

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.



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SITE NAME: ALCONA				DATE: Jun-17		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F: 83		CSA-F280-12	
BUILDER: BAYVIEW/ELLINGTON				LO# 74601		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F: 12		SB-12 PACKAGE A1	
ROOM USE	EXP. WALL CLG. HT.	MR	ENS	BED-2	BED-3	BED-4	BATH	WIC-2	ENS-3		
GRS.WALL AREA	FACTORS	410	270	108	135	251	198	45	153		
GLAZING	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN		
NORTH	23.3 15.1	0 0 0	22 513 332	16 373 242	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0		
EAST	23.3 39.2	0 0 0	0 0 0	0 0 0	33 769 1294	11 256 431	14 326 649	0 0 0	0 0 0		
SOUTH	23.3 23.5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	28 652 658	0 0 0		
WEST	23.3 39.2	38 885 1490	13 303 510	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0		
SKYL.T.	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	0 0 0	0 0 0	0 0 0	0 0 0		
NET EXPOSED WALL	4.9 0.7	372 1917 266	236 1148 166	92 449 66	96 469 69	228 1114 163	187 914 134	31 161 22	125 611 90		
NET EXPOSED SHORT 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	0 0 0		
EXPOSED CLG	1.4 0.6	378 631 218	204 287 118	240 337 139	210 296 121	171 240 98	105 148 61	46 63 28	102 143 69		
NO ATTIC EXPOSED CLG	3.0 1.2	0 0 0	0 0 0	0 0 0	0 0 0	24 72 30	0 0 0	20 60 26	0 0 0		
EXPOSED FLOOR	2.8 0.4	0 0 0	0 0 0	117 327 48	210 586 86	0 0 0	105 293 43	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		3234	2250	1486	2259	2196	1611	601	1406		
SUB TOTAL HT GAIN		1876	1128	484	1805	1686	609	822	807		
LEVEL FACTOR / MULTIPLIER		0.20 0.32	0.20 0.32	0.20 0.32	0.20 0.32	0.20 0.32	0.20 0.32	0.20 0.32	0.20 0.32		
AIR CHANGE HEAT LOSS		1026	713	471	716	636	610	180	446		
AIR CHANGE HEAT GAIN		0	0	196	237	0	212	0	0		
DUCT LOSS		0	0	0	0	0	0	0	0		
HEAT GAIN PEOPLE	240	2	480	137	277	0	72	0	0		
HEAT GAIN APPLIANCE/LIGHTS		598	0	1	240	1	0	0	0		
TOTAL HT LOSS BTU/H		4269	2953	2153	3272	2891	2333	791	1852		
TOTAL HT GAIN x 1.3 BTU/H		4161	1570	1956	3964	3298	1024	855	1123		

ROOM USE	EXP. WALL CLG. HT.	LVEN	KT/FRM	LAUN	WIR	FOY	MUD	WOB	EAS		
GRS.WALL AREA	FACTORS	470	910	0	80	284	143	486	780		
GLAZING	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN		
NORTH	23.3 15.1	0 0 0	14 326 211	0 0 0	0 0 0	0 0 0	0 0 0	86 2003 1298	6 140 91		
EAST	23.3 39.2	24 559 941	0 0 0	0 0 0	0 0 0	6 140 235	0 0 0	0 0 0	0 0 0		
SOUTH	23.3 23.5	48 1118 1129	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0		
WEST	23.3 39.2	0 0 0	117 2726 4598	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0		
SKYL.T.	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	0 0 0	0 0 0	0 0 0	0 0 0		
NET EXPOSED WALL	4.9 0.7	398 1944 285	779 3806 658	0 0 0	80 391 67	40 1106 152	20 563 81	0 0 0	0 20 563		
NET EXPOSED SHORT 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	0 0 0		
EXPOSED CLG	1.4 0.6	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 CLG	3.0 1.2	0 0 0	0 0 0	238 334 137	0 0 0	0 0 0	0 0 0	0 0 0	400 1964 287		
EXPOSED FLOOR	2.8 0.4	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		3822	6866	334	391	2803	1154	821	2906		
SUB TOTAL HT GAIN		2355	5351	137	57	607	169	4779	6135		
LEVEL FACTOR / MULTIPLIER		0.30 0.60	0.30 0.60	0.20 0.32	0.30 0.60	0.30 0.60	0.30 0.60	0.30 0.60	0.60 1.23		
AIR CHANGE HEAT LOSS		1821	3453	106	197	1299	590	1585	12182		
AIR CHANGE HEAT GAIN		0	0	0	4	43	12	0	0		
DUCT LOSS		0	0	0	0	0	0	0	0		
DUCT GAIN		0	0	0	0	0	0	0	0		
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0		
HEAT GAIN APPLIANCE/LIGHTS		699	699	0	0	0	699	0	699		
TOTAL HT LOSS BTU/H		5443	10319	440	587	3761	1734	5589	17317		
TOTAL HT GAIN x 1.3 BTU/H		4056	8240	970	80	845	1015	2060	1477		

