

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@hvacdsgns.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 ☐ 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

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: ALCONIA										WOB		DATE: Jun-17		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F. 83		CSA-F280-12	
BUILDER: BAYVIEW WELLINGTON										TYPE: 4B-2		GFA: 3285		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F. 12		SB-12 PACKAGE A1	
ROOM USE		MBR		ENS		BED-2		BED-3		BED-4		ENS-2		BED-5		ENS-3			
EXP. WALL CLG. HT.		31 10		29 .9		12 9		16 10		31 10		19 9		43 9		8 9			
FACTORS		310		261		108		150		295		171		117		54			
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		16 373 253		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0			
NORTH		23.3 15.8		0 0 0		0 0 0		44 1025 1821		44 1025 1821		7 163 290		0 0 0		0 0 0			
EAST		23.3 41.4		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		16 373 386		7 163 173			
SOUTH		23.3 24.7		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0			
WEST		23.3 41.4		32 746 1324		27 528 1117		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0			
SKYLIT.		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		92 449 66		116 567 83		251 1224 179		164 801 117		101 493 72		47 230 34			
NET EXPOSED WALL		4.9 0.7		278 1388 199		227 1109 163		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0			
SLAB ON GRADE HEAT LOSS		3.9 0.6		0 0 0		0 0 0		0 0 0		0 0 0		84 118 49		290 365 150		126 177 73			
NET EXPOSED BMT WALL ABOVE GR		1.4 0.6		390 648 225		186 281 107		0 0 0		44 132 54		48 144 59		0 0 0		0 0 0			
EXPOSED CLG		3.0 1.2		0 0 0		0 0 0		0 0 0		0 0 0		84 235 34		0 0 0		0 0 0			
NO ATTIC EXPOSED FLOOR		2.8 0.4		0 0 0		210 566 86		169 472 69		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 0 0		0 0 0		0 0 0		0 0 0			
SLAB ON GRADE HEAT LOSS		0 0 0		0 0 0		1746 543		2405 2114		2845 2163		1317 480		1231 618		570 280			
SUBTOTAL HT LOSS		2652 1749		2162 1561		0.20 0.33		0.20 0.33		0.20 0.33		0.20 0.33		0.20 0.33		0.20 0.33			
SUB TOTAL HT GAIN		886 0		723 103		233 154		321 321		0 0		176 82		0 0		0 0			
LEVEL FACTOR / MULTIPLIER		0 0		0 0		1 240		1 240		1 240		0 0		1 240		0 0			
AIR CHANGE HEAT LOSS		0 0		0 0		717 0		717 0		3629 4243		1533 747		1643 2101		760 387			
DUCT LOSS		2 480		0 0		2582 2108		3530 4591		0 0		0 0		0 0		0 0			
HEAT GAIN PEOPLE		717 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0			
HEAT GAIN APPLIANCE/LIGHTS		3538 3880		2163 2163		0 0		0 0		0 0		0 0		0 0		0 0			
TOTAL HT LOSS BTU/H		3538 3880		2163 2163		0 0		0 0		0 0		0 0		0 0		0 0			
TOTAL HT GAIN x 1.3 BTU/H		3538 3880		2163 2163		0 0		0 0		0 0		0 0		0 0		0 0			

ROOM USE		LVDR		K/T/FM		LAUN		WIR		FOY		MUD		WOB		BAS	
EXP. WALL CLG. HT.		66 10		78 10		9 9		6 10		36 11		26 10		60 9		130 9	
FACTORS		560		760		81		60		385		260		480		780	
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		7 163 111		10 233 158		0 0 0		0 0 0		79 1840 1249		6 140 96	
NORTH		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		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
SOUTH		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
WEST		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
SKYLIT.		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		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		629 3073 451		0 0 0		74 352 63		36 244 36		40 1106 162		20 553 81		371 1813 266		0 20 553 81	
SLAB ON GRADE HEAT LOSS		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 BMT WALL ABOVE GR		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		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
NO ATTIC EXPOSED FLOOR		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		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
SLAB ON GRADE HEAT LOSS		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
SUBTOTAL HT LOSS		4039 2787		6125 5872		777 268		477 194		3249 1160		1725 253		4392 1514		5080 401	
SUB TOTAL HT GAIN		0.30 0.50		0.30 0.50		0.20 0.33		0.30 0.60		0.30 0.60		0.30 0.60		0.50 1.37		0.50 1.37	
LEVEL FACTOR / MULTIPLIER		2011 184		3049 388		260 48		238 13		1617 77		859 17		12596 127		12596 127	
AIR CHANGE HEAT LOSS		0 0		0 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 0		0 0	
HEAT GAIN PEOPLE		717 0		717 0		717 0		715 0		4865 0		2584 717		5131 1959		18036 1619	
HEAT GAIN APPLIANCE/LIGHTS		6049 4798		9174 9071		1037 1304		269 259		1608 1608		1283 1283					
TOTAL HT LOSS BTU/H		6049 4798		9174 9071		1037 1304		269 259		1608 1608		1283 1283					
TOTAL HT GAIN x 1.3 BTU/H		6049 4798		9174 9071		1037 1304		269 259		1608 1608		1283 1283					

