

SITE NAME: RUSSEL GARDENS PHASE 3
BUILDER: GREENPARK HOMES

LOT 225
TYPE: MOUNTAINASH 12

DATE: Oct-20

GFA: 3134 LO# 85977

HEATING CFM 1504 COOLING CFM 1504
TOTAL HEAT LOSS 54,362 TOTAL HEAT GAIN 40,846
AIR FLOW RATE CFM 27.67 AIR FLOW RATE CFM 36.82

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

plenium 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

#*GOODMAN
GMEC960804CNA 80
FAN SPEED
LOW 868
MEDLOW 978
MEDIUM 1112
MEDIUM HIGH 1504
HIGH 1615

AFUE = 96 %
INPUT (BTU/H) = 80,000
OUTPUT (BTU/H) = 76,800

DESIGN CFM = 1504
CFM @ .5" E.S.P.

TEMPERATURE RISE 47 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	15	9	5
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-2	BED-3	BED-4	S-ENS	WIC-3	FLEX	MBR	ENS-3	FAM	DIN	K/D	K/D	L/H	LND	W/R	FOY	L/H	BAS	BAS	BAS	BAS
RM LOSS MBH	1.65	2.39	0.53	1.51	1.59	1.28	0.50	0.70	2.04	1.65	0.56	1.79	2.46	1.96	1.96	1.43	0.11	3.45	2.53	1.43	3.53	3.53	3.53	3.53
CFM PER RUN HEAT	46	66	15	42	44	35	14	19	56	46	16	50	68	54	54	40	3	95	70	40	98	98	98	98
RM GAIN MBH	2.17	2.61	0.16	1.85	2.21	1.79	0.20	0.74	2.48	2.17	0.50	1.87	2.83	2.61	2.61	1.79	0.74	0.74	0.63	1.79	0.46	0.46	0.46	0.46
CFM PER RUN COOLING	80	96	6	68	82	66	7	27	91	80	18	69	104	96	96	66	27	23	23	66	17	17	17	17
ADJUSTED PRESSURE	0.17	0.16	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.16	0.17	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	37	41	31	31	54	57	46	48	41	28	57	32	30	23	16	49	19	19	42	35	20	46	31	35
EQUIVALENT LENGTH	170	120	190	190	140	180	170	130	150	120	210	140	130	120	110	130	110	160	180	130	130	150	180	180
TOTAL EFFECTIVE LENGTH	207	161	221	221	194	237	216	178	191	148	267	172	160	143	126	179	129	179	222	165	150	176	181	215
ADJUSTED PRESSURE	0.08	0.1	0.08	0.08	0.08	0.07	0.08	0.1	0.08	0.12	0.06	0.1	0.1	0.11	0.13	0.1	0.13	0.09	0.08	0.1	0.11	0.09	0.09	0.08
ROUND DUCT SIZE	6	6	4	5	6	6	4	4	6	5	4	5	6	6	6	5	4	6	5	5	6	6	6	6
HEATING VELOCITY (ft/min)	235	337	172	308	224	178	161	218	286	338	164	367	347	275	275	294	34	484	514	294	500	500	500	500
COOLING VELOCITY (ft/min)	408	489	69	499	418	337	80	310	484	587	207	507	530	489	489	485	310	138	169	485	87	87	87	87
OUTLET GRILL SIZE	4X10	4X10	3X10	3X10	4X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	4X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	D	C	C	B	B	A	B	B	C	D	A	C	C	D	D	A	E	B	A	A	D	C	C	A

RUN #	25	26	27	28	29
ROOM NAME	BAS	BED-3	BED-4	S-ENS	FAM
RM LOSS MBH	3.53	1.59	1.28	0.50	1.79
CFM PER RUN HEAT	98	44	35	14	50
RM GAIN MBH	0.46	2.21	1.79	0.20	1.87
CFM PER RUN COOLING	17	82	66	7	69
ADJUSTED PRESSURE	0.16	0.16	0.17	0.17	0.17
ACTUAL DUCT LGH	45	49	55	46	29
EQUIVALENT LENGTH	120	170	200	110	150
TOTAL EFFECTIVE LENGTH	165	219	255	156	179
ADJUSTED PRESSURE	0.1	0.07	0.07	0.11	0.1
ROUND DUCT SIZE	6	6	6	4	5
HEATING VELOCITY (ft/min)	500	224	178	161	367
COOLING VELOCITY (ft/min)	87	418	337	80	507
OUTLET GRILL SIZE	4X10	4X10	4X10	3X10	3X10
TRUNK	A	B	A	B	C

