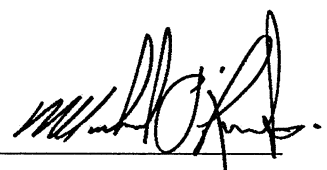


Schedule 1: Designer Information

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 ☐ 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: 41-1 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:

- 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.

SITE NAME: ENCORE		DATE: Mar-17		WINTER NATURAL AIR CHANGE RATE 0.324		HEAT LOSS AT °F. 74		CSA-F380-12	
BUILDER: GOLD PARK		LO# 72717		SUMMER NATURAL AIR CHANGE RATE 0.115		HEAT GAIN AT °F. 14		SB-12 PACKAGE A1	
TYPE: 41-1		GFA: 2557		BATH		ENS-2			
ROOM USE		EINS		WIC		BED-2		BED-3	
EXP. WALL		33		7		35		14	
CLG. HT.		10		9		9		9	
FACTORS		330		63		315		126	
GRS.WALL AREA		252		252		252		252	
GLAZING		0		0		0		0	
NORTH		20.7		16.3		20.7		16.3	
EAST		20.7		41.9		20.7		41.9	
SOUTH		20.7		25.2		20.7		25.2	
WEST		20.7		41.9		20.7		41.9	
SKYL.T.		20.7		86.9		20.7		86.9	
DOORS		24.6		4.7		24.6		4.7	
NET EXPOSED WALL		4.3		0.8		4.3		0.8	
NET EXPOSED BSMT WALL ABOVE GR		3.5		0.7		3.5		0.7	
EXPOSED CLG		1.2		0.6		1.2		0.6	
NO ATTIC EXPOSED CLG		2.7		1.3		2.7		1.3	
EXPOSED FLOOR		2.5		0.5		2.5		0.5	
BASEMENT/CRAWL HEAT LOSS		0		0		0		0	
SLAB ON GRADE HEAT LOSS		0		0		0		0	
SUBTOTAL HT LOSS		2265		1793		2265		1793	
SUB TOTAL HT GAIN		1669		1357		1669		1357	
LEVEL FACTOR / MULTIPLIER		0.20		0.20		0.20		0.20	
AIR CHANGE HEAT LOSS		544		99		544		99	
AIR CHANGE HEAT GAIN		95		77		95		77	
DUCT LOSS		0		0		0		0	
DUCT GAIN		0		0		0		0	
HEAT GAIN PEOPLE		2		480		2		480	
HEAT GAIN APPLIANCES/LIGHTS		579		579		579		579	
TOTAL HT LOSS BTU/H		2809		513		2809		513	
TOTAL HT GAIN x 1.3 BTU/H		3670		2176		3670		2176	

