

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@hvacdsgns.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 | ☒ HVAC – House | ☐ Building Structural |
| ☐ Small Buildings | ☐ Building Services | ☐ Plumbing – House |
| ☐ Large Buildings | ☐ Detection, Lighting and Power | ☐ Plumbing – All Buildings |
| ☐ Complex Buildings | ☐ Fire Protection | ☐ On-site Sewage Systems |

Description of designer's work
**HEAT LOSS / GAIN CALCULATIONS
DUCT SIZING**

Model: 38-8 OPT. 2ND

**RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY
RESIDENTIAL SYSTEM DESIGN per CSA-F280-12**

Project: ENCORE

D. Declaration of Designer

I MICHAEL O'ROURKE 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: 19669

Basis for exemption from registration and qualification: O.B.C SENTENCE 3.2.4.1 (4)

- ☐ The design work is exempt from the registration and qualification requirements of the Building Code.

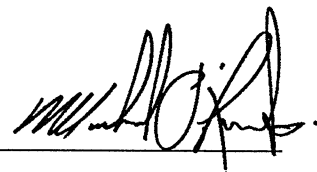
Basis for exemption from registration and qualification: _____

I certify that:

- The information contained in this schedule is true to the best of my knowledge.
- I have submitted this application with the knowledge and consent of the firm.

March 7, 2017
Date

Signature of Designer



NOTE:

- 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.
- 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.

ROOM USE	LIV	KTIFM	LAUN	WIR	FOY	DEN	BAS
EXP. WALL	32	78	0	9	30	15	162
CLG. HT.	9	9	9	9	15	9	9
FACTORS							
GRS.WALL AREA	288	702	0	81	450	135	972
LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN
GLAZING							
NORTH	0	0	0	0	0	0	8
EAST	0	0	0	0	0	0	166
20.7 16.3	0	90	0	0	0	0	130
20.7 41.9	0	1865	0	0	0	0	0
SOUTH	0	0	0	10	0	30	4
20.7 25.2	0	0	0	207	0	622	83
WEST	47	0	0	0	0	0	101
20.7 41.9	974	0	0	0	78	0	0
1969	0	0	0	0	1616	0	0
SKYLT.	0	0	0	0	3267	0	0
20.7 86.9	0	0	0	0	0	0	0
DOORS	20	0	0	0	0	0	0
4.6 4.7	492	0	0	0	492	0	0
93	0	0	0	0	0	0	0
NET EXPOSED WALL	4.3	612	0	71	352	105	0
20.7 182	960	2659	0	309	1530	456	0
4.8	0	503	0	58	289	86	0
NET EXPOSED BSMT WALL ABOVE GR	3.5	0	0	0	0	0	486
0.7	0	0	0	0	0	0	1703
EXPOSED CLG	0	12	0	0	144	0	322
1.2 0.6	0	15	0	0	88	0	0
EXPOSED CLG	0	0	0	0	0	0	0
2.7 1.3	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	56	64	0	0	32	0
128	678	139	159	0	0	79	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	5567
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	3104	4678	159	516	3817	1157	8010
SUB TOTAL HT GAIN	2372	4307	30	311	3737	858	647
LEVEL FACTOR / MULTIPLIER	0.20	0.37	0.20	0.37	0.20	0.20	0.40
AIR CHANGE HEAT LOSS	1162	1751	59	193	1429	433	10056
AIR CHANGE HEAT GAIN	163	296	2	21	257	59	44
DUCT LOSS	427	643	22	0	0	159	0
DUCT GAIN	329	536	79	0	0	92	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	4692	757	757	709	5246	1750	18066
TOTAL HT GAIN x 1.3 BTU/H	4707	7072	1128	432	5192	1312	898

TOTAL HEAT GAIN BTU/H:	48992	TONS: 4.08	LOSS DUE TO VENTILATION LOAD BTU/H: 2777	STRUCTURAL HEAT LOSS: 66187	TOTAL COMBINED HEAT LOSS BTU/H: 68965
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REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.



