



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 ALCONA	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: 32-2-12 - ALT 1ST Project: INNISFIL		
D. Declaration of Designer				
I, <u>MICHAEL O'ROURKE</u> 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 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.				
December 8, 2023				
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: INNISFIL		BUILDER: BAYVIEW WELLINGTON		TYPE: 32-2-12 - ALT 1ST		GFA: 2070		DATE: Dec-23 LO# 103449		WINTER NATURAL AIR CHANGE RATE 0.362		HEAT LOSS ΔT °F. 83		CSA-F280-12	
										SUMMER NATURAL AIR CHANGE RATE 0.082		HEAT GAIN ΔT °F. 9		SB-12 PACKAGE A1	
ROOM USE		MBR		ENS		WIC		BED-2		BED-3		BED-4		BATH	
EXP. WALL		30		22		6		24		35		17		8	
CLG. HT.		9		9		9		10		10		9		9	
FACTORS															
GRS.WALL AREA	LOSS GAIN	270		198		54		228		333		153		72	
GLAZING	LOSS GAIN														
NORTH	23.3 12.3	0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
EAST	23.3 32.4	0 0 0		0 0 0		0 0 0		28 652 907		33 769 1069		0 0 0		0 0 0	
SOUTH	23.3 19.3	0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		28 652 541		7 163 135	
WEST	23.3 32.4	28 652 907		13 303 421		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
SKYL.T.	40.8 131.5	0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
DOORS	22.0 2.4	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 0.5	242 1182 131		185 904 100		54 264 29		200 977 108		300 1463 162		125 611 68		65 318 35	
NET EXPOSED BSMT WALL ABOVE GR	3.9 0.4	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 0.5	224 315 118		121 170 64		96 135 51		124 174 65		145 204 76		187 263 99		128 180 67	
NO ATTIC EXPOSED CLG	3.0 1.1	0 0 0		0 0 0		0 0 0		30 90 34		30 90 34		0 0 0		0 0 0	
EXPOSED FLOOR	2.8 0.3	0 0 0		0 0 0		0 0 0		154 430 48		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		2149		1377		399		2324		2526		1526		660	
SUB TOTAL HT GAIN			1156		585		80		1162		1342		707		238
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		558		357		104		603		656		396		171	
AIR CHANGE HEAT GAIN			60		30		4		60		70		37		12
DUCT LOSS		0		0		0		293		0		0		0	
DUCT GAIN			0		0		0		196		0		0		0
HEAT GAIN PEOPLE	240	2	480	0	0	0	0	1	240	1	240	1	240	0	0
HEAT GAIN APPLIANCES/LIGHTS			499		0		0		499		499		499		0
TOTAL HT LOSS BTU/H		2707		1734		502		3220		3182		1922		832	
TOTAL HT GAIN x 1.3 BTU/H			2853		800		109		2804		2795		1927		325

ROOM USE			GRT				KIT		WIC-2		LAUN		W/R		FOY		MUD						WOD		BAS			
EXP. WALL			41				60		12		7		4		18		16						36		150			
CLG. HT.			10				10		10		9		10		11		10						9		9			
FACTORS																												
GRS.WALL AREA	LOSS	GAIN	410				600		120		63		40		189		160						324		1008			
GLAZING	LOSS	GAIN					LOSS		GAIN		LOSS		GAIN		LOSS		GAIN						LOSS		GAIN			
NORTH	23.3	12.3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0				23	536	283	6	140	74
EAST	23.3	32.4	0	0	0		0	0	0	12	280	389	0	0	0	0	0	0	0	0			0	0	0	0	0	0
SOUTH	23.3	19.3	48	1118	928		0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0
WEST	23.3	32.4	0	0	0		83	1934	2690	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0
SKYLT.	40.8	131.5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0
DOORS	22.0	2.4	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	0.5	362	1769	196		517	2526	279	108	528	58	63	308	34	40	195	22	143	699	77			140	684	76		
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.4	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	0.5	0	0	0		0	0	0	0	0	0	105	148	55	0	0	0	0	0	0			0	0	0		
NO ATTIC EXPOSED CLG	3.0	1.1	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	0.3	0	0	0		0	0	0	0	0	0	54	151	17	0	0	0	0	0	0			0	0	0		
BASEMENT/CRAWL HEAT LOSS																												
SLAB ON GRADE HEAT LOSS																												
SUBTOTAL HT LOSS																												
SUB TOTAL HT GAIN																												
LEVEL FACTOR / MULTIPLIER	0.30	0.40					0.30	0.40		0.30	0.40		0.20	0.26		0.30	0.40		0.30	0.40								
AIR CHANGE HEAT LOSS																												
AIR CHANGE HEAT GAIN																												
DUCT LOSS																												
DUCT GAIN																												
HEAT GAIN PEOPLE	240																											
HEAT GAIN APPLIANCES/LIGHTS																												
TOTAL HT LOSS BTU/H																												
TOTAL HT GAIN x 1.3 BTU/H																												

