

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: 41-5 CNR 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)

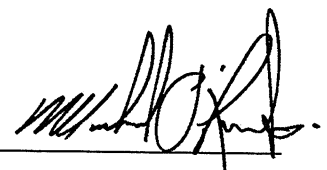
☐ The design work is exempt from the registration and qualification requirements of the Building Code.

Basis for exemption from registration and qualification: _____

I certify that:

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.

March 7, 2017
 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				CNR		DATE: Mar-17		WINTER NATURAL AIR CHANGE RATE 0.404		HEAT LOSS AT °F. 74		CSA-F280-12	
BUILDER: GOLD PARK HOMES				TYPE: 41-5		LO# 72722		SUMMER NATURAL AIR CHANGE RATE 0.139		HEAT GAIN AT °F. 43		SB-12 PACKAGE A1	
ROOM USE	EXP. WALL	CLG. HT.	FACTORS	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-4	PANTRY	DEN
GRS.WALL AREA	340	243	243	340	243	90	99	108	304	63	54	54	135
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	20.7	15.1	0	0	0	0	0	0	0	0	0	0	0
EAST	20.7	38.9	40	829	1556	24	497	934	0	0	0	0	0
SOUTH	20.7	23.4	0	0	0	0	0	0	0	0	0	0	0
WEST	20.7	38.9	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	20.7	86.6	0	0	0	0	0	0	0	0	0	0	0
DOORS	24.6	4.3	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.3	0.8	300	1304	229	211	917	181	247	1073	189	52	226
NET EXPOSED BSRT WALL ABOVE GR	3.5	0.6	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	1.2	0.6	288	350	170	170	212	100	199	249	118	112	140
EXPOSED FLOOR	2.7	1.3	0	0	0	0	0	0	48	128	61	0	0
EXPOSED FLOOR	2.5	0.4	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	0
SLAB ON GRADE HEAT LOSS	2492	1955	0	0	0	641	880	1252	2631	594	347	466	1012
SUB TOTAL HT LOSS	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.20	0.36
SUB TOTAL HT GAIN	452	325	79	0	0	116	160	227	478	108	63	167	363
LEVEL FACTOR / MULTIPLIER	112	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	2	480	1	240	0	0	1	240	1	240	0	0	0
HEAT GAIN PEOPLE	665	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	2945	4163	0	0	0	767	1039	1479	3109	702	410	696	1375
TOTAL HT LOSS BTU/H	2492	1955	0	0	0	641	880	1252	2631	594	347	466	1012
TOTAL HT GAIN x 1.3 BTU/H	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.20	0.36
NET EXPOSED BSRT WALL ABOVE GR	452	325	79	0	0	116	160	227	478	108	63	167	363
NO ATTIC EXPOSED CLG	112	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	0
EXPOSED FLOOR	0	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	0
SLAB ON GRADE HEAT LOSS	2492	1955	0	0	0	641	880	1252	2631	594	347	466	1012
SUB TOTAL HT LOSS	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.20	0.36
SUB TOTAL HT GAIN	452	325	79	0	0	116	160	227	478	108	63	167	363
LEVEL FACTOR / MULTIPLIER	112	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	2	480	1	240	0	0	1	240	1	240	0	0	0
HEAT GAIN PEOPLE	665	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	2945	4163	0	0	0	767	1039	1479	3109	702	410	696	1375
TOTAL HT LOSS BTU/H	2492	1955	0	0	0	641	880	1252	2631	594	347	466	1012
TOTAL HT GAIN x 1.3 BTU/H	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.20	0.36

