

SITE NAME: RUSSEL GARDENS PHASE 3
BUILDER: GREENPARK HOMES

LOT 332
TYPE: MOUNTAINASH 5

DATE: Dec-20

GFA: 3298 LO# 88543

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 53,046 TOTAL HEAT GAIN 36,592
AIR FLOW RATE CFM 21.32 AIR FLOW RATE CFM 30.91

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 928
MEDIUM HIGH 1017
HIGH 1131

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

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

TEMPERATURE RISE 47 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	14	8	4
R/A	0	0	6	2	1

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	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-3	BED-4	BED-5	ENS-3	BED-2	WIC-4	MBR	ENS-2	FAM	L/D	K/B	K/B	L/H	LND	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.31	2.17	0.54	1.89	1.53	1.16	0.80	1.51	0.65	1.31	0.53	3.27	2.87	1.89	1.89	1.54	0.98	1.52	2.48	2.31	4.37	4.37	4.37	4.37
CFM PER RUN HEAT	28	46	12	40	33	25	17	32	14	28	11	70	61	40	40	33	21	32	53	49	93	93	93	93
RM GAIN MBH	1.86	1.42	0.18	2.29	2.09	1.83	0.33	1.86	0.68	1.86	0.35	3.42	2.42	2.29	2.29	1.37	1.21	1.07	0.86	0.53	0.49	0.49	0.49	0.49
CFM PER RUN COOLING	58	44	6	71	65	57	10	58	21	58	11	106	75	71	71	42	37	33	27	16	15	15	15	15
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	37	54	39	59	56	34	34	51	45	39	39	22	10	40	31	27	20	33	41	44	38	33	5	31
EQUIVALENT LENGTH	190	130	150	130	170	200	220	160	110	130	150	140	130	150	160	140	180	110	90	140	140	140	140	130
TOTAL EFFECTIVE LENGTH	227	184	189	189	226	234	254	211	155	169	189	162	140	190	191	167	200	143	131	184	178	173	145	161
ADJUSTED PRESSURE	0.08	0.09	0.09	0.09	0.08	0.07	0.07	0.08	0.11	0.1	0.09	0.1	0.12	0.09	0.09	0.1	0.09	0.12	0.13	0.09	0.09	0.09	0.11	0.1
ROUND DUCT SIZE	5	5	4	5	4	6	4	6	4	5	4	6	6	5	5	5	4	4	5	5	6	6	6	6
HEATING VELOCITY (ft/min)	206	338	138	294	242	127	195	163	161	206	128	357	311	294	294	242	241	367	389	360	474	474	474	474
COOLING VELOCITY (ft/min)	426	323	69	521	477	291	115	296	241	426	126	540	382	521	521	308	424	379	198	117	76	76	76	76
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	B	A	B	D	C	C	C	A	D	E	D	B	D	A	A	C	B	C	C	A	A	B	D	C

RUN #	25	26
ROOM NAME	BED-3	BED-4
RM LOSS MBH	1.89	1.53
CFM PER RUN HEAT	40	33
RM GAIN MBH	2.29	2.09
CFM PER RUN COOLING	71	65
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH.	52	48
EQUIVALENT LENGTH	120	170
TOTAL EFFECTIVE LENGTH	172	218
ADJUSTED PRESSURE	0.1	0.08
ROUND DUCT SIZE	5	5
HEATING VELOCITY (ft/min)	294	242
COOLING VELOCITY (ft/min)	521	477
OUTLET GRILL SIZE	3X10	3X10
TRUNK	D	C

