

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name		Unit no.	Lot/con.
Municipality BRAMPTON	Postal code	Plan number/ other description	
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdesigns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375		Cell number ()
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]			
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings ☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection ☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems			
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 41-5 Project: ENCORE	
D. Declaration of Designer			
I <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name) ☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____ ☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u> ☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
I certify that: 1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm. <u>March 7, 2017</u> Date Signature of Designer			

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
2. Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

SITE NAME: ENCORE
BUILDER: GOLD PARK HOMES
TYPE: 41-5
DATE: Mar-17
LO# 77271
GFA: 4141
WINTER NATURAL AIR CHANGE RATE 0.405
SUMMER NATURAL AIR CHANGE RATE 0.144
HEAT LOSS AT °F. 74
HEAT GAIN AT °F. 14
CSA-F280-12
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-4	PANTRY	DEN
GRS.WALL AREA	340		234		90	99	99	276	63	54	54	117
GLAZING	0		0		0	0	0	0	0	0	0	0
NORTH	20.7	16.3	0	0	0	0	0	0	0	0	0	0
EAST	20.7	41.9	40	829	1676	21	435	880	0	0	0	0
SOUTH	20.7	25.2	0	0	0	0	0	0	0	0	0	0
WEST	20.7	41.9	0	0	0	0	0	0	0	0	0	0
SKYLT.	20.7	86.9	0	0	0	0	0	0	0	0	0	0
DOORS	24.6	4.7	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.3	0.8	300	1304	247	206	895	169	56	54	235	44
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	1.2	0.6	288	360	175	160	200	97	90	112	55	0
EXPOSED FLOOR	2.7	1.3	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	2.5	0.5	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2492		1675		641	898	967	2263	520	347	466	901
SUB TOTAL HT GAIN	0.10	0.19	0.10	0.19	0.10	0.19	0.10	0.19	0.10	0.19	0.20	0.37
LEVEL FACTOR / MULTIPLIER	469		315		121	169	182	426	98	65	171	330
AIR CHANGE HEAT LOSS	136		0		0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0		0		0	0	0	0	0	0	0	0
DUCT LOSS	0		0		0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	2	480	1	240	0	1	240	1	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	648		648		0	648	1149	2688	617	412	700	1232
TOTAL HT LOSS BTU/H	2961		1991		762	1067	1946	4293	397	137	1060	1786
TOTAL HT GAIN x 1.3 BTU/H	4369		2143		271	1946	1946	1992	397	137	1060	1786

ROOM USE	EXP. WALL	CLG. HT.	LIV/DIN	KITCHEN	LAUN	WIR	FOY	FOY-2	REC	BAS
GRS.WALL AREA	342		342		481	54	442	320	960	1086
GLAZING	0		0		0	0	0	0	0	0
NORTH	20.7	16.3	0	0	0	0	0	0	0	0
EAST	20.7	41.9	0	0	0	0	0	0	0	0
SOUTH	20.7	25.2	0	0	0	0	0	0	0	0
WEST	20.7	41.9	50	1036	2094	0	0	0	0	0
SKYLT.	20.7	86.9	0	0	0	0	0	0	0	0
DOORS	24.6	4.7	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.3	0.8	292	1269	240	45	196	37	887	3654
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	1.2	0.6	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.7	1.3	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	2.5	0.5	340	844	160	0	0	0	0	0
SUBTOTAL HT LOSS	3149		2494		2994	382	3379	2200	5367	8288
SUB TOTAL HT GAIN	0.20	0.37	0.20	0.37	0.10	0.19	0.20	0.37	0.30	0.40
LEVEL FACTOR / MULTIPLIER	1154		1154		666	140	1238	2182	5322	10005
AIR CHANGE HEAT LOSS	182		0		0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0		0		0	0	0	0	0	0
DUCT LOSS	430		430		0	0	0	0	0	0
HEAT GAIN PEOPLE	0		0		0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	648		648		648	522	4617	4382	10689	12323
TOTAL HT LOSS BTU/H	4733		4724		4987	366	2769	676	6028	937
TOTAL HT GAIN x 1.3 BTU/H	4724		4724		4987	366	2769	676	6028	937

