

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: 48-2 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 22, 2017 Date		 Signature of Designer	

NOTE:

- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

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

SITE NAME: ALCONA

BUILDER: BAYVIEW WELLINGTON

TYPE: 48-2

GFA: 3256

DATE: Jun-17

WINTER NATURAL AIR CHANGE RATE 0.332

HEAT LOSS AT F. 83

CSA-F280-12

SB-12 PACKAGE A1

ROOM USE	ENS	BED-2	BED-3	BED-4	ENS-2	BED-5	ENS-3	WOD	BAS
EXP. WALL CLG. HT.	31 10	12 9	16 10	31 10	19 9	13 9	6 9	46 9	180 9
FACTORS	310	108	160	295	171	117	54	414	1356
GLAZING	0	0	0	0	0	0	0	0	0
NORTH	23.3	15.8	0	0	0	0	0	0	0
EAST	23.3	41.4	0	0	0	0	0	0	0
SOUTH	23.3	24.7	0	0	0	0	0	0	0
WEST	23.3	41.4	32	745	1324	27	629	1117	0
SKYL.	40.8	101.3	0	0	0	0	0	0	0
DOORS	27.6	4.1	0	0	0	0	0	0	0
NET EXPOSED WALL	4.9	0.7	278	1358	199	227	1109	163	0
NET EXPOSED BSWT WALL ABOVE GR	3.9	0.6	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	1.4	0.6	380	548	225	186	261	107	0
EXPOSED FLOOR	3.0	1.2	0	0	0	0	0	0	0
BASEMENT GRAWL HEAT LOSS	2.8	0.4	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2582	1748	2152	1561	0.20	0.28	613	97	0
LEVEL FACTOR / MULTIPLIER	0.20	0.28	0.20	0.28	0.20	0.28	0.20	0.28	0.20
AIR CHANGE HEAT LOSS	752	109	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	2	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	480	0	0	0	0	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H	3404	717	2776	2155	3404	717	2776	2155	3404
TOTAL HT GAIN x 1.3 BTU/H	3571	2155	2155	2155	2155	2155	2155	2155	2155

ROOM USE	ENS	BED-2	BED-3	BED-4	ENS-2	BED-5	ENS-3	WOD	BAS
EXP. WALL CLG. HT.	56 10	76 10	81 9	60 10	385 11	260 10	414 9	180 9	140 9
FACTORS	560	760	810	600	3850	2600	4140	1800	1400
GLAZING	0	0	0	0	0	0	0	0	0
NORTH	23.3	15.8	0	0	0	0	0	0	0
EAST	23.3	41.4	0	0	0	0	0	0	0
SOUTH	23.3	24.7	0	0	0	0	0	0	0
WEST	23.3	41.4	0	0	0	0	0	0	0
SKYL.	40.8	101.3	0	0	0	0	0	0	0
DOORS	27.6	4.1	0	0	0	0	0	0	0
NET EXPOSED WALL	4.9	0.7	278	1358	199	227	1109	163	0
NET EXPOSED BSWT WALL ABOVE GR	3.9	0.6	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	1.4	0.6	380	548	225	186	261	107	0
EXPOSED FLOOR	3.0	1.2	0	0	0	0	0	0	0
BASEMENT GRAWL HEAT LOSS	2.8	0.4	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	4039	2787	5672	3562	0.20	0.28	613	97	0
LEVEL FACTOR / MULTIPLIER	0.30	0.42	0.30	0.42	0.30	0.42	0.30	0.42	0.30
AIR CHANGE HEAT LOSS	1707	173	0	0	0	0	0	0	0
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	5745	717	8713	9040	5745	717	8713	9040	5745
TOTAL HT GAIN x 1.3 BTU/H	4781	9040	9040	9040	9040	9040	9040	9040	9040

TOTAL HEAT GAIN BTU/H:

41287

TONS: 3.44

LOSS DUE TO VENTILATION LOAD BTU/H: 3122

STRUCTURAL HEAT LOSS: 63622

TOTAL COMBINED HEAT LOSS BTU/H: 66745

Michael O'Rourke

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

SITE NAME: ALCONA
BUILDER: BAYVIEW WELLINGTON

TYPE: 48-2

DATE: Jun-17

GFA: 3285

LO# 74802

HEATING CFM 1255
TOTAL HEAT LOSS 63,622
AIR FLOW RATE CFM 19.73

COOLING CFM 1255
TOTAL HEAT GAIN 40,829
AIR FLOW RATE CFM 30.74

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	14	9	3
R/A	0	0	5	2	1

All S/A diffusers 4" x 10" unless noted otherwise on layout.
All R/A runs 5" Q unless noted otherwise on layout.

