

SITE NAME: RUSSEL GARDENS
BUILDING: GREENPARK HOMES
DATE: JUL-17
LO# 75069
GFA: 2264
TYPE: HIGHGROVE SES WOB
WINTER NATURAL AIR CHANGE RATE 0.482
SUMMER NATURAL AIR CHANGE RATE 0.177
HEAT LOSS ΔT °F. 71
HEAT GAIN ΔT °F. 15
CSA-F280-12
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	FOY	PWD	LAUN	KTIFM	LVDN	GRS.WALL AREA	GLAZING	FACTORS	LOSS GAIN
GRS.WALL AREA	15	9	189	189	63	90	306	125	54									
GLAZING																		
NORTH	19.8	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	19.8	42.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	19.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST	19.8	42.1	31	613	1305	13	257	547	0	0	0	0	0	0	0	0	0	0
SKYLT.	34.6	102.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	23.5	4.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.1	0.9	104	431	90	176	730	153	63	251	55	60	249	52	255	1057	222	105
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.2	0.6	285	340	177	110	131	68	70	83	43	154	184	96	216	258	134	210
NO ATTIC EXPOSED CLG	2.6	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.4	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS																		
SLAB ON GRADE HEAT LOSS																		
SUBTOTAL HT LOSS	1384		1118	769	345	1390	2472	1101	441									
SUB TOTAL HT GAIN	1573		0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43
LEVEL FACTOR / MULTIPLIER	596		481	95	148	599	1065	474	190									
AIR CHANGE HEAT LOSS	194		0	0	0	0	0	0	0									
AIR CHANGE HEAT GAIN	0		0	0	0	0	0	0	0									
DUCT LOSS	0		0	0	0	0	0	0	0									
DUCT GAIN	0		0	0	0	0	0	0	0									
HEAT GAIN PEOPLE	240		2	480	0	0	240	1	0									
HEAT GAIN APPLIANCES/LIGHTS	598		0	0	0	0	598	0	0									
TOTAL HT LOSS BTU/H	1980		1599	1122	493	2188	3891	1575	630									
TOTAL HT GAIN x 1.3 BTU/H	3698						5026	2193	401									

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	FOY	PWD	LAUN	KTIFM	LVDN	GRS.WALL AREA	GLAZING	FACTORS	LOSS GAIN
GRS.WALL AREA	15	9	189	189	63	90	306	125	54									
GLAZING																		
NORTH	19.8	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	19.8	42.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	19.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST	19.8	42.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	34.6	102.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	23.5	4.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.1	0.9	104	431	90	176	730	153	63	251	55	60	249	52	255	1057	222	105
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.2	0.6	285	340	177	110	131	68	70	83	43	154	184	96	216	258	134	210
NO ATTIC EXPOSED CLG	2.6	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.4	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS																		
SLAB ON GRADE HEAT LOSS																		
SUBTOTAL HT LOSS	1384		1118	769	345	1390	2472	1101	441									
SUB TOTAL HT GAIN	1573		0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43	0.20	0.43
LEVEL FACTOR / MULTIPLIER	596		481	95	148	599	1065	474	190									
AIR CHANGE HEAT LOSS	194		0	0	0	0	0	0	0									
AIR CHANGE HEAT GAIN	0		0	0	0	0	0	0	0									
DUCT LOSS	0		0	0	0	0	0	0	0									
DUCT GAIN	0		0	0	0	0	0	0	0									
HEAT GAIN PEOPLE	240		2	480	0	0	240	1	0									
HEAT GAIN APPLIANCES/LIGHTS	598		0	0	0	0	598	0	0									
TOTAL HT LOSS BTU/H	1980		1599	1122	493	2188	3891	1575	630									
TOTAL HT GAIN x 1.3 BTU/H	3698						5026	2193	401									

TOTAL HEAT GAIN BTU/H: 32085 TONS: 2.67 TOTAL HEAT LOSS BTU/H: 45824 STRUCTURAL HEAT LOSS: 43175 TOTAL COMBINED HEAT LOSS BTU/H: 45824

SITE NAME: RUSSEL GARDENS
BUILDING: GREENPARK HOMES

TYPE: HIGHGROVE 5ES WOB DATE: Jul-17

GFA: 2264 LO# 75069

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 43,175 TOTAL HEAT GAIN 31,529
AIR FLOW RATE CFM 26.2 AIR FLOW RATE CFM 35.87

