

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 INNISFIL	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: 32-4-12 Project: ALCONA	
D. Declaration of Designer			
I <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):	
☐ 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.			
June 21, 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.

SITE NAME: ALCONA										DATE: Jun-17		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F.		CSA-F280-12	
BUILDER: BAYVIEW WELLINGTON										LO# 74582		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F.		SB-12 PACKAGE A1	
TYPE: 32-4-12										GFA: 2417							
ROOM USE		MER		ENS		BED-2		BED-3		BED-4		BATH		ENS-2			
EXP. WALL		41		27		24		34		11		8		9			
CLG. HT.		9		9		9		9		9		9		9			
FACTORS		369		243		216		306		99		72		81			
GRS.WALL AREA		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN			
GLAZING		0		0		0		0		0		0		0			
NORTH		23.3		15.8		0		0		0		0		0			
EAST		23.3		41.4		0		0		0		0		0			
SOUTH		23.3		24.7		12		280		297		0		0			
WEST		23.3		41.4		28		652		1169		14		326		579	
SKYLT.		40.8		104.3		0		0		0		0		0			
DOORS		27.6		4.1		0		0		0		0		0			
NET EXPOSED WALL		4.9		0.7		329		1607		236		229		1119		164	
NET EXPOSED BSMT WALL ABOVE GR		3.9		0.6		0		0		0		0		0			
NO A/TIC EXPOSED CLG		1.4		0.8		408		573		236		178		247		102	
EXPOSED FLOOR		2.8		0.4		0		0		0		0		0			
BASEMENT/CRAWL HEAT LOSS		0		0		0		0		0		0		0			
SLAB ON GRADE HEAT LOSS		0		0		0		0		0		0		0			
SUBTOTAL HT LOSS		3112		1927		1692		2401		1010		649		743		141	
SUB TOTAL HT GAIN		0.20		0.26		0.20		0.26		0.20		0.26		0.20		0.26	
LEVEL FACTOR / MUL TIPLIER		820		446		672		633		266		171		188			
AIR CHANGE HEAT LOSS		149		66		111		303		42		22		90		11	
AIR CHANGE HEAT GAIN		0		0		274		237		0		0		0			
DUCT LOSS		0		0		1		240		1		0		0			
DUCT GAIN		2		480		584		584		584		0		0			
HEAT GAIN PEOPLE		240		584		3017		3338		1276		820		992		218	
HEAT GAIN APPLANCES/LIGHTS		0		0		0		0		0		0		0			
TOTAL HT LOSS BTU/H		3932		4081		2438		1183									
TOTAL HT GAIN x 1.3 BTU/H																	

TOTAL HEAT GAIN BTU/H: 29065										TONS: 2.42		LOSSES DUE TO VENTILATION LOAD BTU/H: 3122		STRUCTURAL HEAT LOSS: 47045		TOTAL COMBINED HEAT LOSS BTU/H: 50167	
ROOM USE		LV/DN		KT/IFM		LAUN		PWD		FOY		MUD		WOD		EAS	
EXP. WALL		21		52		8		9		21		10		36		162	
CLG. HT.		10		10		9		10		10		10		9		9	
FACTORS		210		620		72		90		210		100		324		1188	
GRS.WALL AREA		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
GLAZING		0		0		0		0		0		0		0		0	
NORTH		23.3		15.8		0		0		0		0		0		0	
EAST		23.3		41.4		0		0		18		419		745		0	
SOUTH		23.3		24.7		48		210		0		0		0		0	
WEST		23.3		41.4		0		9		0		0		0		0	
SKYLT.		40.8		104.3		0		0		0		0		0		0	
DOORS		27.6		4.1		0		0		0		0		0		0	
NET EXPOSED WALL		4.9		0.7		162		81		40		1106		162		20	
NET EXPOSED BSMT WALL ABOVE GR		3.9		0.6		0		0		0		0		0		0	
EXPOSED CLG		1.4		0.6		0		0		0		0		0		0	
NO A/TIC EXPOSED CLG		3.0		1.2		10		0		0		0		0		0	
EXPOSED FLOOR		2.8		0.4		0		0		0		0		0		0	
BASEMENT/CRAWL HEAT LOSS		0		0		0		0		0		0		0		0	
SLAB ON GRADE HEAT LOSS		0		0		0		0		0		0		0		0	
SUBTOTAL HT LOSS		1910		4154		487		605		2268		944		1161		5981	
SUB TOTAL HT GAIN		0.30		0.49		0.20		0.30		0.30		0.30		0.30		0.60	
LEVEL FACTOR / MUL TIPLIER		935		2033		128		256		1110		482		8059		0.99	
AIR CHANGE HEAT LOSS		100		280		8		22		78		11		48			
AIR CHANGE HEAT GAIN		0		0		0		0		0		0		0			
DUCT LOSS		0		0		0		0		0		0		0			
DUCT GAIN		0		0		0		0		0		0		0			
HEAT GAIN PEOPLE		240		584		584		902		3377		1406		1161		15041	
HEAT GAIN APPLANCES/LIGHTS		0		0		0		0		0		0		0		0	
TOTAL HT LOSS BTU/H		2844		6187		615		902		820		1406		1161		15041	
TOTAL HT GAIN x 1.3 BTU/H		2584		5845		909		393		1423		953		479		1153	