TOTAL HEAT GAIN BTU/H: 23061

TONS: 1.92

LOSS DUE TO VENTILATION LOAD BTU/H: 1786

STRUCTURAL HEAT LOSS: 46548

TOTAL COMBINED HEAT LOSS BTU/H: 48334

SITE NAME: INNISFIL
BUILDER: BAYVIEW WELLINGTON

TYPE: 32-2-12 - ALT 1ST

DATE: Dec-23

GFA: 2070 LO# 103449

HEATING CFM 950 COOLING CFM 950
TOTAL HEAT LOSS 46,548 TOTAL HEAT GAIN 22,863
AIR FLOW RATE CFM 20.41 AIR FLOW RATE CFM 41.55furnace pressure 0.7
furnace filter 0.14
a/c coil pressure 0.22
available pressure
for s/a & r/a 0.34**\$LENNOX**
ML196UH070XE36B
70AFUE = 96 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = **63,900**

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	11	9	4
R/A	0	0	4	1	1

plenium pressure s/a 0.18 r/a pressure 0.16
max s/a dif press. loss 0.02 r/a grille press. Loss 0.02
min adjusted pressure s/a 0.16 adjusted pressure r/a 0.14FAN SPEED 0
LOW 0
MEDLOW 0
MEDIUM 0
MEDIUM HIGH 950
HIGH 0DESIGN CFM = **950**
CFM @ .7" E.S.P.TEMPERATURE RISE 62 °F

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	WIC	BED-2	BED-3	BED-4	BATH	BED-2	BED-3	MBR	WIC-2	GRT	GRT	KIT	KIT	KIT	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.35	1.73	0.50	1.61	1.59	1.92	0.83	1.61	1.59	1.35	1.13	2.02	2.02	2.08	2.08	2.08	0.84	0.27	2.41	1.58	3.98	3.98	3.98	3.98
CFM PER RUN HEAT	28	35	10	33	32	39	17	33	32	28	23	41	41	43	43	43	17	6	49	32	81	81	81	81
RM GAIN MBH.	1.43	0.80	0.11	1.40	1.40	1.93	0.33	1.40	1.40	1.43	0.61	1.09	1.09	1.57	1.57	1.57	0.87	0.03	0.50	0.82	0.38	0.38	0.38	0.38
CFM PER RUN COOLING	59	33	5	58	58	80	14	58	58	59	25	45	45	65	65	65	36	1	21	34	16	16	16	16
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	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	67	58	36	37	54	41	58	42	63	75	41	24	33	33	37	43	30	26	31	19	38	28	25	34
EQUIVALENT LENGTH	150	130	120	190	120	140	160	180	140	150	120	130	140	110	140	120	170	110	90	140	90	110	150	120
TOTAL EFFECTIVE LENGTH	217	188	156	227	174	181	218	222	203	225	161	154	173	143	177	163	200	136	121	159	128	138	175	154
ADJUSTED PRESSURE	0.08	0.09	0.11	0.07	0.1	0.09	0.08	0.08	0.08	0.07	0.1	0.11	0.1	0.12	0.09	0.1	0.08	0.12	0.14	0.1	0.12	0.11	0.09	0.1
ROUND DUCT SIZE	5	4	4	5	5	5	4	5	5	5	4	4	4	5	5	5	4	4	4	4	5	5	6	5
HEATING VELOCITY (ft/min)	206	402	115	242	235	286	195	242	235	206	264	470	470	316	316	316	195	69	562	367	595	595	413	595
COOLING VELOCITY (ft/min)	433	379	57	426	426	587	161	426	426	433	287	516	516	477	477	477	413	11	241	390	117	117	82	117
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	4X10	3X10
TRUNK	A	A	C	C	D	C	D	C	D	A	D	C	D	A	A	A	C	C	D	C	A	A	D	D