ROOM USE	EXP. WALL	CLG. HT.	FACTORS	LV/DN	KTIFM	LAUN	WIR	FOY	FOY-2	REC	BAS
GRS.WALL AREA	324	324	324	324	324	324	324	324	324	324	324
GLAZING	0	0	0	0	0	0	0	0	0	0	0
NORTH	20.7	15.1	0	0	0	0	0	0	0	0	0
EAST	20.7	38.9	0	0	0	0	0	0	0	0	0
SOUTH	20.7	23.4	0	0	0	0	0	0	0	0	0
WEST	20.7	38.9	0	0	0	0	0	0	0	0	0
SKYLT.	20.7	86.6	0	0	0	0	0	0	0	0	0
DOORS	24.6	4.3	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.3	0.8	274	1191	209	386	1677	295	28	122	21
NET EXPOSED BSRT WALL ABOVE GR	3.5	0.6	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.2	0.6	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	340	844	148	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	3071	2302	0	0	0	3284	660	2994	2200	6646	8205
SUB TOTAL HT LOSS	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.40
SUB TOTAL HT GAIN	1100	132	417	309	665	4568	0	0	0	0	0
LEVEL FACTOR / MULTIPLIER	132	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0
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	240	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	4568	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3071	2302	0	0	0	3284	660	2994	2200	6646	8205
TOTAL HT GAIN x 1.3 BTU/H	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.40
NET EXPOSED BSRT WALL ABOVE GR	1100	132	417	309	665	4568	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	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
SLAB ON GRADE HEAT LOSS	3071	2302	0	0	0	3284	660	2994	2200	6646	8205
SUB TOTAL HT LOSS	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.40
SUB TOTAL HT GAIN	1100	132	417	309	665	4568	0	0	0	0	0
LEVEL FACTOR / MULTIPLIER	132	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0
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	240	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	4568	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3071	2302	0	0	0	3284	660	2994	2200	6646	8205
TOTAL HT GAIN x 1.3 BTU/H	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.20	0.36	0.40

SITE NAME: ENCORE
BUILDER: GOLD PARK HOMES

CNR

TYPE: 41-5

GFA: 4188 LO# 72722

DATE: Mar-17

HEATING CFM 1525
TOTAL HEAT LOSS 70,589
AIR FLOW RATE CFM 21.6
COOLING CFM 1525
TOTAL HEAT GAIN 48,971
AIR FLOW RATE CFM 31.14ALLENNOX
EL296UH090XE48C 90

AFUE = 96 %

INPUT (BTU/H) = 88,000

OUTPUT (BTU/H) = 85,000

FAN SPEED

LOW 0

MEDIUM 1105

HIGH 1255

DESIGN CFM = 1525

CFM @ .6" E.S.P.

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

r/a pressure 0.17

r/a grille press. loss 0.02

adjusted pressure r/a 0.15

TEMPERATURE RISE 52 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	13	10	4	4
R/A	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.

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-4	ENS-4	MBR	LAUN	LVDN	LVDN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	ENS	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.47	1.06	0.76	1.04	1.48	1.55	0.70	1.55	0.41	1.47	1.94	2.29	2.29	2.20	2.20	2.20	1.94	0.90	4.07	1.06	4.58	4.58	4.58	4.58
CFM PER RUN HEAT	32	23	16	22	32	34	15	34	9	32	42	50	50	48	48	48	42	19	88	23	99	99	99	99
RM GAIN MBH.	2.08	1.11	0.26	1.89	2.42	2.36	0.50	2.36	0.13	2.08	2.19	2.21	2.21	2.49	2.49	2.49	2.19	0.87	2.66	1.11	0.19	0.19	0.19	0.19
CFM PER RUN COOLING	65	34	8	59	75	73	16	73	4	65	68	69	69	78	78	78	68	27	83	34	6	6	6	6
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	140	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	0.09	0.08	0.1	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	5	5	5	5	5	5	5	4	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	235	264	184	162	235	250	172	250	103	235	308	367	367	352	352	352	308	218	646	264	727	727	727	727
COOLING VELOCITY (ft/min)	477	390	92	433	551	536	184	536	46	477	499	507	507	573	573	573	499	310	609	390	44	44	44	44
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	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	G	G