SITE NAME: ALCONA

BUILDER: BAYVIEW WELLINGTON

TYPE: 48-1

DATE: Jun-17

GFA: 3103 LO# 74601

HEATING CFM 1105 COOLING CFM 1105
TOTAL HEAT LOSS 65,714 TOTAL HEAT GAIN 36,695
AIR FLOW RATE CFM 16.82 AIR FLOW RATE CFM 30.11EL296UH090XE4BC *LENNOX 90
FAN SPEED LOW 0
MEDIUM 1105
HIGH 1255
AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000
DESIGN CFM = 1105
CFM @ 6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	14	8	5
R/A	0	0	4	2	1

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5'0" unless noted otherwise on layout.

TEMPERATURE RISE 71 °F

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-3	BED-4	BATH	BED-3	BED-4	MBR	ENS-3	LVDN	LVDN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	ENS	WIC-2	BATH	MUD	BAS
RM LOSS MBH	2.13	1.48	2.15	1.64	1.64	1.45	1.17	1.64	1.45	2.13	1.85	2.72	2.72	3.44	3.44	3.44	0.44	0.59	3.76	1.48	0.79	1.17	1.73	4.58
CFM PER RUN HEAT	36	25	36	28	24	24	20	28	24	36	31	46	46	58	58	58	7	10	63	25	13	20	29	77
RM GAIN MBH	1.96	0.78	1.96	1.98	1.98	1.65	1.65	0.51	1.98	2.08	1.12	2.03	2.03	2.75	2.75	2.75	0.97	0.08	0.85	0.78	0.87	0.51	1.01	0.71
CFM PER RUN COOLING	63	24	59	60	60	50	50	60	50	63	34	61	61	83	83	83	29	2	25	24	26	15	31	21
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	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	69	76	45	40	40	44	44	44	44	55	52	43	43	54	48	50	39	52	37	63	56	40	24	65
EQUIVALENT LENGTH	120	160	150	150	150	170	170	160	130	180	140	170	150	120	130	120	140	120	110	120	130	160	130	130
TOTAL EFFECTIVE LENGTH	188	236	195	190	201	218	204	180	204	235	192	213	183	174	178	170	179	172	147	183	186	200	154	195
ADJUSTED PRESSURE	0.09	0.07	0.09	0.09	0.09	0.08	0.08	0.1	0.07	0.07	0.09	0.08	0.09	0.09	0.09	0.09	0.1	0.1	0.12	0.09	0.09	0.09	0.11	0.09
ROUND DUCT SIZE	5	4	5	5	5	4	4	5	4	5	4	5	5	5	5	5	4	4	4	4	4	4	4	5
HEATING VELOCITY (ft/min)	264	287	206	275	275	206	229	206	275	264	358	338	338	426	426	426	80	115	723	287	149	229	333	565
COOLING VELOCITY (ft/min)	463	275	433	441	574	441	172	441	574	463	390	448	448	609	609	609	333	23	287	275	298	172	356	154
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	C	E	E	D	E	E	D	B	C	D	D	A	A	A	C	A	D	B	D	C	C	A

RUN #	25	26	27	28
ROOM NAME	BAS	BAS	BAS	BAS
RM LOSS MBH	4.58	4.58	4.58	4.58
CFM PER RUN HEAT	77	77	77	77
RM GAIN MBH	0.71	0.71	0.71	0.71
CFM PER RUN COOLING	21	21	21	21
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	58	62	25	34
EQUIVALENT LENGTH	130	110	90	90
TOTAL EFFECTIVE LENGTH	188	192	135	124
ADJUSTED PRESSURE	0.09	0.09	0.13	0.14
ROUND DUCT SIZE	5	5	5	5
HEATING VELOCITY (ft/min)	565	565	565	565
COOLING VELOCITY (ft/min)	154	154	154	154
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10
TRUNK	B	B	E	D

SUPPLY 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	239	0.09	8	8	538	TRUNK G	0	0	0	8	TRUNK O	0	0	0	8
TRUNK B	298	0.07	9.2	10	536	TRUNK H	0	0	0	8	TRUNK P	0	0	0	8
TRUNK C	660	0.07	12.4	18	660	TRUNK I	0	0	0	8	TRUNK Q	0	0	0	8
TRUNK D	293	0.08	8.9	10	527	TRUNK J	0	0	0	8	TRUNK R	0	0	0	8
TRUNK E	446	0.08	10.4	12	569	TRUNK K	0	0	0	8	TRUNK S	0	0	0	8
TRUNK F	1105	0.07	15.1	26	765	TRUNK L	0	0	0	8	TRUNK T	0	0	0	8

