

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: 32-9-15 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 23, 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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

SITE NAME: ALCONA				DATE: JUN-17		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F. 83		CSA-F280-12
BUILDER: BAYVIEW WELLINGTON				LOW 74588		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F. 12		SB-12 PACKAGE A1
ROOM USE				TYPE: 32-9-15		GFA: 2285		ENS-2		
EXP. WALL CLG. HT.				ENS		WIC		BATH		
GRS.WALL AREA				MBR		BED-2		BED-3		
FACTORS				LOST		LOST		LOST		
GLAZING				LOST		LOST		LOST		
NORTH				23.3		15.8		23.3		15.8
EAST				23.3		41.4		23.3		41.4
SOUTH				23.3		24.7		23.3		24.7
WEST				23.3		41.4		23.3		41.4
SKYLT.				40.8		101.3		40.8		101.3
DOORS				27.6		4.1		27.6		4.1
NET EXPOSED WALL				4.9		0.7		4.9		0.7
NET EXPOSED BENT WALL ABOVE GR				3.9		0.6		3.9		0.6
EXPOSED CLG				1.4		0.6		1.4		0.6
NO ATTIC EXPOSED CLG				3.0		1.2		3.0		1.2
EXPOSED FLOOR				2.8		0.4		2.8		0.4
BASEMENT/CRAWL HEAT LOSS				0		0		0		0
SLAB ON GRADE HEAT LOSS				0		0		0		0
SUBTOTAL HT LOSS				2392		1583		2392		1583
SUB TOTAL HT GAIN				0.20		0.24		0.20		0.24
LEVEL FACTOR / MULTIPLIER				563		114		563		114
AIR CHANGE HEAT LOSS				0		0		0		0
DUCT LOSS				0		0		0		0
HEAT GAIN PEOPLE				2		480		2		480
HEAT GAIN APPLIANCES/LIGHTS				0		0		0		0
TOTAL HT LOSS BTU/H				2954		827		2954		827
TOTAL HT GAIN x 1.3 BTU/H				3905		1124		3905		1124
ROOM USE				K/LD		LAIN		PWD		FOY
EXP. WALL CLG. HT.				85		24		7		46
GRS.WALL AREA				10		13		10		11
FACTORS				850		312		70		506
GLAZING				LOST		LOST		LOST		LOST
NORTH				23.3		15.8		23.3		15.8
EAST				23.3		41.4		23.3		41.4
SOUTH				23.3		24.7		23.3		24.7
WEST				23.3		41.4		23.3		41.4
SKYLT.				40.8		101.3		40.8		101.3
DOORS				27.6		4.1		27.6		4.1
NET EXPOSED WALL				4.9		0.7		4.9		0.7
NET EXPOSED BENT WALL ABOVE GR				3.9		0.6		3.9		0.6
EXPOSED CLG				1.4		0.6		1.4		0.6
NO ATTIC EXPOSED CLG				3.0		1.2		3.0		1.2
EXPOSED FLOOR				2.8		0.4		2.8		0.4
BASEMENT/CRAWL HEAT LOSS				0		0		0		0
SLAB ON GRADE HEAT LOSS				0		0		0		0
SUBTOTAL HT LOSS				6417		2055		526		3428
SUB TOTAL HT GAIN				0.30		0.37		0.30		0.37
LEVEL FACTOR / MULTIPLIER				2356		754		193		1259
AIR CHANGE HEAT LOSS				0		0		0		0
DUCT LOSS				0		0		0		0
HEAT GAIN PEOPLE				240		0		0		0
HEAT GAIN APPLIANCES/LIGHTS				0		0		0		0
TOTAL HT LOSS BTU/H				8773		2809		719		4686
TOTAL HT GAIN x 1.3 BTU/H				8245		1522		405		700
ROOM USE				WOD		FOY		BAS		
EXP. WALL CLG. HT.				47		46		160		
GRS.WALL AREA				9		11		9		
FACTORS				423		506		1242		
GLAZING				LOST		LOST		LOST		
NORTH				23.3		15.8		23.3		15.8
EAST				23.3		41.4		23.3		41.4
SOUTH				23.3		24.7		23.3		24.7
WEST				23.3		41.4		23.3		41.4
SKYLT.				40.8		101.3		40.8		101.3
DOORS				27.6		4.1		27.6		4.1
NET EXPOSED WALL				4.9		0.7		4.9		0.7
NET EXPOSED BENT WALL ABOVE GR				3.9		0.6		3.9		0.6
EXPOSED CLG				1.4		0.6		1.4		0.6
NO ATTIC EXPOSED CLG				3.0		1.2		3.0		1.2
EXPOSED FLOOR				2.8		0.4		2.8		0.4
BASEMENT/CRAWL HEAT LOSS				0		0		0		0
SLAB ON GRADE HEAT LOSS				0		0		0		0
SUBTOTAL HT LOSS				1634		1265		6882		243
SUB TOTAL HT GAIN				0.50		0.88		0.50		0.88
LEVEL FACTOR / MULTIPLIER				7604		109		7604		109
AIR CHANGE HEAT LOSS				0		0		0		0
DUCT LOSS				0		0		0		0
HEAT GAIN PEOPLE				0		0		0		0
HEAT GAIN APPLIANCES/LIGHTS				0		0		0		0
TOTAL HT LOSS BTU/H				1634		1644		14586		457
TOTAL HT GAIN x 1.3 BTU/H				1644		1644		14586		457

