

ROOM USE	LIV	DIN	KIT	FAM	LAUN	W/R	FOY	MUD	WOD	BAS
EXP. WALL	11	12	34	35	42	12	34	23	40	176
CLG. HT.	10	10	10	10	8	10	10	10	9	9
GRS.WALL AREA	110	120	340	350	339	120	340	230	360	1176
GLAZING	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN
NORTH	18.6 15.1 20 371 303	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
EAST	18.6 40.7 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	30 657 1222	0 0 0 0 0 0	6 111 244	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
SOUTH	18.6 24.1 0 0 0	20 371 481	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	8 148 193	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 167 217
WEST	18.6 40.7 0 0 0	0 0 0 0 0 0	56 1039 2280	34 631 1384	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	223 489	0 0 0 0
SKYLT.	31.2 99.9 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	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 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	40 986 146	20 493 73	0 0 0 0 0 0	0 20 493 73
NET EXPOSED WALL	3.5 0.5 90 316 47	100 352 52	284 999 148	316 1111 186	309 1088 161	112 394 68	294 1034 163	210 738 109	0 0 0 0 0 0	0 0 0 0 0 0
NET EXPOSED BSMT WALL ABOVE GR	3.5 0.5 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	210 738 109	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 0 0 0	0 0 0 0 0 0	185 232 103	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	801 119	408 1433 213
NO ATTIC EXPOSED CLG	2.7 1.2 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	10 27 12	26 96 43	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	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 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	0	6094
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	687	723	2038	1769	1973	542	2131	1232	0	8188
SUB TOTAL HT GAIN	350	533	2428	1661	1628	261	544	183	1024	502
LEVEL FACTOR / MULTIPLIER	0.30 0.37	0.30 0.37	0.30 0.37	0.30 0.37	0.20 0.22	0.30 0.37	0.30 0.37	0.30 0.37	0.50	0.65
AIR CHANGE HEAT LOSS	254	267	762	653	429	200	787	465	5967	5967
AIR CHANGE HEAT GAIN	20	31	141	91	89	15	32	11	0	64
DUCT LOSS	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	443	443	443	443	443	443	443	443	0	443
TOTAL HT LOSS BTU/H	941	989	2790	2422	2402	742	2918	1686	1024	14146
TOTAL HT GAIN x 1.3 BTU/H	1057	1310	3916	2723	2679	345	748	527	790	1311

TOTAL HEAT GAIN BTU/H:	30878	TONS: 2.67	LOSS DUE TO VENTILATION LOAD BTU/H: 1811	STRUCTURAL HEAT LOSS: 42106	TOTAL COMBINED HEAT LOSS BTU/H: 44017
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Michael Kounine

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

 OPT 2ND FL
 TYPE: PRESTON 2

DATE: Feb-19

GFA: 2835 LO# 81350

 HEATING CFM 1131 COOLING CFM 1131
 TOTAL HEAT LOSS 42,106 TOTAL HEAT GAIN 30,595
 AIR FLOW RATE CFM 26.86 AIR FLOW RATE CFM 36.97

 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
 FAN SPEED LOW
 MEDLOW
 MEDIUM
 MEDIUM HIGH
 HIGH 1131

 AFUE = 96 %
 INPUT (BTU/H) = 60,000
 OUTPUT (BTU/H) = 57,800

 DESIGN CFM = 1131
 CFM @ 6" E.S.P.

TEMPERATURE RISE 47 °F

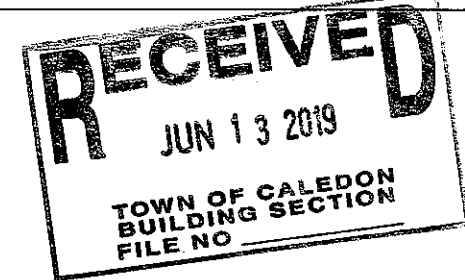
RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	10	4
R/A	0	0	4	3	1

