

CSA-F280.12
ENERGYSTAR

ROOM USE	LIV/DIN		KIT		FAM		FOY		MUD		WOB		BAS	
EXP. WALL	33		43		36		34		26		44		128	
CLG. HT.	10		10		10		10		11		9		9	
FACTORS														
GRS.WALL AREA	LOSS	GAIN	330		430		360		340		286		396	
GLAZING			LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
NORTH	18.6	15.1	0	0	0	0	0	0	0	0	0	0	3	56
EAST	18.6	40.7	40	742	1629	0	0	0	0	0	0	0	0	0
SOUTH	18.6	24.1	23	427	563	0	0	0	0	0	0	6	111	14
WEST	18.6	40.7	0	0	0	64	1187	2606	38	705	1547	85	1577	3461
SKYL.T.	31.2	99.9	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	24.7	3.7	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.6	0.6	267	939	139	366	1287	191	322	1132	166	0	0	0
NET EXPOSED BASMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			0			0			0					
SLAB ON GRADE HEAT LOSS			0			0			0					
SUBTOTAL HT LOSS			2108			2474			1196		1428		642	
SUB TOTAL HT GAIN				2321			2797			177		212		46
LEVEL FACTOR / MULTIPLIER	0.30	0.46				0.30	0.46		0.30	0.46			0.60	0.86
AIR CHANGE HEAT LOSS			966			1132			547		654			6898
AIR CHANGE HEAT GAIN				106			128			8		10		18
DUCT LOSS			0			0			0		0			0
DUCT GAIN			0				0		0		0			0
HEAT GAIN PEOPLE	240	0	0			0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			672				672		0	0	0		0	0
TOTAL HT LOSS BTU/H			3072			3607			1743		2082		3312	11652
TOTAL HT GAIN x 1.3 BTU/H			4029			4676			241		288		4710	17

TOTAL COMBINED HEAT LOSS BTU/H: 44211

INDIVIDUAL RCIN: 19669 MICHAEL O'ROURKE

APPLICANT COPY

SITE NAME: LAMBERT'S LANE PH.2
 BUILDER: GREENPARK HOMES

 WOB
 TYPE: WOODCROFT 3

DATE: Jul-19

GFA: 2907 LO# 83306

 HEATING CFM 1131 COOLING CFM 1131
 TOTAL HEAT LOSS 42,618 TOTAL HEAT GAIN 36,883
 AIR FLOW RATE CFM 26.54 AIR FLOW RATE CFM 30.66

 furnace pressure 0.6
 furnace filter 0.05
 a/c coil pressure 0.2
 available pressure for s/a & r/a 0.35

 #GOODMAN
 GMEC960603BNA 60

 AFUE = 96 %
 INPUT (BTU/H) = 60,000
 OUTPUT (BTU/H) = 57,600

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	7	5
R/A	0	0	5	2	1

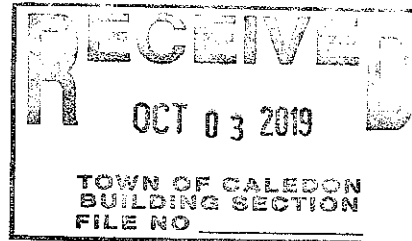
 plenum pressure s/a 0.18
 max s/a dif press. loss 0.02
 min adjusted pressure s/a 0.16
 r/a pressure 0.17
 r/a grille press. Loss 0.02
 adjusted pressure r/a 0.15

 FAN SPEED LOW
 MEDLOW
 MEDIUM
 MEDIUM HIGH
 HIGH 1131
 DESIGN CFM = 1131
 CFM @ .5" E.S.P.

 All S/A diffusers 4"x10" unless noted otherwise on layout.
 All S/A runs 5"Ø unless noted otherwise on layout.