SITE NAME: ENCORE
BUILDING: GOLD PARK HOMES

GFA: 4141 LO# 72721

DATE: Mar-17

TYPE: 41-5

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35
plenum pressure s/a 0.18
max s/a diff press. loss 0.02
min adjusted pressure s/a 0.16

HEATING CFM	1525	COOLING CFM	1525
TOTAL HEAT LOSS	69,039	TOTAL HEAT GAIN	48,024
AIR FLOW RATE CFM	22.09	AIR FLOW RATE CFM	31.76

EL296UH090XE48C
FAN SPEED
LOW 0
MEDIUM 1105
HIGH 1255

^LENNOX 90

AFUE = 96 %

INPUT (BTU/H) = 88,000

OUTPUT (BTU/H) = 85,000

4th	3rd	2nd	1st	Bas
0	13	10	4	4
0	4	2	1	1

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

All S/A runs 5'Ø unless noted otherwise on layout.

ROOM NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
RM LOSS MBH	1.48	1.00	0.76	1.07	1.15	1.34	0.62	1.34	0.41	1.48	2.07	2.37	2.37	2.02	2.02	2.02	2.07	0.52	4.62	1.00	4.57	4.57	4.57	4.57
CFM PER RUN HEAT	33	22	17	24	25	30	14	30	9	33	46	52	52	45	45	45	46	12	102	22	101	101	101	101
RM GAIN MBH	2.18	1.07	0.27	1.95	1.99	2.15	0.40	2.15	0.14	2.18	2.49	2.36	2.36	2.31	2.31	2.31	2.49	0.37	2.77	1.07	0.23	0.23	0.23	0.23
CFM PER RUN COOLING	69	34	9	62	63	68	13	68	4	69	79	75	75	73	73	73	79	12	88	34	7	7	7	7
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	0.17	0.17	0.17	0.16	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	62	54	45	58	59	66	40	65	51	57	72	53	45	60	50	43	68	43	46	82	21	16	24	44
EQUIVALENT LENGTH	130	140	160	140	140	150	150	160	180	160	170	150	140	110	120	150	160	130	110	130	100	110	100	90
TOTAL EFFECTIVE LENGTH	192	194	205	198	199	216	190	225	231	217	242	203	185	170	170	193	228	173	156	212	121	126	124	134
ADJUSTED PRESSURE	0.09	0.09	0.08	0.09	0.09	0.08	0.09	0.08	0.07	0.08	0.07	0.08	0.09	0.1	0.1	0.1	0.09	0.08	0.1	0.08	0.13	0.13	0.13	0.12
ROUND DUCT SIZE	5	4	4	5	5	5	4	5	4	5	6	5	5	5	5	5	5	4	6	4	5	5	5	5
HEATING VELOCITY (ft/min)	242	252	195	176	184	220	161	220	103	242	235	382	382	330	330	330	338	138	520	252	742	742	742	742
COOLING VELOCITY (ft/min)	507	390	103	455	463	499	149	499	46	507	403	551	551	536	536	536	580	138	449	390	51	51	51	51
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	A	B	B	D	C	C	C	C	A	D	C	C	A	A	A	D	D	D	A	F	F	F	G

ROOM NAME	25	26	27	28	29	30	31
ROOM NAME	PANTRY	DEN	REC	REC	REC	REC	FOY-2
RM LOSS MBH	0.70	1.23	3.56	3.56	3.56	3.56	4.38
CFM PER RUN HEAT	15	45	79	79	79	79	97
RM GAIN MBH	1.06	2.31	2.01	2.01	2.01	2.01	0.58
CFM PER RUN COOLING	34	73	64	64	64	64	18
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.16
EQUIVALENT LENGTH	170	110	160	110	110	110	110
TOTAL EFFECTIVE LENGTH	204	153	192	128	132	132	129
ADJUSTED PRESSURE	0.08	0.11	0.09	0.13	0.13	0.13	0.13
ROUND DUCT SIZE	4	5	5	5	5	5	5
HEATING VELOCITY (f/min)	172	330	198	580	580	580	712
COOLING VELOCITY (f/min)	390	536	419	470	470	470	132
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	B	C	F	F	G	G

TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)
TRUNK A	0.08	7.8	8	8	378	0.12	8.8	10	8
TRUNK B	0.08	9.3	10	8	0	0.00	0	0	8
TRUNK C	0.07	8.3	8	8	0	0.00	0	0	8
TRUNK D	0.07	10.8	14	8	0	0.00	0	0	8
TRUNK E	0.07	13.3	16	8	0	0.00	0	0	8
TRUNK F	0.13	8.5	8	8	0	0.00	0	0	8

TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)
TRUNK G	0.15	0.15	0.15	0.15	1525	0.06	17.7	32	8
TRUNK H	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK I	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK J	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK K	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK L	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK M	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK N	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK O	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK P	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK Q	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK R	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK S	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK T	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK U	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK V	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK W	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK X	0.15	0.15	0.15	0.15	1525	0.06	17.7	32	8
TRUNK Y	0.15	0.15	0.15	0.15	0	0.06	0	0	8
TRUNK Z	0.15	0.15	0.15	0.15	0	0.06	0	0	8
DROP	0.15	0.15	0.15	0.15	1525	0.06	17.7	24	14

TYPE: 41-5
SITE NAME: ENCORE

LO # 72721

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	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Kitchen & Bathrooms	<u>5</u> @ 10.6 cfm	<u>53</u> cfm
Other Rooms	<u>7</u> @ 10.6 cfm	<u>74.2</u> cfm
Table 9.32.3.A.	TOTAL	<u>201.4</u> 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
More than 5 - Part 6	TOTAL	<u>79.5</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>201.4</u>	cfm
Less Principal Ventil. Capacity	<u>139</u>	cfm
Required Supplemental Capacity	<u>62.4</u>	cfm

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

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

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
W/R	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 60H-V+		
<u>139</u> cfm high	<u>50</u> cfm low	
<u>75</u> % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

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

BUILDER:	
GOLD PARK 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:	March-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 41-5	BUILDER: GOLD PARK HOMES
SFQT: 4141	LO# 72721
	SITE: ENCORE

DESIGN ASSUMPTIONS

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

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	4
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):	46639.2	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:	6.1 ft
LENGTH: 51.0 ft	WIDTH: 38.0 ft	EXPOSED PERIMETER:	178.0 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	29.8
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	-

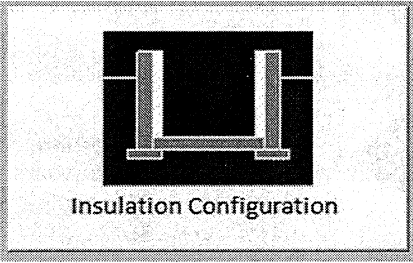
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	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):	15.5	 Insulation Configuration
Floor Width (m):	11.6	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.9	
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):		1754