ROOM USE	DIN		KT/IFM		LAUN		WIR		FOY		S.ENT		BAS	
EXP. WALL	26	70	10	10	22	11	10	20	13	164	9			
CLG. HT.	10	10	11	10	10	10	10	10	10					
FACTORS														
GRS.WALL AREA	260	700	242	110	200	130	984							
LOSS GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN						
GLAZING														
NORTH	0	0	10	207	163	0	0	0	0	3	62	49		
EAST	0	0	128	2652	5362	0	0	0	0	6	124	251		
SOUTH	23	477	580	0	0	0	9	186	227	3	62	76		
WEST	0	0	0	0	0	0	0	0	0	0	0	0		
41.9	0	0	0	0	0	0	0	8	166	0	0	0		
SKYL.T.	0	0	0	0	0	0	0	0	0	0	0	0		
86.9	0	0	0	0	0	0	0	0	0	0	0	0		
DOORS	0	0	0	0	0	0	0	40	983	20	492	93		
24.6	0	0	0	0	0	0	0	152	560	125	110	478		
4.7	0	0	0	0	0	0	0	0	0	0	0	0		
NET EXPOSED WALL	237	1030	195	562	2442	462	101	439	83	152	560	125		
4.3	0	0	0	0	0	0	0	0	0	0	0	0		
0.8	0	0	0	0	0	0	0	0	0	0	0	0		
NET EXPOSED BSMT WALL ABOVE GR	0	0	0	0	0	0	0	0	0	0	0	0		
3.5	0	0	0	0	0	0	0	0	0	0	0	0		
0.7	0	0	0	12	15	7	0	0	0	0	0	0		
EXPOSED CLG	0	0	0	0	0	0	0	0	0	0	0	0		
1.2	0	0	0	0	0	0	0	0	0	0	0	0		
0.6	0	0	0	0	0	0	0	0	0	0	0	0		
2.7	0	0	0	0	0	0	0	0	0	0	0	0		
1.3	0	0	0	0	0	0	0	0	0	0	0	0		
0.5	0	0	0	0	0	0	0	0	0	0	0	0		
EXPOSED FLOOR	0	0	0	0	0	0	0	0	0	0	0	0		
2.5	0	0	0	0	0	0	0	0	0	0	0	0		
0.5	0	0	0	0	0	0	0	0	0	0	0	0		
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0		
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0		
5316	1506	5316	5994	625	310	1456	625	1810	970	8113	795			
SUBTOTAL HT LOSS	775	5994	276	0.30	0.37	0.30	0.37	0.30	0.37	0.50	0.90			
SUB TOTAL HT GAIN	0.30	0.37	0.30	0.37	0.30	0.37	0.30	0.37	0.30	0.50	0.90			
LEVEL FACTOR / MULTIPLIER	564	1992	546	234	678	363	678	363	363	7295	45			
AIR CHANGE HEAT LOSS	44	340	16	18	37	10	37	10	10	45	45			
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0			
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0			
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0			
HEAT GAIN PEOPLE	0	1	240	0	0	1	240	0	0	0	0			
240	0	1	240	0	0	1	240	0	0	0	0			
HEAT GAIN APPLIANCES/LIGHTS	579	579	579	860	426	2002	860	2488	1333	15408	1092			
TOTAL HT LOSS BTU/H	2071	7308	1444	860	426	2002	860	2488	1333	15408	1092			
TOTAL HT GAIN x 1.3 BTU/H	1818	9300	1444	860	426	2002	860	2488	1333	15408	1092			

SITE NAME: ENCORE
BUILDING: GOLD PARK

TYPE: 41-1

DATE: Mar-17

GFA: 2557 LO# 72717

HEATING CFM 1100 COOLING CFM 1100
TOTAL HEAT LOSS 47,184 TOTAL HEAT GAIN 33,272
AIR FLOW RATE CFM 23.31 AIR FLOW RATE CFM 33.06EL296UH070XE36B
FAN SPEED
LOW 0
MEDIUM 995
HIGH 1100AFUE = 96 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 64,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	9	8	4
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.

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 dif press. loss 0.03
min adjusted pressure s/a 0.15
r/a pressure 0.17
r/a grille press. loss 0.02
adjusted pressure r/a 0.15DESIGN CFM = 1100
CFM @ .6" E.S.P.

TEMPERATURE RISE 54 °F

RUN #	1	2	3	4	5	6	7	8	11	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-2	ENS-2	DIN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	SENT	BAS	BAS	BAS	BAS
RM LOSS MBH	2.81	2.22	0.51	2.49	2.33	2.65	0.65	1.02	1.02	2.07	2.44	2.44	2.44	2.00	0.86	2.49	1.33	3.85	3.85	3.85	3.85
CFM PER RUN HEAT	65	52	12	58	54	62	15	24	24	48	57	57	57	47	20	58	31	90	90	90	90
RM GAIN MBH	3.67	2.18	0.16	2.94	3.33	2.72	0.38	0.96	0.96	1.82	3.10	3.10	3.10	1.44	0.43	0.89	1.01	0.27	0.27	0.27	0.27
CFM PER RUN COOLING	121	72	5	97	110	90	13	32	32	60	102	102	102	48	14	29	33	9	9	9	9
ADJUSTED PRESSURE	0.15	0.17	0.17	0.16	0.15	0.16	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	38	50	36	52	36	25	51	41	36	27	25	21	33	21	38	33	20	25	24	21	33
TOTAL EFFECTIVE LENGTH	178	220	136	222	166	135	231	191	196	177	145	151	163	121	158	163	140	125	144	111	163
ADJUSTED PRESSURE	0.09	0.08	0.13	0.07	0.09	0.12	0.07	0.09	0.09	0.1	0.11	0.11	0.11	0.14	0.11	0.11	0.12	0.13	0.11	0.15	0.1
ROUND DUCT SIZE	6	5	4	6	6	5	4	4	4	5	6	6	6	4	4	4	4	5	5	5	5
HEATING VELOCITY (ft/min)	331	382	138	296	275	455	172	275	275	352	291	291	291	539	229	665	356	661	661	661	661
COOLING VELOCITY (ft/min)	617	529	57	495	561	661	149	367	367	441	520	520	520	551	161	333	379	66	66	66	66
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	D	E	A	B	E	A	B	B	A	C	D	D	C	A	A	B	C	D	B	A