RUN #	25	26	27	28	29	30	31
ROOM NAME	PANTRY	REC	REC	REC	REC	REC	FOY-2
RM LOSS MBH	0.70	2.20	1.37	3.70	3.70	4.32	
CFM PER RUN HEAT	15	48	30	80	80	93	
RM GAIN MBH	1.06	2.49	1.80	2.08	2.08	0.53	
CFM PER RUN COOLING	33	78	56	65	65	17	
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.16	
EQUIVALENT LENGTH	34	43	32	18	33	22	19
TOTAL EFFECTIVE LENGTH	204	153	192	128	133	132	129
ADJUSTED PRESSURE	0.08	0.11	0.09	0.13	0.13	0.13	
ROUND DUCT SIZE	4	5	5	5	5	5	
HEATING VELOCITY (ft/min)	172	352	220	587	587	683	
COOLING VELOCITY (ft/min)	379	573	411	477	477	125	
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	
TRUNK	C	B	C	F	F	G	G

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 A	222	0.08	8	8	500	TRUNK G	371	0.12	8.7	10	668	TRUNK O	0	0.06	0	0	8
TRUNK B	340	0.08	9.4	10	612	TRUNK H	0	0.00	0	0	0	TRUNK P	0	0.06	0	0	8
TRUNK C	237	0.07	8.5	8	533	TRUNK I	0	0.00	0	0	0	TRUNK Q	0	0.06	0	0	8
TRUNK D	460	0.07	10.8	14	591	TRUNK J	0	0.00	0	0	0	TRUNK R	0	0.06	0	0	8
TRUNK E	800	0.07	13.3	16	720	TRUNK K	0	0.00	0	0	0	TRUNK S	0	0.06	0	0	8
TRUNK F	358	0.13	8.4	8	806	TRUNK L	0	0.00	0	0	0	TRUNK T	0	0.06	0	0	8

RETURN AIR #	1	2	3	4	5	6	7
AIR VOLUME	120	120	120	120	195	300	360
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15
EQUIVALENT LENGTH	59	41	69	65	35	34	13
TOTAL EFFECTIVE LENGTH	165	195	195	195	175	195	145
ADJUSTED PRESSURE	0.07	0.06	0.06	0.06	0.07	0.06	0.09
ROUND DUCT SIZE	6.6	6.8	6.8	6.8	7.9	9.6	9.3
INLET GRILL SIZE	8	8	8	8	8	8	8
TRUNK	X	X	X	X	X	X	X
VELOCITY (ft/min)	14	14	14	14	30	30	14

TYPE: 41-5
SITE NAME: ENCORE

LO # 72722
CNR

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	7 @ 10.6 cfm	74.2 cfm
Table 9.32.3.A.	TOTAL	201.4 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	201.4	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	62.4	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	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+		
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 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	CNR	BUILDER: GOLD PARK HOMES
SFQT: 4188	LO# 72722	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)	73

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):	47178.6	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:	6.2 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	-

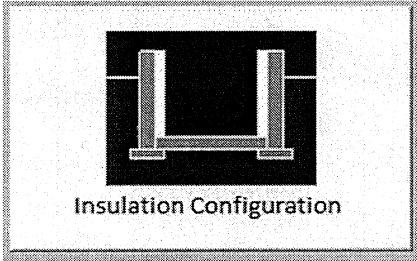
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

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):	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):		1730

