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	**Postal code**	**Plan number/ other description**		
INNISFIL				

B. Individual who reviews and takes responsibility for design activities

Name		Firm		
MICHAEL O'ROURKE		**HVAC DESIGNS LTD.**		
Street address			**Unit no.**	**Lot/con.**
375 FINLEY AVE			**202**	**N/A**
Municipality	**Postal code**	**Province**	**E-mail**	
AJAX	**L1S 2E2**	**ONTARIO**	**info@hvacdesigns.ca**	
Telephone number	**Fax number**		**Cell number**	
(905) 619-2300	**(905) 619-2375**		( )	

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** **RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY** **RESIDENTIAL SYSTEM DESIGN per CSA-F280-12**	**Model:** 32-5-12 **Project:** ALCONA

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 Di vision 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.

June 22, 2017
Date

Michael O'Rourke
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.

HVAC DESIGNS LTD.
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Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: ALCONA | DATE: Jun-17 | WINTER NATURAL AIR CHANGE RATE 0.332 | HEAT LOSS ΔT °F. 83 | CSA-F280-12
BUILDER: BAYVIEW WELLINGTON | TYPE: 32-5-12 | GFA: 2586 | LO# 74584 | SUMMER NATURAL AIR CHANGE RATE 0.087 | HEAT GAIN ΔT °F. 12 | SB-12 PACKAGE A1

ROOM USE			MBR			ENS			WIC			BED-2			BED-3			BED-4			BATH						ENS-2		
EXP. WALL			32			22			7			30			35			13			8						13		
CLG. HT.			9			9			9			9			10			9			9						9		
	FACTORS																												
GRS.WALL AREA	LOSS	GAIN	288			198			63			270			333			117			72						117		
GLAZING			LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN					LOSS	GAIN	
NORTH	23.3	15.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
EAST	23.3	41.4	0	0	0	0	0	0	0	0	0	22	513	910	43	1002	1780	0	0	0	0	0	0				0	0	0
SOUTH	23.3	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	373	396	7	163	173				0	0	0
WEST	23.3	41.4	28	652	1159	13	303	538	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
SKYLT.	40.8	101.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
DOORS	27.6	4.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
NET EXPOSED WALL	4.9	0.7	260	1270	186	185	904	133	63	308	45	248	1212	178	290	1414	207	101	493	72	65	318	47				117	572	84
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
EXPOSED CLG	1.4	0.6	255	358	147	143	201	83	91	128	53	220	309	127	166	233	96	208	292	120	96	135	55				143	201	83
NO ATTIC EXPOSED CLG	3.0	1.2	0	0	0	0	0	0	0	0	0	0	0	0	70	211	87	0	0	0	0	0	0				0	0	0
EXPOSED FLOOR	2.8	0.4	0	0	0	0	0	0	0	0	0	220	614	90	0	0	0	0	0	0	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				2281			1408			436			2647			2860			1158			616					773	
SUB TOTAL HT GAIN					1492			753			98			1305			2169			588			275					166	
LEVEL FACTOR / MULTIPLIER			0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27					0.20	0.27	
AIR CHANGE HEAT LOSS				614			379			117			713			770			312			166					208	
AIR CHANGE HEAT GAIN					116			58			8			101			168			46			21					13	
DUCT LOSS				0			0			0			336			0			0			0					0	
DUCT GAIN					0			0			0			217			0			0			0					0	
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240	0		0				0	0	
HEAT GAIN APPLIANCES/LIGHTS					528			0			0			528			528			528			0					0	
TOTAL HT LOSS BTU/H				2895			1787			553			3696			3630			1470			781					981	
TOTAL HT GAIN x 1.3 BTU/H					3401			1055			137			3110			4038			1822			385					233	

