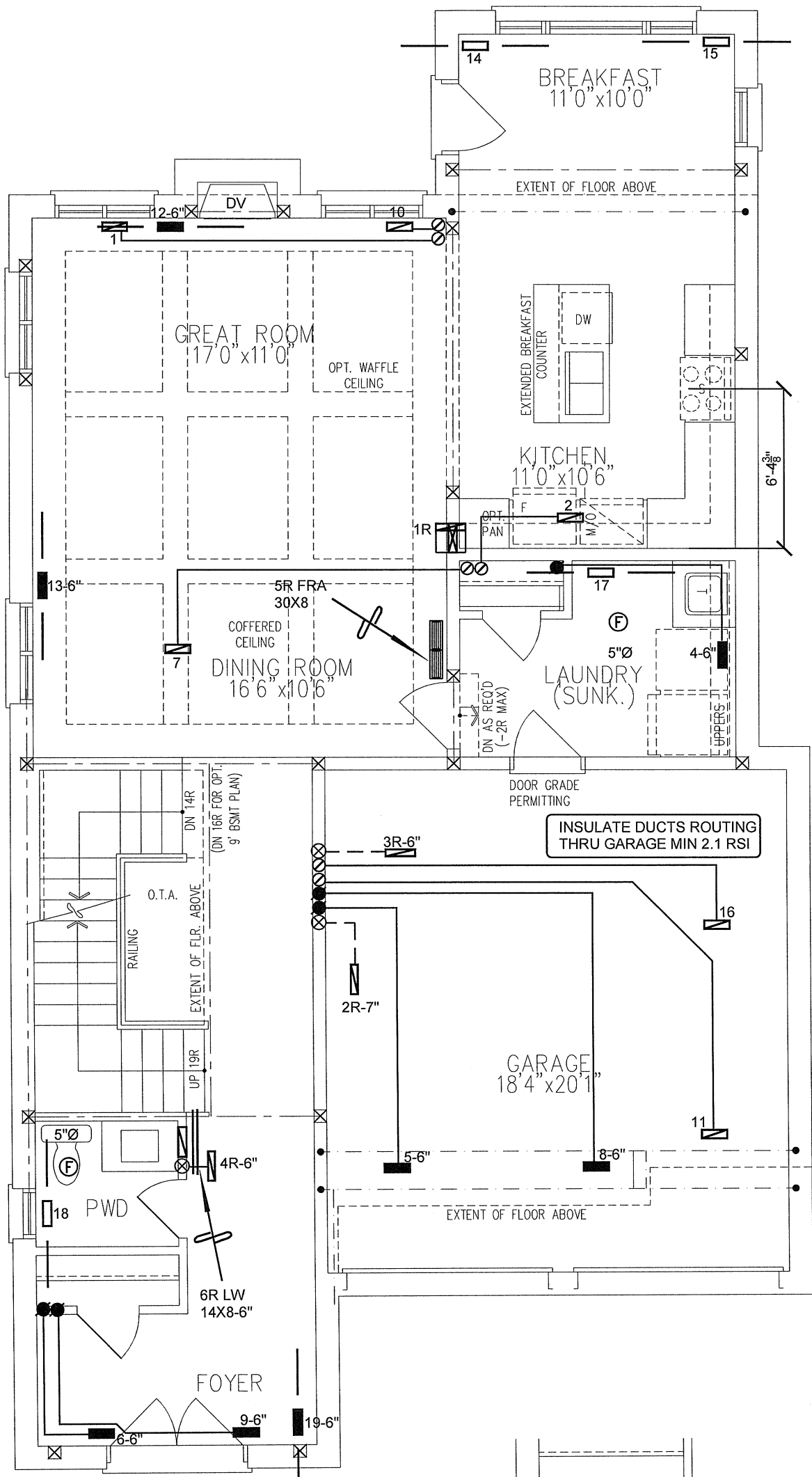
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Client  
**GOLD PARK HOMES**  
 Project Name  
**PINE VALLEY & TESTON VAUGHAN, ONTARIO**  
**THE SUNCREST WOB**  
**4007**      **2494 sqft**