TYPE: 41-5
LO# 72722

CNR

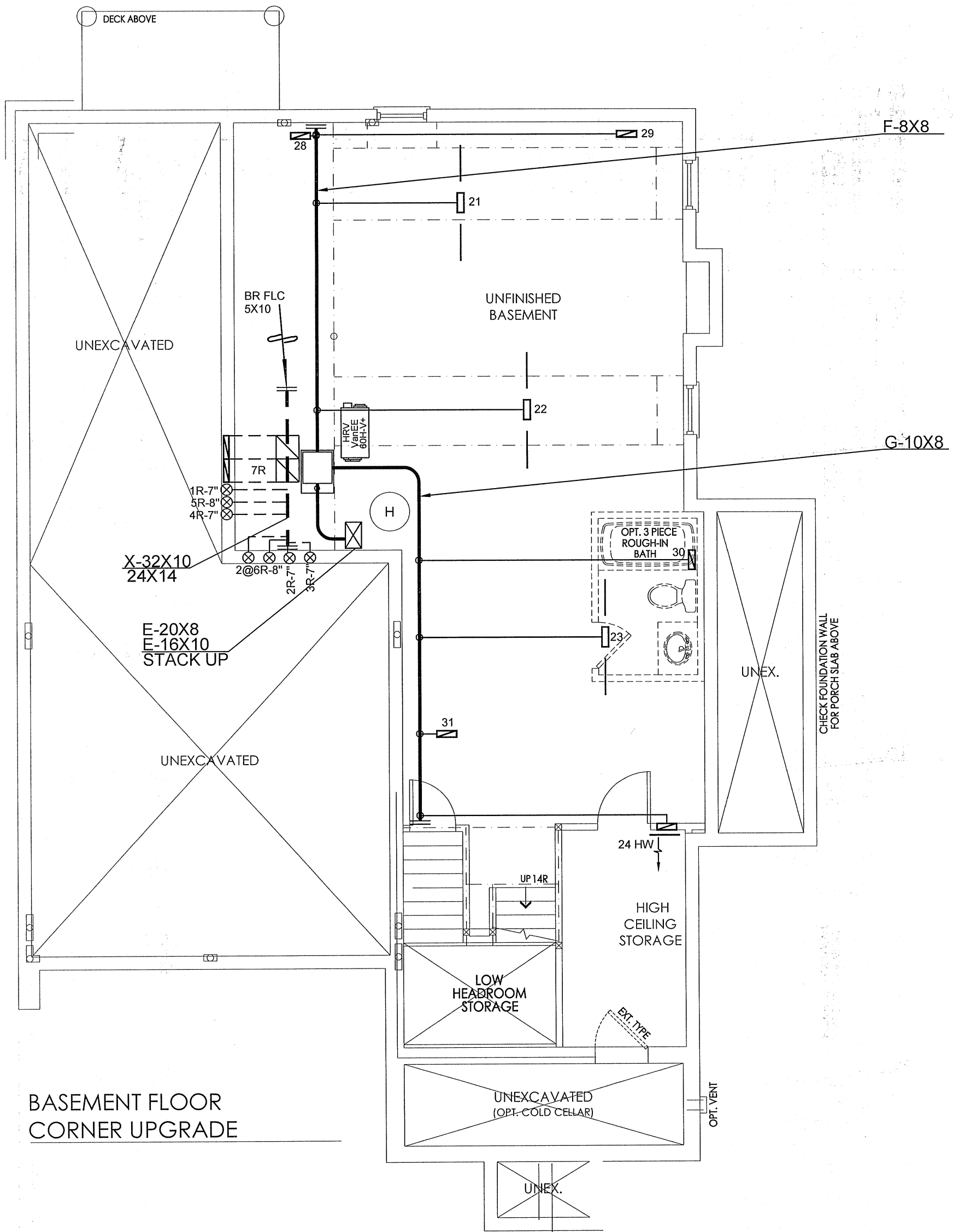
Air Infiltration Residential Load Calculator

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):	9.30			
Building Configuration				
Type:	Detached			
Number of Stories:	Three			
Foundation:	Full			
House Volume (m ³):	1335.9			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1780.9 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):	0.404			
Cooling Air Leakage Rate (ACH/H):	0.139			