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
CFM	PRESS.	DUCT	DUCT	CFM	FT/MIN	INCH	FT/MIN	CFM	PRESS.	DUCT	DUCT	CFM	FT/MIN	INCH	FT/MIN	CFM	PRESS.	DUCT	DUCT	CFM	FT/MIN	INCH	FT/MIN	CFM	PRESS.
TRUNK A	300	0.08	8.9	10	X	8	540	TRUNK G	0	0.00	0	0	X	8	0	TRUNK O	0	0.05	0	0	X	8	0	TRUNK P	0
TRUNK B	552	0.08	11.2	14	X	8	710	TRUNK H	0	0.00	0	0	X	8	0	TRUNK Q	0	0.05	0	0	X	8	0	TRUNK R	0
TRUNK C	319	0.07	9.5	10	X	8	574	TRUNK I	0	0.00	0	0	X	8	0	TRUNK S	0	0.05	0	0	X	8	0	TRUNK T	0
TRUNK D	578	0.07	11.8	16	X	8	650	TRUNK J	0	0.00	0	0	X	8	0	TRUNK U	0	0.05	0	0	X	8	0	TRUNK V	0
TRUNK E	0	0.00	0	0	X	8	0	TRUNK K	0	0.00	0	0	X	8	0	TRUNK W	0	0.05	0	0	X	8	0	TRUNK X	1041
TRUNK F	0	0.00	0	0	X	8	0	TRUNK L	0	0.00	0	0	X	8	0	TRUNK Y	695	0.05	13.8	22	X	8	569	TRUNK Z	445
																DROP	1131	0.05	16.5	24	X	10	679		

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	90	85	90	90	85	75	360	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	41	52	53	58	53	59	45	41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	185	195	165	165	215	265	165	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	226	247	218	223	268	324	210	231	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.06	0.07	0.07	0.06	0.05	0.07	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	5.9	6	5.9	5.9	6	6	9.9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	X	X	X	X	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	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: MOUNTAINASH 5
 SITE NAME: RUSSEL GARDENS PHASE 3

 LO # 88543
 LOT 332

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	5	@ 10.6 cfm	53	cfm
Other Rooms	7	@ 10.6 cfm	74.2	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 71 F	X 1.08	X	0.25

SUPPLEMENTAL FANS		PANASONIC		
Location	Model	cfm	HVI	Sones
ENS	FV-05-11VK1	50	☒	0.3
ENS-3	FV-05-11VK1	50	☒	0.3
ENS-2	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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	December-20

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

LO#: 88543

Model: MOUNTAINASH 5

Builder: GREENPARK HOMES

Date: 07/12/2020

Volume Calculation
House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	1452	9	13068
First	1452	11	15972
Second	1846	9	16614
Third	0	9	0
Fourth	0	9	0
Total:			45,654.0 ft³
Total:			1292.8 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.314
SUMMER NATURAL AIR CHANGE RATE	0.113

Design Temperature Difference				
	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-17	39	71
Summer DTDc	24	31	7	13

5.2.3.1 Heat Loss due to Air Leakage

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

$$0.314 \times 359.10 \times 39^\circ\text{C} \times 1.2 = 5315 \text{ W}$$

$$= 18134 \text{ Btu/h}$$

6.2.6 Sensible Gain due to Air Leakage

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

$$0.113 \times 359.10 \times 7^\circ\text{C} \times 1.2 = 345 \text{ W}$$

$$= 1177 \text{ Btu/h}$$

5.2.3.2 Heat Loss due to Mechanical Ventilation

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

$$95 \text{ CFM} \times 71^\circ\text{F} \times 1.08 \times 0.25 = 1819 \text{ Btu/h}$$

6.2.7 Sensible heat Gain due to Ventilation

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

$$95 \text{ CFM} \times 13^\circ\text{F} \times 1.08 \times 0.25 = 330 \text{ Btu/h}$$

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 _{level})
1	0.5	18,134	8,396	1.080
2	0.3		12,329	0.441
3	0.2		13,573	0.267
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

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL:	MOUNTAINASH 5	LOT 332	BUILDER:	GREENPARK HOMES
SFQT:	3298	LO#	88543	SITE: RUSSEL GARDENS PHASE 3