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE									
TRUNK	STATIC	ROUND	RECT	VELOCITY						TRUNK	STATIC	ROUND	RECT	VELOCITY					
CFM	PRESS.	DUCT	DUCT	(ft/min)						CFM	PRESS.	DUCT	DUCT	(ft/min)					
TRUNK A	432	0.06	11	14	x	8	555			TRUNK G	0	0.00	0	0	x	8	0		
TRUNK B	704	0.06	13.2	20	x	8	634			TRUNK H	0	0.00	0	0	x	8	0		
TRUNK C	501	0.08	10.8	14	x	8	644			TRUNK I	0	0.00	0	0	x	8	0		
TRUNK D	298	0.08	8.9	12	x	8	447			TRUNK J	0	0.00	0	0	x	8	0		
TRUNK E	802	0.08	12.9	20	x	8	722			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		BR									
AIR VOLUME	95	260	85	75	75	85	155	435	0	0	0	0	0	0	0	0	239		
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		
ACTUAL DUCT LGH	34	49	56	57	63	64	33	31	1	1	1	1	1	1	1	1	15		
EQUIVALENT LENGTH	155	225	175	220	215	195	200	195	0	0	0	0	0	0	0	0	160		
TOTAL EFFECTIVE LH	189	274	231	277	278	259	233	226	1	1	1	1	1	1	1	1	175		
ADJUSTED PRESSURE	0.08	0.05	0.06	0.05	0.05	0.06	0.06	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.08		
ROUND DUCT SIZE	5.8	9.5	6	6	6	6	7.5	10.6	0	0	0	0	0	0	0	0	8.2		
INLET GRILL SIZE	8	8	8	8	8	8	8	8	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		
INLET GRILL SIZE	14	30	14	14	14	14	14	30	0	0	0	0	0	0	0	0	24		

TYPE: MOUNTAINASH 12
SITE NAME: RUSSEL GARDENS PHASE 3

LO # 85977
LOT 225

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	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	190.8 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		9.32.3.5.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	111.3	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANE 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 71 F	X 1.08	X	0.25

SUPPLEMENTAL FANS		PANASONIC		
Location	Model	cfm	HVI	Sones
ENS	FV-05-11VK1	60	☒	0.3
S-ENS	FV-05-11VK1	50	☒	0.3
ENS-3	FV-05-11VK1	60	☒	0.3
W/R	FV-05-11VK1	60	☒	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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	October-20

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

LO#: 85977

Model: MOUNTAINASH 12

Builder: GREENPARK HOMES

Date: 05/10/2020

Volume Calculation
House Volume

Level	Floor Area (ft ²)	Floor Height (ft)	Volume (ft ³)
Bsmt	1390	9	12510
First	1390	11	15290
Second	1744	9	15696
Third	0	9	0
Fourth	0	9	0
Total:			43,496.0 ft ³
Total:			1231.7 m ³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.319
SUMMER NATURAL AIR CHANGE RATE	0.114

Design Temperature Difference				
	T _{in} °C	T _{out} °C	ΔT °C	ΔT °F
Winter DTD _h	22	-17	39	71
Summer DTD _c	24	31	7	13

5.2.3.1 Heat Loss due to Air Leakage

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

0.319 x 342.13 x 39 °C x 1.2 = 5140 W

= 17538 Btu/h

6.2.6 Sensible Gain due to Air Leakage

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

= 0.114 x 342.13 x 7 °C x 1.2 = 334 W

= 1139 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 CFM x 71 °F x 1.08 x 0.25 = 1515 Btu/h