plenum pressure s/a
max s/a diff. press. loss
min adjusted pressure s/a

furnace pressure
furnace filter
at coil pressure
available pressure
for s/a & r/a

0.6
0.05
0.2
0.35
0.18

0.02
0.17
0.15
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
0.17
0.17
0.17
0.17

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	ENS-2	BED-3	BED-4	MBR	ENS-3	LV/DN	LV/DN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	ENS	ENS-2	BED-5	LV/DN	MUD	
RM LOSS MBH	1.70	1.39	2.47	1.70	1.70	0.93	1.70	1.70	1.70	0.73	1.92	1.92	2.90	2.90	2.90	1.00	0.68	4.62	1.39	0.93	1.58	1.92	2.45	
CFM PER RUN HEAT	34	27	49	34	33	18	34	33	34	14	38	38	57	57	57	20	13	91	27	18	31	38	48	
RM GAIN MBH	1.99	1.08	2.19	2.29	2.12	0.37	2.29	2.12	1.99	0.39	1.59	1.59	3.01	3.01	3.01	1.30	0.27	1.60	1.08	0.37	2.10	1.59	1.28	
CFM PER RUN COOLING	61	33	67	70	65	11	70	65	61	12	49	49	93	93	93	40	8	49	33	11	64	49	39	
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	0.16	0.17	0.17	0.17	0.17	0.17	
ACTUAL DUCT LGTH	57	29	46	49	33	49	50	37	68	28	22	28	37	52	57	57	63	53	34	49	46	21	7	
EQUIVALENT LENGTH	130	200	180	130	150	160	150	140	120	120	110	120	130	140	140	120	130	140	170	170	190	110	110	
TOTAL EFFECTIVE LENGTH	187	229	226	179	183	208	200	177	188	148	132	148	167	192	177	183	183	174	219	216	211	117	166	
ADJUSTED PRESSURE	0.09	0.08	0.08	0.1	0.09	0.08	0.09	0.1	0.09	0.12	0.13	0.12	0.12	0.1	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	4	5	5	5	4	4	4	4	5	6	6	4	4	4	4	5	4	4	
HEATING VELOCITY (ft/min)	250	310	360	250	242	207	250	242	250	161	436	436	582	582	582	291	149	464	310	207	228	436	551	
COOLING VELOCITY (ft/min)	448	379	492	514	477	126	514	477	448	138	562	562	683	683	474	474	459	92	250	126	470	562	447	
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	
TRUNK	B	B	D	D	D	D	D	D	B	D	C	C	C	B	A	A	A	C	B	D	B	D	A	

RUN #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
ROOM NAME	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16
CFM PER RUN HEAT	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
RM GAIN MBH	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
CFM PER RUN COOLING	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	49	35	22	12	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
EQUIVALENT LENGTH	130	110	150	150	130	179	145	172	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152
TOTAL EFFECTIVE LENGTH	179	145	172	182	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152
ADJUSTED PRESSURE	0.09	0.11	0.09	0.1	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
ROUND DUCT SIZE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602
COOLING VELOCITY (ft/min)	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	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	3X10
TRUNK	A	B	B	D	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C

SUPPLY AIR TRUNK SIZE															RETURN AIR TRUNK SIZE														
TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)															
TRUNK A	277	0.08	8.7	10	8	499	0	0	8	0	0.05	0	0	0															
TRUNK B	651	0.08	11.9	16	8	732	0	0	8	0	0.05	0	0	0															
TRUNK C	315	0.09	8.8	10	8	567	0	0	8	0	0.05	0	0	0															
TRUNK D	602	0.08	11.6	16	8	677	0	0	8	0	0.05	0	0	0															
TRUNK E	0	0.00	0	0	8	0	0	0	8	0	0.05	0	0	0															
TRUNK F	0	0.00	0	0	8	0	0	0	8	0	0.05	0	0	0															
RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14															
AIR VOLUME	0	0	0	0	0	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															
EQUIVALENT LENGTH	83	49	41	41	47	40	29	1	1	1	1	1	1	1															
TOTAL EFFECTIVE LENGTH	228	274	231	186	232	190	185	0	0	0	0	0	0	0															
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															
ROUND DUCT SIZE	6.8	7.5	7.1	6.3	6.8	7	9.2	0	0	0	0	0	0	0															
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8															
INLET GRILL SIZE	14	14	14	14	14	14	14	14	14	14	14	14	14	14															