SITE NAME: ALCONA
BUILDER: BAYVIEW WELLINGTONWOB
TYPE: 4S-2

DATE: Jun-17

GFA: 3285 LO# 74603

HEATING CFM 1255 COOLING CFM 1255
TOTAL HEAT LOSS 67,972 TOTAL HEAT GAIN 42,327
AIR FLOW RATE CFM 18.46 AIR FLOW RATE CFM 29.65ALLENNOX
EL296UH090XE48C
FAN SPEED
LOW 0
MEDIUM 1105
HIGH 1255AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	14	9	5
R/A	0	0	5	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	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	BED-2	BED-3	BED-4	BED-4	ENS-2	BED-3	BED-4	MBR	ENS-3	L/V/DN	L/V/DN	KT/FM	KT/FM	KT/FM	LAUN	WIR	FOY	ENS	ENS-2	BED-5	L/V/DN	MUD
RM LOSS MBH	1.77	1.44	2.56	4.63	1.77	1.76	0.97	1.77	1.76	1.77	0.76	2.02	2.02	3.06	3.06	3.06	1.04	0.71	4.87	1.44	0.97	1.64	2.02	2.58
CFM PER RUN HEAT	33	27	47	86	33	33	18	33	33	33	14	37	37	56	56	56	19	13	90	27	18	30	37	48
RM GAIN MBH	1.99	1.08	2.20	2.30	2.12	2.12	0.37	2.30	2.12	1.99	0.39	1.80	1.80	3.02	3.02	3.02	1.30	0.27	1.81	1.08	0.37	2.10	1.80	1.28
CFM PER RUN COOLING	59	32	65	68	63	63	11	68	63	59	11	47	47	80	80	80	39	8	48	32	11	62	47	38
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	0.16	0.16	0.16	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17
EQUIVALENT LENGTH	57	29	46	49	35	35	49	50	37	68	28	22	28	37	52	57	63	53	34	49	46	21	7	58
TOTAL EFFECTIVE LENGTH	130	200	180	130	150	150	160	150	140	120	120	110	120	130	140	120	120	130	140	170	170	190	110	110
ADJUSTED PRESSURE	187	229	226	179	183	183	209	200	177	188	148	132	148	167	192	177	183	183	174	218	216	211	117	166
ADJUSTED PRESSURE	0.09	0.08	0.08	0.1	0.09	0.09	0.08	0.09	0.1	0.09	0.12	0.13	0.12	0.1	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.15	0.1
ROUND DUCT SIZE	5	4	5	5	5	5	4	5	5	5	4	4	4	5	6	6	4	4	6	4	4	5	4	4
HEATING VELOCITY (ft/min)	242	310	345	242	242	242	207	242	242	242	161	424	424	411	286	286	218	149	459	310	207	220	424	551
COOLING VELOCITY (ft/min)	433	367	477	499	463	463	126	499	463	433	126	539	539	661	459	459	447	92	245	367	126	455	539	436
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	B	D	D	D	C	D	D	C	B	D	C	C	B	A	A	A	A	C	B	D	B	D	A