SITE NAME: ALCONA

BUILDER: BAYVIEW WELLINGTON

TYPE: 32-4-12

DATE: Jun-17

GFA: 2417 LO# 74582

HEATING CFM 995 COOLING CFM 995
TOTAL HEAT LOSS 47,045 TOTAL HEAT GAIN 28,607
AIR FLOW RATE CFM 21.15 AIR FLOW RATE CFM 34.78

EL296UH070XE36B
FAN SPEED
LOW 0
MEDIUM 995
HIGH 1100

AFUE = 96 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 64,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	11	7	4
R/A	0	0	4	1	1

DESIGN CFM = 995
CFM @ .6" E.S.P.
TEMPERATURE RISE 60 °F
r/a pressure 0.17
r/a grille press. Loss 0.02
r/a adjusted pressure r/a 0.15

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	BED-2	BED-3	BED-4	BATH	BED-2	BED-3	MBR	ENS-2	LV/DN	KT/FM	KT/FM	KT/FM	KT/FM	KT/FM	LAUN	PWD	FOY	MJD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.97	2.14	1.51	1.67	1.28	1.82	1.51	1.67	1.97	0.99	2.84	2.06	2.06	2.06	2.06	2.06	0.61	0.90	3.38	1.41	4.05	4.05	4.05	4.05
CFM PER RUN HEAT	42	45	32	35	27	17	32	35	42	21	60	44	44	44	44	44	13	19	71	30	86	86	86	86
RM GAIN MBH	2.04	1.18	1.69	1.88	1.84	0.40	1.69	1.88	2.04	0.22	2.58	1.95	1.95	1.95	1.95	1.95	0.91	0.39	1.42	0.95	0.41	0.41	0.41	0.41
CFM PER RUN COOLING	71	41	59	65	64	14	59	65	71	8	90	68	68	68	68	68	32	14	49	33	14	14	14	14
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	180	170	170	110	190	190	180	170	190	160	170	190	110	110	120	120	130	120	120	140	150	140	150	130
TOTAL EFFECTIVE LENGTH	243	237	199	147	231	239	223	223	264	202	196	236	155	173	173	173	174	159	152	164	185	170	185	158
ADJUSTED PRESSURE	0.07	0.07	0.09	0.12	0.07	0.07	0.08	0.08	0.07	0.09	0.08	0.07	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.09	0.11	0.11
ROUND DUCT SIZE	5	5	5	5	5	4	5	5	5	4	6	5	5	5	5	5	4	4	5	4	6	5	5	5
HEATING VELOCITY (ft/min)	308	330	235	257	198	195	235	257	308	241	306	323	323	323	323	323	149	218	521	344	438	631	631	631
COOLING VELOCITY (ft/min)	521	301	433	477	470	161	433	477	521	92	459	499	499	499	499	499	367	161	360	379	71	103	103	103
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10
TRUNK	A	A	B	C	B	B	B	C	A	B	C	A	A	A	A	A	B	C	C	B	A	A	B	C