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	1	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):	45654.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.5 ft
LENGTH: 54.0 ft	WIDTH: 36.0 ft	EXPOSED PERIMETER:	155.0 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	-

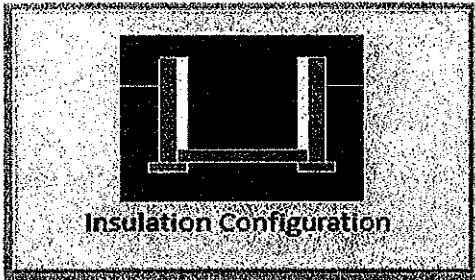
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

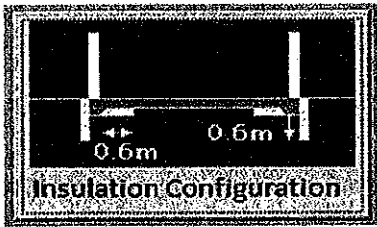
Weather Station Description		
Province:	Ontario	
Region:	Hamilton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	16.5	 Insulation Configuration
Floor Width (m):	11.0	
Exposed Perimeter (m):	47.2	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.98	
Window Area (m ²):	1.4	
Door Area (m ²):	3.7	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1406

TYPE: MOUNTAINASH 5
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LOT 332

Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Hamilton	
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):	4.6	
Exposed Perimeter (m):	7.6	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):	64	

TYPE: MOUNTAINASH 5
LO# 88543

LOT 332

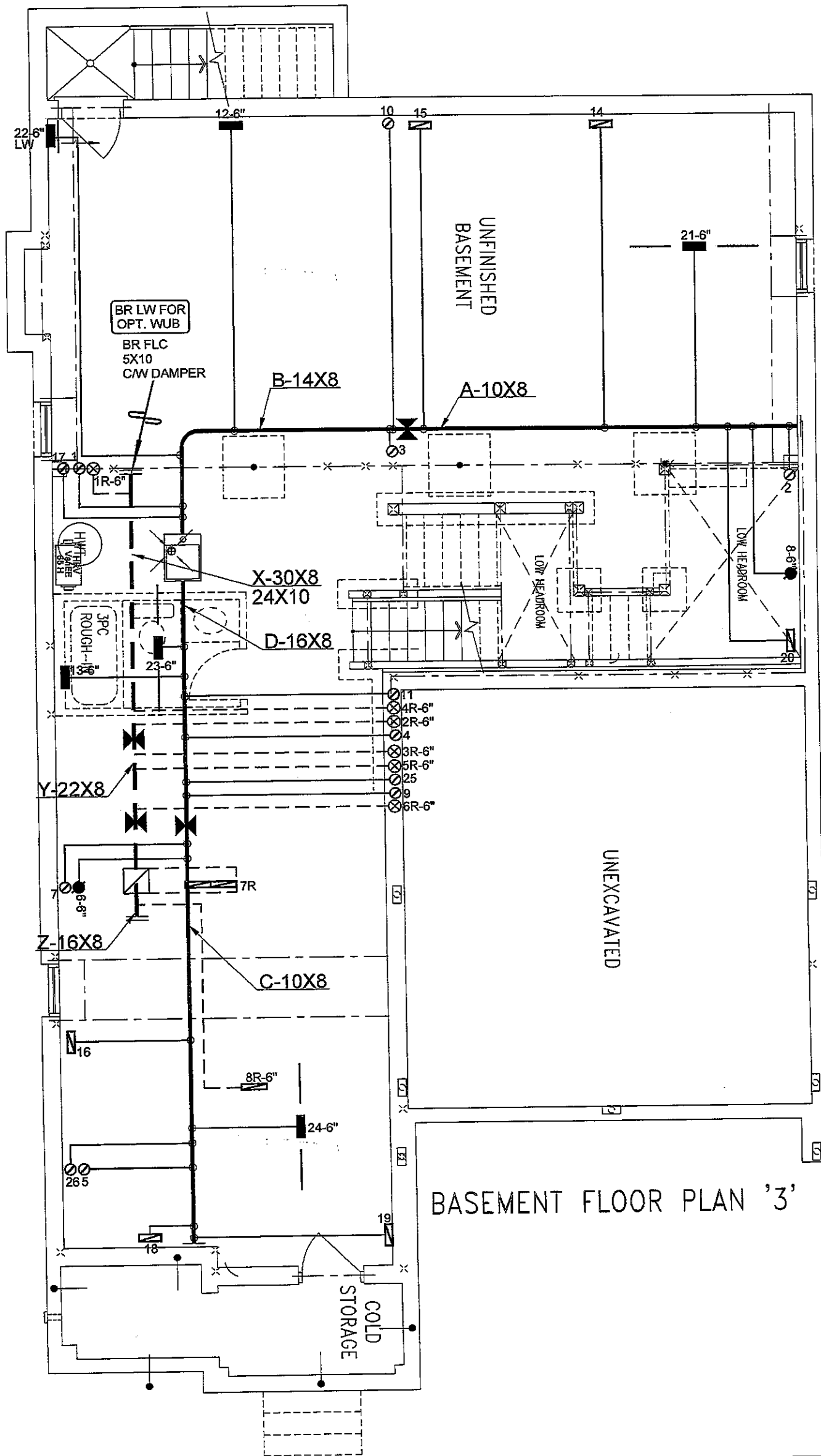
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Hamilton			
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):	6.86			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1292.8			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1723.3 cm ²		
	3.57	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):	0.314			
Cooling Air Leakage Rate (ACH/H):	0.113			