TYPE: 48-2
SITE NAME: ALCONA

LO # 74602

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 Ventil. Capacity	139	cfm
Required Supplemental Capacity	62.4	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
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: VANEE 60H-V+		
139 cfm high	50 cfm low	
75 % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER: BAYVIEW WELLINGTON	
Name:	
Address:	
City:	
Telephone #:	Fax #:

INSTALLING CONTRACTOR	
Name:	
Address:	
City:	
Telephone #:	Fax #:

DESIGNER CERTIFICATION	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name:	HVAC Designs Ltd.
Signature:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	June-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 48-2	BUILDER: BAYVIEW WELLINGTON
SFQT: 3285	SITE: ALCONA
LO# 74602	

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:	180.0 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	-

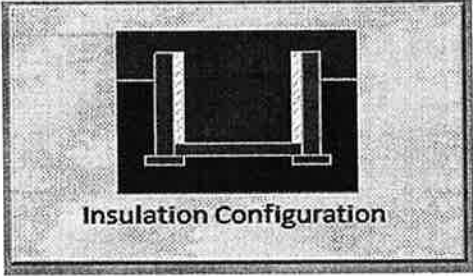
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Barrie	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	15.2	 Insulation Configuration
Floor Width (m):	12.2	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	3.0	
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):		1891