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

 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

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	ENS	MBR	WIC	BED-2	BED-3	BED-4	BATH	BED-3	MBR	ENS-2	LIV	DIN	KIT	KIT	FAM	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.30	1.01	0.36	1.02	1.46	1.49	0.73	1.46	1.01	0.51	0.94	0.99	1.39	1.39	1.21	2.40	0.74	2.92	1.69	3.79	3.79	3.79	3.79	3.79
CFM PER RUN HEAT	35	27	10	27	39	40	20	39	27	14	25	27	37	37	33	65	20	78	45	102	102	102	102	102
RM GAIN MBH	1.02	1.66	0.11	1.44	1.66	1.75	0.32	1.66	1.66	0.91	1.06	1.31	1.96	1.96	1.36	2.68	0.35	0.75	0.83	0.53	0.53	0.53	0.53	0.53
CFM PER RUN COOLING	38	62	4	53	61	65	12	61	62	34	39	48	72	72	50	99	13	28	31	19	19	19	19	19
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	0.17	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	52	59	38	46	55	46	46	64	45	41	34	27	39	29	34	51	60	53	31	39	32	25	54	54
EQUIVALENT LENGTH	150	160	160	210	190	190	190	190	190	210	210	190	170	140	190	190	190	190	170	150	210	220	210	210
TOTAL EFFECTIVE LENGTH	202	219	198	256	245	236	236	254	235	251	244	217	209	169	224	241	250	243	201	189	242	245	264	264
ADJUSTED PRESSURE	0.09	0.08	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.1	0.08	0.07	0.07	0.07	0.09	0.09	0.07	0.07	0.06	0.06
ROUND DUCT SIZE	4	5	4	5	5	5	4	5	5	4	5	5	5	5	5	6	4	6	4	6	6	6	6	6
HEATING VELOCITY (ft/min)	402	198	115	198	286	294	229	286	198	161	184	198	272	272	242	331	229	398	516	520	520	520	520	520
COOLING VELOCITY (ft/min)	436	455	46	389	448	477	138	448	455	390	286	352	529	529	367	505	149	143	356	97	97	97	97	97
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	4X10	4X10	4X10	4X10
TRUNK	D	C	D	B	A	B	A	A	C	B	B	B	C	C	C	C	A	A	A	B	D	C	B	A

RUN #	26	27	28
ROOM NAME	FAM	LIBR	BED-5
RM LOSS MBH	1.21	0.77	0.93
CFM PER RUN HEAT	33	21	25
RM GAIN MBH	1.36	1.10	1.59
CFM PER RUN COOLING	50	41	59
ADJUSTED PRESSURE	0.17	0.17	0.17
ACTUAL DUCT LGH	44	38	45
EQUIVALENT LENGTH	160	190	160
TOTAL EFFECTIVE LENGTH	204	229	205
ADJUSTED PRESSURE	0.08	0.08	0.08
ROUND DUCT SIZE	5	4	5
HEATING VELOCITY (ft/min)	242	241	184
COOLING VELOCITY (ft/min)	367	470	433
OUTLET GRILL SIZE	3X10	3X10	3X10
TRUNK	C	B	D



SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE									
TRUNK	STATIC	ROUND	RECT	VELOCITY	TRUNK	STATIC	ROUND	RECT	VELOCITY	TRUNK	STATIC	ROUND	RECT	VELOCITY	TRUNK	STATIC	ROUND	RECT	VELOCITY
CFM	PRESS.	DUCT	DUCT	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)
TRUNK A	363	0.06	10.3	12	x	8	545			TRUNK G	0	0.00	0	0	x	8	0		
TRUNK B	664	0.06	12.9	20	x	8	598			TRUNK H	0	0.00	0	0	x	8	0		
TRUNK C	296	0.07	9.2	12	x	8	444			TRUNK I	0	0.00	0	0	x	8	0		
TRUNK D	468	0.07	10.9	14	x	8	602			TRUNK J	0	0.00	0	0	x	8	0		
TRUNK E	1132	0.06	15.8	28	x	8	728			TRUNK K	0	0.00	0	0	x	8	0		
TRUNK F	0	0.00	0	0	x	8	0			TRUNK L	0	0.00	0	0	x	8	0		
RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
AIR VOLUME	155	155	85	85	135	145	175	0	0	0	0	0	0	0	0	0	0	0	196
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	45	42	66	69	60	39	39	1	1	1	1	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	180	175	185	185	265	145	145	0	0	0	0	0	0	0	0	0	0	0	175
TOTAL EFFECTIVE LH	225	217	251	254	325	184	184	1	1	1	1	1	1	1	1	1	1	1	189
ADJUSTED PRESSURE	0.07	0.07	0.06	0.06	0.05	0.08	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.08
ROUND DUCT SIZE	7.2	7.2	6	6	7.5	6.8	7.3	0	0	0	0	0	0	0	0	0	0	0	7.6
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	8
INLET GRILL SIZE	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	14	0	0	0	0	0	0	0	0	0	0	0	24
TRUNK X	1131	0.05	18.5	32	x	8	636			TRUNK Y	450	0.05	11.7	16	x	8	0		
TRUNK Y	450	0.05	11.7	16	x	8	506			TRUNK Z	0	0.05	0	0	x	8	0		
TRUNK Z	0	0.05	0	0	x	8	0			DROP	1131	0.05	16.5	24	x	10			679

TYPE: PRESTON 2
SITE NAME: LAMBERT'S LANE PH.2

LO # 81350
OPT 2ND FL

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	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	4 @ 10.6 cfm	42.4 cfm
Other Rooms	8 @ 10.6 cfm	84.8 cfm
Table 9.32.3.A.	TOTAL	212.0 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	95.4	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	212	cfm
Less Principal Ventil. Capacity	95.4	cfm
Required Supplemental Capacity	116.6	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
95.4 cfm	3.0 sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
95.4 CFM	X 74 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		PANASONIC
Location	Model	cfm HVI Sones
ENS	FV-05-11VK1	50 ✓ 0.3
BATH	FV-05-11VK1	50 ✓ 0.3
W/R	FV-05-11VK1	50 ✓ 0.3

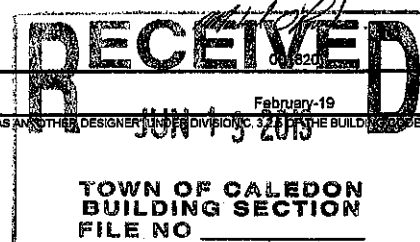
HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
155 cfm high	64 cfm low	
75 % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER:		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:	
HRAI #	000320
Date:	February-19

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN OTHER DESIGNER UNDER DIVISION 3.2 OF THE BUILDING CODE.
INDIVIDUAL BCIN: 19669 *Michael O'Rourke* MICHAEL O'ROURKE


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

LO#: 81350

Model: PRESTON 2

Builder: GREENPARK HOMES

Date: 2/5/2019

Volume Calculation
Air Change & Delta T Data
House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	1300	9	11700
First	1300	10	13000
Second	1535	8	12407.405
Third	0	9	0
Fourth	0	9	0
Total:			37,107.4 ft³
Total:			1050.8 m³

WINTER NATURAL AIR CHANGE RATE	0.242
SUMMER NATURAL AIR CHANGE RATE	0.079

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
6.2.6 Sensible Gain due to Air Leakage

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

$$0.242 \times 291.88 \times 41^\circ\text{C} \times 1.2 = 3492 \text{ W}$$

$$= 11915 \text{ Btu/h}$$

$$HG_{salb} = LR_{aire} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

$$= 0.079 \times 291.88 \times 6^\circ\text{C} \times 1.2 = 168 \text{ W}$$

$$= 574 \text{ Btu/h}$$

5.2.3.2 Heat Loss due to Mechanical Ventilation
6.2.7 Sensible heat Gain due to Ventilation

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

$$95 \text{ CFM} \times 74^\circ\text{F} \times 1.08 \times 0.25 = 1911 \text{ Btu/h}$$