TOTAL HEAT GAIN BTU/H: 29005

TONS: 2.42

LOSS DUE TO VENTILATION LOAD BTU/H: 3122

STRUCTURAL HEAT LOSS: 48644

SITE NAME: ALCONA

BUILDER: BAYVIEW WELLINGTON

TYPE: 32-9-15

DATE: Jun-17

GFA: 2285 LO# 74598

HEATING CFM 995 COOLING CFM 995
TOTAL HEAT LOSS 49,644 TOTAL HEAT GAIN 28,547
AIR FLOW RATE CFM 20.04 AIR FLOW RATE CFM 34.86TYPE: 32-9-15
furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure 0.35
for s/a & r/aEL296UH070XE368
FAN SPEED
LOW 0
MEDIUM 0
MEDIUM HIGH 1100AFUE = 96 %
INPUT (BTUH) = 66,000
OUTPUT (BTUH) = 64,000
DESIGN CFM = 995
CFM @ 8" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	1	6	4
R/A	0	0	4	1	1

All S/A diffusers 4"x10" unless noted otherwise on layout.

All S/A runs 5'0" unless noted otherwise on layout.

RUN #	1	2	3	4	5	6	7	8	9	10	11	14	15	16	17	18	19	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-3	BED-4	MBR	ENS-2	K/L/D	K/L/D	K/L/D	LAUN	PWID	FOY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.48	1.87	0.77	1.55	1.88	1.85	1.38	1.88	1.85	1.48	0.46	2.92	2.92	2.92	2.81	0.72	4.69	4.05	4.05	4.05	4.05
CFM PER RUN HEAT	30	37	15	31	38	37	28	38	37	30	9	59	59	59	56	14	94	81	81	81	81
RM GAIN MBH	1.95	1.12	0.18	2.03	1.80	1.95	0.73	1.80	1.95	1.95	0.12	2.75	2.75	2.75	1.52	0.40	0.70	0.53	0.53	0.53	0.53
CFM PER RUN COOLING	68	39	6	71	63	68	26	63	68	68	4	96	96	96	53	14	24	18	18	18	18
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	0.16	0.16	0.17	0.17	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	48	48	36	34	42	54	36	46	46	40	31	37	31	42	25	30	39	30	33	21	24
EQUIVALENT LENGTH	180	170	180	130	150	140	160	150	160	150	150	140	150	160	120	150	120	110	100	140	140
TOTAL EFFECTIVE LENGTH	228	218	216	204	172	204	176	206	196	200	181	177	181	202	145	180	159	140	133	161	164
ADJUSTED PRESSURE	0.08	0.08	0.08	0.08	0.1	0.08	0.1	0.08	0.09	0.09	0.1	0.09	0.09	0.08	0.12	0.1	0.1	0.12	0.12	0.1	0.1
ROUND DUCT SIZE	5	4	4	5	5	5	4	5	5	5	4	6	6	6	4	4	5	5	5	5	5
HEATING VELOCITY (ft/min)	220	424	172	228	279	272	321	279	272	220	103	301	301	301	642	161	690	595	595	595	595
COOLING VELOCITY (ft/min)	499	447	69	521	463	499	298	463	499	499	46	489	489	489	608	161	176	132	132	132	132
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	B	D	D	D	C	D	D	C	A	B	A	A	A	D	C	C	B	B	B	C

ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-3	BED-4	MBR	ENS-2	K/L/D	K/L/D	K/L/D	LAUN	PWID	FOY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.48	1.87	0.77	1.55	1.88	1.85	1.38	1.88	1.85	1.48	0.46	2.92	2.92	2.92	2.81	0.72	4.69	4.05	4.05	4.05	4.05
CFM PER RUN HEAT	30	37	15	31	38	37	28	38	37	30	9	59	59	59	56	14	94	81	81	81	81
RM GAIN MBH	1.95	1.12	0.18	2.03	1.80	1.95	0.73	1.80	1.95	1.95	0.12	2.75	2.75	2.75	1.52	0.40	0.70	0.53	0.53	0.53	0.53
CFM PER RUN COOLING	68	39	6	71	63	68	26	63	68	68	4	96	96	96	53	14	24	18	18	18	18
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	0.16	0.16	0.17	0.17	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	48	48	36	34	42	54	36	46	46	40	31	37	31	42	25	30	39	30	33	21	24
EQUIVALENT LENGTH	180	170	180	130	150	140	160	150	160	150	150	140	150	160	120	150	120	110	100	140	140
TOTAL EFFECTIVE LENGTH	228	218	216	204	172	204	176	206	196	200	181	177	181	202	145	180	159	140	133	161	164
ADJUSTED PRESSURE	0.08	0.08	0.08	0.08	0.1	0.08	0.1	0.08	0.09	0.09	0.1	0.09	0.09	0.08	0.12	0.1	0.1	0.12	0.12	0.1	0.1
ROUND DUCT SIZE	5	4	4	5	5	5	4	5	5	5	4	6	6	6	4	4	5	5	5	5	5
HEATING VELOCITY (ft/min)	220	424	172	228	279	272	321	279	272	220	103	301	301	301	642	161	690	595	595	595	595
COOLING VELOCITY (ft/min)	499	447	69	521	463	499	298	463	499	499	46	489	489	489	608	161	176	132	132	132	132
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	B	D	D	D	C	D	D	C	A	B	A	A	A	D	C	C	B	B	B	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 CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	237	0.08	8	8	533	TRUNK G	0	0	0	0	TRUNK O	0	0.07	0	8
TRUNK B	526	0.08	11	14	676	TRUNK H	0	0	0	0	TRUNK P	0	0.07	0	8
TRUNK C	263	0.08	8.5	8	592	TRUNK I	0	0	0	0	TRUNK Q	0	0.07	0	8
TRUNK D	463	0.08	10.6	14	603	TRUNK J	0	0	0	0	TRUNK R	0	0.07	0	8
TRUNK E	995	0.08	14	22	814	TRUNK K	0	0	0	0	TRUNK S	0	0.07	0	8
TRUNK F	0	0.00	0	0	0	TRUNK L	0	0	0	0	TRUNK T	0	0.07	0	8
RETURN AIR #	1	2	3	4	5	TRUNK U	0	0	0	0	TRUNK V	0	0.07	0	8
AIR VOLUME	120	120	120	85	400	TRUNK W	0	0	0	0	TRUNK X	995	0.07	0	8
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	TRUNK Y	0	0	0	0	TRUNK Z	520	0.07	14.5	8
ACTUAL DUCT LGH.	51	44	44	51	32	TRUNK 2	0	0	0	0	DROP	995	0.07	14.5	8
EQUIVALENT LENGTH	150	175	155	135	145	TRUNK 3	0	0	0	0	TRUNK 4	0	0.07	14.5	10
TOTAL EFFECTIVE LH	201	219	199	186	177	TRUNK 5	0	0	0	0	TRUNK 6	0	0.07	14.5	10
ADJUSTED PRESSURE	0.07	0.07	0.07	0.08	0.08	TRUNK 7	0	0	0	0	TRUNK 8	0	0.07	14.5	10
ROUND DUCT SIZE	6.6	6.6	6.6	5.6	9.9	TRUNK 9	0	0	0	0	TRUNK 10	0	0.07	14.5	10
INLET GRILL SIZE	X	X	X	X	X	TRUNK 11	0	0	0	0	TRUNK 12	0	0.07	14.5	10
INLET GRILL SIZE	14	14	14	14	30	TRUNK 13	0	0	0	0	TRUNK 14	0	0.07	14.5	10