ROOM USE			LV/DN				KT/FM				LAUN			W/R			FOY			MUD						WOD			BAS		
EXP. WALL			40				78				7			13			32			5						36			166		
CLG. HT.			10				10				9			10			11			10						9			9		
	FACTORS																														
GRS.WALL AREA	LOSS	GAIN	400				780				63			130			352			50						324			1212		
GLAZING			LOSS	GAIN			LOSS	GAIN			LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN					LOSS	GAIN		LOSS	GAIN	
NORTH	23.3	15.8	0	0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0				23	536	364	6	140	95
EAST	23.3	41.4	0	0	0		0	0	0		0	0	0	0	0	0	6	140	248	0	0	0				0	0	0	0	0	0
SOUTH	23.3	24.7	48	1118	1187		0	0	0		8	186	198	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0
WEST	23.3	41.4	0	0	0		89	2073	3683		0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0
SKYLT.	40.8	101.3	0	0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0
DOORS	27.6	4.1	0	0	0		0	0	0		0	0	0	0	0	0	40	1106	162	20	553	81				0	0	0	20	553	81
NET EXPOSED WALL	4.9	0.7	352	1720	252		691	3376	495		55	269	39	130	635	93	306	1495	219	30	147	21				0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.6	0	0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0				193	760	111	282	1111	163
EXPOSED CLG	1.4	0.6	0	0	0		0	0	0		112	157	65	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0
NO ATTIC EXPOSED CLG	3.0	1.2	0	0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0
EXPOSED FLOOR	2.8	0.4	0	0	0		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS				0				0				0			0			0			0								5823	
SLAB ON GRADE HEAT LOSS				0				0				0			0			0			0					0				
SUBTOTAL HT LOSS				2838				5449				612			635			2740			699					1296			7627		
SUB TOTAL HT GAIN					1439				4178				302			93			630			103					475			339	
LEVEL FACTOR / MULTIPLIER			0.30	0.42			0.30	0.42			0.20	0.27		0.30	0.42		0.30	0.42		0.30	0.42								0.50	0.96	
AIR CHANGE HEAT LOSS				1186				2277				165			265			1145			292								8610		
AIR CHANGE HEAT GAIN					112				324				23			7			49			8								63	
DUCT LOSS				0				0				0			0			0			0								0		
DUCT GAIN					0				0				0			0			0			0								0	
HEAT GAIN PEOPLE	240		0		0		0		0		0		0	0		0	0		0	0		0				0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					528				528				528			0			0			528					0			528	
TOTAL HT LOSS BTU/H				4024				7726				777			901			3886			992					1296			16237		
TOTAL HT GAIN x 1.3 BTU/H					2703				6540				1109			130			882			830					618			1209	

TOTAL HEAT GAIN BTU/H: 28660 TONS: 2.39 LOSS DUE TO VENTILATION LOAD BTU/H: 3122 STRUCTURAL HEAT LOSS: 51632 TOTAL COMBINED HEAT LOSS BTU/H: 54754

I 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 MICHAEL O'ROURKE

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SITE NAME: ALCONA
BUILDER: BAYVIEW WELLINGTON

TYPE: 32-5-12 DATE: Jun-17 GFA: 2586 LO# 74584

HEATING CFM	995	COOLING CFM	995	furnace pressure	0.6				^LENNOX		AFUE = 96 %
TOTAL HEAT LOSS	51,632	TOTAL HEAT GAIN	28,202	furnace filter	0.05				EL296UH070XE36B	70	INPUT (BTU/H) = 66,000
AIR FLOW RATE CFM	19.27	AIR FLOW RATE CFM	35.28	a/c coil pressure	0.2				FAN SPEED		OUTPUT (BTU/H) = 64,000
				available pressure for s/a & r/a	0.35				LOW	0	
									MEDLOW	0	DESIGN CFM = 995
				plenum pressure s/a	0.18	r/a pressure	0.17		MEDIUM	995	CFM @ .6 " E.S.P.
				max s/a dif press. loss	0.02	r/a grille press. Loss	0.02		MEDIUM HIGH	1100	
				min adjusted pressure s/a	0.16	adjusted pressure r/a	0.15		HIGH	0	TEMPERATURE RISE 60 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	7	5
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.

RUN #	1	2	3	4	5	6	7	8	9	10	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	BED-2	BED-3	MBR	ENS-2	LV/DN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.45	1.79	0.55	1.85	1.82	1.47	0.78	1.85	1.82	1.45	0.98	4.02	2.58	2.58	2.58	0.78	0.90	3.89	0.99	3.51	3.51	3.51	3.51
CFM PER RUN HEAT	28	34	11	36	35	28	15	36	35	28	19	78	50	50	50	15	17	75	19	68	68	68	68
RM GAIN MBH.	1.70	1.06	0.14	1.55	2.02	1.82	0.39	1.55	2.02	1.70	0.23	2.70	2.18	2.18	2.18	1.11	0.13	0.88	0.83	0.37	0.37	0.37	0.37
CFM PER RUN COOLING	60	37	5	55	71	64	14	55	71	60	8	95	77	77	77	39	5	31	29	13	13	13	13
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	49	50	36	39	60	37	35	41	67	53	26	38	47	45	46	38	20	36	17	39	34	24	25
EQUIVALENT LENGTH	120	130	120	140	120	170	130	150	140	140	170	130	120	120	130	160	190	120	170	140	150	110	120
TOTAL EFFECTIVE LENGTH	169	180	156	179	180	207	165	191	207	193	196	168	167	165	176	198	210	156	187	179	184	134	145
ADJUSTED PRESSURE	0.1	0.1	0.11	0.1	0.1	0.08	0.1	0.09	0.08	0.09	0.09	0.1	0.1	0.1	0.1	0.09	0.08	0.11	0.09	0.1	0.09	0.13	0.12
ROUND DUCT SIZE	5	4	4	4	5	5	4	5	5	5	4	5	5	5	5	4	4	5	4	5	5	5	5
HEATING VELOCITY (ft/min)	206	390	126	413	257	206	172	264	257	206	218	573	367	367	367	172	195	551	218	499	499	499	499
COOLING VELOCITY (ft/min)	441	424	57	631	521	470	161	404	521	441	92	698	565	565	565	447	57	228	333	95	95	95	95
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
TRUNK	A	B	B	D	C	B	D	D	C	A	D	C	A	A	A	B	B	C	B	A	B	B	D