TYPE: 41-5

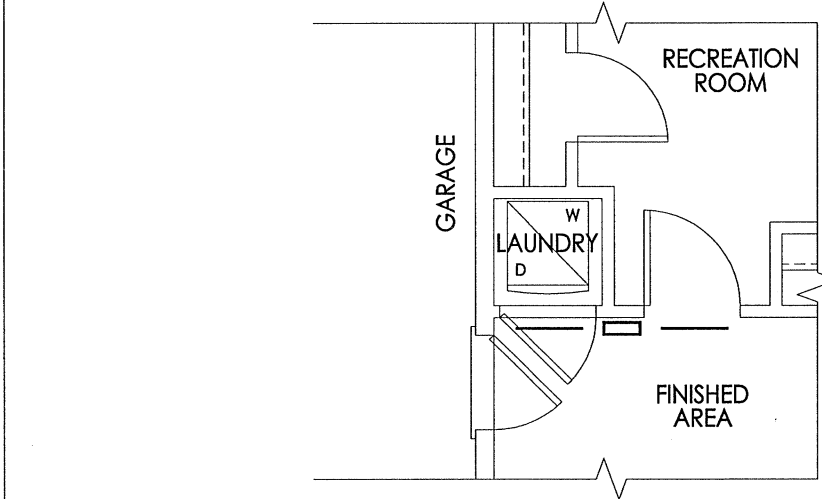
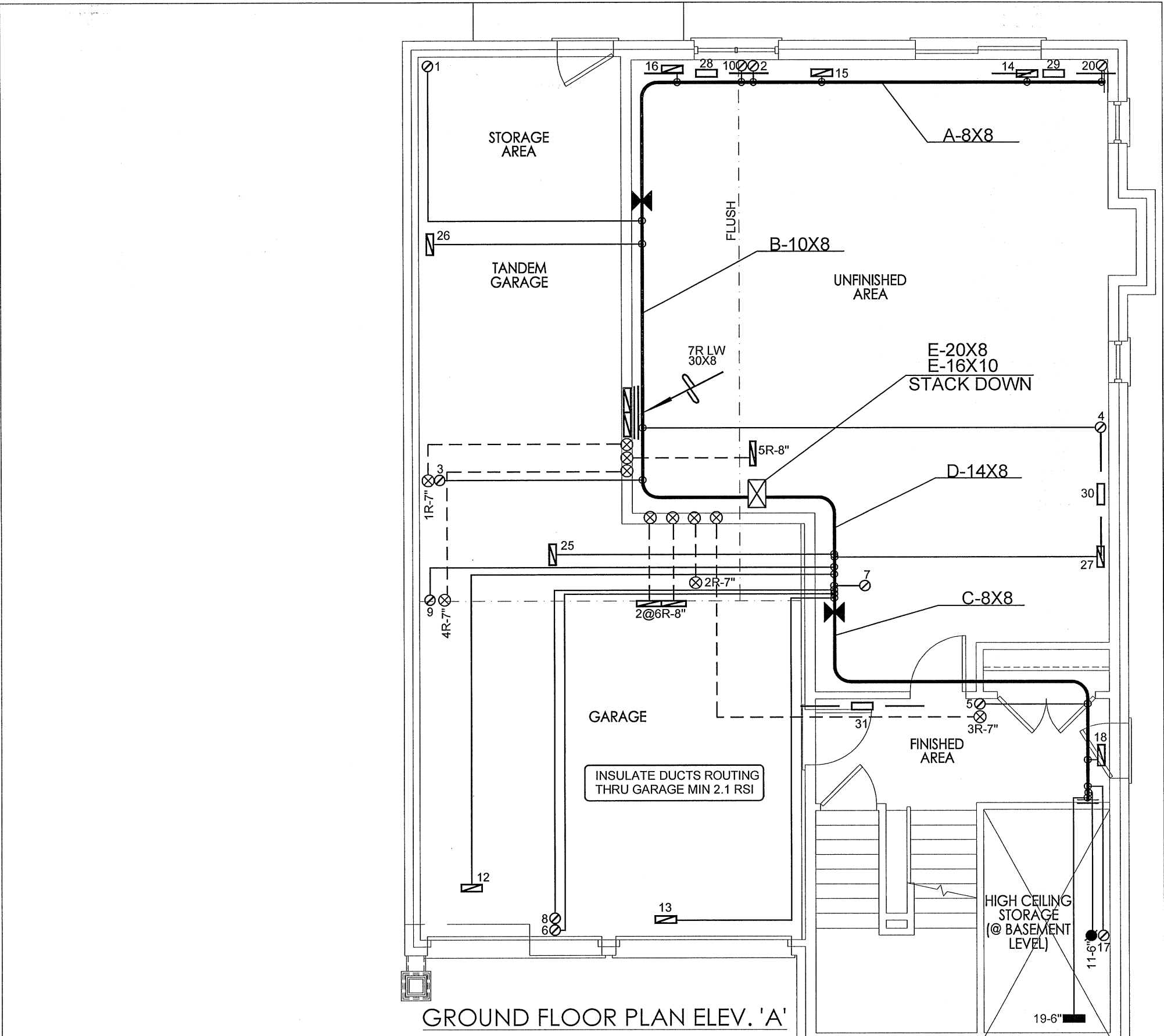
LO# 72721

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):	9.33			
Building Configuration				
Type:	Detached			
Number of Stories:	Three			
Foundation:	Full			
House Volume (m ³):	1320.7			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1760.5 cm ²		
	3.57	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):	0.405			
Cooling Air Leakage Rate (ACH/H):	0.144			

TYPE: 41-5
LO# 72721



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.

