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:** 32-3-10 **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 21, 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.

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Town of Innisfil Certified Model
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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: 32-3-10 | GFA: 2326 | LO# 74579 | SUMMER NATURAL AIR CHANGE RATE 0.087 | HEAT GAIN ΔT °F. 12 | SB-12 PACKAGE A1

ROOM USE			MBR			ENS				BED-2			BED-3			BED-4			BATH					ENS-2				
EXP. WALL			43			22				24			19			11			22					9				
CLG. HT.			9			9				9			9			9			9					9				
	FACTORS																											
GRS.WALL AREA	LOSS	GAIN	387			198				216			171			99			198					81				
GLAZING			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		
EAST	23.3	41.4	0	0	0	0	0	0		28	652	1159	11	256	455	0	0	0	19	443	786			0	0	0		
SOUTH	23.3	24.7	0	0	0	0	0	0		0	0	0	11	256	272	16	373	396	0	0	0			7	163	173		
WEST	23.3	41.4	28	652	1159	11	256	455		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		
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		
NET EXPOSED WALL	4.9	0.7	359	1754	257	187	914	134		188	918	135	149	728	107	83	405	59	179	875	128			74	362	53		
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		
EXPOSED CLG	1.4	0.6	325	457	188	120	169	69		154	216	89	181	254	105	197	277	114	90	126	52			54	76	31		
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		
EXPOSED FLOOR	2.8	0.4	0	0	0	0	0	0		154	430	63	0	0	0	0	0	0	0	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				2863			1338				2217			1495			1055			1444					600			
SUB TOTAL HT GAIN					1604			658				1445			939			569			967					257		
LEVEL FACTOR / MULTIPLIER			0.20	0.26		0.20	0.26			0.20	0.26		0.20	0.26		0.20	0.26		0.20	0.26				0.20	0.26			
AIR CHANGE HEAT LOSS				750			350				581			391			276			378					157			
AIR CHANGE HEAT GAIN					120			49				108			70			43			73					19		
DUCT LOSS				0			0				280			0			0			0					0			
DUCT GAIN					0			0				236			0			0			0					0		
HEAT GAIN PEOPLE	240		2		480	0		0		1		240	1		240	1		240	0		0			0		0		
HEAT GAIN APPLIANCES/LIGHTS					570			0				570			570			570			0					0		
TOTAL HT LOSS BTU/H				3612			1689				3077			1886			1331			1822					758			
TOTAL HT GAIN x 1.3 BTU/H					3605			920				3380			2364			1847			1351					360		

ROOM USE			DIN			KT/GR				LAUN			W/R			FOY			MUD					WOD			BAS		
EXP. WALL			37			75				14			7			25			22					36			162		
CLG. HT.			10			10				9			10			11			10					9			9		
	FACTORS																												
GRS.WALL AREA	LOSS	GAIN	370			750				126			70			263			220					324			1188		
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	15	349	621	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	25	582	618	0	0	0		0	0	0	9	210	223	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	330	1612	236	661	3229	474		126	616	90	61	298	44	217	1058	155	200	977	143			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	270	1064	156
EXPOSED CLG	1.4	0.6	0	0	0	0	0	0		175	246	101	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		51	142	21	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							5664	
SLAB ON GRADE HEAT LOSS				0			0				0			0			0			0					0				
SUBTOTAL HT LOSS				2544			5303				1004			508			2303			1530					1296		7420		
SUB TOTAL HT GAIN					1475			4157				212			266			566			224					475			332
LEVEL FACTOR / MULTIPLIER			0.30	0.39		0.30	0.39			0.20	0.26		0.30	0.39		0.30	0.39		0.30	0.39							0.50	0.90	
AIR CHANGE HEAT LOSS				985			2053				263			197			892			592							7865		
AIR CHANGE HEAT GAIN					111			312				16			20			42			17								61
DUCT LOSS				0			0				127			0			0			0							0		
DUCT GAIN					0			0				80			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					570			570				570			0			0			570					0			570
TOTAL HT LOSS BTU/H				3529			7356				1393			704			3195			2122					1296		15286		
TOTAL HT GAIN x 1.3 BTU/H					2802			6549				1141			372			790			1054					618			1250