RUN #	25
ROOM NAME	BAS
RM LOSS MBH.	3.51
CFM PER RUN HEAT	68
RM GAIN MBH.	0.37
CFM PER RUN COOLING	13
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	37
EQUIVALENT LENGTH	120
TOTAL EFFECTIVE LENGTH	157
ADJUSTED PRESSURE	0.11
ROUND DUCT SIZE	5
HEATING VELOCITY (ft/min)	499
COOLING VELOCITY (ft/min)	95
OUTLET GRILL SIZE	3X10
TRUNK	C

SUPPLY AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK A	274	0.09	8.4	8	x	8	617	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	534	0.08	11.1	14	x	8	687	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	291	0.08	8.8	10	x	8	524	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	465	0.08	10.5	14	x	8	598	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	995	0.08	14	22	x	8	814	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK O	0	0.06	0	0	x	8	0
TRUNK P	0	0.06	0	0	x	8	0
TRUNK Q	0	0.06	0	0	x	8	0
TRUNK R	0	0.06	0	0	x	8	0
TRUNK S	0	0.06	0	0	x	8	0
TRUNK T	0	0.06	0	0	x	8	0
TRUNK U	0	0.06	0	0	x	8	0
TRUNK V	0	0.06	0	0	x	8	0
TRUNK W	0	0.06	0	0	x	8	0
TRUNK X	995	0.06	15	26	x	8	689
TRUNK Y	735	0.06	13.4	20	x	8	662
TRUNK Z	320	0.06	9.8	12	x	8	480
DROP	995	0.06	15	24	x	10	597

RETURN AIR #	1	2	3	4	5	6										BR
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AIR VOLUME	135	120	120	120	185	175	0	0	0	0	0	0	0	0	0	140
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	50	40	42	42	35	21	1	1	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	145	225	185	145	150	185	0	0	0	0	0	0	0	0	0	150
TOTAL EFFECTIVE LH	195	265	227	187	185	206	1	1	1	1	1	1	1	1	1	164
ADJUSTED PRESSURE	0.08	0.06	0.07	0.08	0.08	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.09
ROUND DUCT SIZE	6.6	6.8	6.6	6.3	7.5	7.5	0	0	0	0	0	0	0	0	0	6.5
INLET GRILL SIZE	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	14	0	0	0	0	0	0	0	0	0	14

Town of Innisfil Certified Model
14/02/2018 10:00:41 AM kgervais

I 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 MICHAEL O'ROURKE

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Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

TYPE: 32-5-12 LO # 74584
SITE NAME: ALCONA

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
	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	83 F	X	1.08	X	0.25

SUPPLEMENTAL FANS

Location	Model	cfm	HVI	Sones
		NUTONE		
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+

139 cfm high 50 cfm low

75 % Sensible Efficiency @ 32 deg F (0 deg C) [✓] HVI Approved

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: Michael O'Rourke

HRAI # 001820

Date: June-17

I REVIEW AND TAKE RESPONIBILITY 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.

INDIVIDUAL BCIN: 19669 Michael O'Rourke MICHAEL O'ROURKE

HVA DESIGNS LTD.