 MICHAEL O'ROURKE
 INDIVIDUAL BCIN: 19669

SITE NAME: ENCORE
BUILDER: GOLD PARK HOMES

TYPE: 38-3
OPT 2ND

GFA: 4401 LO# 72712

DATE: Mar-17

HEATING CFM 1525
TOTAL HEAT GAIN 48,466
AIR FLOW RATE CFM 23.04

furnace pressure 0.6
a/c coil pressure 0.21
available pressure for s/a & r/a 0.34

EL296UH090XE48C

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	11	10	4	4
R/A	0	5	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.

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	MBR	ENS	ENS-2	BED-3	BED-4	BED-2	BED-4	ENS-3	BED-5	BATH	LIV	LIV	LIV	KT/FM	KT/FM	LAUN	W/R	FOY	DEN	REC	REC	REC	MUD
RM LOSS MBH	1.76	1.76	0.98	1.31	1.18	0.92	1.14	0.92	0.58	1.16	1.28	2.35	2.35	2.35	2.36	2.36	0.24	0.71	2.62	1.75	3.88	3.88	3.88	3.80
CFM PER RUN HEAT	40	40	23	30	27	21	26	21	13	27	29	54	54	54	54	54	6	16	60	40	89	89	88	
RM GAIN MBH	2.21	2.21	1.32	0.75	2.28	2.00	2.26	2.00	0.40	2.05	0.84	2.35	2.35	2.35	2.55	2.55	1.13	0.43	2.60	1.31	2.34	2.34	1.79	
CFM PER RUN COOLING	70	70	41	23	72	63	71	63	13	65	26	74	74	74	80	80	36	14	82	41	74	74	56	
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	0.16	0.16	0.16	0.16	
ACTUAL DUCT LGH.	81	90	82	71	52	64	54	62	44	55	66	63	51	69	68	60	45	42	45	37	28	24	37	19
EQUIVALENT LENGTH	180	200	200	170	200	170	140	170	200	200	200	170	180	160	160	150	160	190	140	160	100	120	90	130
TOTAL EFFECTIVE LENGTH	261	290	282	241	252	234	194	232	244	255	266	233	231	229	228	210	205	232	185	197	128	144	127	149
ADJUSTED PRESSURE	0.06	0.06	0.06	0.07	0.07	0.07	0.09	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.07	0.08	0.08	0.12	0.11	0.12	0.11
ROUND DUCT SIZE	6	6	5	4	5	5	5	5	4	5	4	5	5	6	6	5	4	4	5	4	5	5	5	5
HEATING VELOCITY (ft/min)	204	204	169	344	198	154	191	154	149	198	333	396	396	275	275	396	69	184	441	459	653	653	646	
COOLING VELOCITY (ft/min)	357	357	301	264	529	463	521	463	149	477	298	543	543	408	408	587	413	161	602	470	543	543	411	
OUTLET GRILL SIZE	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	A	C	C	B	C	B	C	B	B	A	B	A	C	C	B	C	E	C	H	G	G	E

RUN #	25	26	27	28	29
ROOM NAME	BAS	BAS	BAS	BAS	FOY
RM LOSS MBH	4.52	4.52	4.52	4.52	2.62
CFM PER RUN HEAT	104	104	104	104	60
RM GAIN MBH	0.22	0.22	0.22	0.22	2.60
CFM PER RUN COOLING	7	7	7	7	82
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	26	23	26	35	51
EQUIVALENT LENGTH	120	120	120	120	150
TOTAL EFFECTIVE LENGTH	146	143	146	155	201
ADJUSTED PRESSURE	0.11	0.11	0.11	0.11	0.08
ROUND DUCT SIZE	6	6	6	6	5
HEATING VELOCITY (ft/min)	530	530	530	530	441
COOLING VELOCITY (ft/min)	36	36	36	36	602
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	3X10
TRUNK	G	H	G	E	E

RETURN AIR TRUNK SIZE	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	211	0.06	8.4	8	475	386	0.11	9.1	10	695
TRUNK B	369	0.06	10.4	12	554	579	0.11	7	6	579
TRUNK C	280	0.07	8.8	10	468	579	0.11	10.5	14	744
TRUNK D	629	0.06	12.7	18	629	0	0.00	0	0	0
TRUNK E	312	0.08	9.1	10	562	0	0.00	0	0	0
TRUNK F	941	0.06	14.7	26	651	0	0.00	0	0	0