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

$$95 \text{ CFM} \times 11^\circ\text{F} \times 1.08 \times 0.25 = 283 \text{ Btu/h}$$

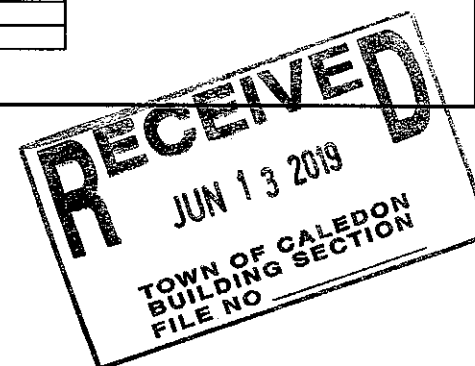
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)

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

Level	Level Factor (LF)	HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{cleve})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HL _{cleve})
1	0.5	11,915	9,211	0.647
2	0.3		9,684	0.369
3	0.2		10,965	0.217
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 HLairv = 0



HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: PRESTON 2	OPT 2ND FL	BUILDER: GREENPARK HOMES
SFQT: 2835	LO# 81350	SITE: LAMBERT'S LANE PH.2

DESIGN ASSUMPTIONS

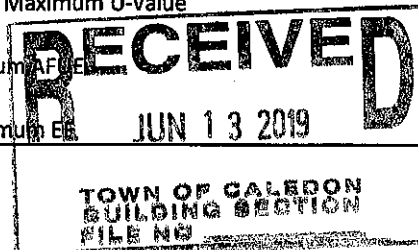
HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

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):	37107.4	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 57.0 ft	WIDTH: 31.0 ft	EXPOSED PERIMETER:	176.0 ft

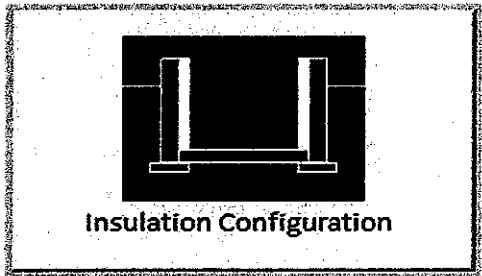
2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
ENERGYSTAR****Nominal Min. Eff.**

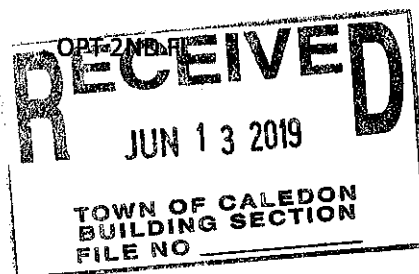
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.20
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.70
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	R22+R5	21.10
Basement Walls Minimum RSI (R)-Value	20	21.12
Below Grade Slab Entire surface > 600 mm below 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*

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

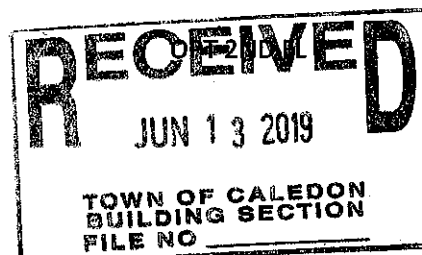
Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	17.4	 Insulation Configuration
Floor Width (m):	9.4	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	2.0	
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):		1786