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

TYPE: 32-9-15
SITE NAME: ALCONA

LO # 74589

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	4	@ 10.6 cfm	42.4	cfm
Table 9.32.3.A.		TOTAL	169.6	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	169.6	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	30.6	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	83 F	1.08	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
PWD	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

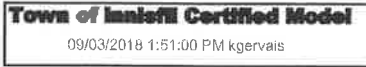
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.

Name: HVAC Designs Ltd.

Signature: *Michael O'Rourke*

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: 32-9-15	BUILDER: BAYVIEW WELLINGTON
SFQT: 2285	SITE: ALCONA
LO# 74588	

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):	30771.0	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: 53.0 ft	WIDTH: 27.0 ft	EXPOSED PERIMETER:	160.0 ft

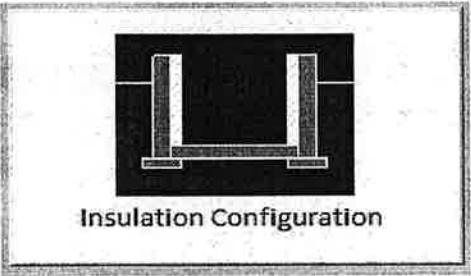
2012 OBC - COMPLIANCE PACKAGE		
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.8
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement 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):	16.2	 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):	2.8	
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):		1635

TYPE: 32-9-15
LO# 74588



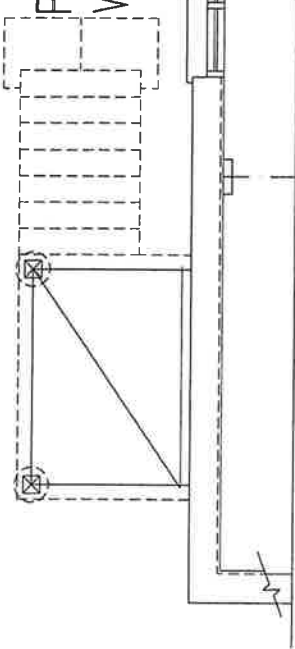
HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

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):	871.3		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1161.5 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
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):		0.332	
Cooling Air Leakage Rate (ACH/H):		0.087	

TYPE: 32-9-15
LO# 74588



I MICHAEL COURAGE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C 325 OF THE BUILDING CODE.