RUN #	ROOM NAME	RM LOSS MBH	CFM PER RUN HEAT	RM GAIN MBH	CFM PER RUN COOLING	ADJUSTED PRESSURE	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	ROUND DUCT SIZE	HEATING VELOCITY (ft/min)	COOLING VELOCITY (ft/min)	OUTLET GRILL SIZE	TRUNK
1	TRUNK A	289	0.07	9.1	10	10	10	10	10	10	10	10	10	10
2	TRUNK B	512	0.07	11.3	14	14	14	14	14	14	14	14	14	14
3	TRUNK C	259	0.09	8.2	8	8	8	8	8	8	8	8	8	8
4	TRUNK D	255	0.08	8.4	8	8	8	8	8	8	8	8	8	8
5	TRUNK E	589	0.08	11.5	16	16	16	16	16	16	16	16	16	16
6	TRUNK F	0	0.00	0	0	0	0	0	0	0	0	0	0	0

SUPPLY 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	289	0.07	9.1	10	10	10	0.06	0	0	0
TRUNK B	512	0.07	11.3	14	14	14	0.06	0	0	0
TRUNK C	259	0.09	8.2	8	8	8	0.06	0	0	0
TRUNK D	255	0.08	8.4	8	8	8	0.06	0	0	0
TRUNK E	589	0.08	11.5	16	16	16	0.06	0	0	0
TRUNK F	0	0.00	0	0	0	0	0.06	0	0	0

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 G	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK H	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK I	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK J	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK K	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK L	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK M	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK N	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK O	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK P	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK Q	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK R	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK S	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK T	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK U	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK V	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK W	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK X	1100	0.06	15.6	30	30	30	0.06	15.6	30	30
TRUNK Y	0	0.06	0	0	0	0	0.06	0	0	0
TRUNK Z	0	0.06	0	0	0	0	0.06	0	0	0
DROP	1100	0.06	15.6	24	24	24	0.06	15.6	24	24

TYPE: 41-1
SITE NAME: ENCORE

LO # 72717

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	5 @ 10.6 cfm	53.0 cfm
Table 9.32.3.A.	TOTAL	180.2 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	79.5 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	180.2	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	41.2	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	ΔT °F	FACTOR	% LOSS
139.0 CFM	X 74 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
ENS-2	QTXEN050C	50	☒
W/R	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:	
GOLD PARK	
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:** 41-1**BUILDER:** GOLD PARK**SFQT:** 2557**LO#** 72717**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

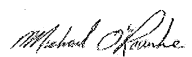
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	WEST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft ³):	34003.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED 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: 48.0 ft	WIDTH: 34.0 ft	EXPOSED PERIMETER:	164.0 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	-

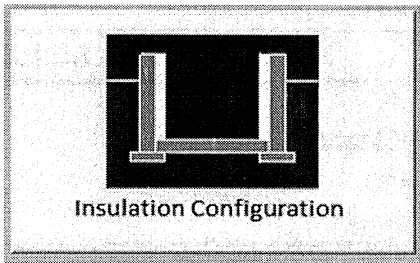
INDIVIDUAL BCIN: 19669

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):	14.6	 Insulation Configuration
Floor Width (m):	10.4	
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):		1655