TOTAL HEAT GAIN BTU/H: 28862 TONS: 2.41 LOSS DUE TO VENTILATION LOAD BTU/H: 3122 STRUCTURAL HEAT LOSS: 49057 TOTAL COMBINED HEAT LOSS BTU/H: 52179

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: 32-3-10   DATE: Jun-17   GFA: 2326   LO# 74579

HEATING CFM	995	COOLING CFM	995
TOTAL HEAT LOSS	49,057	TOTAL HEAT GAIN	28,404
AIR FLOW RATE CFM	20.28	AIR FLOW RATE CFM	35.03

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	0.02
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

^LENNOX
EL296UH070XE36B **70**

FAN SPEED	
LOW	0
MEDLOW	0
MEDIUM	995
MEDIUM HIGH	1100
HIGH	0

AFUE = 96 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = **64,000**
DESIGN CFM = **995**
CFM @ .6 " E.S.P.
TEMPERATURE RISE 60 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	10	7	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.

RUN #	1	2	4	5	6	7	8	10	11	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	MBR	ENS-2	DIN	KT/GR	KT/GR	KT/GR	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.81	1.69	1.54	1.89	1.33	1.82	1.54	1.81	0.76	3.53	2.45	2.45	2.45	1.39	0.70	3.19	2.12	4.15	4.15	4.15	4.15
CFM PER RUN HEAT	37	34	31	38	27	37	31	37	15	72	50	50	50	28	14	65	43	84	84	84	84
RM GAIN MBH.	1.80	0.92	1.69	2.36	1.85	1.35	1.69	1.80	0.36	2.80	2.18	2.18	2.18	1.14	0.37	0.79	1.05	0.47	0.47	0.47	0.47
CFM PER RUN COOLING	63	32	59	83	65	47	59	63	13	98	76	76	76	40	13	28	37	16	16	16	16
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	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	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	47	56	40	45	38	51	43	59	43	35	38	32	44	38	18	34	18	38	28	23	26
EQUIVALENT LENGTH	120	180	130	140	150	140	140	120	180	150	150	150	130	150	130	100	170	120	90	110	90
TOTAL EFFECTIVE LENGTH	167	236	170	185	188	191	183	179	223	185	188	182	174	188	148	134	188	158	118	133	116
ADJUSTED PRESSURE	0.1	0.07	0.1	0.09	0.09	0.09	0.09	0.1	0.08	0.09	0.09	0.09	0.1	0.09	0.12	0.13	0.09	0.1	0.14	0.12	0.14
ROUND DUCT SIZE	5	4	5	5	5	4	5	5	4	**6**	5	5	5	4	4	4	4	5	5	5	5
HEATING VELOCITY (ft/min)	272	390	228	279	198	424	228	272	172	367	367	367	367	321	161	746	493	617	617	617	617
COOLING VELOCITY (ft/min)	463	367	433	609	477	539	433	463	149	500	558	558	558	459	149	321	424	117	117	117	117
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	D	C	B	C	D	A	B	C	A	A	A	D	B	C	D	A	B	B	C

RUN #	
ROOM NAME	
RM LOSS MBH.	
CFM PER RUN HEAT	
RM GAIN MBH.	
CFM PER RUN COOLING	
ADJUSTED PRESSURE	
ACTUAL DUCT LGH.	
EQUIVALENT LENGTH	
TOTAL EFFECTIVE LENGTH	
ADJUSTED PRESSURE	
ROUND DUCT SIZE	
HEATING VELOCITY (ft/min)	
COOLING VELOCITY (ft/min)	
OUTLET GRILL SIZE	
TRUNK	