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										RETURN AIR TRUNK SIZE									
TRUNK	STATIC	ROUND	RECT	VELOCITY						TRUNK	STATIC	ROUND	RECT	VELOCITY					
CFM	PRESS.	DUCT	DUCT						(ft/min)	CFM	PRESS.	DUCT	DUCT						(ft/min)
TRUNK A	382	0.07	10.1	12	x	8	573			TRUNK G	0	0.00	0	0	x	8	0		
TRUNK B	0	0.00	0	0	x	8	0			TRUNK H	0	0.00	0	0	x	8	0		
TRUNK C	593	0.07	11.9	18	x	8	593			TRUNK I	0	0.00	0	0	x	8	0		
TRUNK D	356	0.08	9.5	10	x	8	641			TRUNK J	0	0.00	0	0	x	8	0		
TRUNK E	949	0.07	14.2	24	x	8	712			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 #	1	2	3	4	5	BR													
FLOOR	2	2	2	2	1														
AIR VOLUME	110	110	108	100	360	0	0	0	0	0	0	0	0	0	0	0	0	162	
PLENUM PRESSURE	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	
ACTUAL DUCT LGH.	55	36	42	47	27	1	1	1	1	1	1	1	1	1	1	1	1	14	
EQUIVALENT LENGTH	145	150	145	145	190	0	0	0	0	0	0	0	0	0	0	0	0	150	
TOTAL EFFECTIVE LH	200	186	187	192	217	1	1	1	1	1	1	1	1	1	1	1	1	164	
ADJUSTED PRESSURE	0.07	0.08	0.08	0.07	0.07	14.32	14.32	14.32	14.32	14.32	14.32	14.32	14.32	14.32	14.32	14.32	0.09		
ROUND DUCT SIZE	6.3	6	6	6	9.9	0	0	0	0	0	0	0	0	0	0	0	0	6.9	
INLET GRILL SIZE	8	8	8	8	8	0	0	0	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	X	X	
INLET GRILL SIZE	14	14	14	14	30	0	0	0	0	0	0	0	0	0	0	0	0	14	

TYPE: 32-2-12 - ALT 1ST
SITE NAME: INNISFIL

LO # 103449

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	<u>2</u>	@ 21.2 cfm	<u>42.4</u>	cfm
Other Bedrooms	<u>3</u>	@ 10.6 cfm	<u>31.8</u>	cfm
Kitchen & Bathrooms	<u>4</u>	@ 10.6 cfm	<u>42.4</u>	cfm
Other Rooms	<u>5</u>	@ 10.6 cfm	<u>53.0</u>	cfm
Table 9.32.3.A.		TOTAL	<u>169.6</u>	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		<u>79.5</u>	cfm

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	<u>169.6</u>	cfm
Less Principal Ventil. Capacity	<u>79.5</u>	cfm
Required Supplemental Capacity	<u>90.1</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANEE V150H Location: BSMT

79.5 cfm ☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM		ΔT °F		FACTOR		% LOSS
79.5 CFM	X	83 F	X	1.08	X	0.25

SUPPLEMENTAL FANS BY INSTALLING CONTRACTOR

Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	☒	3.5
BATH	BY INSTALLING CONTRACTOR	50	☒	3.5
W/R	BY INSTALLING CONTRACTOR	50	☒	3.5

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANEE V150H

150 cfm high 35 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: 

HRAI # 001820

Date: December-23



CSA F280-12 Residential Heat Loss and Heat Gain Calculations

Formula Sheet (For Air Leakage / Ventilation Calculation)

LO#: 103449

Model: 32-2-12 - ALT 1ST

Builder: BAYVIEW WELLINGTON

Date: 2023-12-08

Volume Calculation

Air Change & Delta T Data

House Volume

Level	Floor Area (ft ²)	Floor Height (ft)	Volume (ft ³)
Bsmt	922	9	8298
First	922	10	9220
Second	1148	9	10332
Third	0	9	0
Fourth	0	9	0
		Total:	27,850.0 ft ³
		Total:	788.6 m ³

WINTER NATURAL AIR CHANGE RATE	0.362
SUMMER NATURAL AIR CHANGE RATE	0.082

Design Temperature Difference

	T _{in} °C	T _{out} °C	ΔT °C	ΔT °F
Winter DTDh	22	-24	46	83
Summer DTDc	24	29	5	9