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	TRUNK A	TRUNK B	TRUNK C	TRUNK D	TRUNK E	TRUNK F	TRUNK G	TRUNK H	TRUNK I	TRUNK J	TRUNK K	TRUNK L	TRUNK M	TRUNK N	TRUNK O	TRUNK P	TRUNK Q	TRUNK R	TRUNK S	TRUNK T	TRUNK U	TRUNK V	TRUNK W	TRUNK X
RM LOSS MBH	1.97	2.14	1.51	1.67	1.28	1.82	1.51	1.67	1.97	0.99	2.84	2.06	2.06	2.06	2.06	2.06	0.61	0.90	3.38	1.41	4.05	4.05	4.05	4.05
CFM PER RUN HEAT	42	45	32	35	27	17	32	35	42	21	60	44	44	44	44	44	13	19	71	30	86	86	86	86
RM GAIN MBH	2.04	1.18	1.69	1.88	1.84	0.40	1.69	1.88	2.04	0.22	2.58	1.95	1.95	1.95	1.95	1.95	0.91	0.39	1.42	0.95	0.41	0.41	0.41	0.41
CFM PER RUN COOLING	71	41	59	65	64	14	59	65	71	8	90	68	68	68	68	68	32	14	49	33	14	14	14	14
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	180	170	170	110	190	190	180	170	190	160	170	190	110	110	120	120	130	120	120	140	150	140	150	130
TOTAL EFFECTIVE LENGTH	243	237	199	147	231	239	223	223	264	202	196	236	155	173	173	173	174	159	152	164	185	170	185	158
ADJUSTED PRESSURE	0.07	0.07	0.09	0.12	0.07	0.07	0.08	0.08	0.07	0.09	0.08	0.07	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.09	0.11	0.11
ROUND DUCT SIZE	5	5	5	5	5	4	5	5	5	4	6	5	5	5	5	5	4	4	5	4	6	5	5	5
HEATING VELOCITY (ft/min)	308	330	235	257	198	195	235	257	308	241	306	323	323	323	323	323	149	218	521	344	438	631	631	631
COOLING VELOCITY (ft/min)	521	301	433	477	470	161	433	477	521	92	459	499	499	499	499	499	367	161	360	379	71	103	103	103
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10
TRUNK	A	A	B	C	B	B	B	C	A	B	C	A	A	A	A	A	B	C	C	B	A	A	B	C

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	TRUNK A	TRUNK B	TRUNK C	TRUNK D	TRUNK E	TRUNK F	TRUNK G	TRUNK H	TRUNK I	TRUNK J	TRUNK K	TRUNK L	TRUNK M	TRUNK N	TRUNK O	TRUNK P	TRUNK Q	TRUNK R	TRUNK S	TRUNK T	TRUNK U	TRUNK V	TRUNK W	TRUNK X
RM LOSS MBH	1.97	2.14	1.51	1.67	1.28	1.82	1.51	1.67	1.97	0.99	2.84	2.06	2.06	2.06	2.06	2.06	0.61	0.90	3.38	1.41	4.05	4.05	4.05	4.05
CFM PER RUN HEAT	42	45	32	35	27	17	32	35	42	21	60	44	44	44	44	44	13	19	71	30	86	86	86	86
RM GAIN MBH	2.04	1.18	1.69	1.88	1.84	0.40	1.69	1.88	2.04	0.22	2.58	1.95	1.95	1.95	1.95	1.95	0.91	0.39	1.42	0.95	0.41	0.41	0.41	0.41
CFM PER RUN COOLING	71	41	59	65	64	14	59	65	71	8	90	68	68	68	68	68	32	14	49	33	14	14	14	14
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	180	170	170	110	190	190	180	170	190	160	170	190	110	110	120	120	130	120	120	140	150	140	150	130
TOTAL EFFECTIVE LENGTH	243	237	199	147	231	239	223	223	264	202	196	236	155	173	173	173	174	159	152	164	185	170	185	158
ADJUSTED PRESSURE	0.07	0.07	0.09	0.12	0.07	0.07	0.08	0.08	0.07	0.09	0.08	0.07	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.09	0.11	0.11
ROUND DUCT SIZE	5	5	5	5	5	4	5	5	5	4	6	5	5	5	5	5	4	4	5	4	6	5	5	5
HEATING VELOCITY (ft/min)	308	330	235	257	198	195	235	257	308	241	306	323	323	323	323	323	149	218	521	344	438	631	631	631
COOLING VELOCITY (ft/min)	521	301	433	477	470	161	433	477	521	92	459	499	499	499	499	499	367	161	360	379	71	103	103	103
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10
TRUNK	A	A	B	C	B	B	B	C	A	B	C	A	A	A	A	A	B	C	C	B	A	A	B	C