Town of Innisfil Certified Model
14/02/2018 10:00:41 AM kgervais

375 Finley Ave. Suite 202 Ajax, ON L1S 2E2
Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 32-5-12 **BUILDER:** BAYVIEW WELLINGTON
SFQT: 2586 **LO#** 74584 **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 (ft^3):	34843.0	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: 56.0 ft	WIDTH: 27.0 ft	EXPOSED PERIMETER:	166.0 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

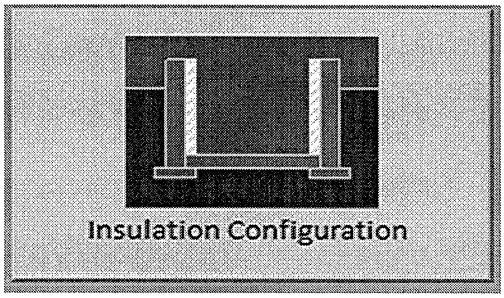
HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

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 dand, 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):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m^2):	2.7	
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):	**1706**

TYPE: 32-5-12
LO# 74584

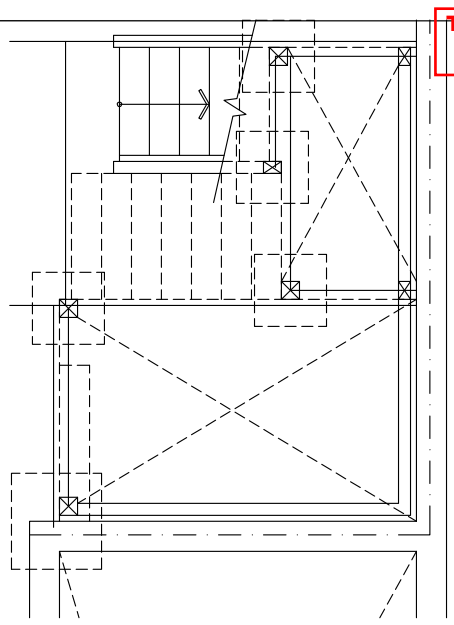
HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

Air Infiltration Residential Load Calculator

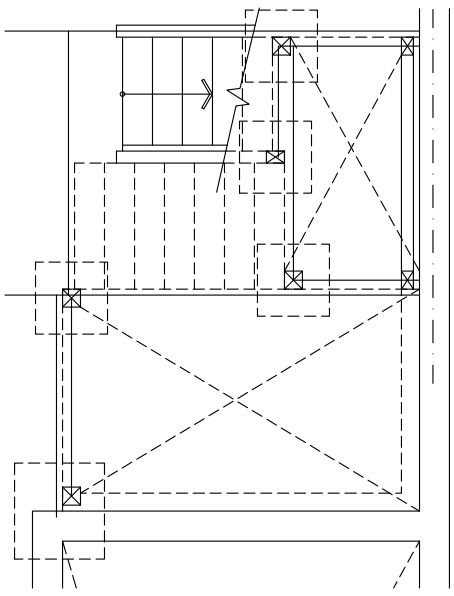
Supplemental tool for CAN/CSA-F280

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):	986.6
Air Leakage/Ventilation	
Air Tightness Type:	Present (1961-) (3.57 ACH)
Custom BDT Data:	ELA @ 10 Pa. 1315.2 cm^2
	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply 65.6 / Total Exhaust 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**