#GOODMAN
GMEC960603BNA 60
FAN SPEED LOW
MEDLOW
MEDIUM
HIGH 1131

AFUE = 96 %
INPUT (BTU/H) = 60,000
OUTPUT (BTU/H) = 57,600
DESIGN CFM = 1131
CFM @ .6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	7	5
R/A	0	0	4	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	BATH	BED-2	BED-3	MBR	LV/DN	LV/DN	LV/DN	KT/FM	KT/FM	KT/FM	LAUN	PWD	FOY	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	0.99	1.60	0.49	1.09	1.95	1.57	0.63	1.09	1.95	0.99	3.11	3.11	3.11	1.95	1.95	1.95	0.66	0.74	1.82	3.11	3.11	3.11	3.11	
CFM PER RUN HEAT	26	42	13	29	51	41	17	29	51	26	82	82	82	51	51	51	17	19	48	81	81	81	81	
RM GAIN MBH	1.85	1.12	0.14	1.79	2.51	2.19	0.40	1.79	2.51	1.85	2.29	2.29	2.29	2.35	2.35	2.35	1.10	0.39	0.34	0.38	0.38	0.38	0.38	
CFM PER RUN COOLING	66	40	5	64	90	79	14	64	90	66	82	82	82	84	84	84	39	14	12	14	14	14	14	
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16	
ACTUAL DUCT LGH	42	46	36	46	47	22	28	52	43	51	18	27	24	33	40	37	8	32	3	11	24	39	11	
EQUIVALENT LENGTH	140	170	160	120	140	150	140	130	170	160	140	140	90	120	130	140	130	120	140	140	160	160	130	
TOTAL EFFECTIVE LENGTH	182	216	196	166	187	172	168	182	213	211	158	117	144	144	163	180	167	128	172	172	164	199	101	
ADJUSTED PRESSURE	0.09	0.08	0.09	0.1	0.09	0.1	0.1	0.09	0.08	0.08	0.1	0.14	0.11	0.11	0.1	0.09	0.1	0.13	0.1	0.1	0.1	0.08	0.16	
ROUND DUCT SIZE	5	4	4	5	6	5	4	5	6	5	5	5	5	5	5	5	4	4	4	5	5	5	5	
HEATING VELOCITY (f/min)	191	482	149	213	260	301	195	213	260	191	602	602	602	374	374	374	195	218	551	595	595	595	595	
COOLING VELOCITY (f/min)	485	459	57	470	459	580	161	470	459	485	602	602	602	617	617	617	447	161	138	103	103	103	103	
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	
TRUNK	A	A	B	D	C	B	D	D	C	A	C	C	C	A	A	A	D	D	C	A	A	A	B	

25	ROOM NAME	BAS
3.11	RM LOSS MBH	3.11
81	CFM PER RUN HEAT	81
0.38	RM GAIN MBH	0.38
14	CFM PER RUN COOLING	14
0.16	ADJUSTED PRESSURE	0.16
21	ACTUAL DUCT LGH	21
130	EQUIVALENT LENGTH	130
151	TOTAL EFFECTIVE LENGTH	151
0.11	ADJUSTED PRESSURE	0.11
5	ROUND DUCT SIZE	5
595	HEATING VELOCITY (f/min)	595
103	COOLING VELOCITY (f/min)	103
3X10	OUTLET GRILL SIZE	3X10
C	TRUNK	C

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 CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)					
					8					8																	
TRUNK A	409	0.08	10	12																							
TRUNK B	544	0.08	11.2	14		TRUNK G	0	0.00	0									TRUNK O	0	0.06	0	0					
TRUNK C	395	0.08	9.9	12	8	TRUNK H	0	0.00	0									TRUNK P	0	0.06	0	0					
TRUNK D	587	0.08	11.5	16	8	TRUNK I	0	0.00	0									TRUNK Q	0	0.06	0	0					
TRUNK E	0	0.00	0	0	8	TRUNK J	0	0.00	0									TRUNK R	0	0.06	0	0					
TRUNK F	0	0.00	0	0	0	TRUNK K	0	0.00	0									TRUNK S	0	0.06	0	0					
					8	TRUNK L	0	0.00	0									TRUNK T	0	0.06	0	0					
					0													TRUNK U	0	0.06	0	0					
					0													TRUNK V	0	0.06	0	0					
RETURN AIR #	1	2	3	4	5	6				BR								TRUNK W	0	0.06	0	0					
AIR VOLUME	120	85	85	175	300	180	0	0	0	0	0	0	0	0	0	0	0	TRUNK X	1131	0.06	15.8	30					
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0	0	0	0	0	0	0	0	0	0	0	TRUNK Y	350	0.06	10.2	12					
ACTUAL DUCT LGH.	47	52	43	40	22	24	1	1	1	1	1	1	1	1	1	1	1	TRUNK Z	0	0.06	0	0					
EQUIVALENT LENGTH	175	145	165	160	155	150	0	0	0	0	0	0	0	0	0	0	0	DROP	1131	0.06	15.8	24					
TOTAL EFFECTIVE LH	222	197	208	200	177	174	1	1	1	1	1	1	1	1	1	1	1										
ADJUSTED PRESSURE	0.07	0.08	0.07	0.07	0.08	0.09	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.06										
ROUND DUCT SIZE	6.6	5.6	5.8	7.5	8.9	7.2	0	0	0	0	0	0	0	0	0	0	8										
INLET GRILL SIZE	8	8	8	8	8	8	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										
INLET GRILL SIZE	14	14	14	14	30	14	0	0	0	0	0	0	0	0	0	0	24										