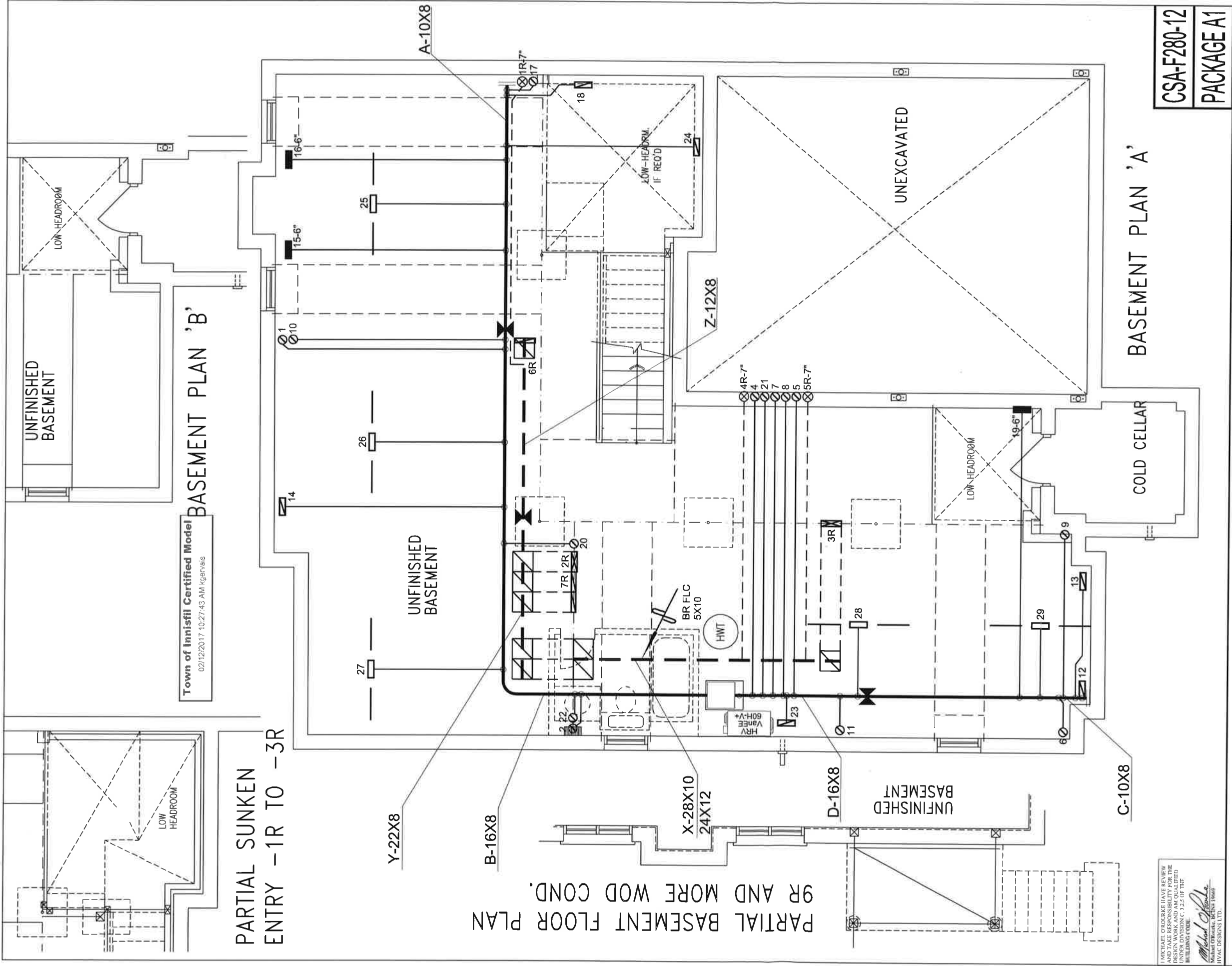
TYPE: 48-2
LO# 74602

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):	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	#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: 48-2
LO# 74602



MICHAEL O'DRISCOLL
DESIGNER
TOWN OF INNISFIL
DIVISION C 3.25 OF THE
BUILDING CODE
Michael O'Driscoll
Mechanical Engineer
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

BASEMENT PLAN 'A'

SYMBOL			DESCRIPTION			SYMBOL			DESCRIPTION		
—	—	—	FLOOR SUPPLY AIR GRILLE	—	—	—	—	—	14"x8" RETURN AIR GRILLE	—	—
—	—	—	FLOOR SUPPLY AIR GRILLE 6" BOOT	—	—	—	—	—	30"x8" RETURN AIR GRILLE	—	—
—	—	—	SUPPLY AIR BOOT ABOVE	—	—	—	—	—	FRA- FLOOR RETURN AIR GRILLE	—	—

SYMBOL			DESCRIPTION			SYMBOL			DESCRIPTION		
—	—	—	6" SUPPLY AIR BOOT ABOVE	—	—	—	—	—	RETURN AIR STACK ABOVE	—	—
—	—	—	SUPPLY AIR STACK FROM 2nd FLOOR	—	—	—	—	—	RETURN AIR STACK 2nd FLOOR	—	—
—	—	—	6" SUPPLY AIR STACK 2nd FLOOR	—	—	—	—	—	REDUCER	—	—

SYMBOL			DESCRIPTION			SYMBOL			DESCRIPTION		
—	—	—	6" SUPPLY AIR BOOT ABOVE	—	—	—	—	—	No.	Description	Date

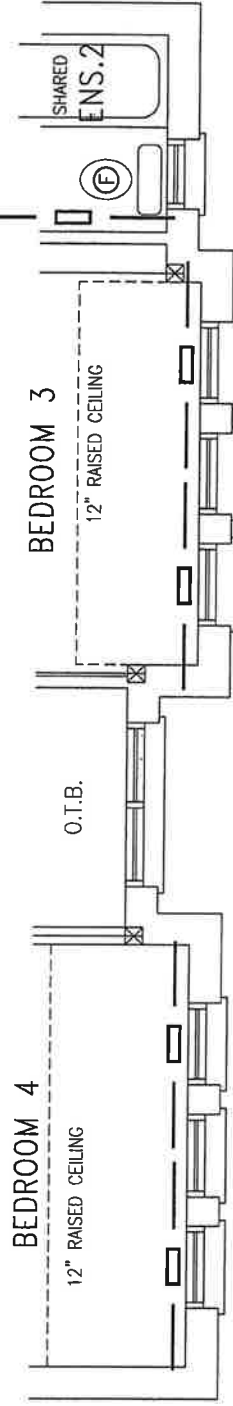
SYMBOL			DESCRIPTION			SYMBOL			DESCRIPTION		
—	—	—	6" SUPPLY AIR BOOT ABOVE	—	—	—	—	—	No.	Description	Date