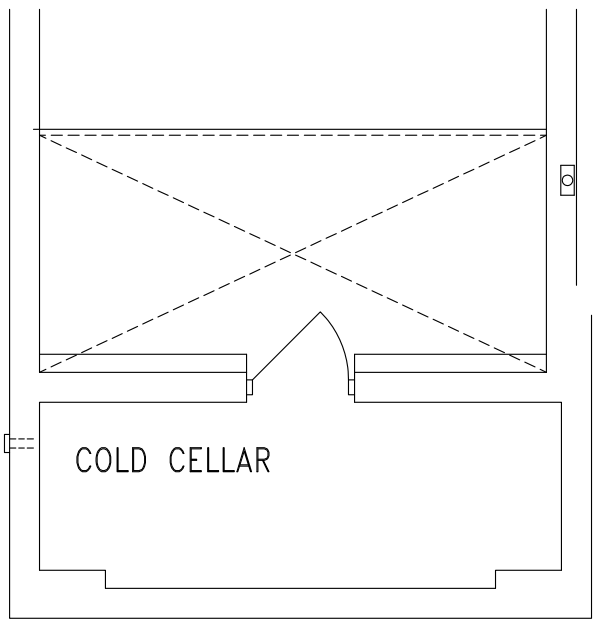
TYPE: 32-5-12
LO# 74584



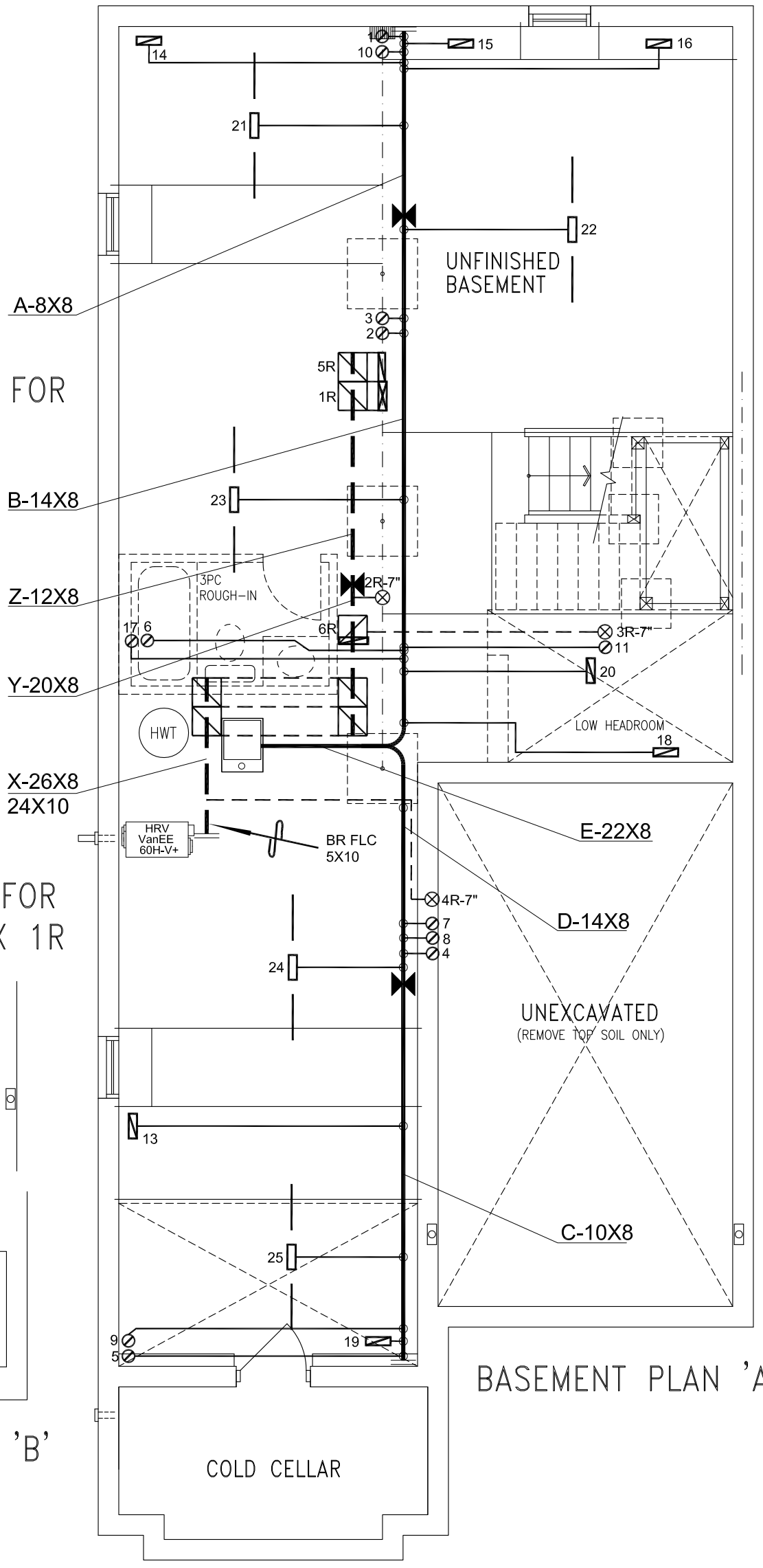
PARTIAL BASEMENT PLAN FOR
SUNKEN MUD & PWD 2R



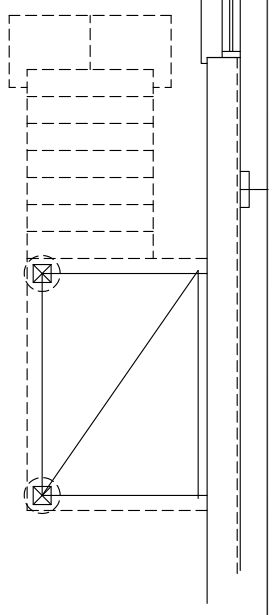
PARTIAL BASEMENT PLAN FOR
SUNKEN MUD & PWD MAX 1R



PARTIAL BASEMENT PLAN 'B'
10'0" GARAGE



BASEMENT PLAN 'A'



PARTIAL BASEMENT FLOOR PLAN 'A' & 'B'
W.O.D. 9R AND MORE COND.