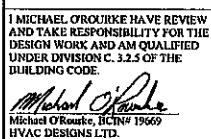
TYPE: PRESTON 2
LO# 81350

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

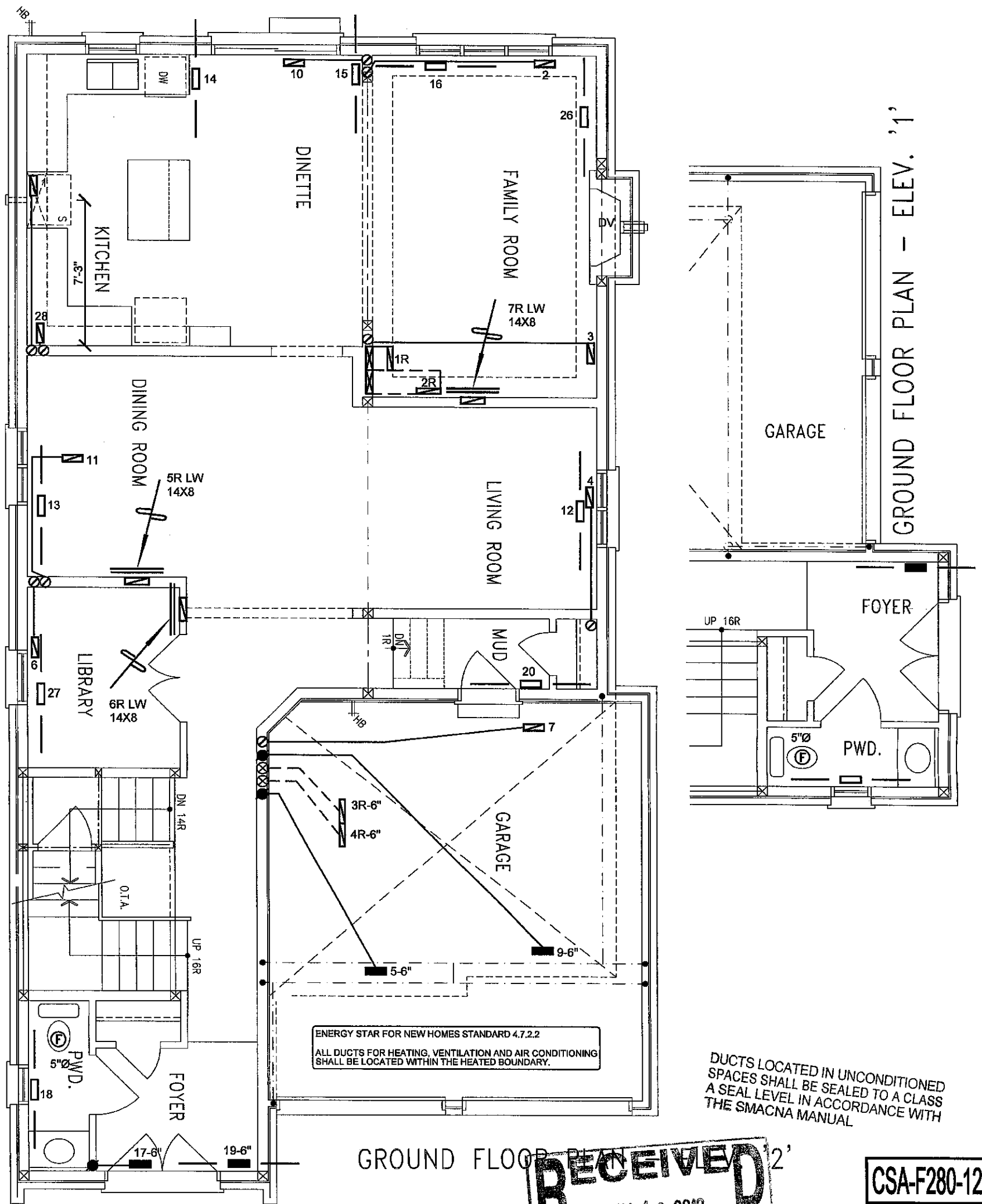
Weather Station Description				
Province:	Ontario			
Region:	Brampton			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	7.34			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1050.8			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	980.9 cm ²		
	2.50	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	45.0	45.0		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.242			
Cooling Air Leakage Rate (ACH/H):	0.079			

TYPE: PRESTON 2
LO# 81350



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Client		 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	HEAT LOSS 44017 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title	
GREENPARK HOMES			MAKE	GOODMAN	3RD FLOOR				BASEMENT HEATING LAYOUT	
Project Name			MODEL	GMEC960603BNA-60	2ND FLOOR	12	4	3		
LAMBERTS LANE HOME CORP PH 2 CALEDON, ONTARIO			INPUT	60 MBTU/H	1ST FLOOR	10	3	2		
OPT 2ND FL PRESTON 2			OUTPUT	57.6 MBTU/H	BASEMENT	4	1	0	Date	FEB/2019
2835 sqft		COOLING	2.5 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				Scale	3/16" = 1'-0"	
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.		FAN SPEED	1131 cfm @ 0.6" w.p.					BCIN# 19669		
								LO#	81350	