5.2.3.1 Heat Loss due to Air Leakage

$$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$$

$$\frac{0.362}{\text{ft}^2} \times \frac{219.06}{\text{ft}^2} \times \frac{46^\circ\text{C}}{\text{ft}^2} \times \frac{1.2}{\text{ft}^2} = 4401 \text{ W}$$

$$= 15016 \text{ Btu/h}$$

6.2.6 Sensible Gain due to Air Leakage

$$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

$$= \frac{0.082}{\text{ft}^2} \times \frac{219.06}{\text{ft}} \times \frac{5^\circ\text{C}}{\text{ft}} \times \frac{1.2}{\text{ft}} = 110 \text{ W}$$

$$= 376 \text{ Btu/h}$$

5.2.3.2 Heat Loss due to Mechanical Ventilation

$$HL_{vairh} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

$$80 \text{ CFM} \times 83^\circ\text{F} \times 1.08 \times 0.25 = 1786 \text{ Btu/h}$$

6.2.7 Sensible heat Gain due to Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

$$80 \text{ CFM} \times 9^\circ\text{F} \times 1.08 \times 0.25 = 197 \text{ Btu/h}$$

5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)

$$HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{aqcr} + HL_{bqcr}) \div (HL_{aqcleve1} + HL_{bqcleve1})\}$$

Level	Level Factor (LF)	HLairv Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{level})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HL _{level})
1	0.5	15,016	8,408	0.893
2	0.3		11,188	0.403
3	0.2		11,567	0.260
4	0		0	0.000
5	0		0	0.000

*HLairbv = Air leakage heat loss + ventilation heat loss

*For a balanced or supply only ventilation system $H_{Lairve} = 0$

Michael O'Rourke
BCIN# 19669

Michael Fournier

**HEAT LOSS AND GAIN SUMMARY SHEET**

MODEL: 32-2-12 - ALT 1ST	BUILDER: BAYVIEW WELLINGTON
SFQT: 2070	SITE: INNISFIL

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-11	OUTDOOR DESIGN TEMP.	84
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75
		WINDOW SHGC	0.60

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):	27850.0	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: 48.0 ft	WIDTH: 27.0 ft	EXPOSED PERIMETER:	150.0 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	29.80
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	96%	-
HRV/ERV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

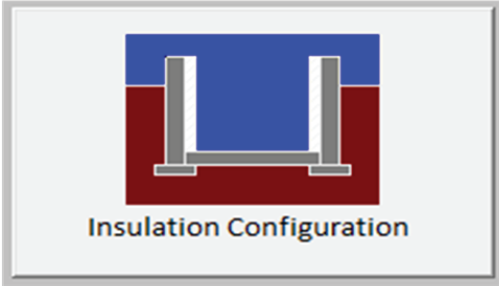
INDIVIDUAL BCIN: 19669

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):	14.6	 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):		1519

TYPE: 32-2-12 - ALT 1ST
LO# 103449

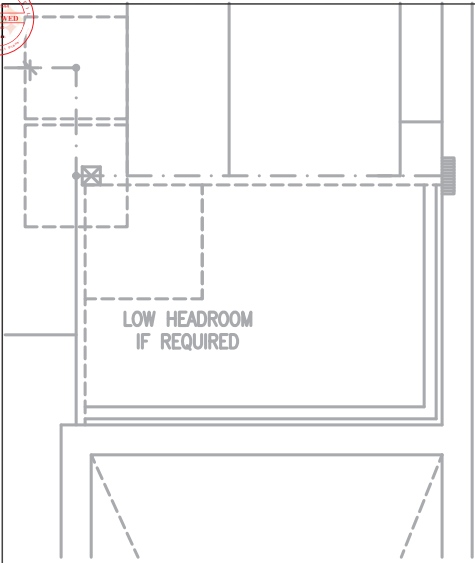


Air Infiltration Residential Load Calculator

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):	7.62			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	788.6			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1051.3 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	37.5	37.5		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.362			
Cooling Air Leakage Rate (ACH/H):	0.082			