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	342	0.07	9.7	12	x	8	513	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	566	0.07	11.7	16	x	8	637	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	296	0.09	8.6	8	x	8	666	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	429	0.09	9.9	12	x	8	644	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	995	0.07	14.5	24	x	8	746	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	0.05	0	0	x	8	0
TRUNK P	0	0.05	0	0	x	8	0
TRUNK Q	0	0.05	0	0	x	8	0
TRUNK R	0	0.05	0	0	x	8	0
TRUNK S	0	0.05	0	0	x	8	0
TRUNK T	0	0.05	0	0	x	8	0
TRUNK U	0	0.05	0	0	x	8	0
TRUNK V	0	0.05	0	0	x	8	0
TRUNK W	0	0.05	0	0	x	8	0
TRUNK X	995	0.05	15.7	28	x	8	640
TRUNK Y	445	0.05	11.6	16	x	8	501
TRUNK Z	0	0.05	0	0	x	8	0
DROP	995	0.05	15.7	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	155	135	95	85	155	205	0	0	0	0	0	0	0	0	0	165
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.	46	47	34	46	36	19	1	1	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	185	225	145	185	230	145	0	0	0	0	0	0	0	0	0	190
TOTAL EFFECTIVE LH	231	272	179	231	266	164	1	1	1	1	1	1	1	1	1	204
ADJUSTED PRESSURE	0.06	0.05	0.08	0.06	0.06	0.09	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.07
ROUND DUCT SIZE	7.5	7.5	5.8	6	7.5	7.5	0	0	0	0	0	0	0	0	0	7.4
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

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.

INDIVIDUAL BCIN: 19669   MICHAEL O'ROURKE

HVAC DESIGNS LTD.

Town of Innisfil Certified Model
04/01/2018 3:12:14 PM kgervais

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TYPE: 32-3-10 LO # 74579
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

NUTONE

Location	Model	cfm	HVI	Sones
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: 

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

HVAC DESIGNS LTD.
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: 32-3-10 **BUILDER:** BAYVIEW WELLINGTON
SFQT: 2326 **LO#** 74579 **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):	31829.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD ($Btu/h/ft^2$):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 54.0 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

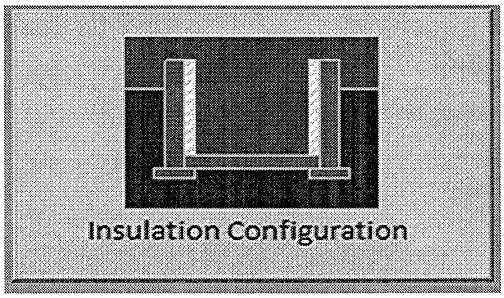
Michael O'Rourke

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):	16.5	 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):	**1660**	