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 32-4-12**BUILDER:** BAYVIEW WELLINGTON**SFQT:** 2417**LO#** 74582**SITE:** ALCONA**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-11	OUTDOOR DESIGN TEMP.	84
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
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):	32613.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
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: 56.0 ft	WIDTH: 27.0 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



TYPE: 32-4-12
SITE NAME: ALCONA

LO # 74582

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	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	190.8 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	190.8	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	51.8	cfm

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

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	$\Delta T ^\circ F$	FACTOR	% LOSS
139.0 CFM	83 F	1.08	0.25

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
ENS-2	QTXEN050C	50	☒
PWD	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 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:	
BAYVIEW WELLINGTON	
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:	June-17

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

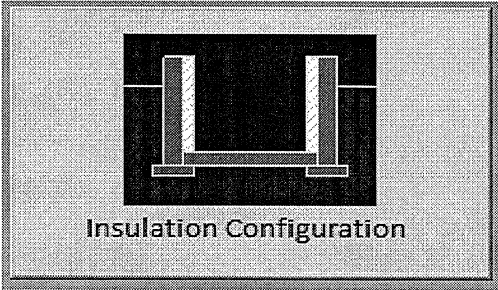
Weather Station Description				
Province:	Ontario			
Region:	Barrie			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	923.5			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1231.1 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):	0.332			
Cooling Air Leakage Rate (ACH/H):	0.087			