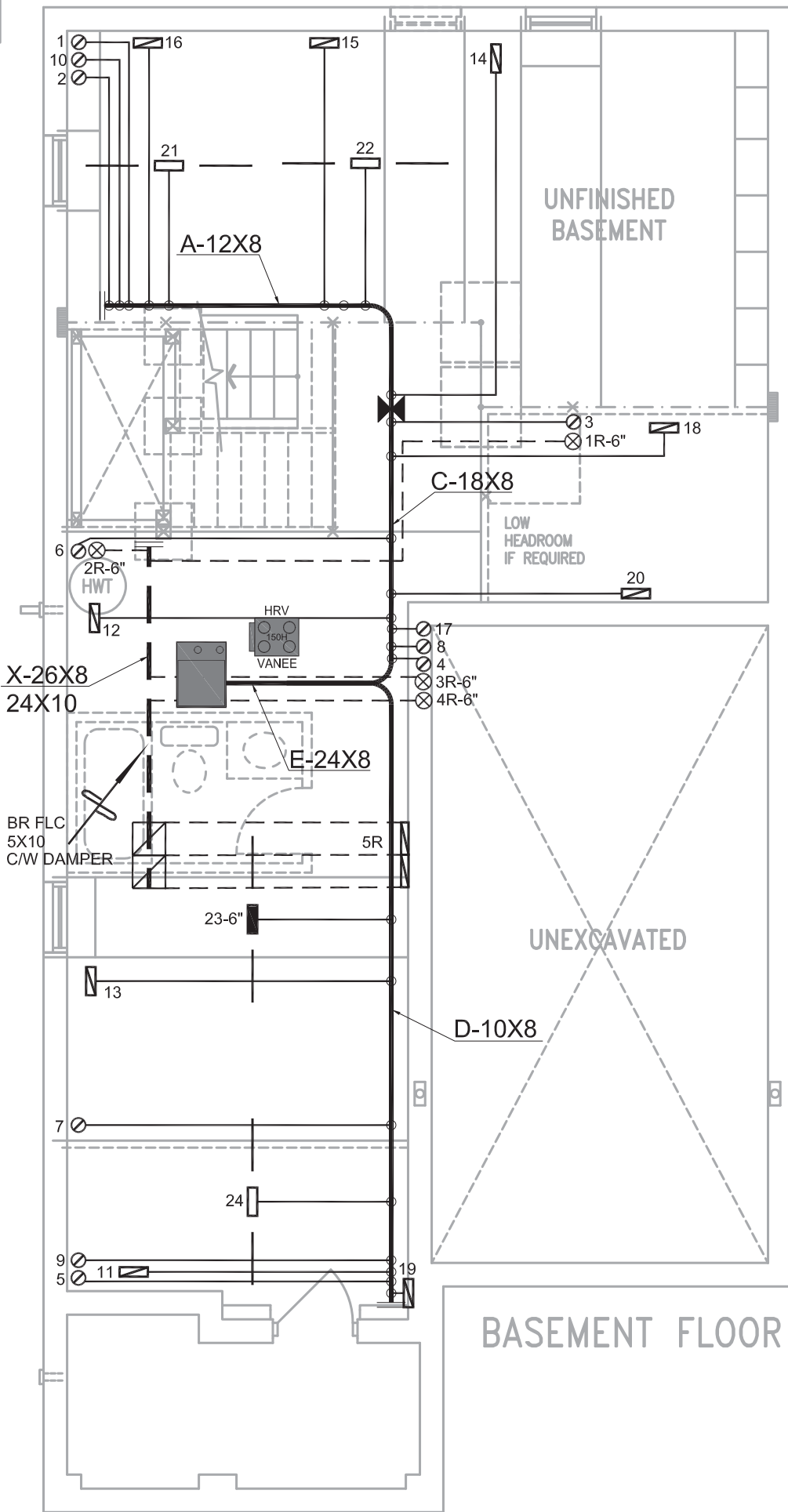
TYPE: 32-2-12 - ALT 1ST
LO# 103449



LOW HEADROOM IF REQUIRED

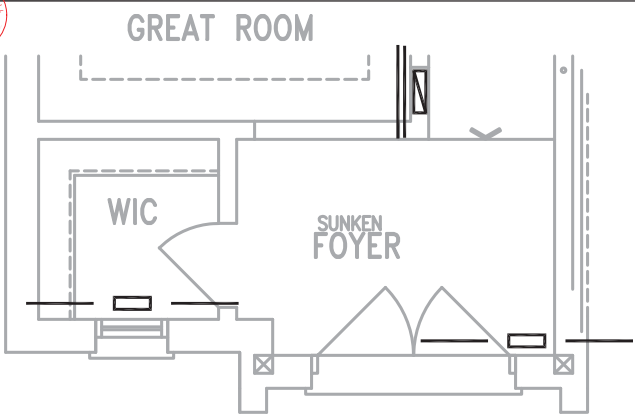
PARTIAL SUNKEN
LAUNDRY 1R
CONDITION

The floor plan shows a large rectangular area labeled 'UNFINISHED BASEMENT' on the left. To its right is a smaller rectangular area labeled 'COLD CELLAR'. A curved line, likely representing a staircase, connects the two areas. The plan is oriented with a north arrow pointing towards the top right.