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, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER

No.	Description	Date
3.		
2.		
1.		

REVISIONS

Client
BAYVIEW WELLINGTON

Project Name
ALCONA
INNISFIL, ONTARIO

32-5-12 2586 sqft

HVAC DESIGNS LTD.
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 54754 BTU/H

UNIT DATA

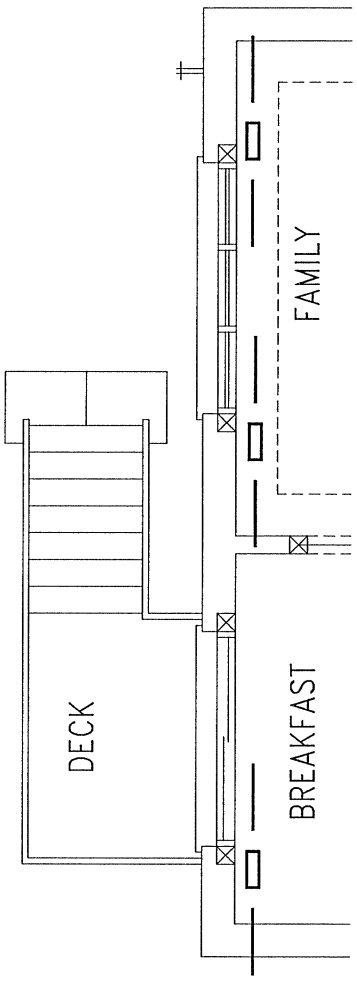
MAKE	LENNOX
MODEL	EL296UH070XE36B
INPUT	66 MBTU/H
OUTPUT	64 MBTU/H
COOLING	2.5 TONS
FAN SPEED	995 cfm @ 0.5" w.c.

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	12	4	4
1ST FLOOR	7	2	2
BASEMENT	5	1	0

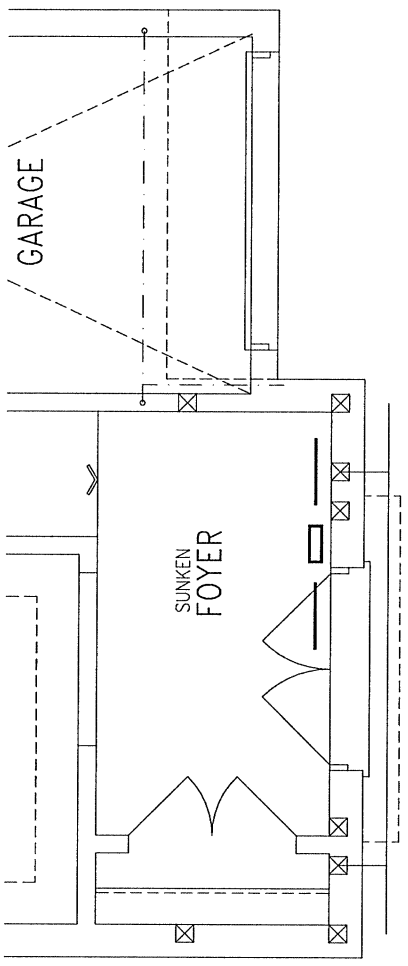
ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