RUN #	25	26	27	28	29
ROOM NAME	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	4.63	4.63	4.63	4.63	4.63
CFM PER RUN HEAT	86	86	86	86	86
RM GAIN MBH	0.72	0.72	0.72	0.72	0.72
CFM PER RUN COOLING	21	21	21	21	21
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	120	160	180	150	130
ADJUSTED PRESSURE	189	202	215	162	152
ADJUSTED PRESSURE	0.09	0.08	0.08	0.1	0.11
ROUND DUCT SIZE	6	6	6	5	5
HEATING VELOCITY (ft/min)	631	438	438	631	631
COOLING VELOCITY (ft/min)	154	107	107	154	154
OUTLET GRILL SIZE	3X10	4X10	4X10	3X10	3X10
TRUNK	A	B	B	D	C

SUPPLY AIR TRUNK SIZE	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	RETURN AIR TRUNK SIZE	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	278	0.08	8.7	10	8	0	0.00	0	0	8	TRUNK O	0	0.05	0	0	8
TRUNK B	656	0.08	12	16	8	0	0.00	0	0	8	TRUNK P	0	0.05	0	0	8
TRUNK C	316	0.09	8.8	10	8	0	0.00	0	0	8	TRUNK Q	0	0.05	0	0	8
TRUNK D	602	0.08	11.6	16	8	0	0.00	0	0	8	TRUNK R	0	0.05	0	0	8
TRUNK E	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK S	0	0.05	0	0	8
TRUNK F	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK T	0	0.05	0	0	8
TRUNK G	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK U	0	0.05	0	0	8
TRUNK H	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK V	0	0.05	0	0	8
TRUNK I	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK W	0	0.05	0	0	8
TRUNK J	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK X	1255	0.05	17.2	28	10
TRUNK K	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK Y	710	0.05	13.9	22	8
TRUNK L	0	0.00	0	0	8	0	0.00	0	0	8	TRUNK Z	275	0.05	9.7	12	8
TRUNK M	0	0.00	0	0	8	0	0.00	0	0	8	DROP	1255	0.05	17.2	24	12
TRUNK N	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK O	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK P	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK Q	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK R	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK S	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK T	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK U	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK V	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK W	0	0.00	0	0	8	0	0.00	0	0	8						
TRUNK X	1255	0.05	17.2	28	10	1255	0.05	17.2	28	10	1255	0.05	17.2	28	10	1255
TRUNK Y	710	0.05	13.9	22	8	710	0.05	13.9	22	8	710	0.05	13.9	22	8	710
TRUNK Z	275	0.05	9.7	12	8	275	0.05	9.7	12	8	275	0.05	9.7	12	8	275
DROP	1255	0.05	17.2	24	12	1255	0.05	17.2	24	12	1255	0.05	17.2	24	12	1255
RETURN AIR #	1	2	3	4	5	6	7				BR					
AIR VOLUME	120	135	135	120	120	155	300	0	0	0	0	0	0	0	0	0
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.	83	49	41	41	47	40	29	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	145	225	190	145	185	190	185	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	228	274	231	188	232	190	214	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.05	0.06	0.08	0.06	0.08	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	14	14	30	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	14	14	14	14	14	14	30	0	0	0	0	0	0	0	0	0

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: 19569

MICHAEL O'ROURKE

TYPE: 48-2
SITE NAME: ALCONA

LO # 74603
WOB

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	4	@ 10.6 cfm	42.4	cfm
Kitchen & Bathrooms	5	@ 10.6 cfm	53	cfm
Other Rooms	6	@ 10.6 cfm	63.6	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
	TOTAL	95.4	cfm

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	201.4	cfm
Less Principal Ventl. Capacity	139	cfm
Required Supplemental Capacity	62.4	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	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
ENS-2	QTXEN050C	50	☒	0.3
ENS-3	QTXEN050C	50	☒	0.3
W/R	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANE 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



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: 48-2	WOB	BUILDER: BAYVIEW WELLINGTON
SFQT: 3285	LO# 74603	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):	44504.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
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: 50.0 ft	WIDTH: 40.0 ft	EXPOSED PERIMETER:	130.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	50.0 ft

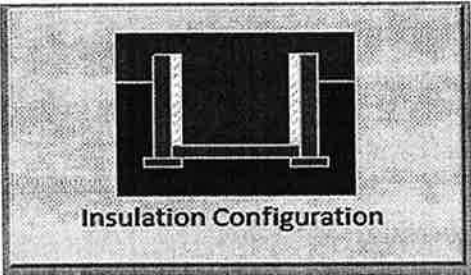
2012 OBC - COMPLIANCE PACKAGE Component	Compliance Package	
	A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.8
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement 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:	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):	4.6	 Insulation Configuration
Floor Width (m):	12.2	
Exposed Perimeter (m):	39.6	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.57	
Window Area (m²):	0.6	
Door Area (m²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		835