6.2.7 Sensible heat Gain due to Ventilation

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

80 CFM x 13 °F x 1.08 x 0.25 = 275 Btu/h

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

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

Level	Level Factor (LF)	HL _{airbv} Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{level})	Air Leakage Heat Loss Multiplier (LF x HL _{airbv} / HL _{level})
1	0.5	17,538	8,894	0.986
2	0.3		13,548	0.388
3	0.2		13,801	0.254
4	0		0	0.000
5	0		0	0.000

*HL_{airbv} = Air leakage heat loss + ventilation heat loss

*For a balanced or supply only ventilation system HL_{airv} = 0

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL:	MOUNTAINASH 12	LOT 225	BUILDER:	GREENPARK HOMES
SFQT:	3134	LO#	85977	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:	SOUTH	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):	43496.0	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:	6.0 ft
LENGTH: 51.0 ft	WIDTH: 37.0 ft	EXPOSED PERIMETER:	148.0 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	-

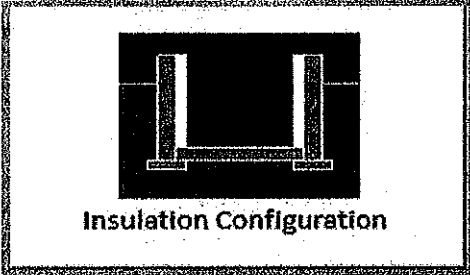
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

Michael O'Rourke

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

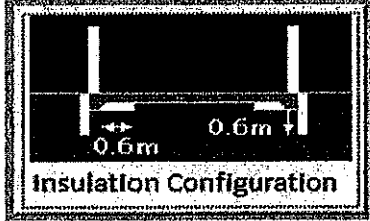
Weather Station Description		
Province:	Ontario	
Region:	Hamilton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	15.5	 Insulation Configuration
Floor Width (m):	11.3	
Exposed Perimeter (m):	45.1	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.9	
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):		1412

TYPE: MOUNTAINASH 12
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LOT 225

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):	1.8	
Width (m):	4.9	
Exposed Perimeter (m):	8.5	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		75