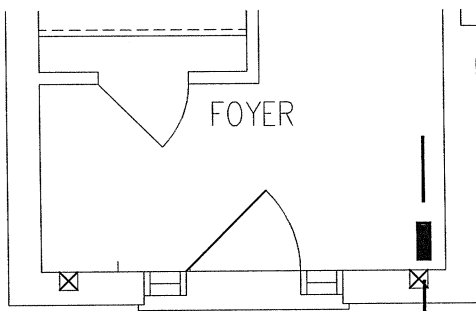
375 Finley Ave. Suite 202 - Ajax, Ontario  
 L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375  
 Email: info@hvacdsgns.ca  
 Web: www.hvacdsgns.ca  
 Specializing in Residential Mechanical Design Services  
 Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

HEAT LOSS 59101 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		
MAKE	LENNO	3RD FLOOR		
MODEL	EL296UH070XE36B	2ND FLOOR	11	4 3
INPUT	66 MBTU/H	1ST FLOOR	7	2 3
OUTPUT	64 MBTU/H	BASEMENT	5	1 0
COOLING	3.0 TONS	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A		
FAN SPEED	1100 cfm @ 0.6" w.c.			

Sheet Title  
**BASEMENT HEATING LAYOUT**  
 Date  
**FEB/2020**  
 Scale  
**3/16" = 1'-0"**  
 BCIN#  
**19669**  
 LO#  
**85232**



GROUND FLOOR PLAN, EL. 'A'



PART. GROUND FLOOR PLAN, EL. 'B'

**WOB**  
**CSA-F280-12**  
**PACKAGE A1**

1 MICHAEL O'ROURKE HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
*Michael O'Rourke*  
 Michael O'Rourke, BCIN# 19669  
 HVAC DESIGNS LTD.

HVAC LEGEND						REVISIONS	
—○—	SUPPLY AIR GRILLE	—■—	6" SUPPLY AIR BOOT ABOVE	—▨—	14"x8" RETURN AIR GRILLE	3.	
—■—	SUPPLY AIR GRILLE 6" BOOT	○	SUPPLY AIR STACK FROM 2nd FLOOR	—▨—	30"x8" RETURN AIR GRILLE	2.	
—■—	SUPPLY AIR BOOT ABOVE	●	6" SUPPLY AIR STACK 2nd FLOOR	—▨—	FRA- FLOOR RETURN AIR GRILLE	1.	
				—X—	REDUCER	No.	Description Date

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Client  
**GOLD PARK HOMES**

Project Name  
**PINE VALLEY & TESTON VAUGHAN, ONTARIO**

**THE SUNCREST WOB 4007**

2494 sqft

**HVAC DESIGNS LTD.**

375 Finley Ave. Suite 202 - Ajax, Ontario  
 L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375  
 Email: info@hvacdsgns.ca  
 Web: www.hvacdsgns.ca