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

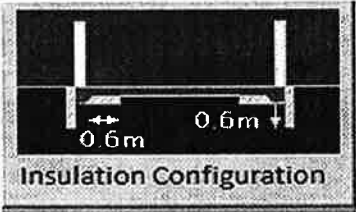
Weather Station Description			
Province:	Ontario		
Region:	Barrie		
Weather Station Location:	Open flat terrain, grass		
Anemometer height (m):	10		
Local Shielding			
Building Site:	Suburban, forest		
Walls:	Heavy		
Flue:	Heavy		
Highest Ceiling Height (m):	8.53		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m ³):	1260.2		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1679.9 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
Diameter (mm):	0	0	0
			#4
			0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.391		
Cooling Air Leakage Rate (ACH/H):	0.102		

TYPE: 48-2
LO# 74603

WOB

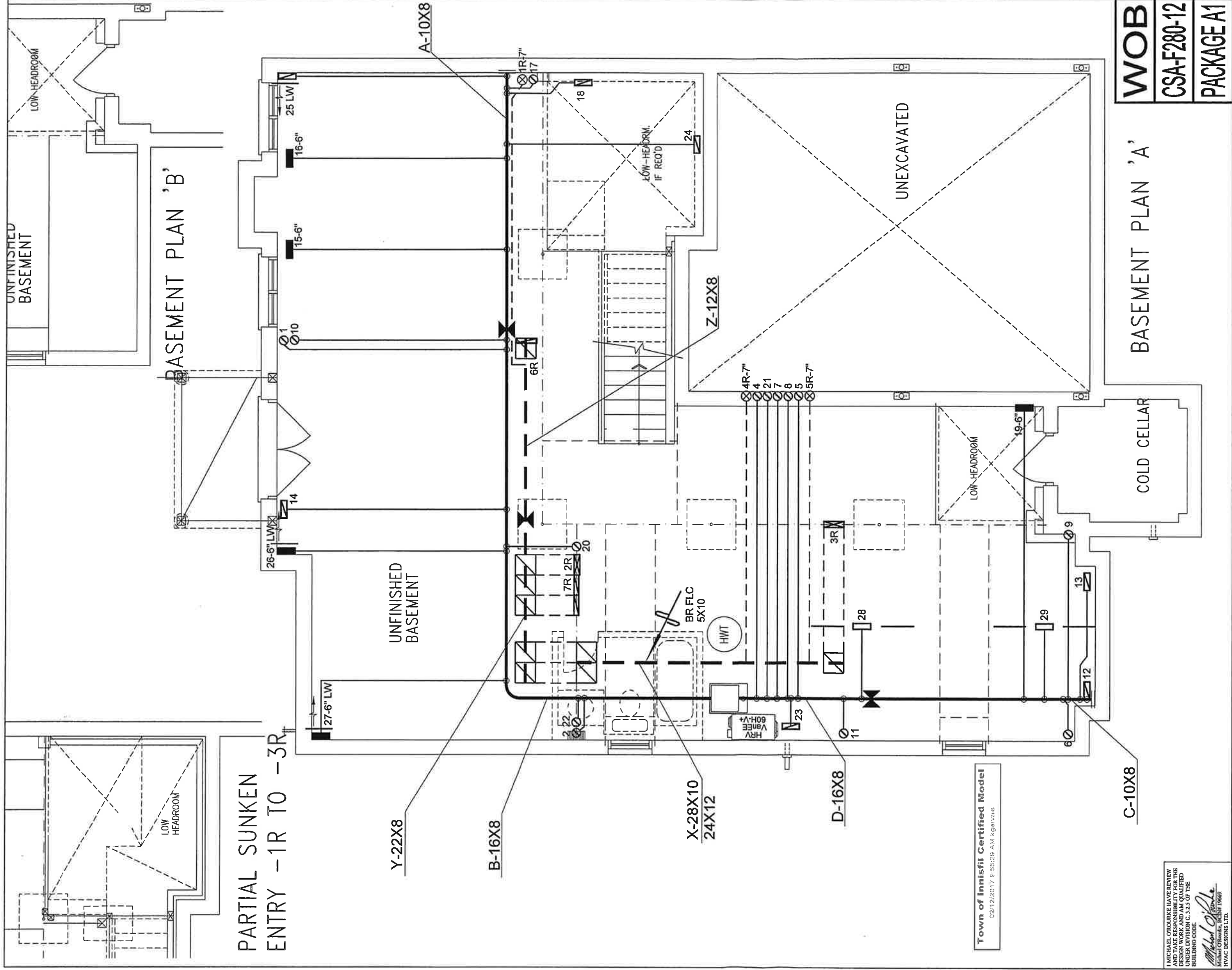
Residential Foundation Thermal Load Calculator