TYPE: HIGHGROVE 5ES WOB
SITE NAME: RUSSEL GARDENS

LO # 75069

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	4 @ 10.6 cfm	42.4 cfm
Other Rooms	4 @ 10.6 cfm	42.4 cfm
Table 9.32.3.A.	TOTAL	159.0 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	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	159	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	20.0	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 60H-V+	Location: BSMT
139.0 cfm	3.0 sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	$\Delta T \cdot F$
139.0 CFM	71 F
X	X
FACTOR	% LOSS
1.08	X
	0.25

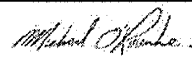
SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
PWD	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 60H-V+		
139 cfm high	50 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 #	001820
Date:	July-17

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** HIGHGROVE SES WOB**BUILDER:** GREENPARK HOMES**SFQT:** 2264**LO#** 75069**SITE:** RUSSEL GARDENS**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	1	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	73

BUILDING DATA

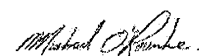
ATTACHMENT:	ATTACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	4.55	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft ³):	30676.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 51.0 ft	WIDTH: 26.0 ft	EXPOSED PERIMETER:	130.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	0.0 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	-

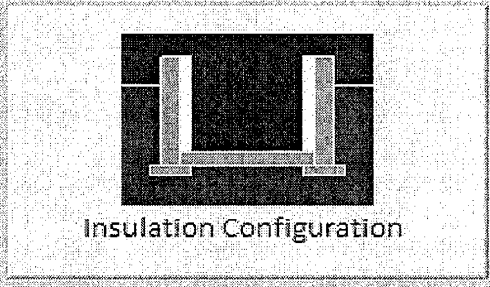
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

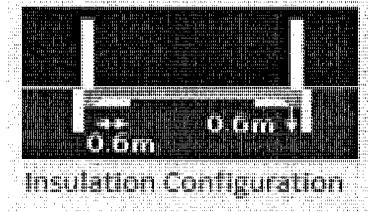
Supplemental tool for CAN/CSA-F280

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):	3.0	 Insulation Configuration
Floor Width (m):	7.9	
Exposed Perimeter (m):	39.6	
Wall Height (m):	2.7	
Depth Below Grade (m):	0.91	
Window Area (m ²):	0.7	
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):		663

TYPE: HIGHGROVE 5ES WOB
LO# 75069

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		
Length (m):	0.0	 Insulation Configuration
Width (m):	0.0	
Exposed Perimeter (m):	0.0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		0