TYPE: 32-3-10
LO# 74579

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

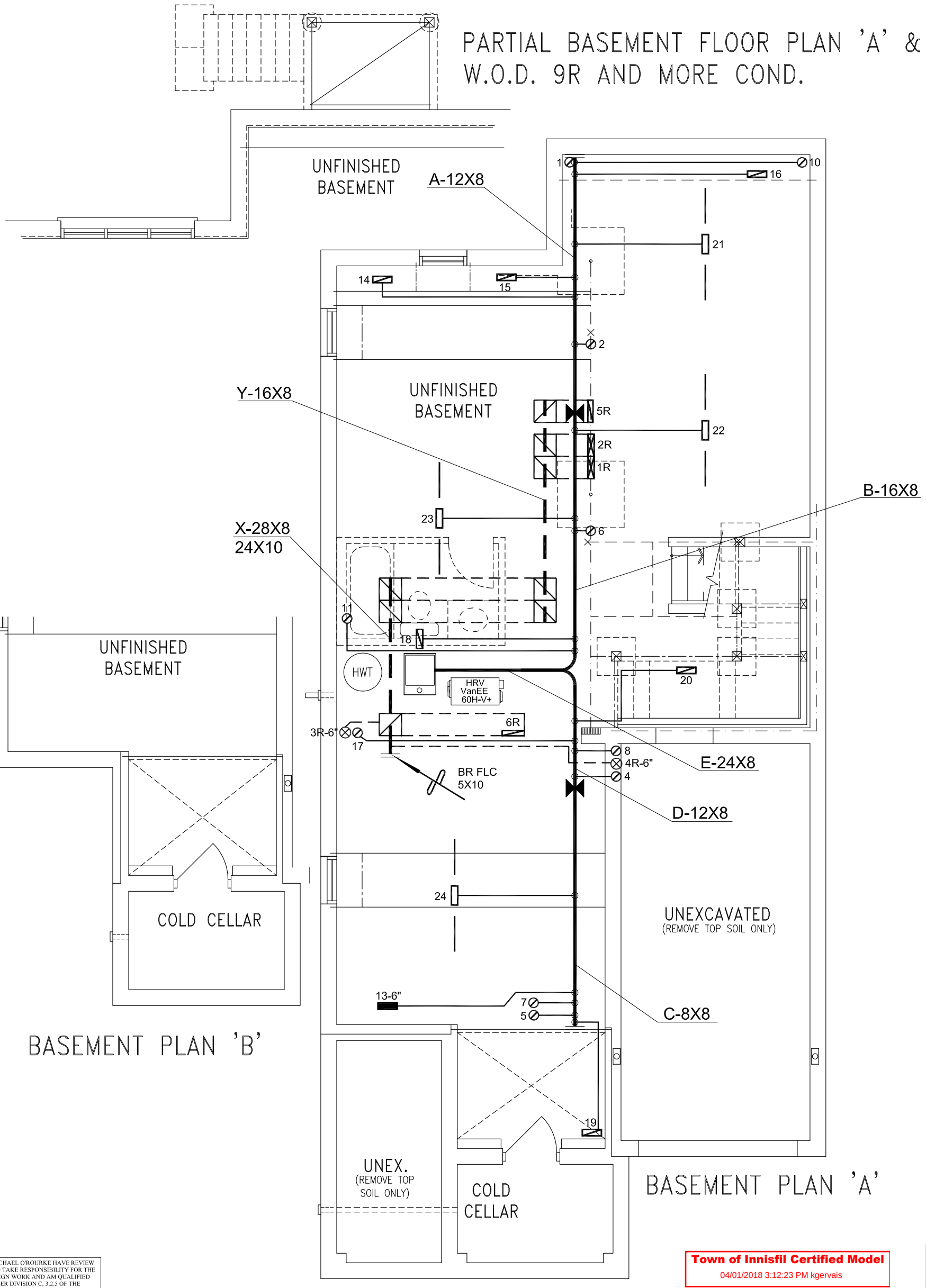
Air Infiltration Residential Load Calculator

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):	901.3	
Air Leakage/Ventilation		
Air Tightness Type:	Present (1961-) (3.57 ACH)	
Custom BDT Data:	ELA @ 10 Pa.	1201.5 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):	**0.332**	
Cooling Air Leakage Rate (ACH/H):	**0.087**	

TYPE: 32-3-10
LO# 74579

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



BASEMENT PLAN 'B'

BASEMENT 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.

Town of Innisfil Certified Model
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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

32-3-10 2326 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 52179 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	10	4	4
1ST FLOOR	7	2	2
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