RUN #	1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	LAUN	MBR	ENS-3	LIV/DIN	LIV/DIN	KIT	KIT	FAM	BED-3	BED-4	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.14	2.04	0.48	1.67	1.67	1.30	0.93	0.63	1.14	0.50	1.54	1.54	1.80	1.80	2.68	1.67	1.30	1.74	2.08	2.99	2.99	2.99	2.99
CFM PER RUN HEAT	30	54	13	44	44	34	25	17	30	13	41	41	48	48	71	44	34	46	55	79	79	79	79
RM GAIN MBH	1.77	1.44	0.15	1.99	2.23	2.23	0.34	1.28	1.77	0.36	2.01	2.01	2.34	2.34	3.21	2.23	2.23	0.24	0.29	1.29	1.29	1.29	1.29
CFM PER RUN COOLING	54	44	4	61	68	68	10	39	54	11	62	62	72	72	98	68	68	7	9	39	39	39	39
ADJUSTED PRESSURE	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	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	63	67	24	71	47	41	55	16	52	22	7	21	31	39	54	56	38	33	42	34	63	12	10
EQUIVALENT LENGTH	180	150	170	140	160	155	125	205	145	215	120	120	130	150	110	160	130	170	120	140	140	130	110
TOTAL EFFECTIVE LENGTH	223	217	194	211	207	196	180	221	197	237	127	141	161	189	164	216	168	203	162	174	203	142	120
ADJUSTED PRESSURE	0.08	0.08	0.09	0.08	0.08	0.09	0.1	0.08	0.09	0.07	0.14	0.12	0.11	0.09	0.1	0.08	0.1	0.08	0.11	0.1	0.08	0.12	0.14
ROUND DUCT SIZE	5	5	4	6	5	5	4	4	5	4	5	5	5	5	6	6	5	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	220	396	149	224	323	250	287	195	220	149	301	301	352	352	362	224	250	338	404	580	580	580	580
COOLING VELOCITY (ft/min)	396	323	46	311	499	499	115	447	396	126	455	455	529	529	500	347	499	51	66	286	286	286	286
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	A	B	D	C	C	D	B	B	B	D	C	B	B	A	C	C	C	A	B	A	D	D

RUN #	25
ROOM NAME	BAS
RM LOSS MBH	2.99
CFM PER RUN HEAT	79
RM GAIN MBH	1.29
CFM PER RUN COOLING	39
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH	39
EQUIVALENT LENGTH	180
TOTAL EFFECTIVE LENGTH	189
ADJUSTED PRESSURE	0.09
ROUND DUCT SIZE	5
HEATING VELOCITY (ft/min)	580
COOLING VELOCITY (ft/min)	286
OUTLET GRILL SIZE	3X10
TRUNK	B


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SUPPLY AIR TRUNK SIZE													RETURN AIR TRUNK SIZE												
	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)						
TRUNK A	259	0.08	8.5	8	x	8	583	TRUNK G	0	0.00	0	0	0	TRUNK O	0	0.05	0	0	x	8	0				
TRUNK B	616	0.07	12.1	18	x	8	616	TRUNK H	0	0.00	0	0	0	TRUNK P	0	0.05	0	0	x	8	0				
TRUNK C	243	0.08	8.3	10	x	8	437	TRUNK I	0	0.00	0	0	0	TRUNK Q	0	0.05	0	0	x	8	0				
TRUNK D	511	0.08	10.9	14	x	8	657	TRUNK J	0	0.00	0	0	0	TRUNK R	0	0.05	0	0	x	8	0				
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	0	TRUNK S	0	0.05	0	0	x	8	0				
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	0	TRUNK T	0	0.05	0	0	x	8	0				
														TRUNK U	0	0.05	0	0	x	8	0				
														TRUNK V	0	0.05	0	0	x	8	0				
														TRUNK W	0	0.05	0	0	x	8	0				
														TRUNK X	1131	0.05	16.5	32	x	8	636				
														TRUNK Y	210	0.05	8.8	10	x	8	378				
														TRUNK Z	0	0.05	0	0	x	8	0				
														DROP	1131	0.05	16.5	24	x	10	679				

RETURN AIR #	1	2	3	4	5	6	7													BR
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AIR VOLUME	75	175	85	95	85	135	300	0	0	0	0	0	0	0	0	0	0	0	0	181
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
ACTUAL DUCT LGH	55	43	62	39	56	40	19	1	1	1	1	1	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	215	180	185	170	180	190	175	0	0	0	0	0	0	0	0	0	0	0	0	135
TOTAL EFFECTIVE LH	270	223	247	209	236	230	194	1	1	1	1	1	1	1	1	1	1	1	1	149
ADJUSTED PRESSURE	0.05	0.07	0.06	0.07	0.06	0.06	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10
ROUND DUCT SIZE	6	7.5	6	6	6	7.1	8.9	0	0	0	0	0	0	0	0	0	0	0	0	7
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	14	30	0	0	0	0	0	0	0	0	0	0	0	0	14

TYPE: WOODCROFT 3 TOWN OF CALEDON
SITE NAME: LAMBERT'S LANE BUILDING SECTION
RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