TYPE: MOUNTAINASH 12
LO# 85977

LOT 225

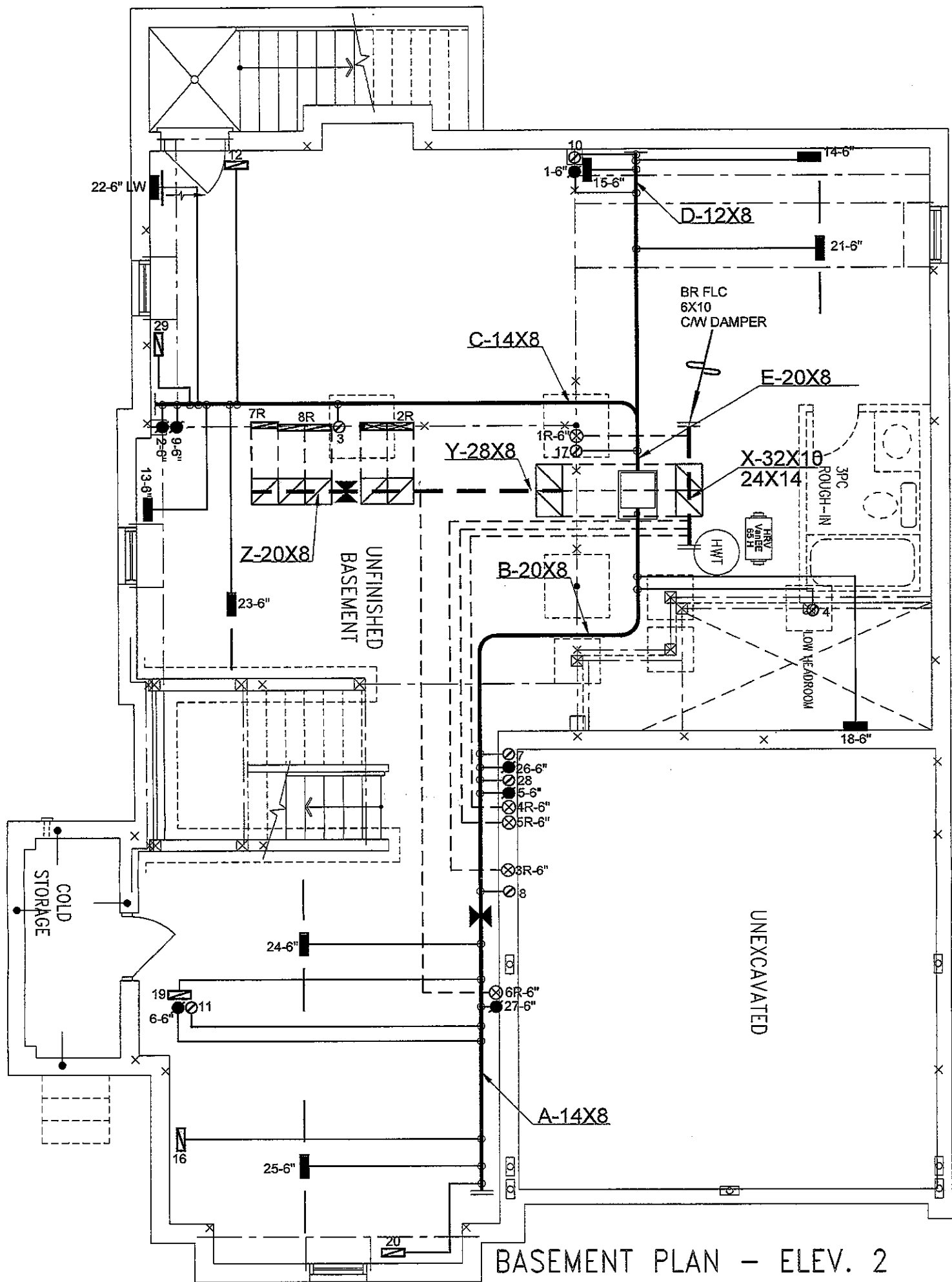
Air Infiltration Residential Load Calculator

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):	7.01			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1231.7			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1641.9 cm ²		
	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				
Heating Air Leakage Rate (ACH/H):	0.319			
Cooling Air Leakage Rate (ACH/H):	0.114			

TYPE: MOUNTAINASH 12
LO# 85977

LOT 225



BASEMENT PLAN - ELEV. 2

I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.32.5 OF THE BUILDING CODE.
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