Sheet Title
BASEMENT HEATING LAYOUT

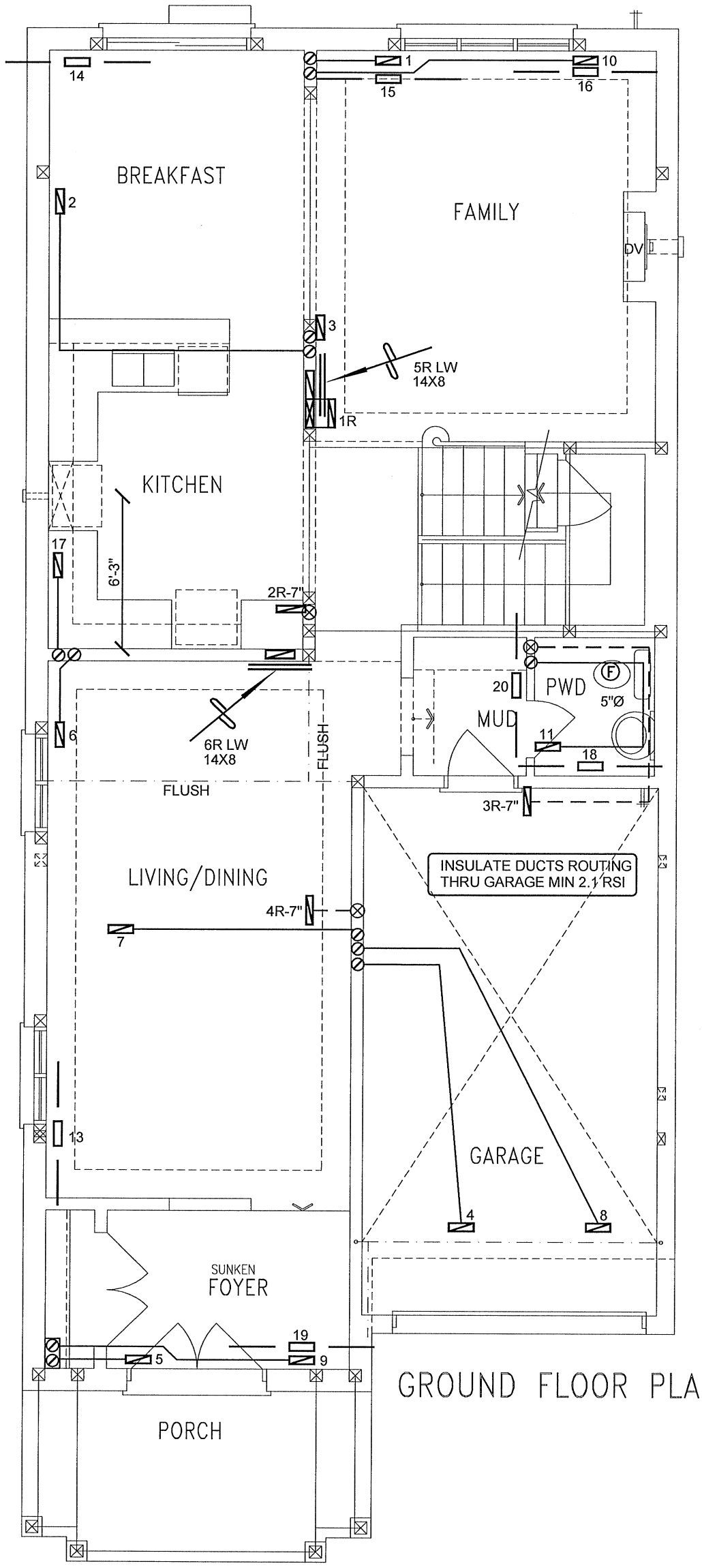
Date JUNE/2017
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 74584



PARTIAL GROUND FLOOR PLAN 'A' & 'B'
W.O.D. 9R AND MORE COND.



PARTIAL GROUND FLOOR PLAN 'B'
10'0" GARAGE



GROUND FLOOR PLAN 'A'

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, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12

PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
— ▭ —	FLOOR SUPPLY AIR GRILLE	▬	6" SUPPLY AIR BOOT ABOVE	▱	14"x8" RETURN AIR GRILLE	▱	RETURN AIR STACK ABOVE
— ▬ —	FLOOR SUPPLY AIR GRILLE 6" BOOT	⊘	SUPPLY AIR STACK FROM 2nd FLOOR	▱▱	30"x8" RETURN AIR GRILLE	⊠	RETURN AIR STACK 2nd FLOOR
▱	SUPPLY AIR BOOT ABOVE	●	6" SUPPLY AIR STACK 2nd FLOOR	▬	FRA- FLOOR RETURN AIR GRILLE	⧗	REDUCER

No.	Description	Date
3.		
2.		
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REVISIONS

Client
BAYVIEW WELLINGTON

Project Name
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INNISFIL, ONTARIO