LO # 83306
WOB

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	5	@ 10.6 cfm	53.0	cfm
Table 9.32.3.A.	TOTAL		180.2	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
TOTAL	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.6

Total Ventilation Capacity	180.2	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	100.7	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANE 65H Location: BSMT

79.5 cfm 3.0 sones ☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM	AT °F	FACTOR	% LOSS
79.5 CFM	74 F	1.08	0.25

SUPPLEMENTAL FANS PANASONIC

Location	Model	cfm	HVI	Sones
ENS	FV-05-11VK1	50	☒	0.3
BATH	FV-05-11VK1	50	☒	0.3
ENS-3	FV-05-11VK1	50	☒	0.3

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANE 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: GREENPARK 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: July-19

CSA F280-12 Residential Heat Loss and Heat Gain Calculations
Formula Sheet (For Air Leakage / Ventilation Calculation)

LO#: 83306

Model: WOODCROFT 3

Builder: GREENPARK HOMES

Date: 7/30/2019

Volume Calculation
House Volume

Level	Floor Area (ft ²)	Floor Height (ft)	Volume (ft ³)
Bsmt	1257	9	11313
First	1257	10	12570
Second	1658	9	14922
Thrd	0	9	0
Fourth	0	9	0
Total:			38,805.0 ft ³
Total:			1098.8 m ³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.268
SUMMER NATURAL AIR CHANGE RATE	0.087

Design Temperature Difference				
	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-19	41	74
Summer DTDc	24	30	6	11

5.2.3.1 Heat Loss due to Air Leakage

$$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$$

$$0.268 \times 305.23 \times 41^\circ\text{C} \times 1.2 = 4043 \text{ W}$$

$$= 13795 \text{ Btu/h}$$

6.2.6 Sensible Gain due to Air Leakage

$$HG_{satb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

$$0.087 \times 305.23 \times 6^\circ\text{C} \times 1.2 = 195 \text{ W}$$

$$= 664 \text{ Btu/h}$$

5.2.3.2 Heat Loss due to Mechanical Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

$$80 \text{ CFM} \times 74^\circ\text{F} \times 1.08 \times 0.25 = 1593 \text{ Btu/h}$$

6.2.7 Sensible heatGain due to Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

$$80 \text{ CFM} \times 11^\circ\text{F} \times 1.08 \times 0.25 = 236 \text{ Btu/h}$$

5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)

$$HL_{airr} = \text{Level Factor} \times HL_{airbv} \times ((HL_{agcr} + HL_{bgcr}) \div (HL_{agcleve1} + HL_{bgcleve1}))$$

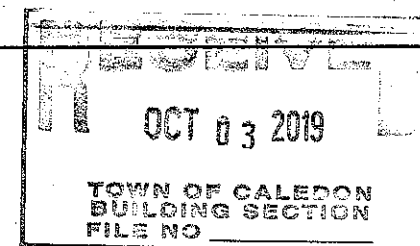
Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{cleve1})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HL _{cleve1})
1	0.5	13,795	8,067	0.855
2	0.3		9,043	0.458
3	0.2		11,172	0.247
4	0		0	0.000
5	0		0	0.000

*HLairbv = Air leakage heat loss + ventilation heat loss

*For a balanced or supply only ventilation system HLairve = 0

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Specializing in Residential Mechanical Design Services



HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: WOODCROFT 3	WOB	BUILDER: GREENPARK HOMES
SFQT: 2907	LO# 83306	SITE: LAMBERT'S LANE PH.2

DESIGN ASSUMPTIONS

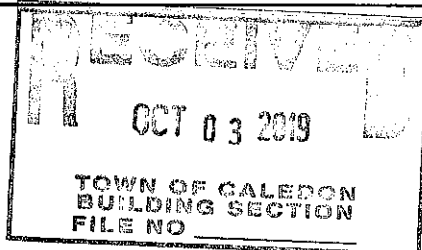
HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	2.50	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	38805.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.45	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 47.0 ft	WIDTH: 39.0 ft	EXPOSED PERIMETER:	128.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	44.0 ft

2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
ENERGYSTAR****Nominal Min. Eff.**