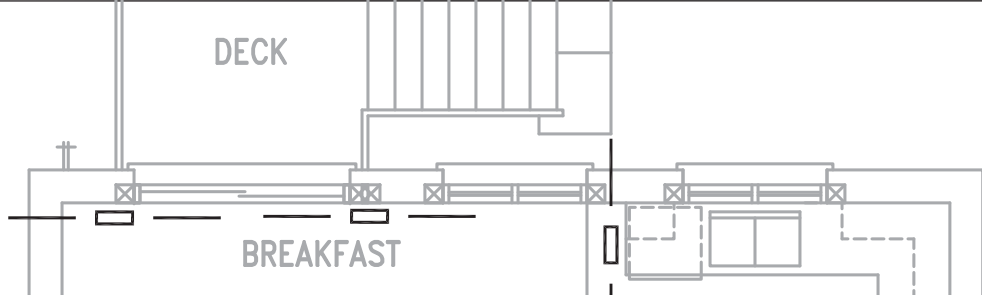
UNFINISHED
BASEMENT

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

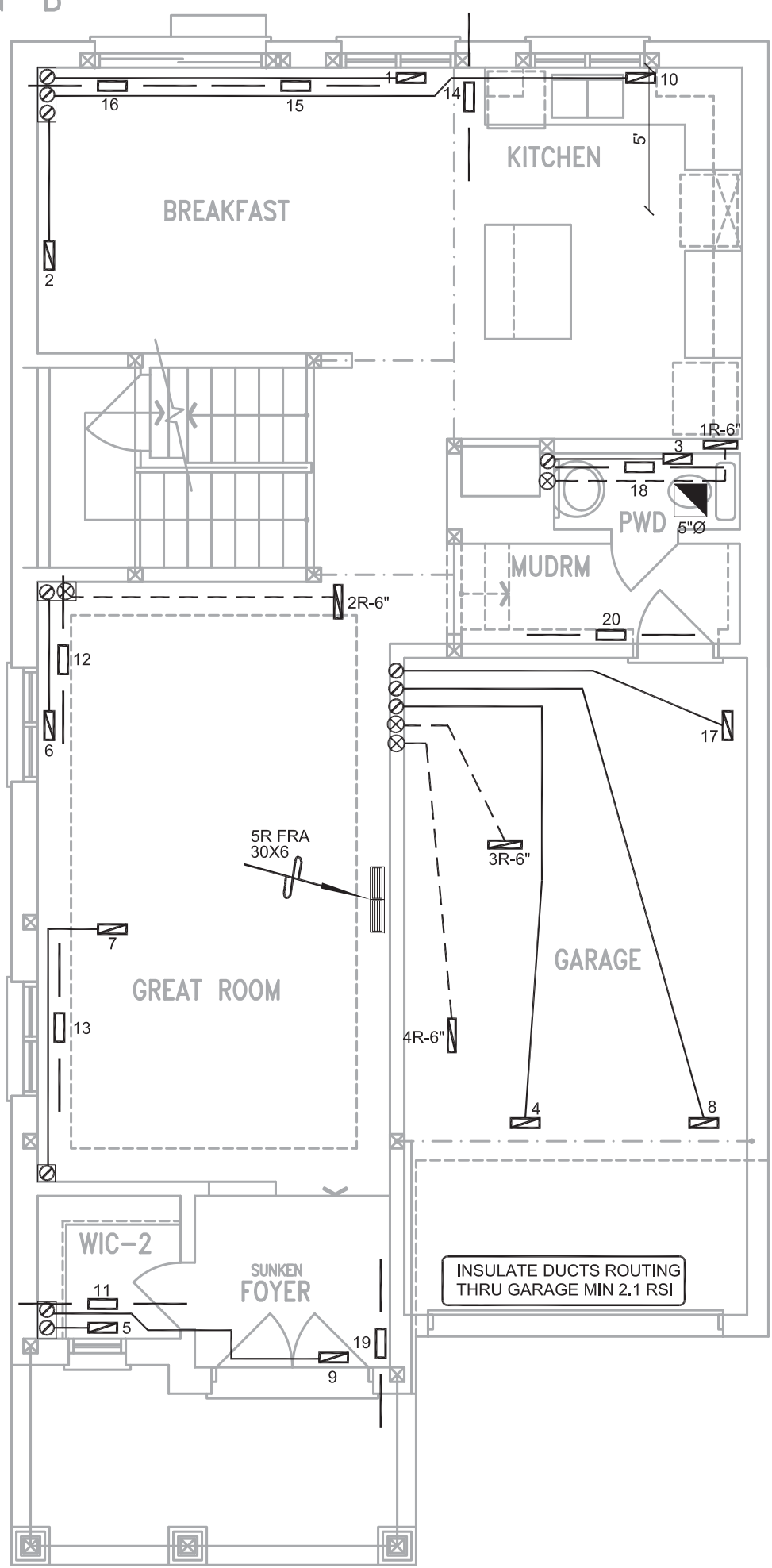
HVAC LEGEND								3.					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.					
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.					
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date			
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS					
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Client BAYVIEW WELLINGTON		 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 48334 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		Sheet Title BASEMENT HEATING LAYOUT			
Project Name ALCONA INNISFIL, ONTARIO						MAKE LENNOX		3RD FLOOR					Date DEC/2023
						MODEL ML196UH070XE36B		2ND FLOOR		11	4	3	Scale 3/16" = 1'-0"
						INPUT 66 MBTU/H		1ST FLOOR		9	1	2	BCIN# 19669
						OUTPUT 63.9 MBTU/H		BASEMENT		4	1	0	LO# 103449
ALT. 1ST 32-2-12						COOLING 2.0 TONS		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					
2070 sqft						FAN SPEED 950 cfm @ 0.6" w.c.							