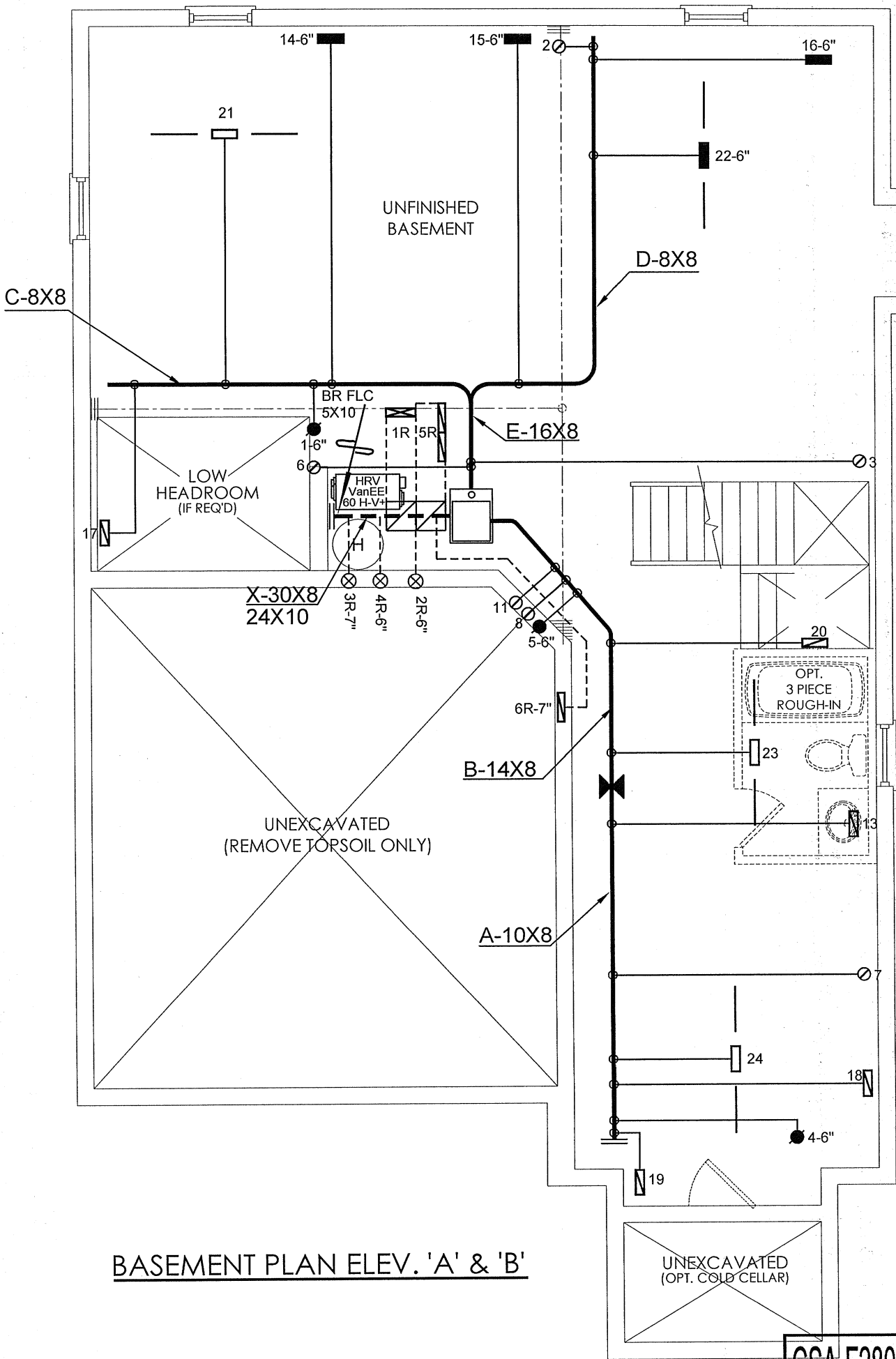
TYPE: 41-1
LO# 72717

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):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	962.9			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1283.5 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):	0.324			
Cooling Air Leakage Rate (ACH/H):	0.115			