TYPE: MOUNTAINASH 5
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LOT 332



BASEMENT FLOOR PLAN '3'

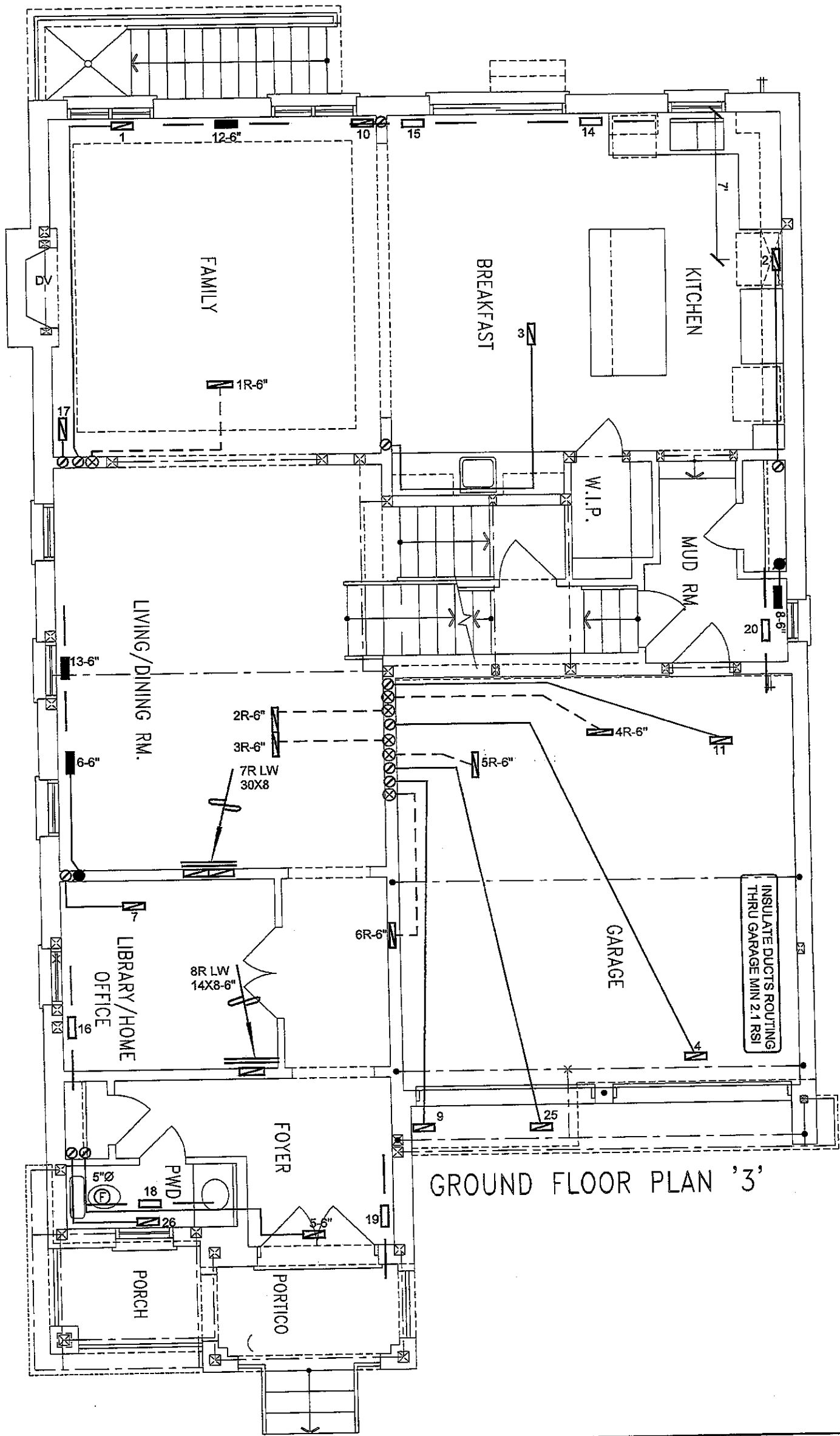
LOT 332
WUB
CSA-F280-12
PACKAGE A1

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.	
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	HVACDESIGNSLTD. 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.	HEAT LOSS 54864 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				BASEMENT HEATING LAYOUT	
Project Name RUSSEL GARDENS PHASE 3 HAMILTON, ONTARIO		MAKE GOODMAN			3RD FLOOR				
		MODEL GMEC960603BNA			2ND FLOOR	14	6		3
		INPUT 60 MBTU/H			1ST FLOOR	8	2		2
		OUTPUT 57.6 MBTU/H			BASEMENT	4	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				
LOT 332 MOUNTAINASH 5 3298 sqft			FAN SPEED 1131 cfm @ 0.6" w.c.					Date DEC/2020	
							Scale 3/16" = 1'-0"	BCIN# 19669	
							LO#	88543	



GROUND FLOOR PLAN '3'