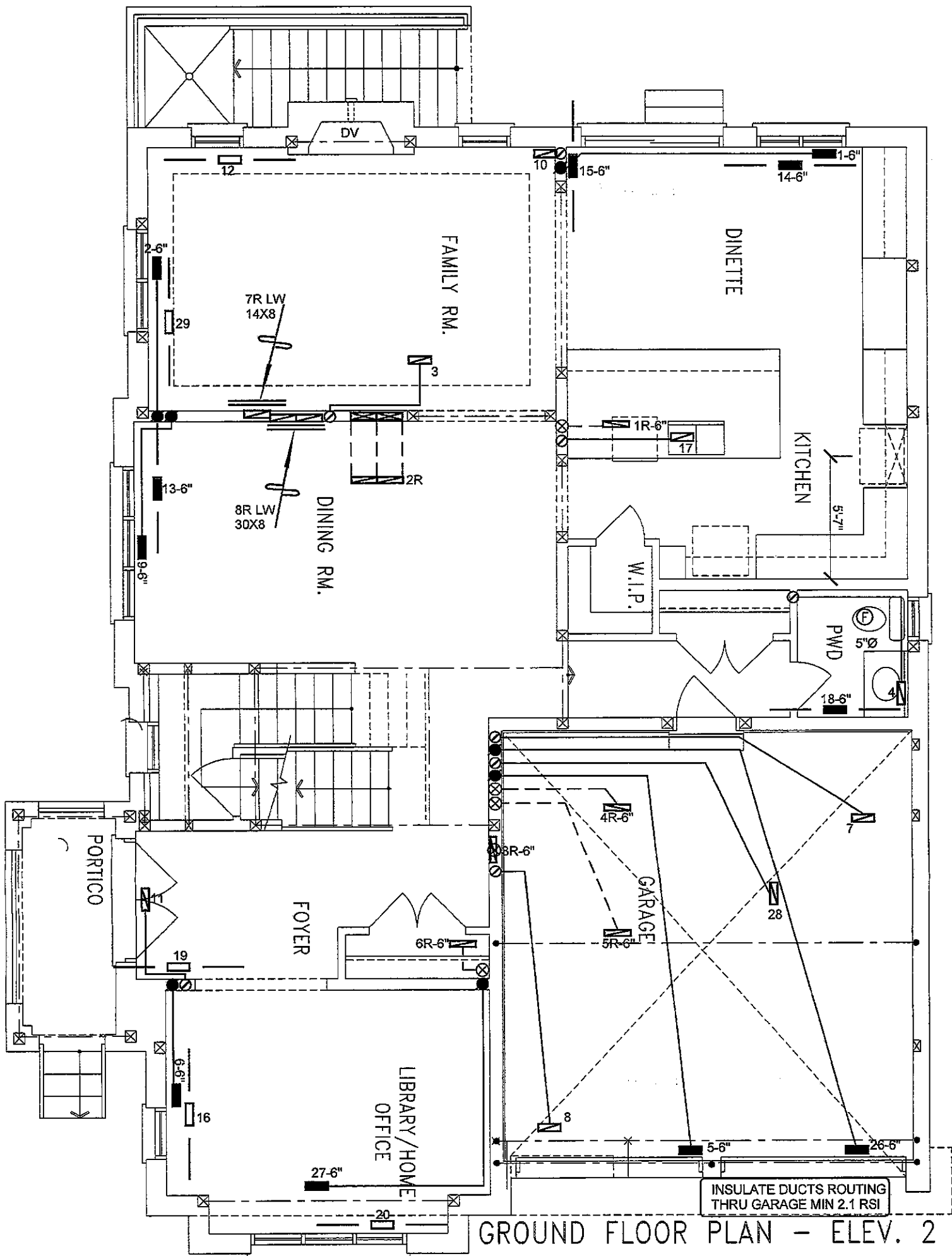
CITY OF HAMILTON
BUILDING DIVISION
Planning & Development Department
FEB 11 2021

LOT 225 CSA-F280-12
WUB PACKAGE A1

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

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Client			Sheet Title							
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.		HEAT LOSS 55877 BTU/H		# OF RUNS S/A R/A FANS				BASEMENT HEATING LAYOUT	
Project Name			UNIT DATA		3RD FLOOR					
RUSSEL GARDENS PHASE 3 HAMILTON, ONTARIO			MAKE GOODMAN		2ND FLOOR 15 6 4					
LOT 225 MOUNTAINASH 12 3135 sqft			MODEL GMEC960804CNA		1ST FLOOR 9 2 2		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			
			INPUT 80 MBTU/H		BASEMENT 5 1 0					
	OUTPUT 76.8 MBTU/H		COOLING 3.5 TONS				BCIN# 19669			
FAN SPEED 1504 cfm @ 0.6" w.c.		LO# 87757								



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.