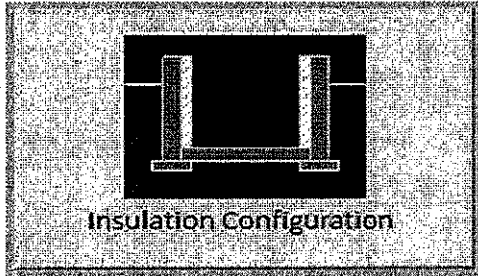
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.20
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.70
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	R22+R5	21.10
Basement Walls Minimum RSI (R)-Value	20	21.12
Below Grade Slab Entire surface > 600 mm below 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	ZONE 2	-
Skylights Maximum U-Value	ZONE 2	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.9	-

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

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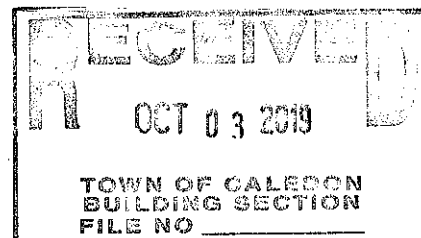
Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	4.6	 Insulation Configuration
Floor Width (m):	11.9	
Exposed Perimeter (m):	39.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.56	
Window Area (m ²):	0.8	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	804	

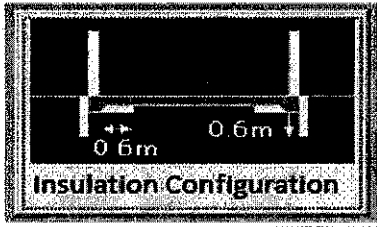
TYPE: WOODCROFT 3
LO# 83306

WOB

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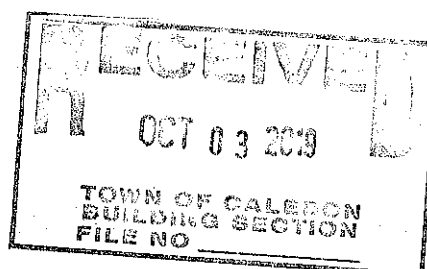
Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	1.5	
Width (m):	11.9	
Exposed Perimeter (m):	13.4	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		188

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LO# 83306

WOB



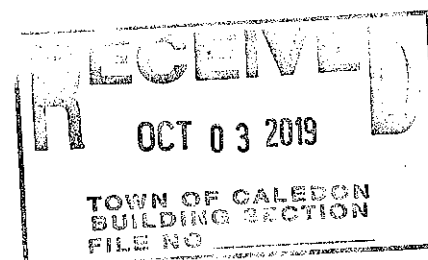
Air Infiltration Residential Load Calculator