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	75	75	85	120	120	230	260	360	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLENUM PRESSURE	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
ACTUAL DUCT LGH.	87	85	45	83	58	60	66	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	230	225	140	165	185	205	140	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	317	310	185	248	243	265	206	159	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.05	0.05	0.08	0.06	0.06	0.05	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
ROUND DUCT SIZE	6	6	5.6	6.8	6.8	9.1	8.8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	14	14	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

TYPE: 38-3
SITE NAME: ENCORE

LO # 72712
OPT.2ND

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>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Kitchen & Bathrooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Other Rooms	<u>5</u> @ 10.6 cfm	<u>53.0</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>95.4</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	74 F	1.08	0.25

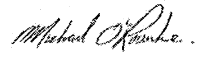
SUPPLEMENTAL FANS		NUTONE	HVI	Sones
Location	Model	cfm		
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
ENS-2	QTXEN050C	50	☒	0.3
W/R	QTXEN050C	50	☒	0.3

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 @ 32 deg F (0 deg C)	☒ HVI Approved

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:	
HRAI #	001820
Date:	March-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 38-3	OPT.2ND	BUILDER: GOLD PARK HOMES
SFQT: 4401	LO# 72712	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:	WEST	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):	46471.0	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: 49.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	162.0 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	-

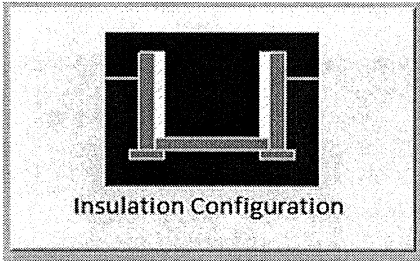
INDIVIDUAL BCIN: 19669

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):	14.9	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	1.1	
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):	1631	