TYPE: 32-4-12

LO# 74582

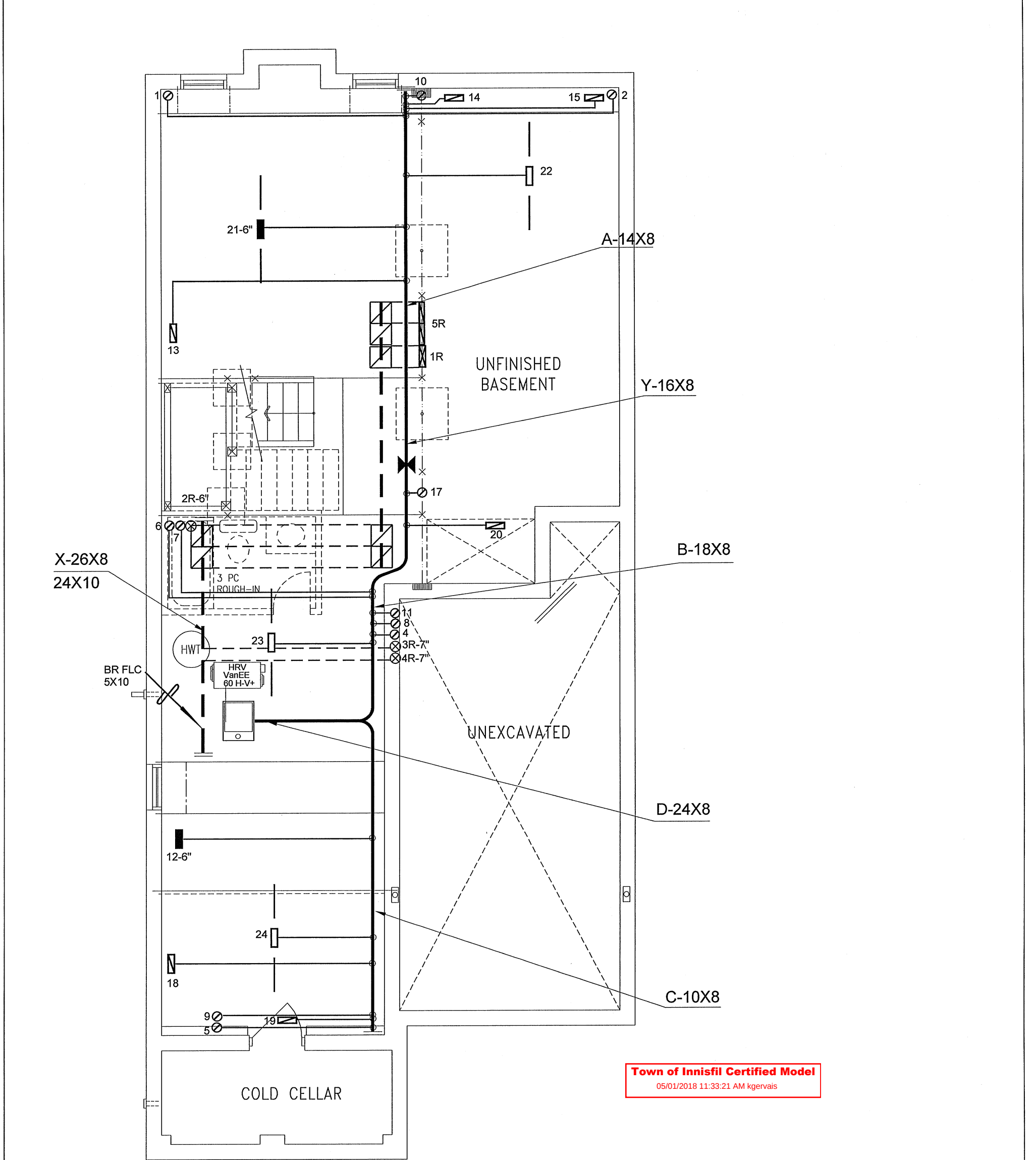
Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Barrie	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	17.1	 Insulation Configuration
Floor Width (m):	8.2	
Exposed Perimeter (m):	49.4	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.1	
Door Area (m ²):	0.0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1718

TYPE: 32-4-12

LO# 74582



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.

BASEMENT FLOOR PLAN 'A'/'B'

12'0" GARAGE

CSA-F280-12

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.
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	Date
REVISIONS								

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Client

BAYVIEW WELLINGTON

Project Name

**ALCONA
INNISFIL, ONTARIO**

32-4-12

2417 sqft

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

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 50167 BTU/H

UNIT DATA

MAKE LENNOX

MODEL EL296UH070XE36B-70

INPUT 66 MBTU/H

OUTPUT 64 MBTU/H

COOLING 2.5 TONS

FAN SPEED 995 cfm @ 0.6" w.c.

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	11	4	4
1ST FLOOR	7	1	1
BASEMENT	4	1	0