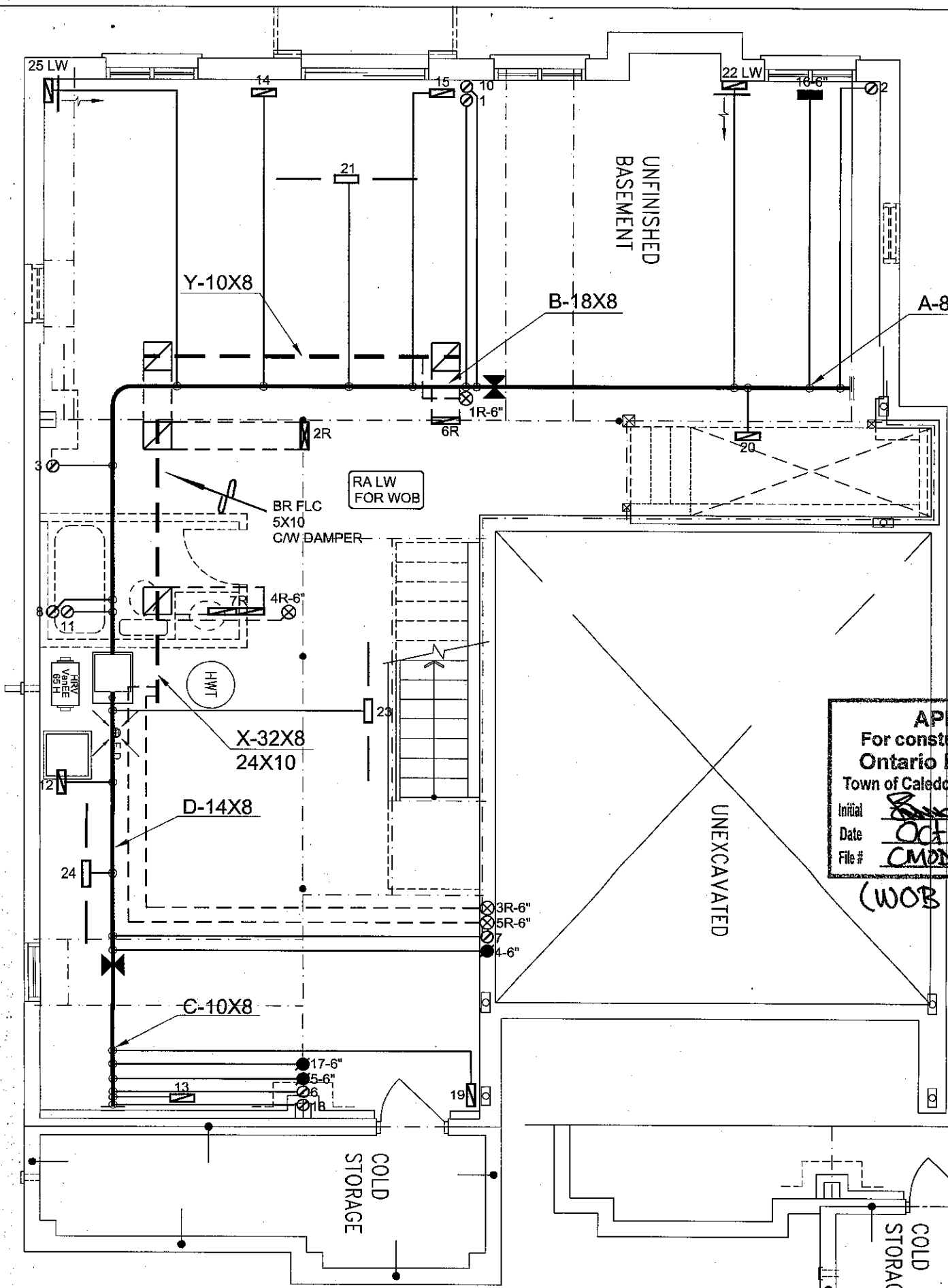
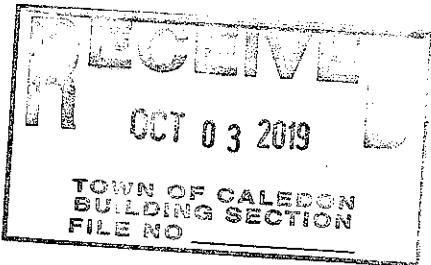
Supplemental tool for CAN/CSA-F280

Weather Station Description			
Province:	Ontario		
Region:	Brampton		
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):	8.53		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m ³):	1098.8		
Air Leakage/Ventilation			
Air Tightness Type:	Energy Star Detached (2.5 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1025.8 cm ²	
	2.50	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust	
	37.5	37.5	
Flue Size			
Flue #:	#1	#2	#3
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.268		
Cooling Air Leakage Rate (ACH/H):	0.087		

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODETYPE: WOODCROFT 3
LO# 83306

WOB





APPROVED
For construction as per the
Ontario Building Code
Town of Caledon Building Department
Initial S. SADDHANY
Date OCT 11, 2019
File # CMDB-WOODCROFT-3
(WOB CONDITION)

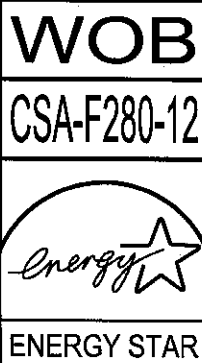
BASEMENT PLAN - ELEV. '1'

BASEMENT PLAN - ELEV. '2'

BASEMENT PLAN - ELEV. '3'

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

MINIMUM CEILING HEIGHT SHALL BE 2100 MM
OVER AT LEAST 75% OF BASEMENT
AREA EXCEPT THAT UNDER BEAMS AND
DUCTS THE CLEARANCE IS PERMITTED TO
BE REDUCED 1950 MM