TYPE: 38-3
LO# 72712

OPT.2ND

Air Infiltration Residential Load Calculator

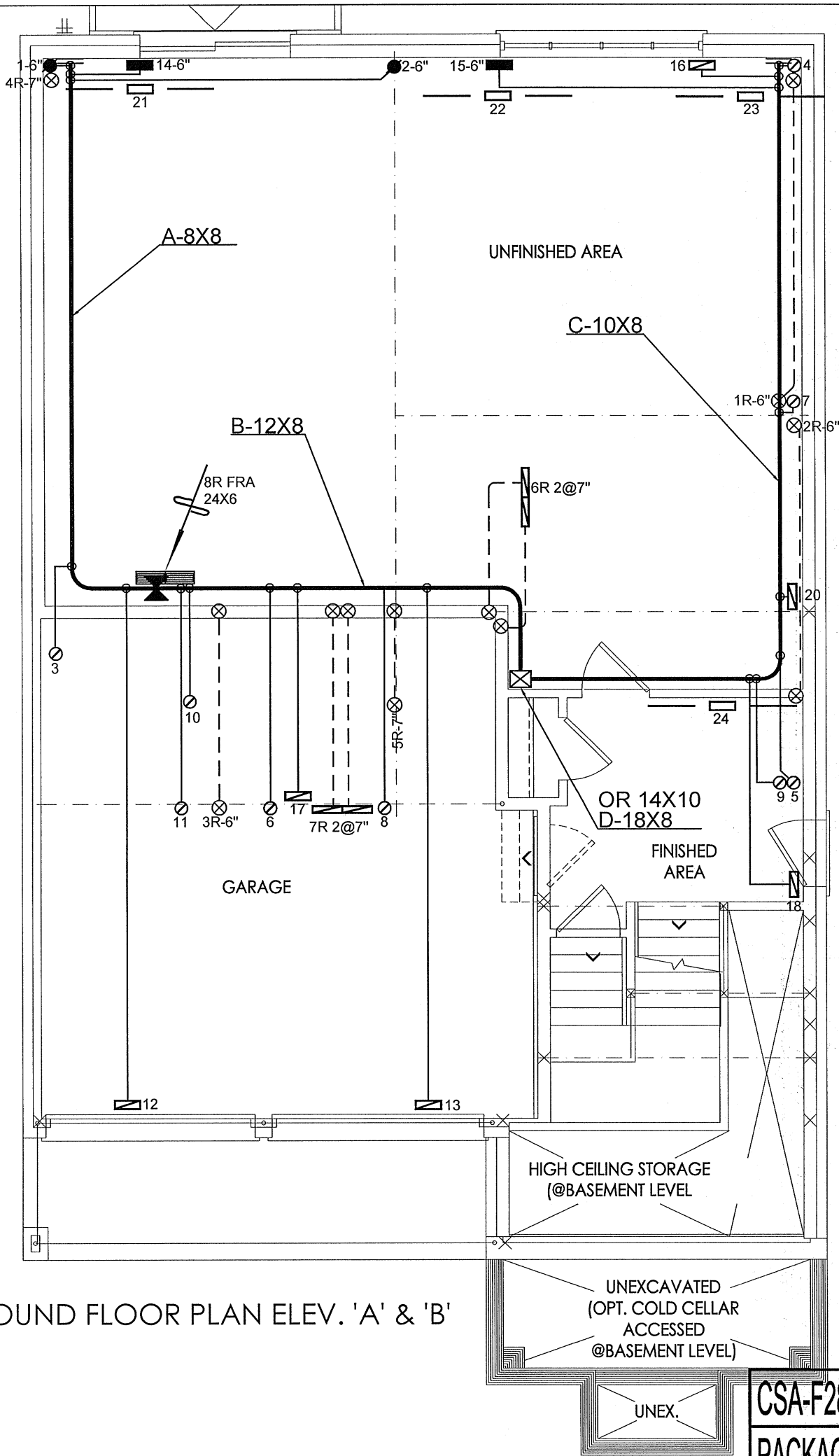
Supplemental tool for CAN/CSA-F280

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):	9.45		
Building Configuration			
Type:	Detached		
Number of Stories:	Three		
Foundation:	Full		
House Volume (m ³):	1315.9		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1754.2 