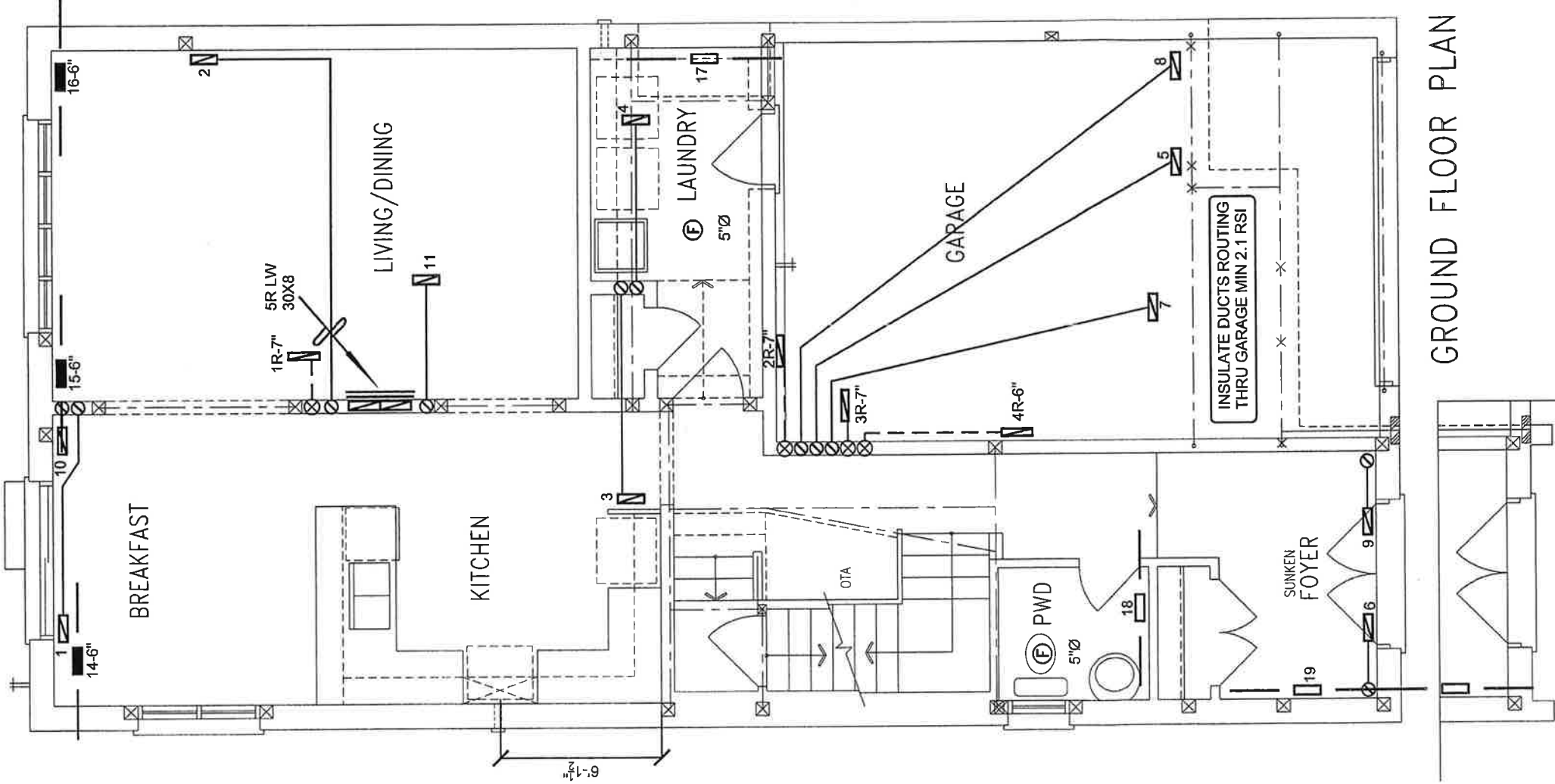
Michael Courage
Michael Courage, INC. # 10640
UNAC DESIGNS LTD

HVAC LEGEND

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HEAT LOSS 52767 BTU/H		# OF RUNS				S/A	R/A	FANS	Sheet Title BASEMENT HEATING LAYOUT
UNIT DATA		3RD FLOOR							
MAKE	LENNOX	2ND FLOOR		11	4	3			
MODEL	EL296UH070XE36B	1ST FLOOR		6	1	3			
INPUT	66 MBTU/H	BASEMENT		4	1	0			
-OUTPUT		ALL S/A DIFFUSERS 4"x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5'± ON LAYOUT. UNDERCUT DOORS 1" min. For R/A							
COOLING	2.5 TONS	Scale 3/16" = 1'-0"							BCIN# 19669
FAN SPEED	995 cfm @ 0.5" w.g.	LO# 74588							

Town of Innisfil Certified Model
09/03/2018 1:51:08 PM kgervais



GROUND FLOOR PLAN 'A'

PARTIAL GROUND FLOOR PLAN 'B'

MICHAEL DYORKE HAVE REVIEWED THESE DRAWINGS AND CONFIRMED THE WORKS AND AM QUALIFIED UNDER DIVISION C.3.2.5 OF THE BUILDING CODE.
Michael Dyork
HVAC DESIGNS LTD.

CSA-F280-12

PACKAGE A1

HVAC LEGEND				3.	2.	1.	No.
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---	SUPPLY AIR GRILLE	---	6" SUPPLY AIR BOOT ABOVE	---	14"x8" RETURN AIR GRILLE	---	RETURN AIR STACK ABOVE
---	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

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Client

BAYVIEW WELLINGTON

ALCONA
INNISFIL, ONTARIO

32-9-15

2285 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@hvacdsgns.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.

Sheet Title

FIRST FLOOR
HEATING
LAYOUT

Date JUNE/2017

Scale 3/16" = 1'-0"

BCIN# 19669

LO# 74588

Town of Innisfil Certified Model

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