GROUND FLOOR PLAN 'B'
10'0" GARAGE

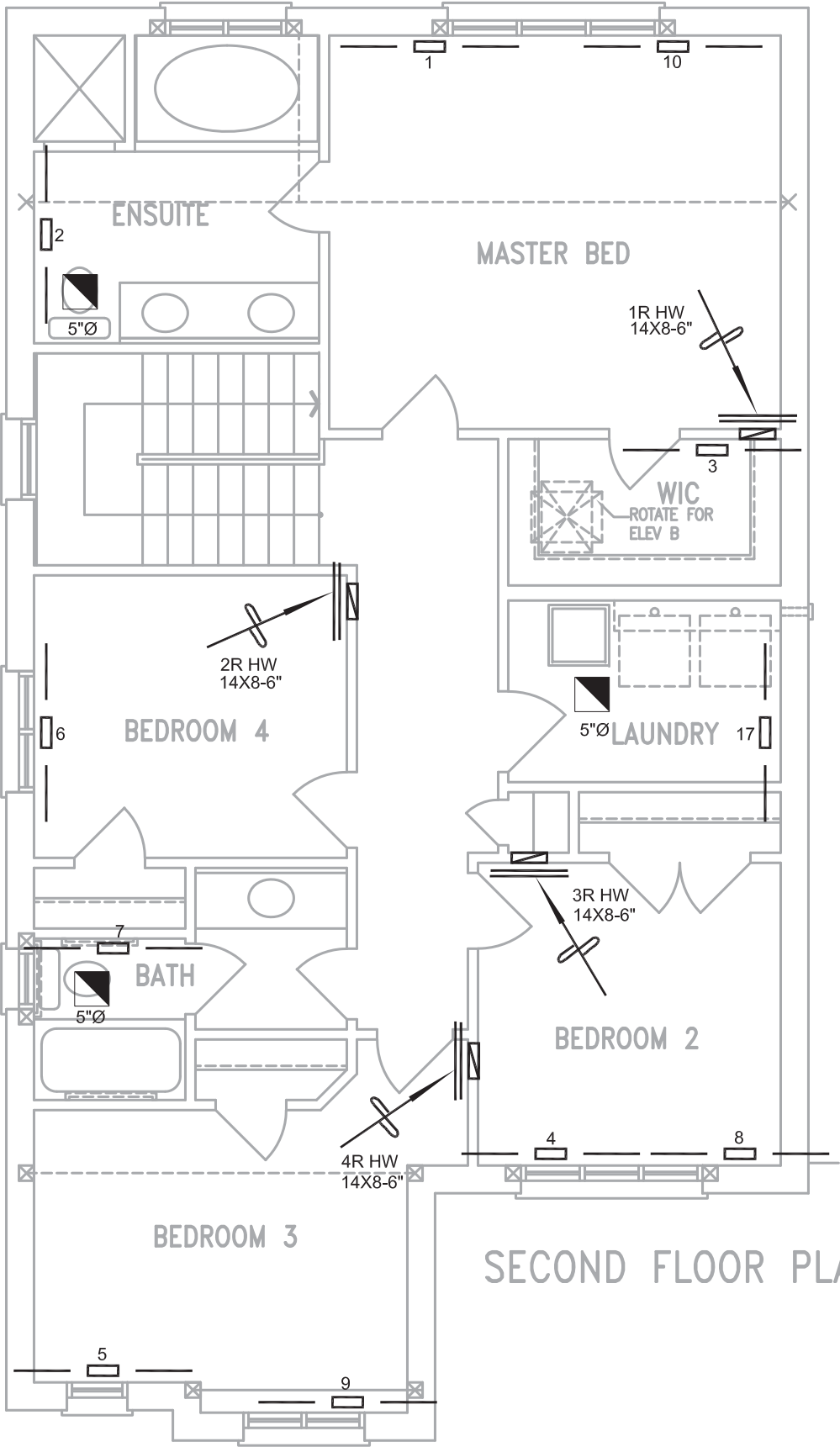
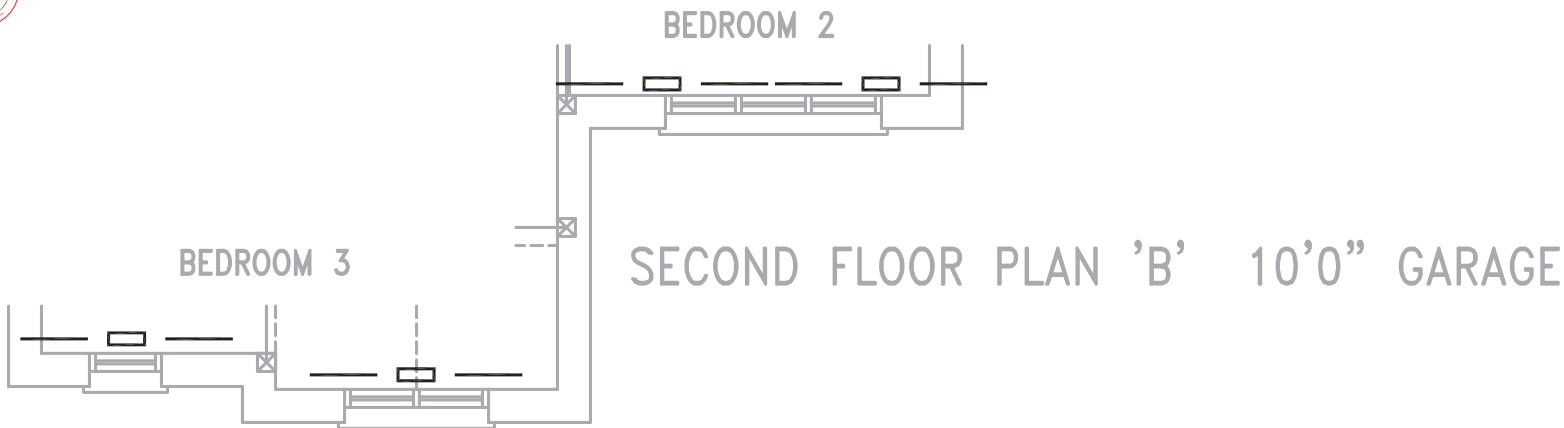


PARTIAL ALT. GROUND FLOOR PLAN 'A' & 'B'
W.O.D. 9R AND MORE COND.



ALT. GROUND FLOOR PLAN 'A'

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		
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FIRST FLOOR HEATING LAYOUT										
Date	DEC/2023									
Scale	3/16" = 1'-0"									
BCIN# 19669										
Project Name						LO#		103449		
BAYVIEW WELLINGTON										
ALCONA INNISFIL, ONTARIO										
ALT. 1ST 32-2-12										
2070 sqft										



HVAC LEGEND								3.			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.			
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.			
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Project Name										SECOND FLOOR HEATING LAYOUT	
ALCONA INNISFIL, ONTARIO										Date DEC/2023	
ALT. 1ST 32-2-12										Scale 3/16" = 1'-0"	
2070 sqft						BCIN# 19669					
						LO#		103449			