TYPE: HIGHGROVE SES WOB
LO# 75069

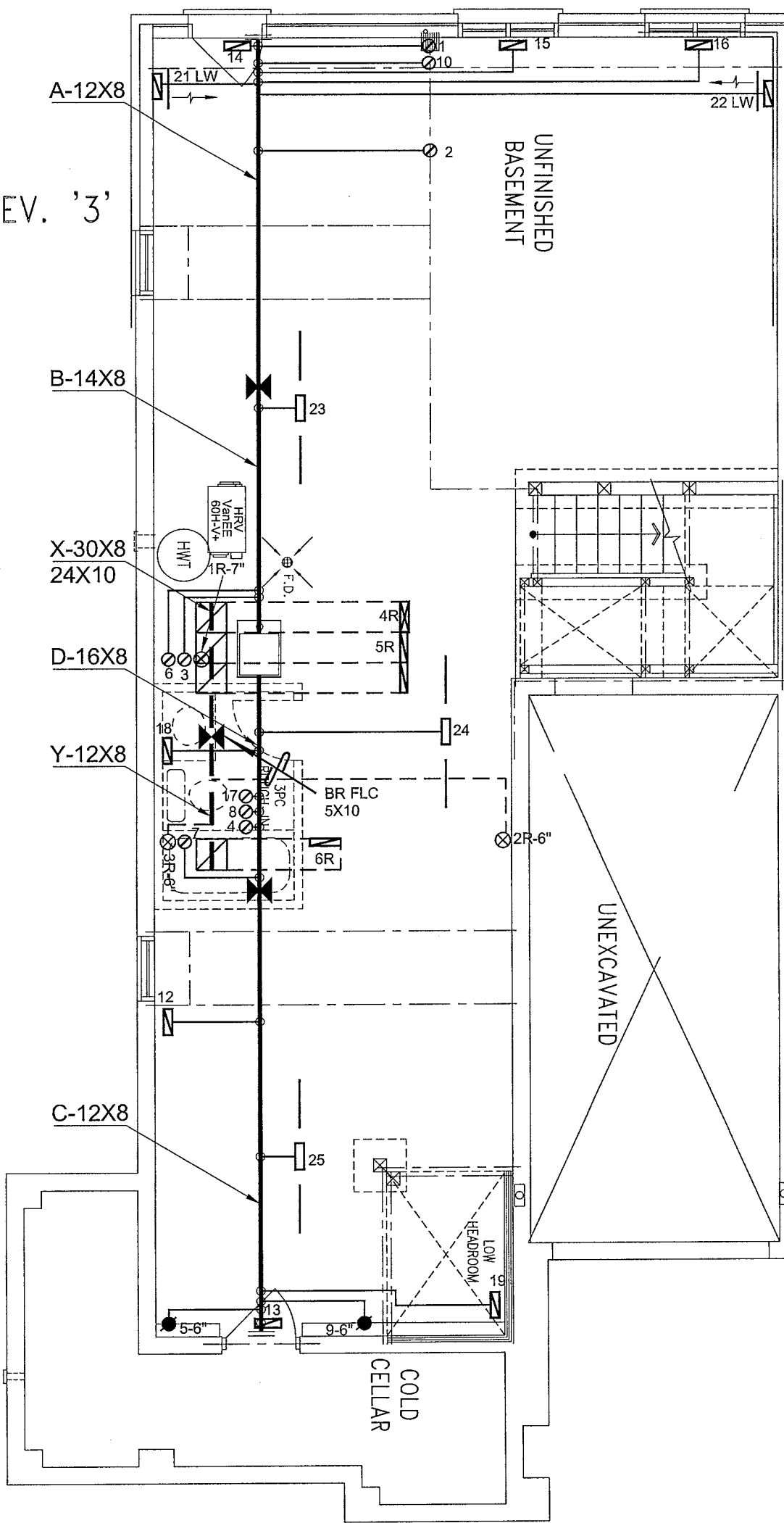
Air Infiltration Residential Load Calculator

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):	8.53			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	868.6			
Air Leakage/Ventilation				
Air Tightness Type:	Average (1946-1960) (4.55 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1475.8 cm ²		
	4.55	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	65.6	65.6		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.482			
Cooling Air Leakage Rate (ACH/H):	0.177			

TYPE: HIGHGROVE 5ES WOB
LO# 75069

PART. BASEMENT PLAN- ELEV. '3'
W.O.B CONDITION



BASEMENT PLAN-ELEV. '1' B200/Unit 5

I MICHAEL O'ROURKE HAVE REVIEW
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.