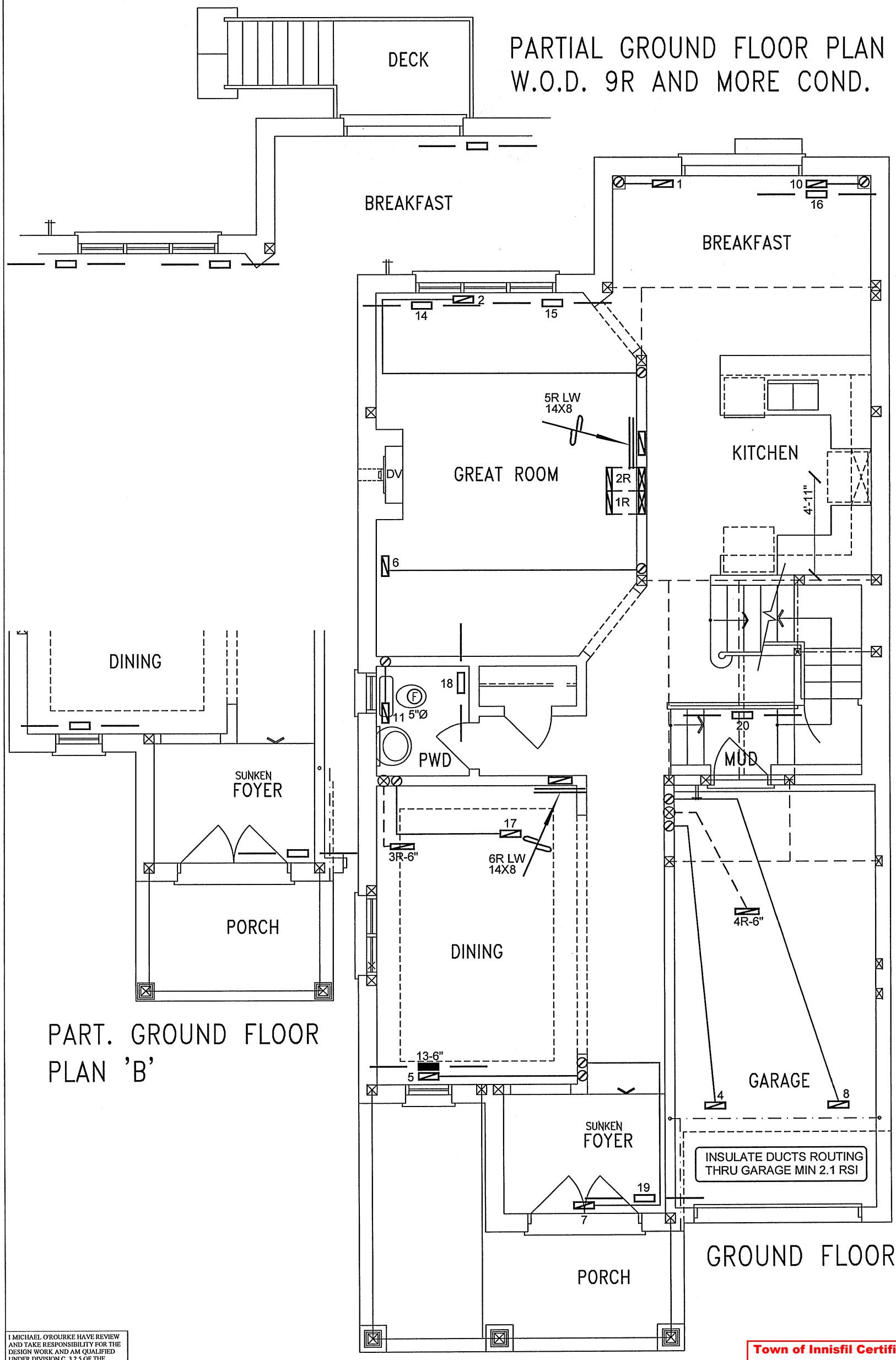
Date JUNE/2017

Scale 3/16" = 1'-0"

BCIN# 19669

LO# 74579

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



PART. GROUND FLOOR
PLAN 'B'

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.