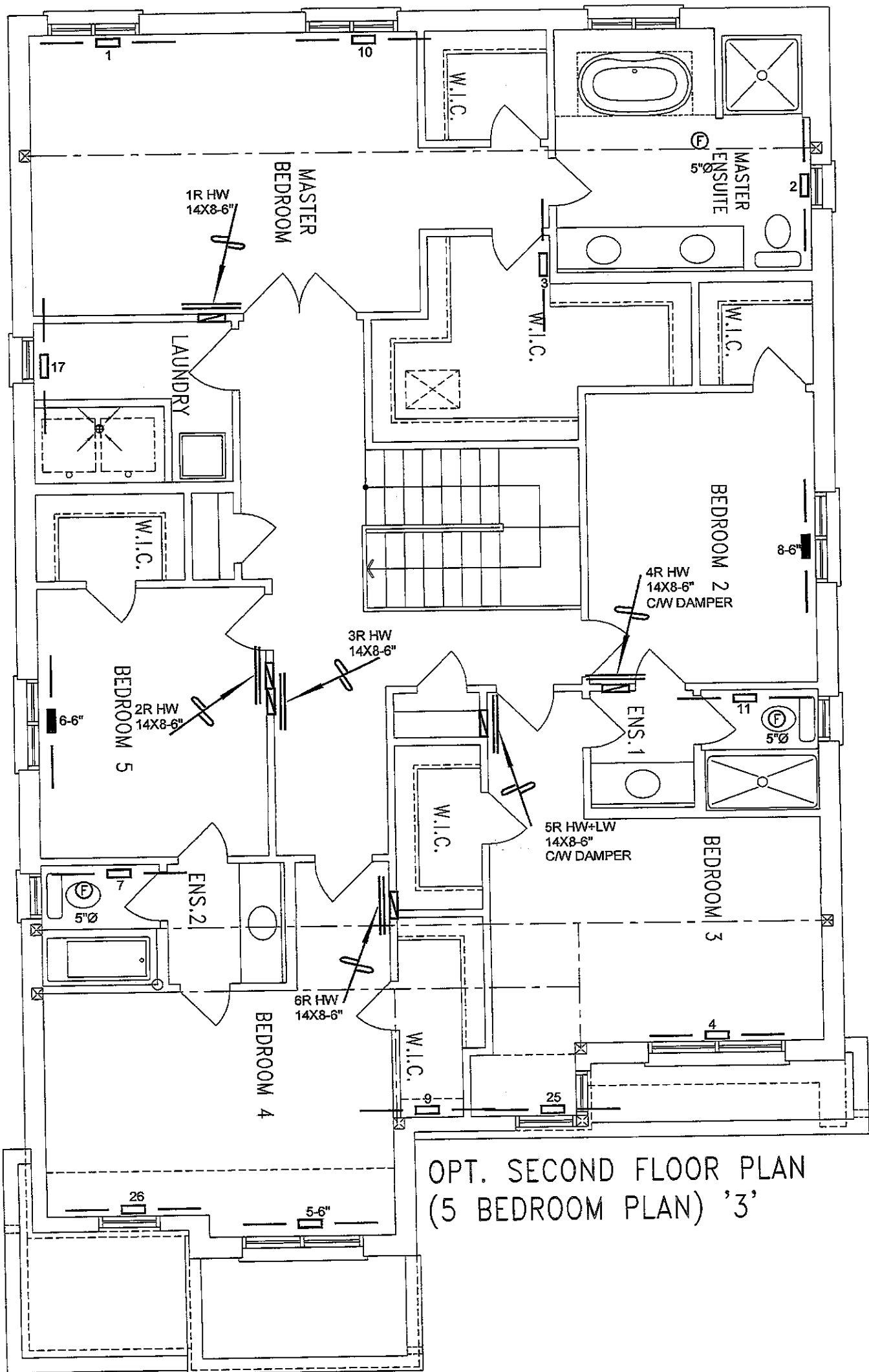
LOT 332
WUB
CSA-F280-12
PACKAGE A1

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

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ONTARIO BUILDING CODE.		Sheet Title	
Client GREENPARK HOMES		FIRST FLOOR HEATING LAYOUT	
Project Name RUSSEL GARDENS PHASE 3 HAMILTON, ONTARIO		Date DEC/2020	
 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.		Scale 3/16" = 1'-0"	
		BCIN# 19669	
		LO#	88543



OPT. SECOND FLOOR PLAN
(5 BEDROOM PLAN) '3'

LOT 332
WUB
CSA-F280-12
PACKAGE A1

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Michael O'Rourke
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		

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ONTARIO BUILDING CODE		Sheet Title		
Client	H V A C D E S I G N S LTD. 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.	SECOND FLOOR HEATING LAYOUT		
GREENPARK HOMES		Date	DEC/2020	
Project Name		Scale	3/16" = 1'-0"	
RUSSEL GARDENS PHASE 3 HAMILTON, ONTARIO		BCIN# 19669		
LOT 332 MOUNTAINASH 5 3298 sqft	LO# 88543			