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

Sheet Title

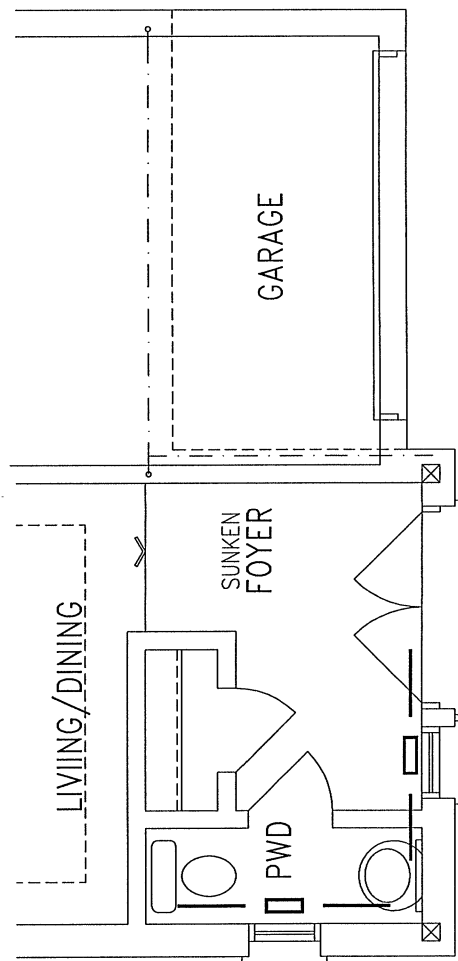