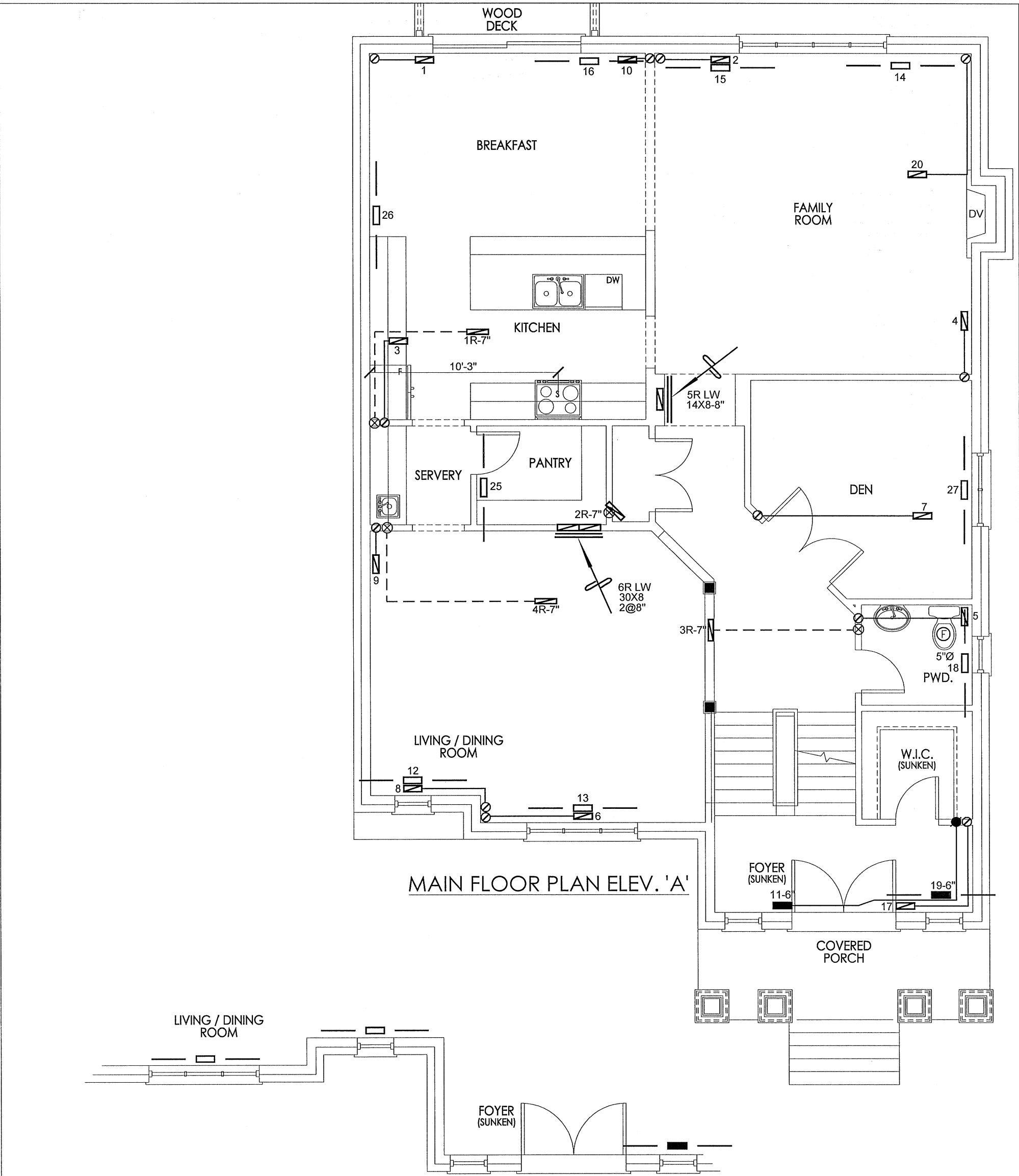
PAR. OPT. GRD. FLR. PLAN
ELEV. 'A' W/ OPT. LAUN.