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		
Length (m):	1.5	
Width (m):	12.2	
Exposed Perimeter (m):	15.2	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		217

TYPE: 48-2
LO# 74603

WOB



WOB
CSA-F280-12
PACKAGE A1

BASEMENT PLAN 'A'

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

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Client		Sheet Title	
BAYVIEW WELLINGTON		BASEMENT	
Project Name		HEATING	
ALCONA		LAYOUT	
INNISFIL, ONTARIO		Date	
		JUNE/2017	
		Scale	
		3/16" = 1'-0"	
		BCIN# 19669	
48-2 WOB		LO#	
		74603	

HEAT LOSS 71094 BTUH		# OF RUNS		S/A		R/A		FANS	
UNIT DATA		3RD FLOOR		2ND FLOOR		1ST FLOOR		BASEMENT	
MAKE		LENNOX		14		5		4	
MODEL		EL296UH090XE48C		9		2		2	
INPUT		88 MBTUH		5		1		0	
OUTPUT		85 MBTUH		ALL S/A DIFFUSERS 4"x10"		UNLESS NOTED OTHERWISE		ON LAYOUT. ALL S/A RUNS 5/8"	
COOLING		3.5 TONS		UNLESS NOTED OTHERWISE		ON LAYOUT. UNDERCUT		DOORS 1" min. FOR R/A	
FAN SPEED		1255 cfm @ 0.5" w.c.							

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.

I MICHAEL OROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN AND CALCULATIONS SHOWN ON THESE DRAWINGS. I AM A MEMBER OF THE BUILDING DIVISION C.1.3.3 OF THE BUILDING CODE.
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

Town of Innisfil Certified Model
02/12/2017 6:55:29 AM kganvaus

GROUND FLOOR PLAN 'A'

W.C. CSA-F

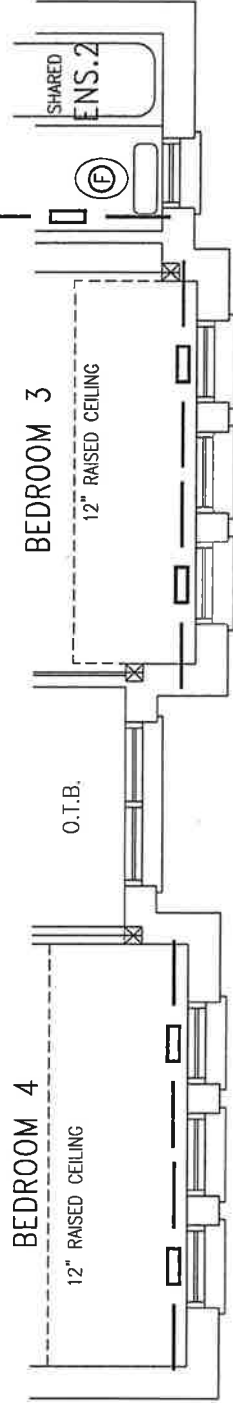
I MICHAEL O'BOURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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