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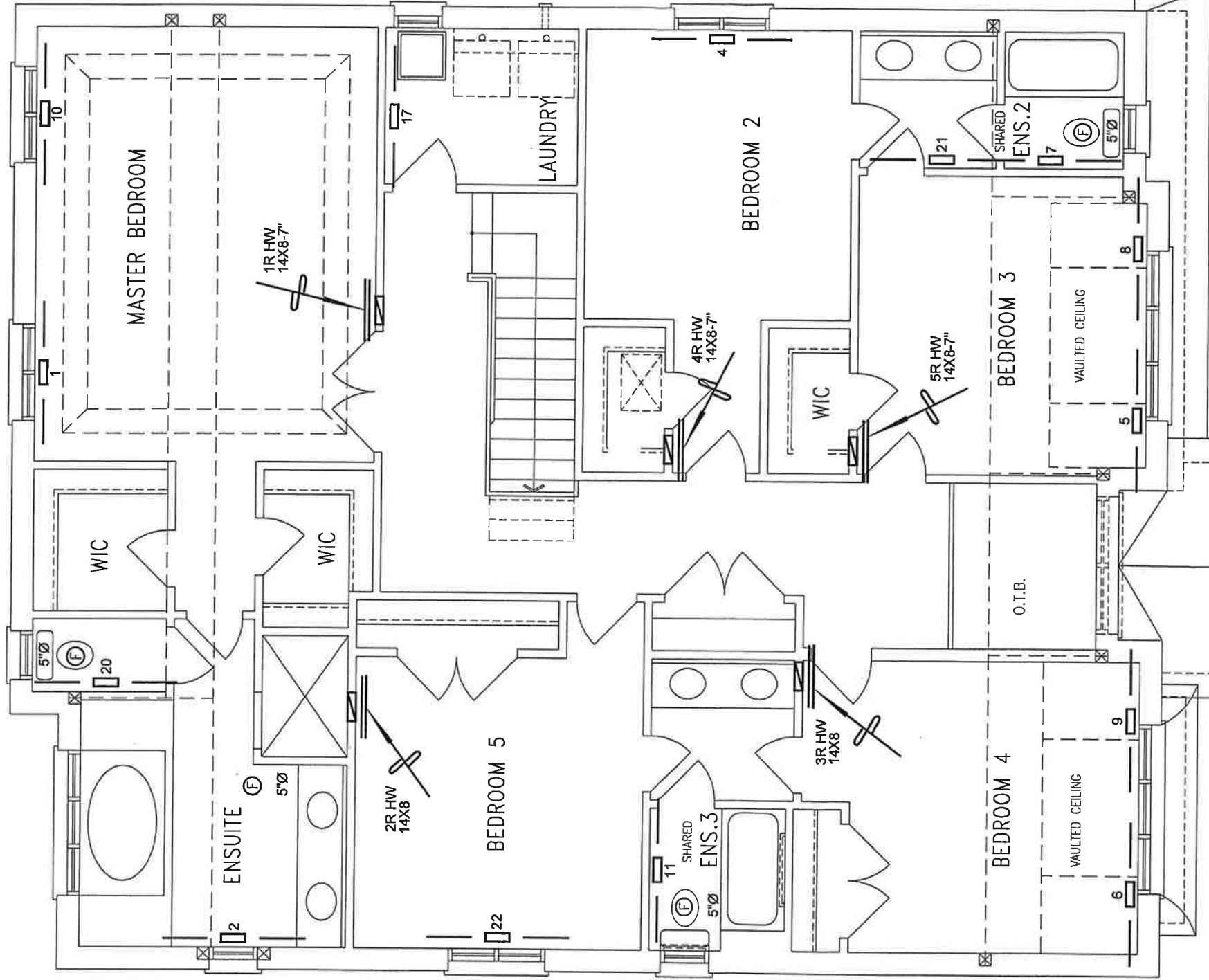
Client		Sheet Title	
BAYVIEW WELLINGTON		BASEMENT	
ALCONA		HEATING	
INNISFIL, ONTARIO		LAYOUT	
48-2		JUNE/2017	
3285 sqft		Scale 3/16" = 1'-0"	
		BCIN# 19669	
		LO# 74602	

HEAT LOSS 66745 BTU/H		# 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		88		85		3.5	
OUTPUT		85		3.5		1255		0.5" w.c.	
COOLING		TONS		1255		0.5" w.c.		DOORS 1" min. FOR R/A	
FAN SPEED		1255		0.5" w.c.		DOORS 1" min. FOR R/A			

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.



PARTIAL SECOND FLOOR PLAN 'B'



Town of Innisfil Certified Model
02/12/2017 10:27:59 AM kgervais

I MICHAEL OROURKE HAVE REVIEWED THESE DRAWINGS FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C 3.2.3 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BChM 1969
HVAC DESIGNS LTD.

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"x6" 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#

74602

HVACDESIGNS 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.