TYPE: 41-1
LO# 72717

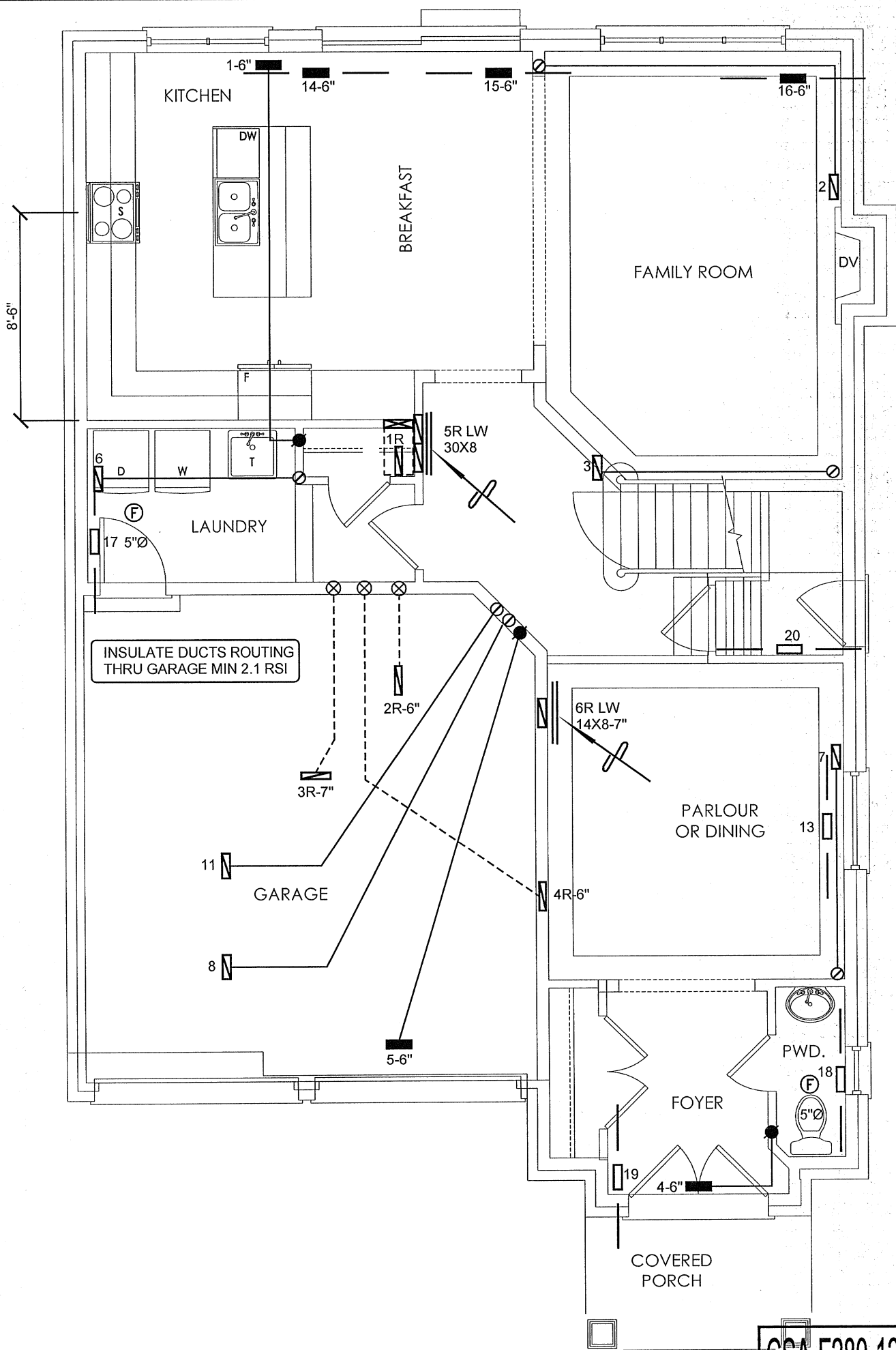


BASEMENT PLAN ELEV. 'A' & 'B'

1 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, P.Eng. 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"x6" 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: info@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services				HEAT LOSS 49961 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		Sheet Title	
GOLD PARK HOMES						MAKE LENNOX		3RD FLOOR		BASEMENT HEATING LAYOUT	
Project Name						MODEL EL296UH070XE36B		2ND FLOOR		Date	
ENCORE BRAMPTON, ONTARIO						INPUT 66 MBTU/H		1ST FLOOR		MAR/2017	
		OUTPUT 64 MBTU/H		BASEMENT		Scale					
		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		3/16" = 1'-0"					
		FAN SPEED 1100 cfm @ 0.5" w.c.				BCIN# 19669					
41-1		2557 sqft				LO# 72717					