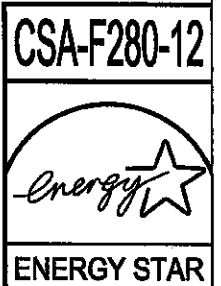


I MICHAEL OROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE ONTARIO BUILDING CODE.

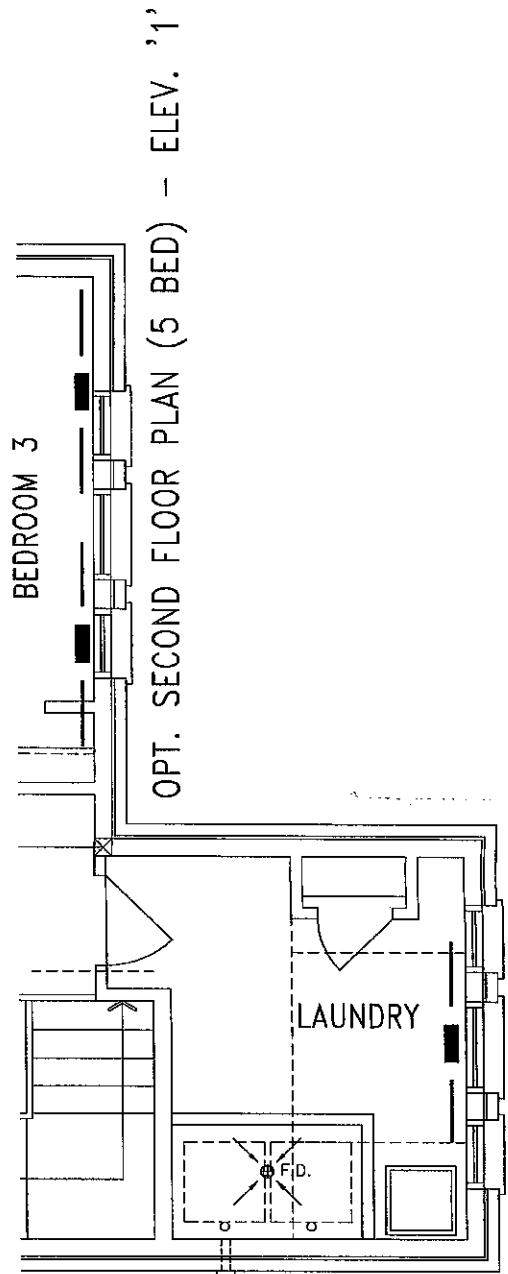
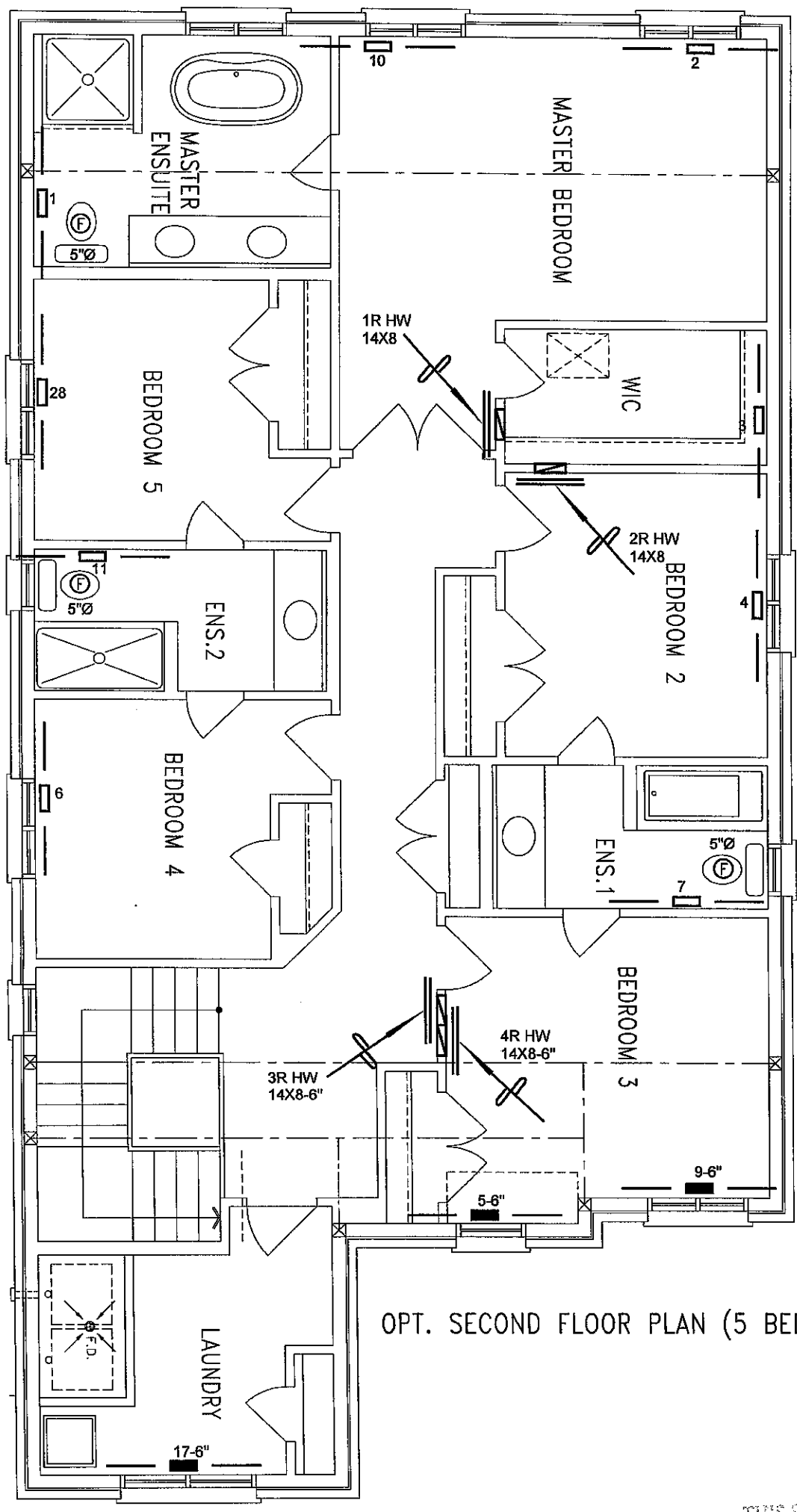
RECEIVED
JUN 13 2019
TOWN OF CALEDON
BUILDING SECTION
FILE NO



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
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	Date	

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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.	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name LAMBERTS LANE HOME CORP PH 2 CALEDON, ONTARIO			Date FEB/2019	Scale 3/16" = 1'-0"
OPT 2ND FL PRESTON 2 2835 sqft			BCIN# 19669	
			LO#	81350



OPT. SECOND FLOOR PLAN (5 BED) - ELEV. '2'

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

CSA-F280-12

ENERGY STAR

I MICHAEL O'BROURKE HAVE REVIEWED
AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C.3.2.5 OF THE
BUILDING CODE.

Michael O'Brourke
Michael O'Brourke, 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"x6" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	Date	

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Client
GREENPARK HOMES

Project Name
**LAMBERTS LANE HOME CORP PH 2
CALEDON, ONTARIO**

**OPT 2ND FL
PRESTON 2**

HVAC DESIGNS LTD.

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L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdesigns.ca
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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.

RECEIVED

JUN 13 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO

Sheet Title	SECOND FLOOR HEATING LAYOUT
Date	FEB/2019
Scale	3/16" = 1'-0"
BCIN#	19669
LO#	81350