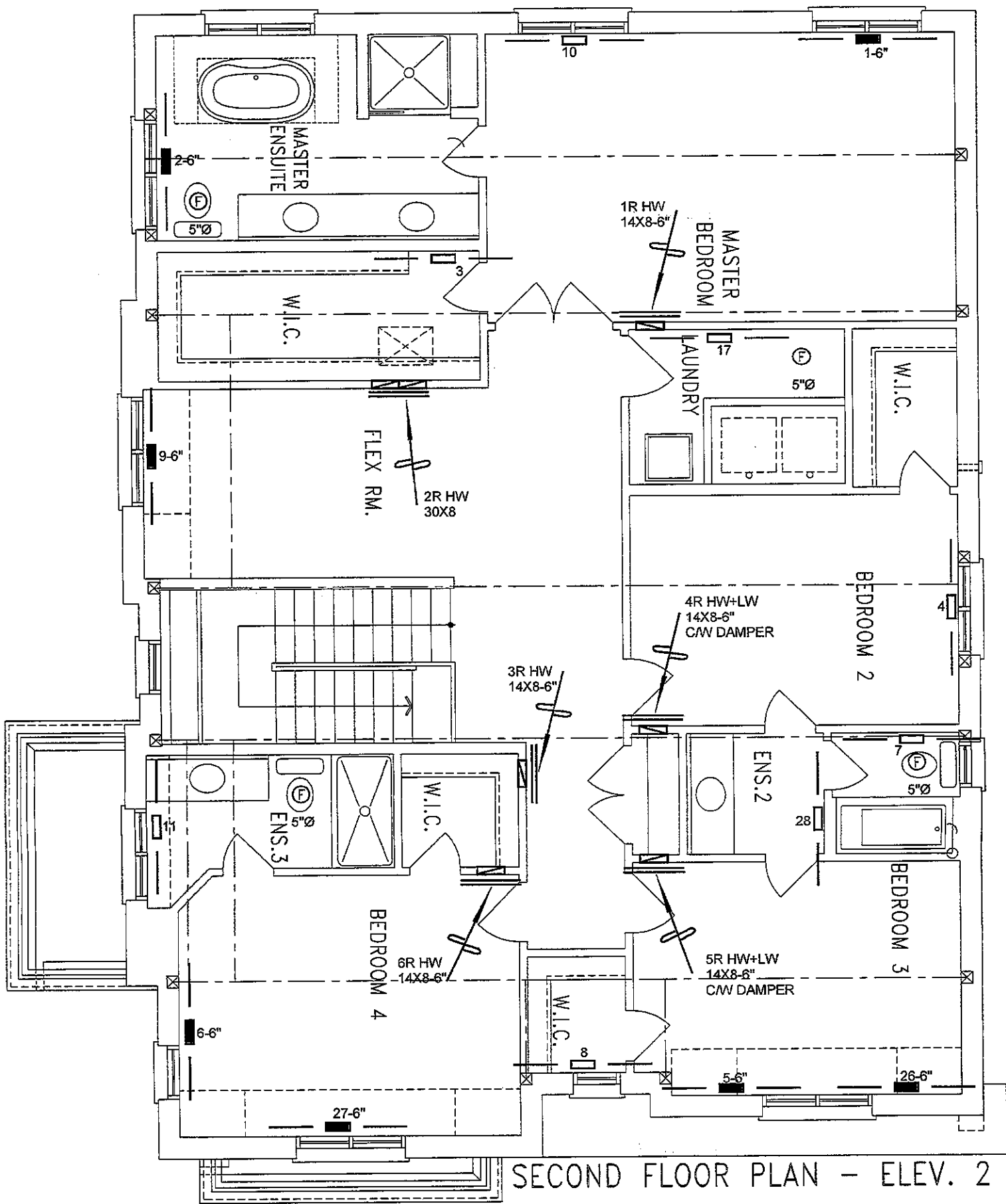
Michael O'Rourke, B.C.M.A. 19669
HVAC DESIGNS LTD.

LOT 225 CSA-F280-12
WUB PACKAGE A1

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		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.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 RUSSEL GARDENS PHASE 3 HAMILTON, ONTARIO	LOT 225 MOUNTAINASH 12 3135 sqft		
			Date OCT/2020
			Scale 3/16" = 1'-0"
			BCIN# 19669
			LO# 87757



SECOND FLOOR PLAN – ELEV. 2

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.

LOT 225 CSA-F280-12
WUB PACKAGE A1

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

**RUSSEL GARDENS PHASE 3
HAMILTON, ONTARIO**

**LOT 225
MOUNTAINASH 12 3135 sqft**

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Sheet Title

**SECOND FLOOR
HEATING
LAYOUT**

Date **OCT/2020**

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

BCIN# 19669

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