TYPE: 41-5
LO# 72722

CNR



BASEMENT FLOOR
CORNER UPGRADE

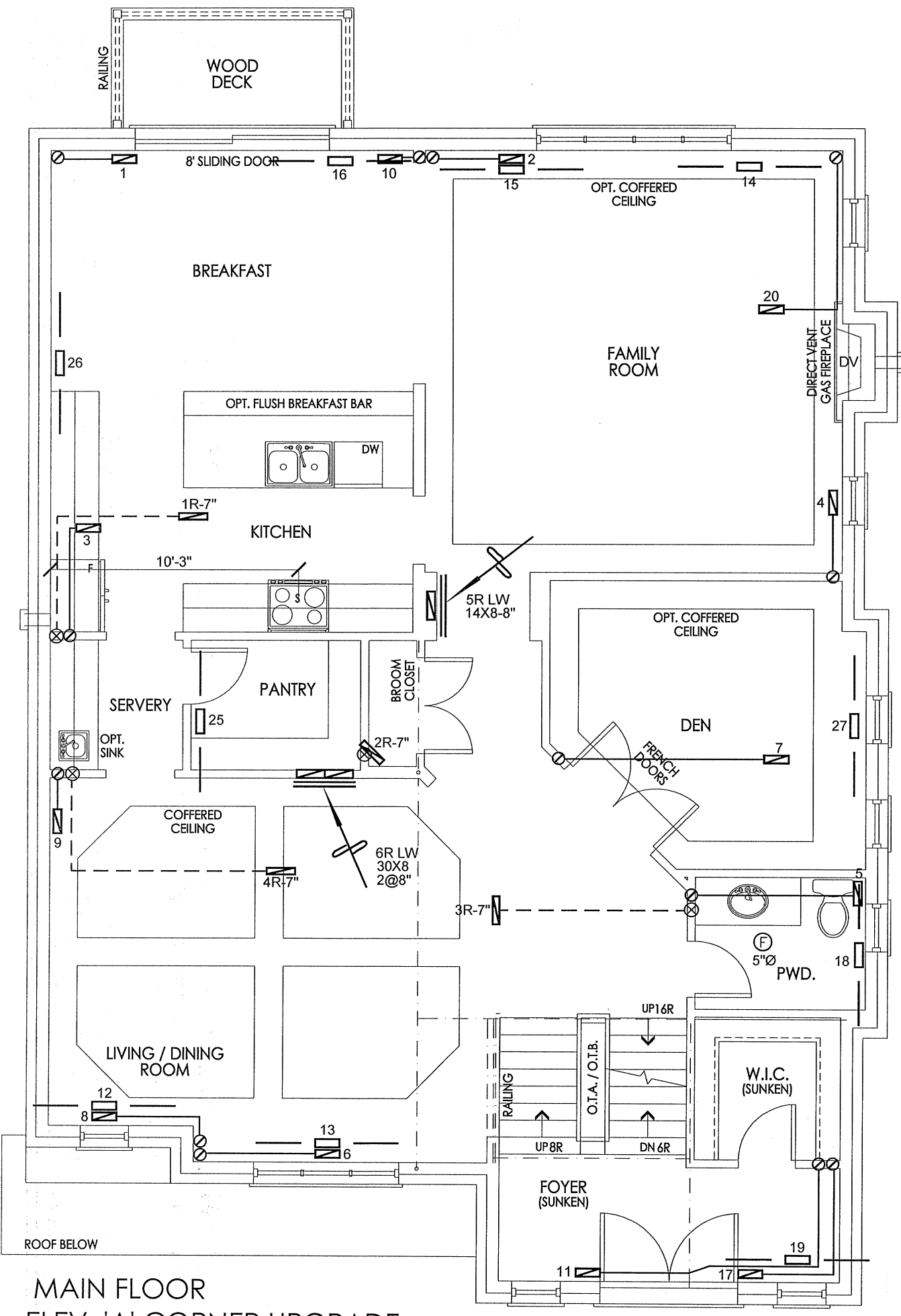
I MICHAEL O'Rourke HAVE REVIEW
AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C. 3.2.5 OF THE
BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