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
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.409		
Cooling Air Leakage Rate (ACH/H):	0.145		

TYPE: 38-3
LO# 72712

OPT.2ND

GROUND FLOOR PLAN ELEV. 'A' & 'B'



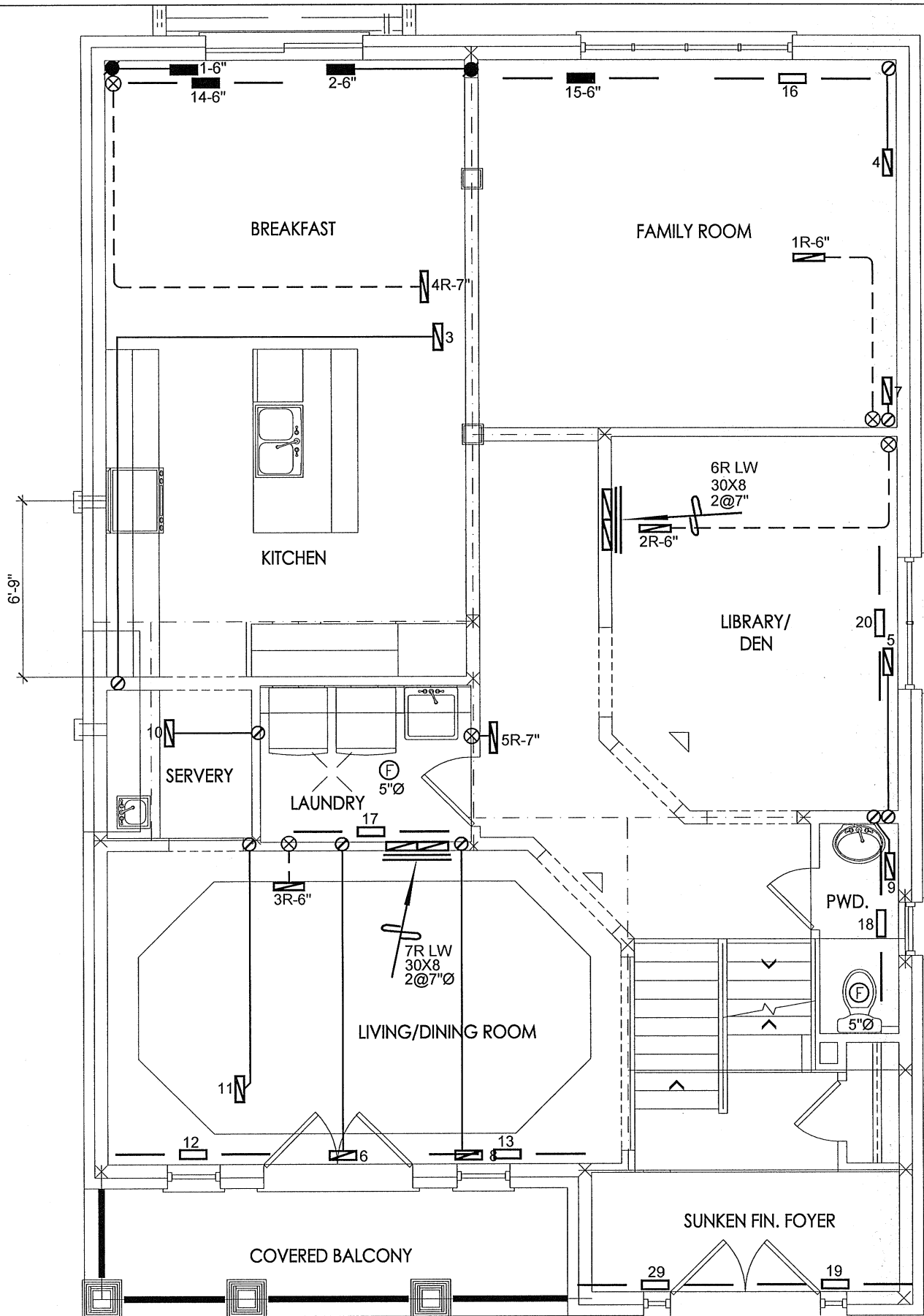
I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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