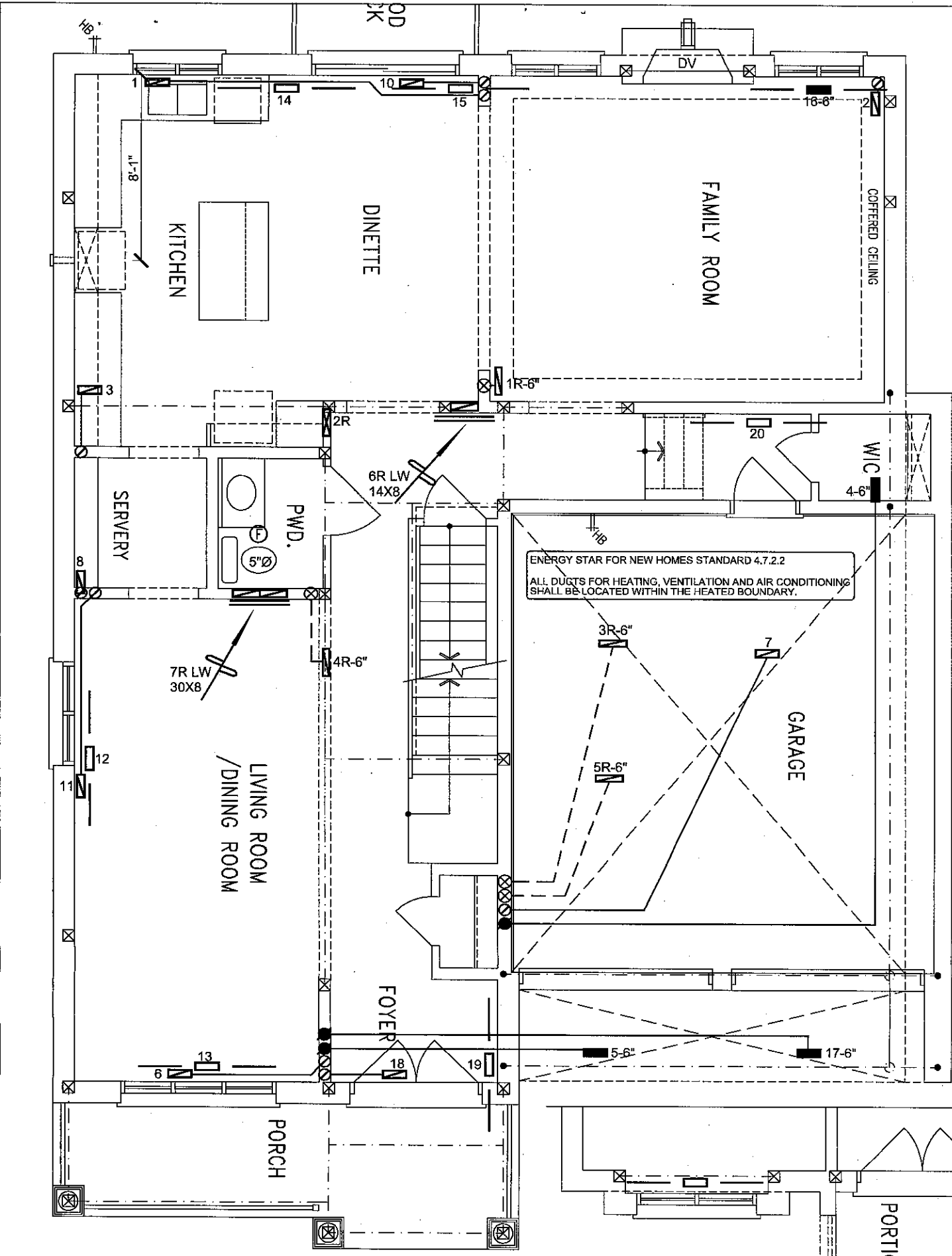


I MICHAEL O'ROURKE HAVE REVIEWED
AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C, 3.2.5 OF THE
BUILDING CODE.
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND								3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	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	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

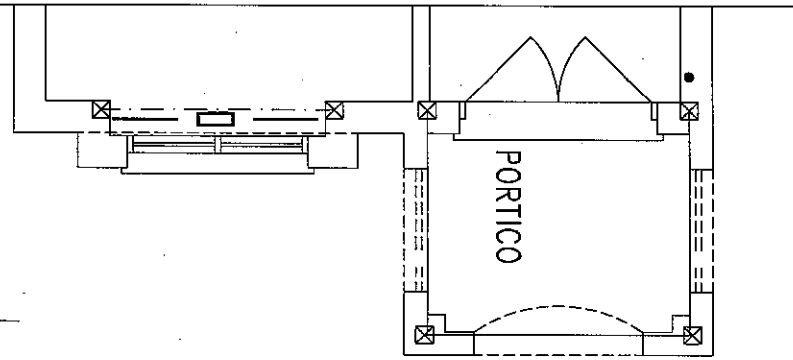
Client GREENPARK HOMES Project Name LAMBERTS LANE HOME CORP PH2 CALEDON, ONTARIO WOB WOODCROFT 3 2907 sqft	HVAC DESIGNS LTD. 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical 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.	HEAT LOSS 44211 BTU/H UNIT DATA MAKE GOODMAN MODEL GMEC960603BNA INPUT 60 MBTU/H OUTPUT 57.6 MBTU/H COOLING 3.0 TONS FAN SPEED 1131 cfm @ 0.5" w.c.	# OF RUNS S/A R/A FANS 3RD FLOOR 2ND FLOOR 12 5 3 1ST FLOOR 7 2 2 BASEMENT 5 1 0 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	Sheet Title BASEMENT HEATING LAYOUT Date JULY/2019 Scale 3/16" = 1'-0" BCIN# 19669 LO# 83306