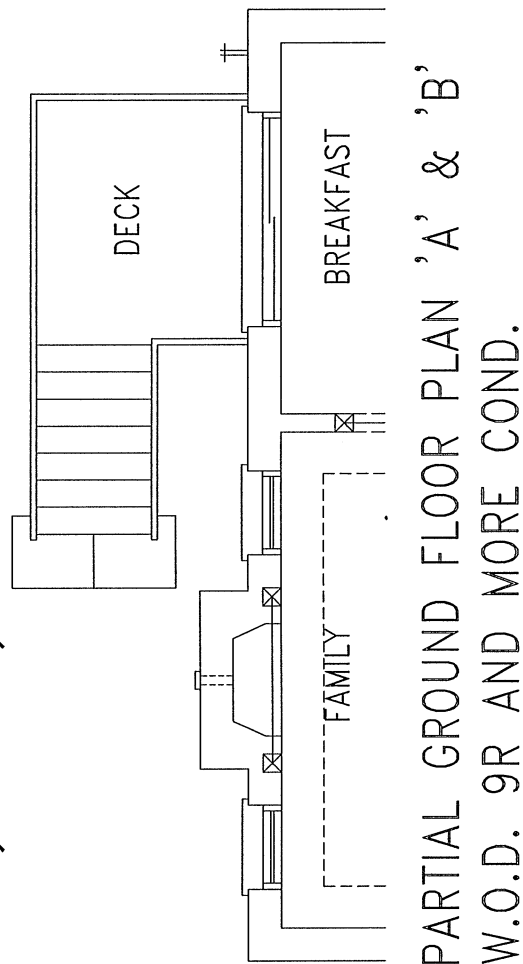
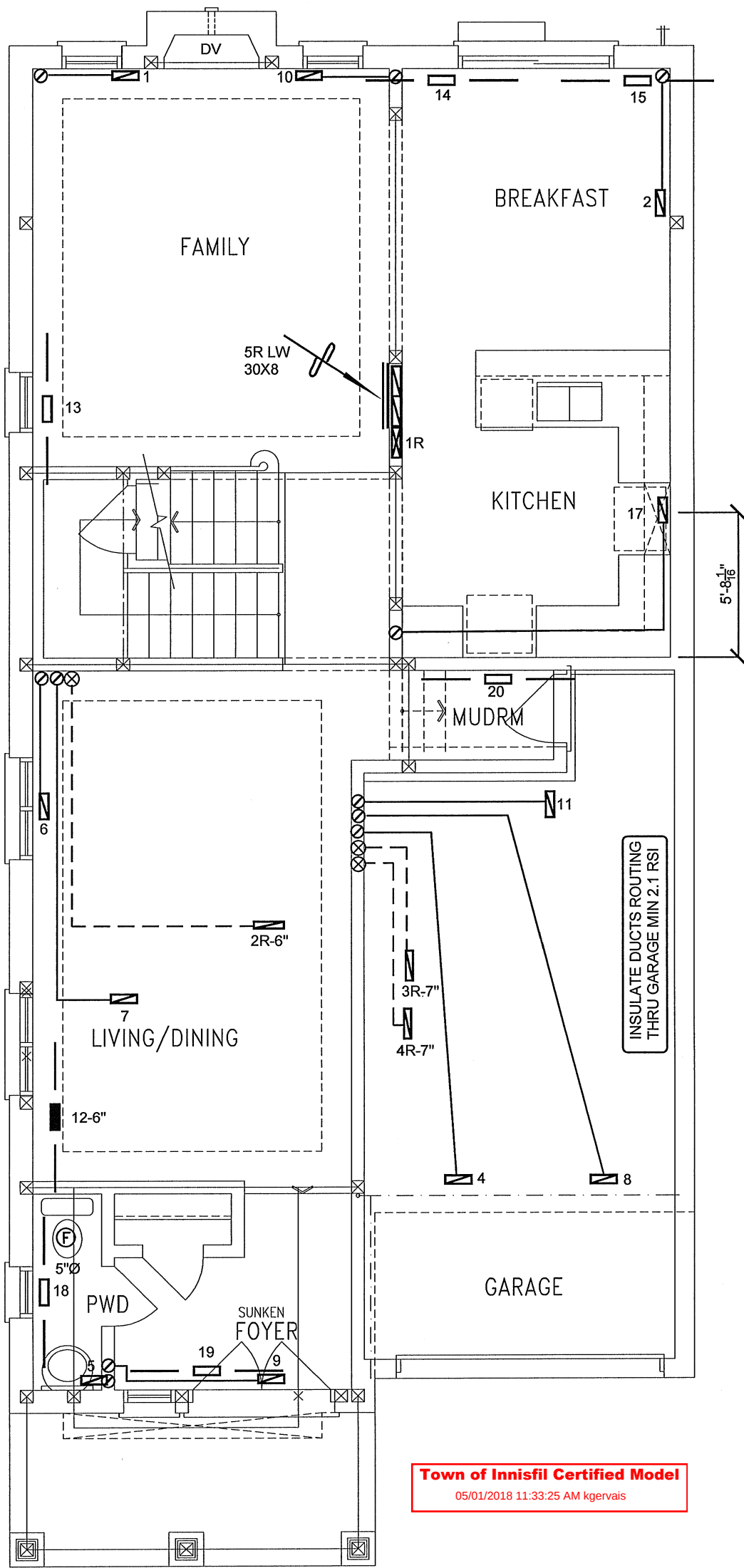
**BASEMENT
HEATING
LAYOUT**