Town of Innisfil Certified Model
04/01/2018 3:12:29 PM kgervais

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

32-3-10 2326 sqft

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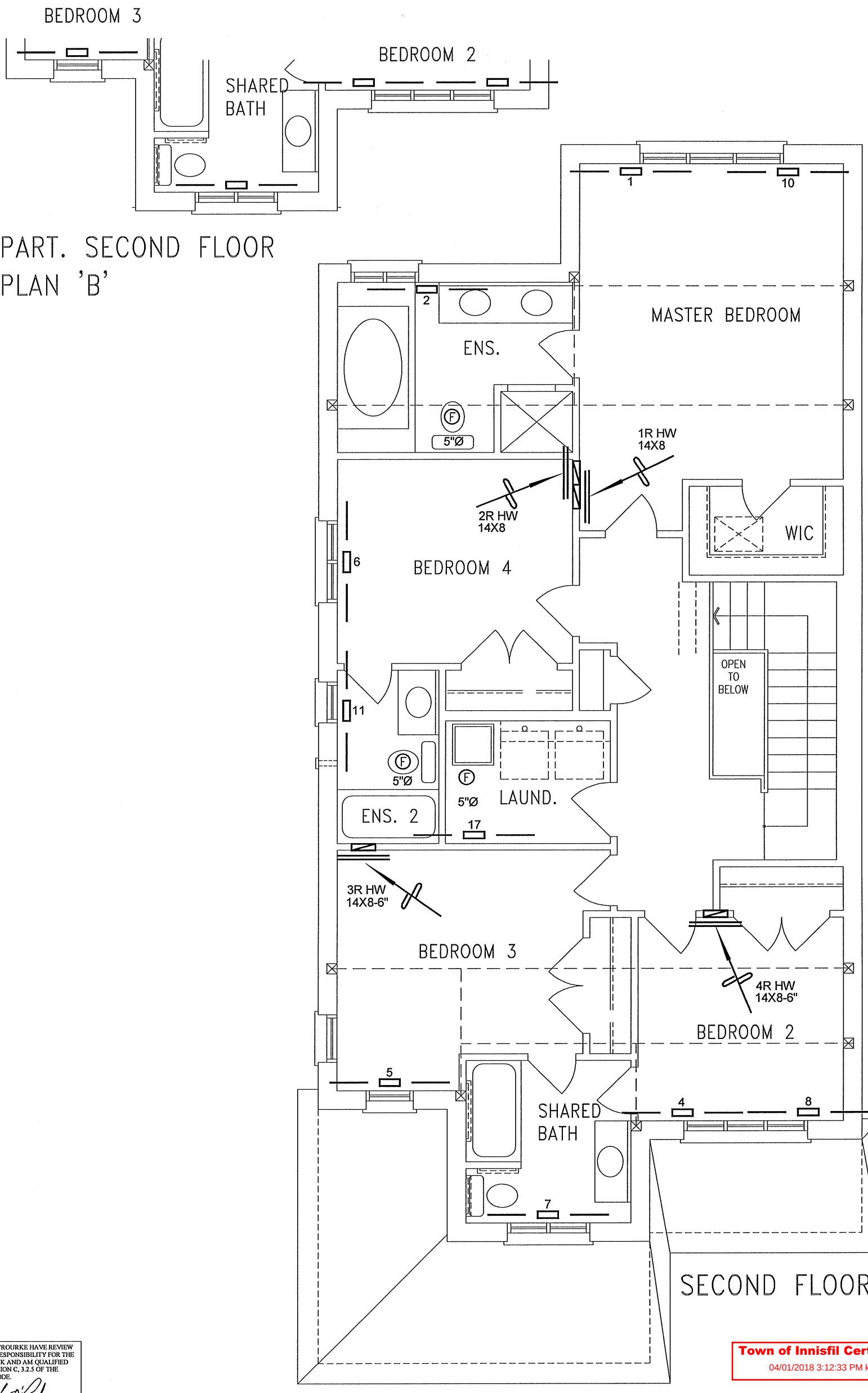
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

Sheet Title
FIRST FLOOR
HEATING
LAYOUT

Date JUNE/2017
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 74579



PART. SECOND FLOOR PLAN 'B'

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.

Town of Innisfil Certified Model
04/01/2018 3:12:33 PM kgervais

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

32-3-10 2326 sqft

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Sheet Title
SECOND FLOOR HEATING LAYOUT

Date JUNE/2017
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 74579