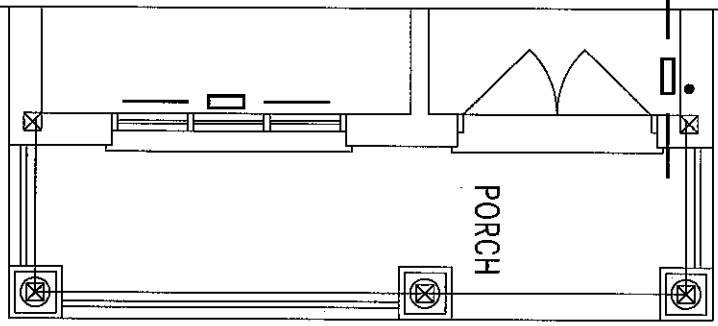
RECEIVED
OCT 03 2019
TOWN OF CALEDON
BUILDING SECTION
FILE NO

DUCTS LOCATED IN UNCONDITIONED SPACES SHALL BE SEALED TO A CLASS A SEAL LEVEL IN ACCORDANCE WITH THE SMACNA MANUAL

GROUND FLOOR PLAN - ELEV. '1'



GROUND FLOOR PLAN - ELEV. '2'



GROUND FLOOR PLAN - ELEV. '3'

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.3 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

WOB
CSA-F280-12

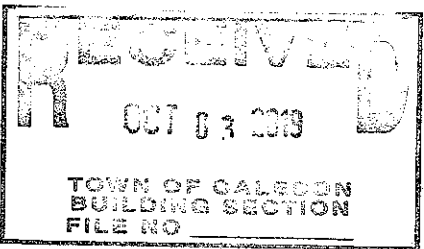
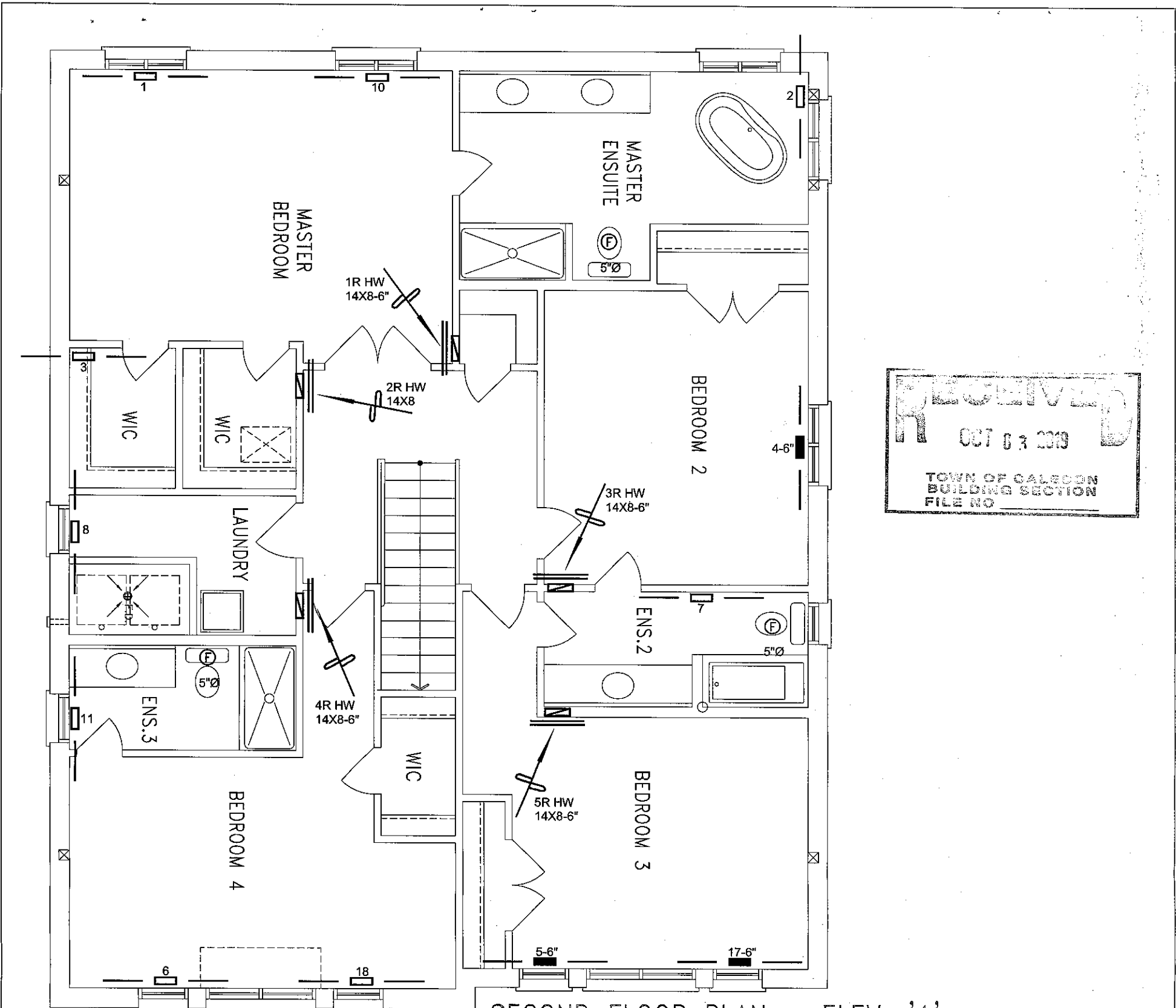
Energy