32-5-12 2586 sqft

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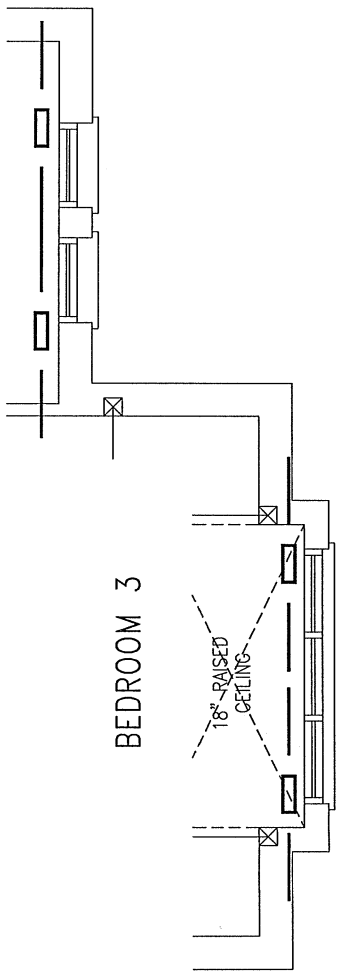
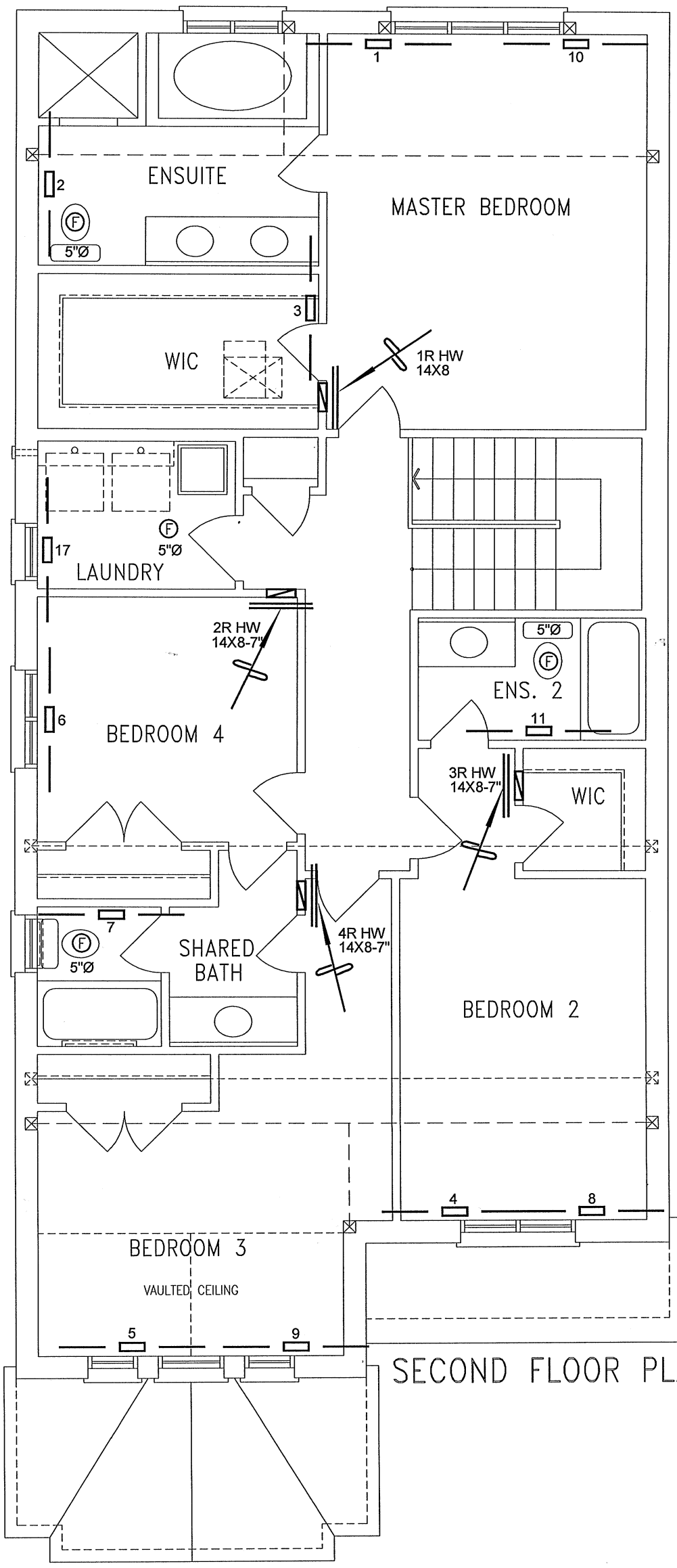
Sheet Title
FIRST FLOOR HEATING LAYOUT

Date JUNE/2017
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 74584

Town of Innisfil Certified Model
14/02/2018 10:00:42 AM kgervais



PARTIAL SECOND FLOOR PLAN 'B'
10'0" GARAGE



SECOND FLOOR PLAN 'A'

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, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER

No.	Description	Date
3.		
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REVISIONS

Client
BAYVIEW WELLINGTON

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INNISFIL, ONTARIO

32-5-12 2586 sqft

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Sheet Title
SECOND FLOOR HEATING LAYOUT

Date JUNE/2017
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 74584