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

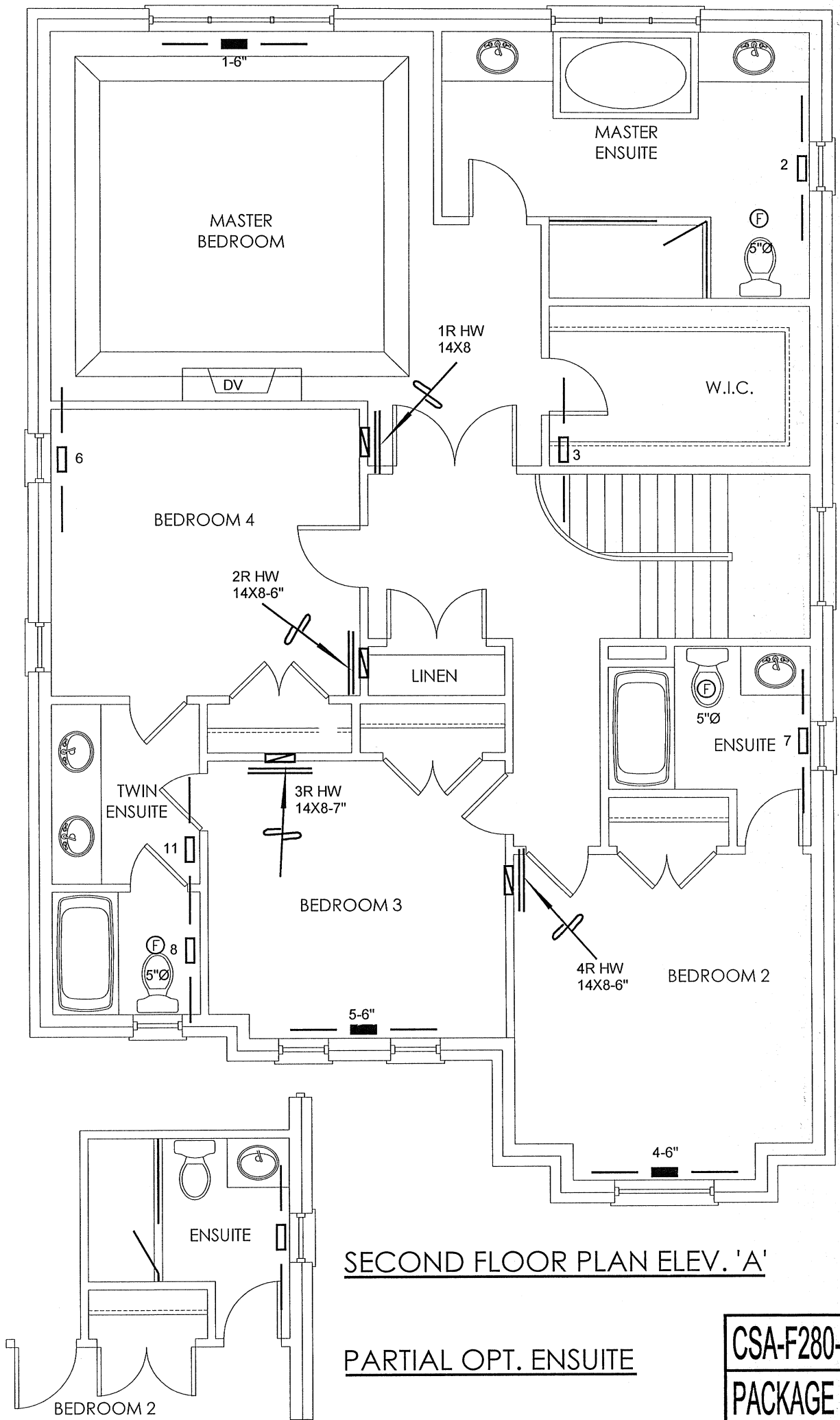
GROUND FLOOR PLAN ELEV. 'A'

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 GOLD PARK 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	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			Date MAR/2017	
41-1		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
2557 sqft			LO#	72717



SECOND FLOOR PLAN ELEV. 'A'

PARTIAL OPT. ENSUITE

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.		
	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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Project Name ENCORE BRAMPTON, ONTARIO			Date MAR/2017	
41-1 2557 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.	Scale 3/16" = 1'-0"	
			BCIN# 19669	
			LO#	72717