ENERGY STAR

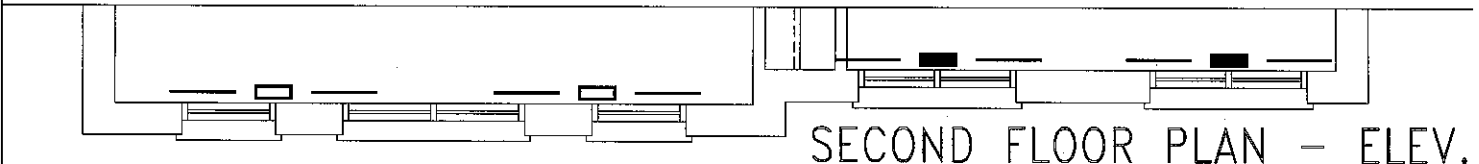
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR 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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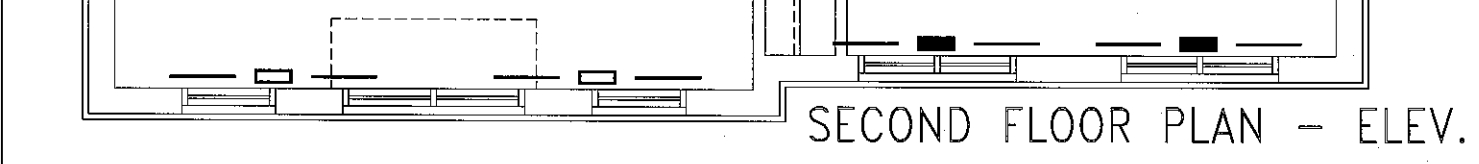
Client GREENPARK HOMES		 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services Installation to comply with the latest Ontario Building Code. All supply 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.	THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name LAMBERTS LANE HOME CORP PH2 CALEDON, ONTARIO				Date JULY/2019	Scale 3/16" = 1'-0"
WOB WOODCROFT 3 2907 sqft				BCIN# 19669	LO# 83306



SECOND FLOOR PLAN - ELEV. '1'



SECOND FLOOR PLAN - ELEV. '2'



SECOND FLOOR PLAN - ELEV. '3'

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.

WOB

CSA-F280-12

ENERGY STAR

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	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

GREENPARK HOMES

Project Name

LAMBERTS LANE HOME CORP PH2 CALEDON, ONTARIO

WOB

WOODCROFT 3 2907 sqft

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

THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE

Sheet Title

SECOND FLOOR HEATING LAYOUT

Date

JULY/2019

Scale

3/16" = 1'-0"

BCIN# 19669

LO#

83306