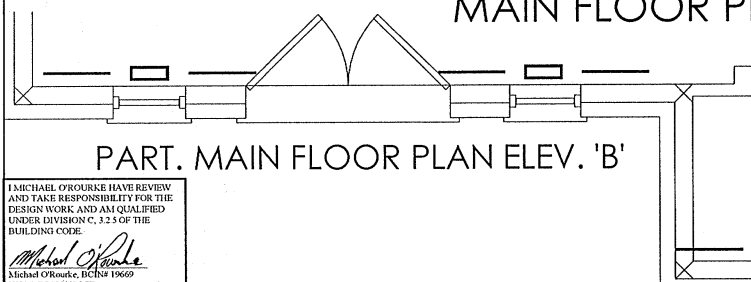
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE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

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Client GOLD PARK HOMES		 375 Finley Ave, Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: mike@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			Date MAR/2017	
OPT. 2ND 38-8		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"	
4401 sqft			BCIN# 19669	
				LO# 72712



MAIN FLOOR PLAN ELEV. 'A'



PART. MAIN FLOOR PLAN ELEV. 'B'

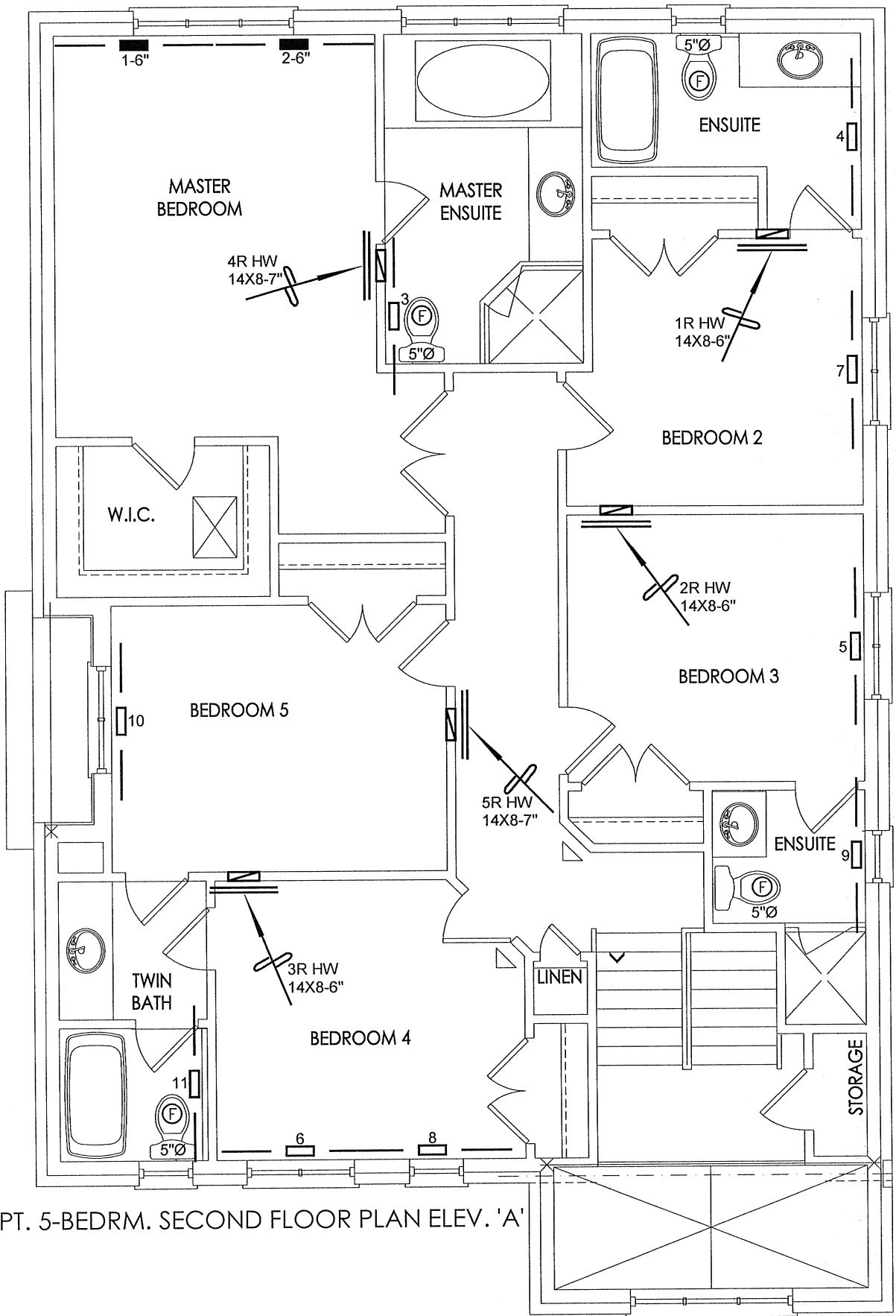
I MICHAEL OROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

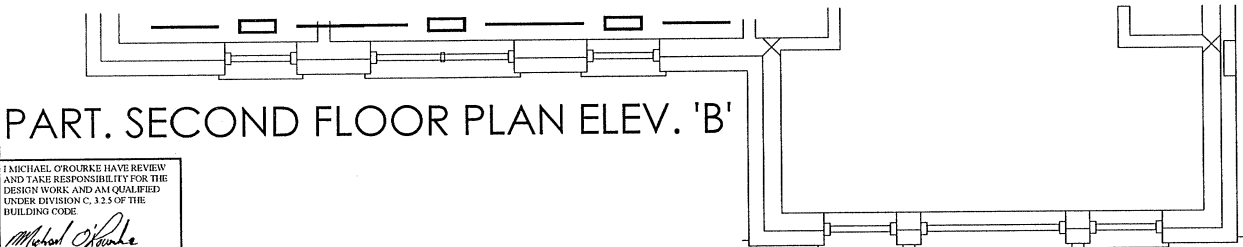
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE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

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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: mike@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	Sheet Title	
GOLD PARK HOMES			SECOND FLOOR	
Project Name			HEATING	
ENCORE			LAYOUT	
BRAMPTON, ONTARIO		Date		
OPT. 2ND		MAR/2017		
38-8		Scale		
4401 sqft		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.		BCIN# 19669		
Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.		LO#		
		72712		



OPT. 5-BEDRM. SECOND FLOOR PLAN ELEV. 'A'



PART. SECOND FLOOR PLAN ELEV. 'B'

1 MICHAEL O'ROURKE HAVE REVIEW 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.	Description
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	Date	
REVISIONS									
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Client		HVAC DESIGNS LTD.						Sheet Title	
GOLD PARK HOMES		375 Finley Ave, Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: mike@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services						THIRD 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	
ENCORE BRAMPTON, ONTARIO								MAR/2017	
OPT. 2ND 38-8								Scale	
4401 sqft								3/16" = 1'-0"	
								BCIN# 19669	
								LO#	
								72712	