CSA-F280-12
PACKAGE A1

HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	FLOOR 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	
							REVISIONS		

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Client		 375 Finley Ave - Unit 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	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	
ENCORE BRAMPTON, ONTARIO			MAR/2017	
		Scale		
		3/16" = 1'-0"		
		BCIN# 19669		
41-5		LO#		
4141 sqft		72721		



PART. MAIN FLOOR PLAN ELEV. 'B'

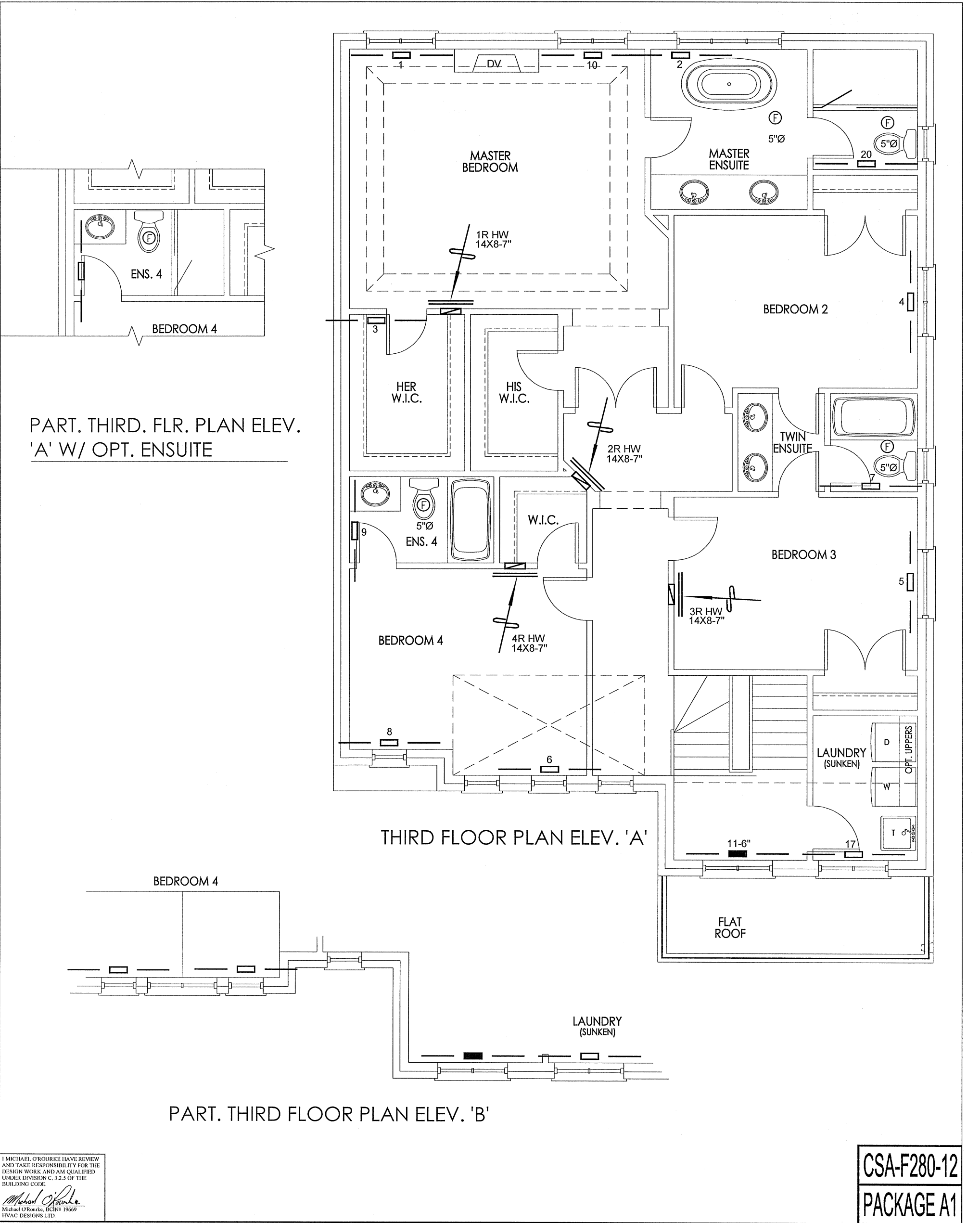
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

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

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Client		 375 Finley Ave - Unit 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	
GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name		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	MAR/2017
ENCORE BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
			BCIN# 19669	
41-5	4141 sqft		LO#	72721



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
PACKAGE A1

HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	FLOOR 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
							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 GOLD PARK HOMES		 375 Finley Ave - Unit 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 THIRD FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			Date MAR/2017	
41-5 4141 sqft		Scale 3/16" = 1'-0"		
		BCIN# 19669		
		LO#	72721	
		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.		