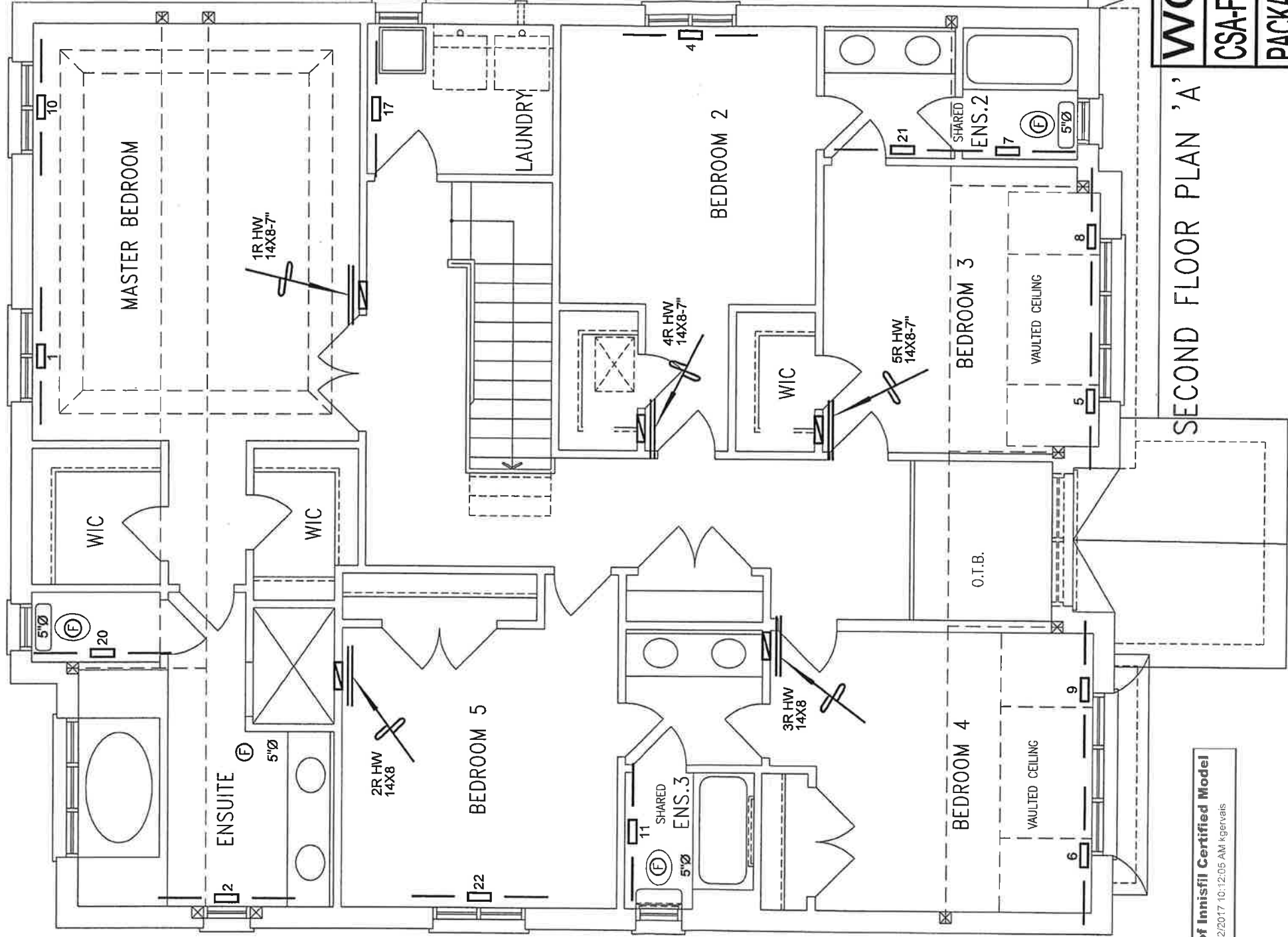
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Sheet Title	FIRST FLOOR HEATING LAYOUT	
	Date	JUNE/2017
	Scale	3/16" = 1'-0"
	BCIN# 19669	
	LO#	74603

48-2 WOB 3285 sqft



PARTIAL SECOND FLOOR PLAN 'B'



Town of Innisfil Certified Model
02/12/2017 10:12:05 AM kgervais

I MICHAEL OROURKE HAVE REVIEWED THESE DRAWINGS FOR THE DESIGN WORK SHOWN AND I AM NOT PROVIDING ANY GUARANTEE OR WARRANTY UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, Techn 19669
HVAC DESIGNS LTD.

SECOND FLOOR PLAN 'A'

WOB
CSA-F280-12
PACKAGE A1

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

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Client

BAYVIEW WELLINGTON

Project Name

ALCONA

INNISFIL, ONTARIO

Sheet Title

SECOND FLOOR HEATING LAYOUT

Date

JUNE/2017

Scale

3/16" = 1'-0"

BCIN#

19669

LO#

74603

HVAC DESIGNS LTD.

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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.