Specializing in Residential Mechanical Design Services

Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

Sheet Title  
**FIRST FLOOR HEATING LAYOUT**

Date  
**FEB/2020**

Scale  
**3/16" = 1'-0"**

BCIN# 19669

LO# **85232**

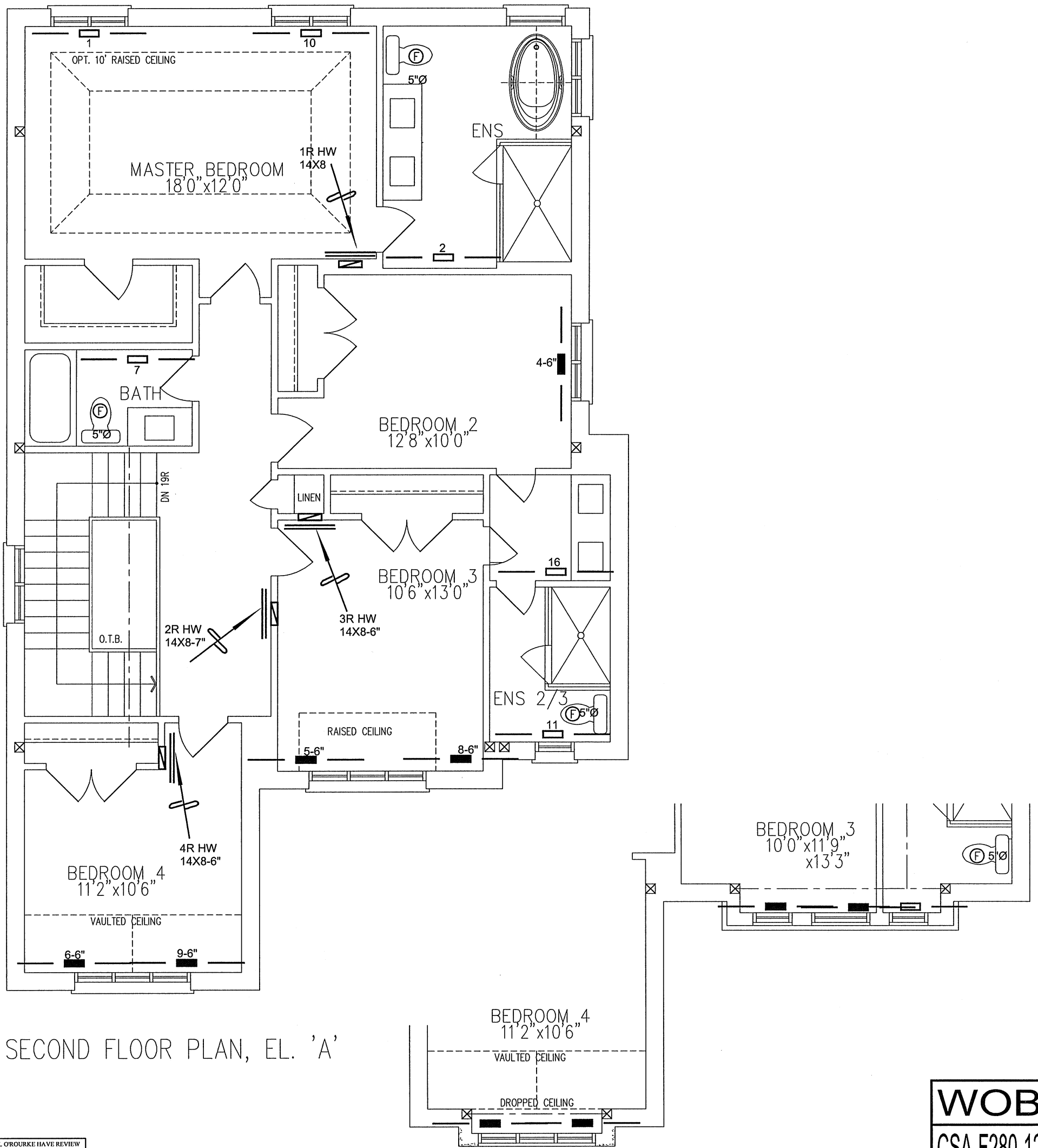
Sheet Title  
**FIRST FLOOR HEATING LAYOUT**

Date  
**FEB/2020**

Scale  
**3/16" = 1'-0"**

BCIN# 19669

LO# **85232**



SECOND FLOOR PLAN, EL. 'A'

PART. SECOND FLOOR PLAN, EL. 'B'

**WOB**  
**CSA-F280-12**  
**PACKAGE A1**

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
*Michael O'Rourke*  
 Michael O'Rourke, BCIN# 19669  
 HVAC DESIGNS LTD.

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	3.	
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	2.	
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	1.	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	No.	Description Date

REVISIONS

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Client  
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 Project Name  
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**THE SUNCREST WOB 4007**  
 2494 sqft

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 BCIN# 19669  
 LO# **85232**