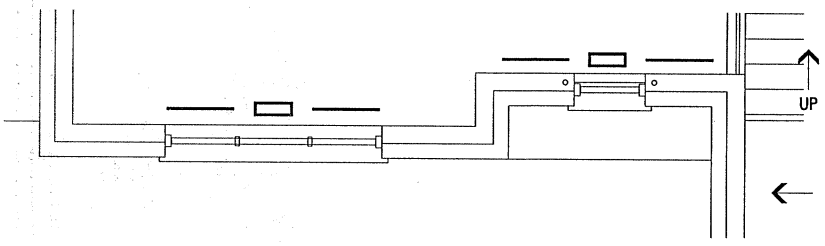
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE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

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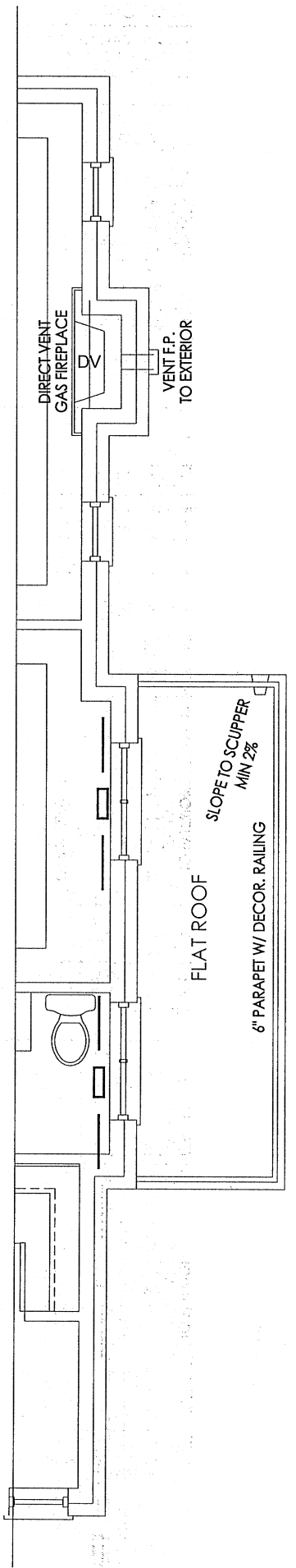
Client		HVACDESIGNS LTD. 375 Finley Ave - Unit 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services Installation to comply with the latest Ontario Building Code. All supply 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 73366 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title			
GOLD PARK HOMES			MAKE LENNOX		3RD FLOOR		13	4	4	BASEMENT HEATING LAYOUT		
Project Name			MODEL EL296UH090XE48C		2ND FLOOR		10	2	2			
ENCORE BRAMPTON, ONTARIO			INPUT 88 MBTU/H		1ST FLOOR		4	1	0			
CORNER 41-5			OUTPUT 85 MBTU/H		BASEMENT		4	1	0	Date	MAR/2017	
4188 sqft			COOLING 4.0 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						Scale	3/16" = 1'-0"
			FAN SPEED 1525 cfm @ 0.5" w.c.								BCIN# 19669	
											LO#	72722