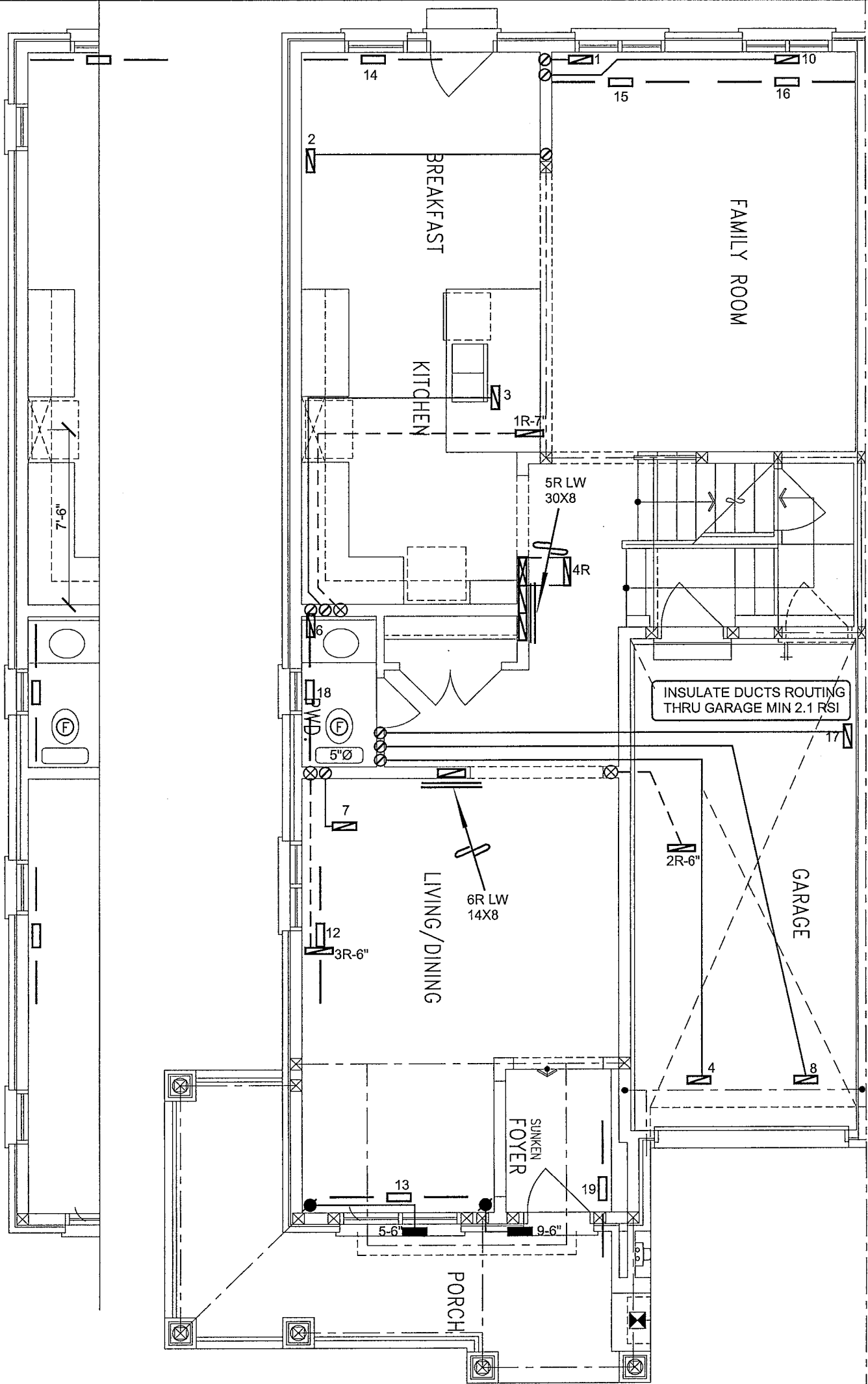
CSA-F280-12
WOB PACKAGE A1

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		5" 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@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	HEAT LOSS 45824 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title BASEMENT HEATING LAYOUT
		MAKE GOODMAN		3RD FLOOR			
Project Name RUSSEL GARDENS HAMILTON, ONTARIO	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.	MODEL GMEC960603BNA		2ND FLOOR	11	4	Date JULY/2017
		INPUT 60 MBTU/H		1ST FLOOR	7	2	
WOB HIGHGROVE 5ES 2264 sqft		OUTPUT 57.6 MBTU/H		BASEMENT	5	1	Scale 3/16" = 1'-0"
		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			BCIN# 19669
		FAN SPEED 1131 cfm @ 0.6" w.c.					LO# 75069

GROUND FLOOR PLAN ELEV. '3' - BLOCK 205, UNIT 1



GROUND FLOOR PLAN - ELEV. '1' B200/Unit 5

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.