Date JUNE/2017

Scale 3/16" = 1'-0"

BCIN# 19669

LO# 74582



PART. GROUND FLOOR
PLAN 'B' 12'0" GARAGE

GROUND FLOOR PLAN 'A' 12'0" GARAGE

CSA-F280-12

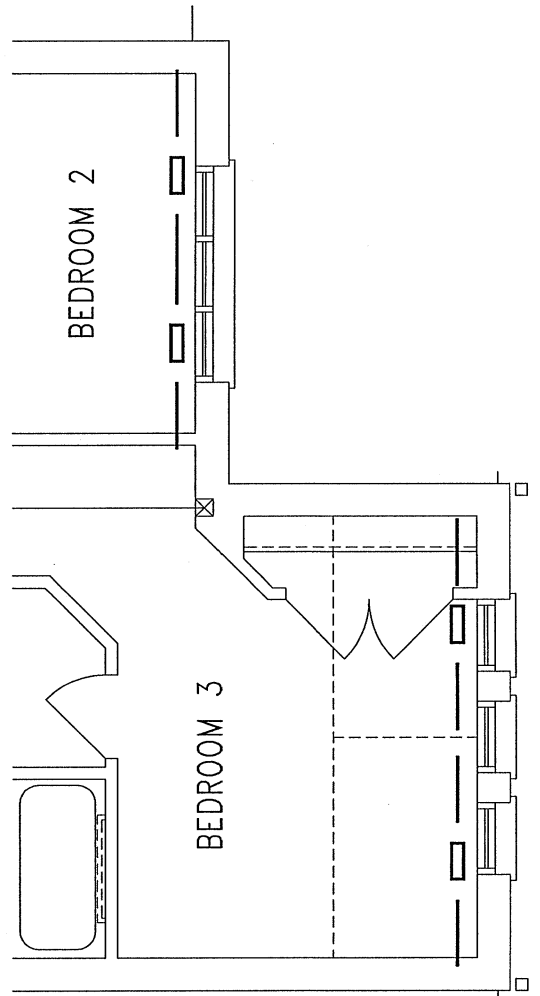
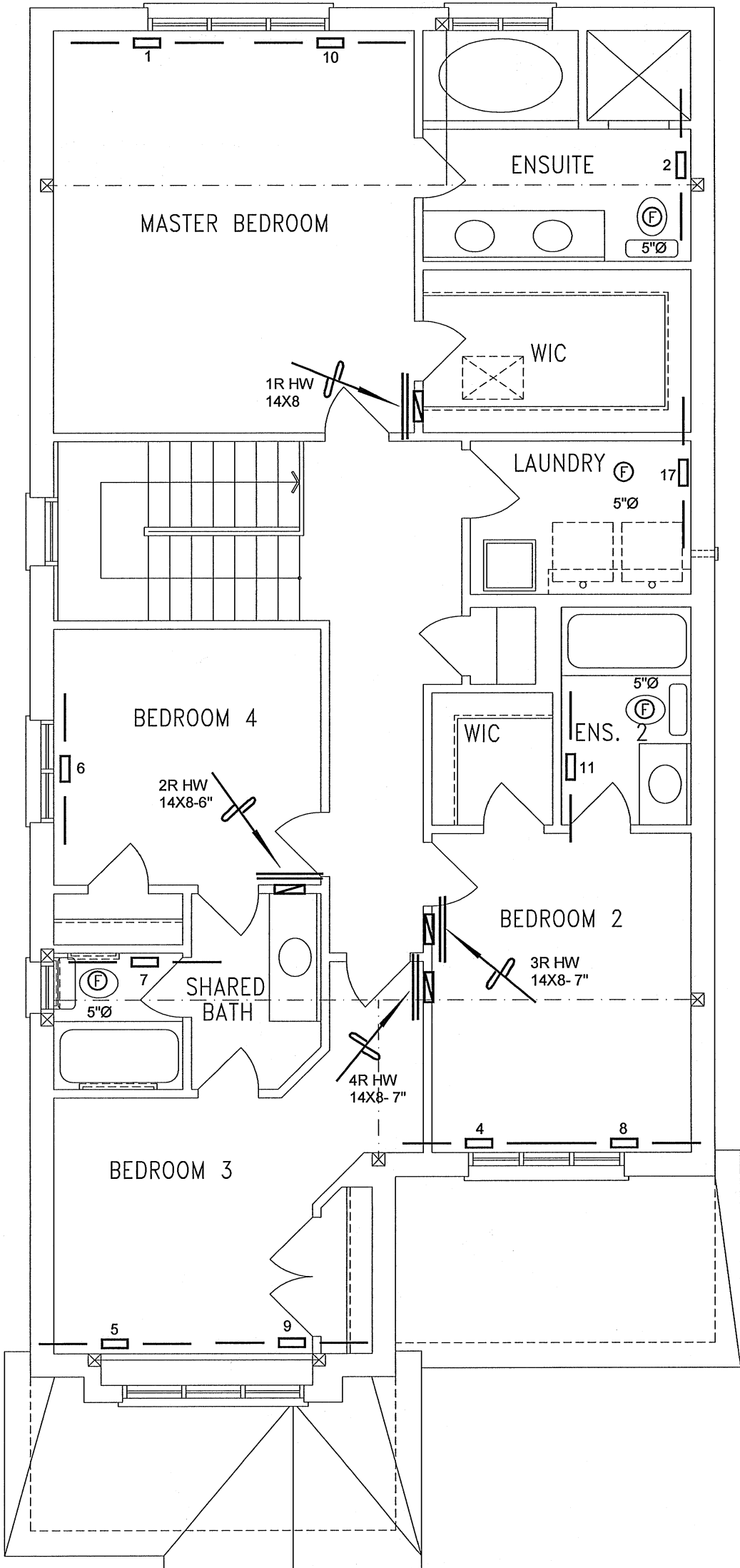
PACKAGE A1

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

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
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	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Client BAYVIEW WELLINGTON		 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 ALCONA INNISFIL, ONTARIO			Date JUNE/2017	Scale 3/16" = 1'-0"
32-4-12 <				



PART. SECOND FLOOR PLAN 'B'

Town of Innisfil Certified Model
05/01/2018 11:33:27 AM kgervais

SECOND FLOOR PLAN 'A' 12'0" GARAGE

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.		
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Project Name ALCONA INNISFIL, ONTARIO			Date JUNE/2017	
32-4-12			Scale 3/16" = 1'-0"	
2417 sqft			BCIN# 19669	
			LO# 74582	