MAIN FLOOR
ELEV. 'A' CORNER UPGRADE



PARTIAL MAIN FLOOR ELEV 'B'
CORNER UPGRADE



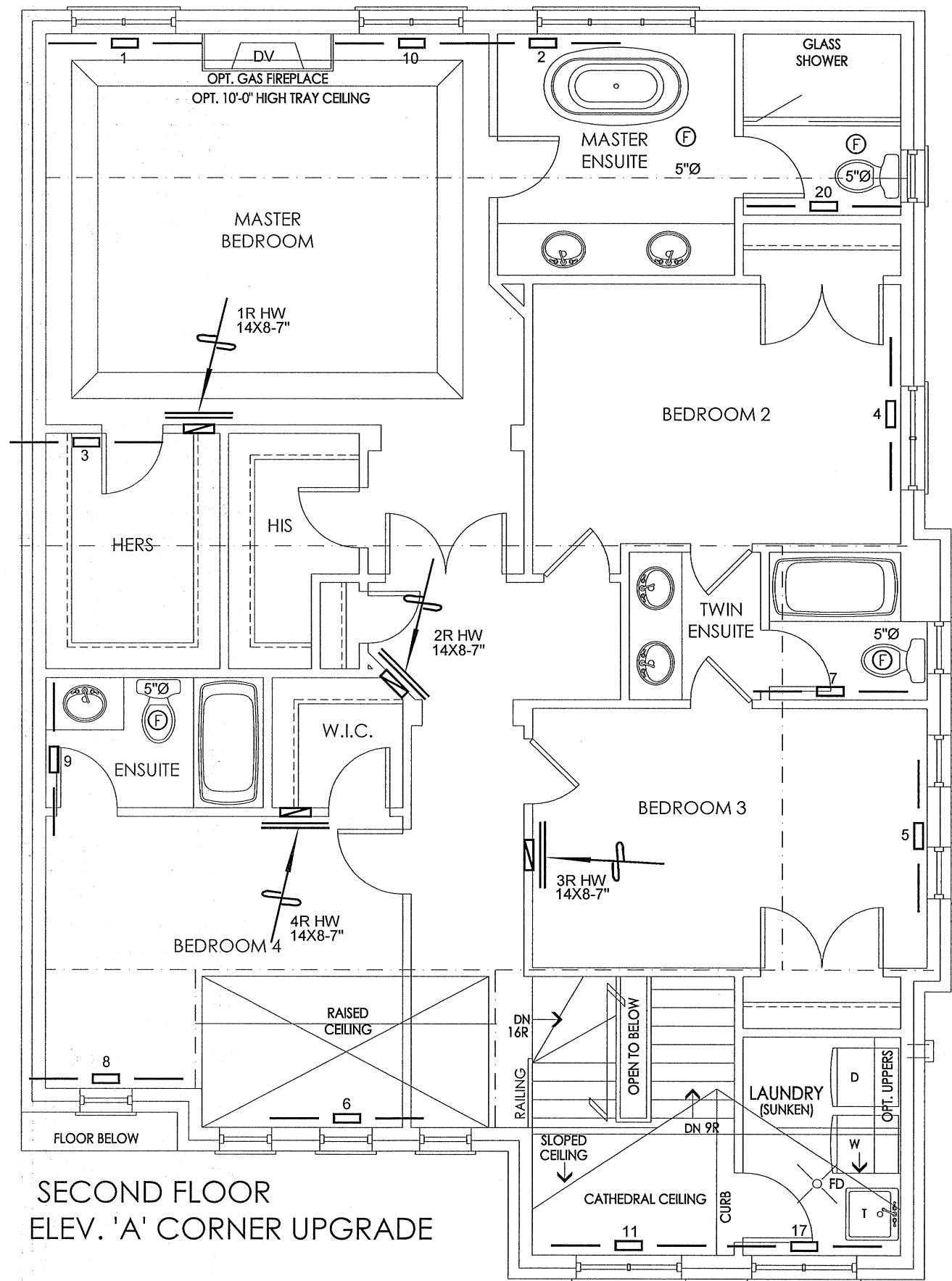
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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.	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 - Unit 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 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 MAIN FLOOR HEATING LAYOUT
Project Name ENCORE BRAMPTON, ONTARIO			
CORNER 41-5	4188 sqft		Date MAR/2017
			Scale 3/16" = 1'-0"
			BCIN# 19669
			LO# 72722



SECOND FLOOR
ELEV. 'A' CORNER UPGRADE

PARTIAL SECOND FLOOR ELEV 'B'
CORNER UPGRADE

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.		
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	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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GOLD PARK HOMES			SECOND FLOOR	
Project Name			HEATING	
ENCORE			LAYOUT	
BRAMPTON, ONTARIO			Date	MAR/2017
CORNER		Scale	3/16" = 1'-0"	
41-5		BCIN# 19669		
4188 sqft		LO#	72722	