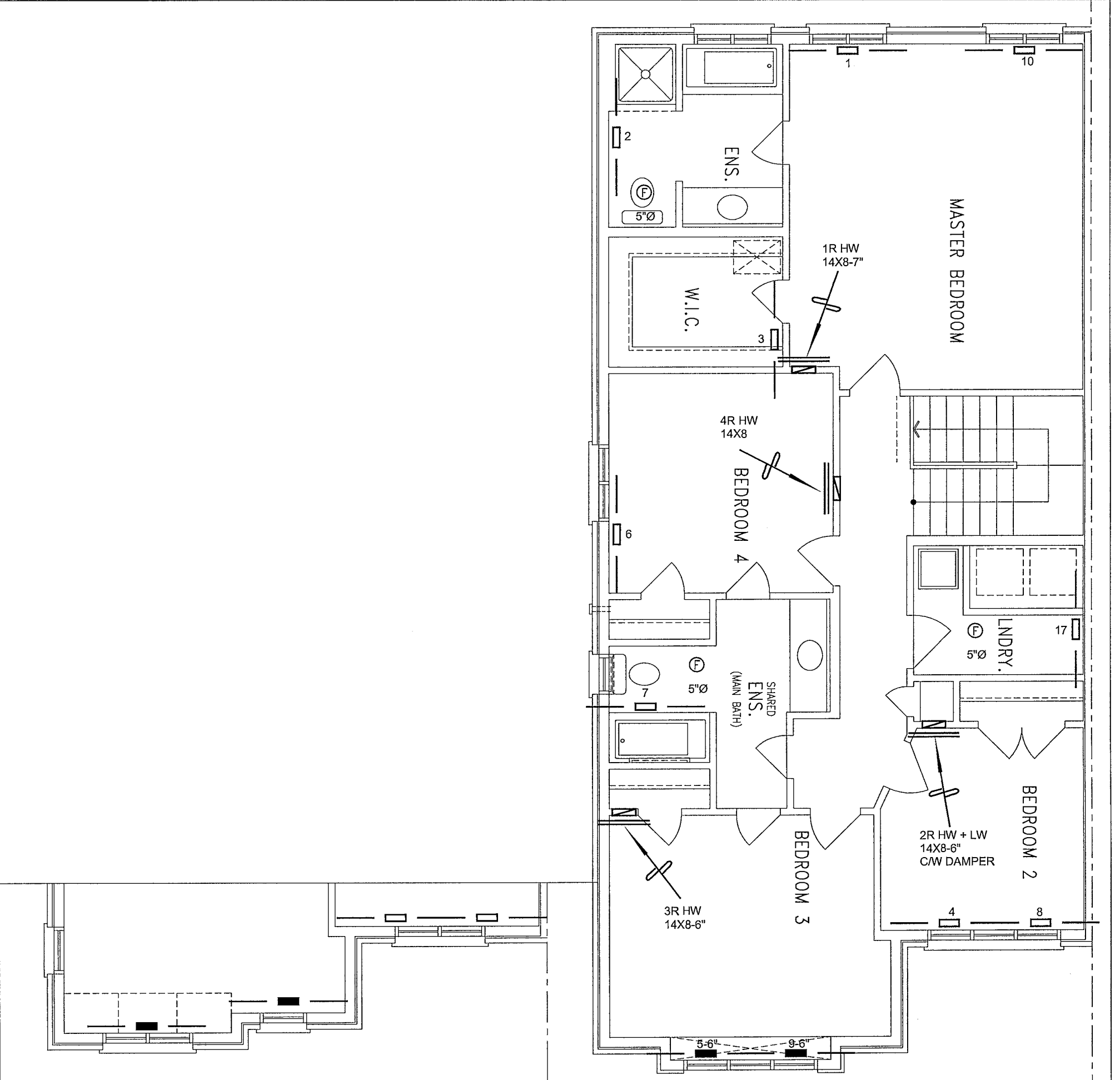
CSA-F280-12

WOB PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6\"/>		14\"/>		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6\"/>		SUPPLY AIR STACK FROM 2nd FLOOR		30\"/>		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6\"/>		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@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services	Sheet Title FIRST FLOOR HEATING LAYOUT
Project Name RUSSEL GARDENS HAMILTON, ONTARIO			
WOB HIGHGROVE 5ES 2264 sqft		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.	Date JULY/2017
			Scale 3/16" = 1'-0"
			BCIN# 19669
			LO# 75069



SECOND FLOOR PLAN-ELEV. 1 B200/Unit 5

SECOND FLOOR PLAN ELEV. '3' - BLOCK 205, UNIT 1

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.

CSA-F280-12

WOB 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	HVACDESIGNS 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	Sheet Title	
GREENPARK HOMES		SECOND FLOOR HEATING LAYOUT	
Project Name		Date	JULY/2017
RUSSEL GARDENS HAMILTON, ONTARIO		Scale	3/16" = 1'-0"
WOB HIGHGROVE 5ES 2264 sqft		BCIN# 19669	
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.		LO#	75069