RETURN AIR #	1	2	3	4	5	6	BR																	
AIR VOLUME	120	120	120	120	270	175	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ACTUAL DUCT LGH	57	42	44	50	52	27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
EQUIVALENT LENGTH	185	145	145	195	225	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL EFFECTIVE LGH	242	187	189	245	277	217	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
ADJUSTED PRESSURE	0.06	0.08	0.08	0.06	0.05	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	
ROUND DUCT SIZE	6.8	6.3	6.3	6.8	9.7	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INLET GRILL SIZE	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INLET GRILL SIZE	X	X	X	X	X	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	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	TRUNK V	
TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	TRUNK W	
TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	TRUNK X	
TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	TRUNK Y	
TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	TRUNK Z	
DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05</																	

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

TYPE: 48-1
SITE NAME: ALCONA

LO # 74601

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	6	@ 10.6 cfm	63.6	cfm
Table 9.32.3.A.		TOTAL	190.8	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	190.8	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	51.8	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-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

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 48-1

SFQT: 3103

LO# 74601

BUILDER: BAYVIEW WELLINGTON

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

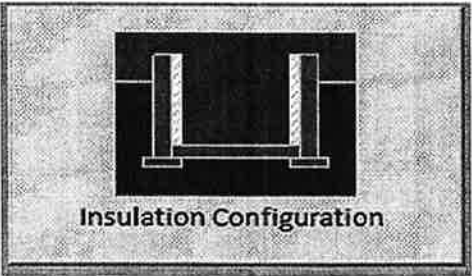
BUILDING DATA

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):	41847.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.20	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 52.0 ft	WIDTH: 40.0 ft	EXPOSED PERIMETER:	130.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	54.0 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	-

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):	5.2	 Insulation Configuration
Floor Width (m):	12.2	
Exposed Perimeter (m):	39.6	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.58	
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):		851

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):	1185.0		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1579.6 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):	0.391		
Cooling Air Leakage Rate (ACH/H):	0.102		

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		
Length (m):	2.1	
Width (m):	12.2	
Exposed Perimeter (m):	16.5	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts): 241		

TYPE: 48-1

LO# 74601

PARTIAL SUNKEN
MUD ROOM 2R OR MORE

PARTIAL SUNKEN
MUD ROOM 1R

A-8X8

Z-12X8

B-10X8

UNFINISHED
BASEMENT

LOW HEADROOM

C-18X8

Y-14X8

E-12X8

F-26X8

X-32X8
24X10

HRV
VanEE
60HLV+

BR FLC
5X10

LOW HEADROOM
IF REQ'D

UNEXCAVATED
(REMOVE TOP SOIL ONLY)

D-10X8

LOW HEADROOM

COLD CELLAR

Town of Innisfil Certified Model
01/12/2017 4:18:42 PM lgevals

I MICHAEL O'Rourke HAVE REVIEWED
AND TAKE RESPONSIBILITY FOR THE
ACCURACY OF THE INFORMATION SHOWN
UNDER DIVISION C, 3.1.3 OF THE
BUILDING CODE.

Michael O'Rourke
Innisfil, Ontario, ECEN 1969
HVAC DESIGNS LTD.

BASEMENT FLOOR PLAN 'A&B'

WOB
CSA-F280-12
PACKAGE A1

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

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ONTARIO BUILDING CODE.

REVISIONS

Client		Sheet Title	
BAYVIEW WELLINGTON		BASEMENT HEATING LAYOUT	
Project Name		Date	
ALCONA		JUNE/2017	
INNISFIL, ONTARIO		Scale	
		3/16" = 1'-0"	
		BCIN# 19669	
48-1 WOB		LO#	
		74601	

HEAT LOSS 68837 BTU/H		# OF RUNS		S/A		R/A		FANS	
UNIT DATA		3RD FLOOR		2ND FLOOR		1ST FLOOR		BASEMENT	
MAKE				14		8		5	
MODEL		LENNOX							
INPUT		EI296UH090XE48C							
OUTPUT		88		85		3.0		1105	
COOLING		88		85		3.0		1105	
FAN SPEED		88		85		3.0		1105	

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.

GROUND FLOOR PLAN 'B'

LIVING/DINING RM.

SUNKEN
FOYER

DECK

BREAKFAST

KITCHEN

FAMILY RM.

5R FRA
24X6

SUNKEN
PWD

18

PWD

5"Ø

(F)

6R LW
14X8

17

11

12

13

6

9

21

19

SUNKEN
FOYER

PORCH

23

MUD RM.

2R-7"

3R-7"

1R-7"

20

16

10

15

14

1

2

4

7

8

5

22

INSULATE DUCTS ROUTING
THRU GARAGE MIN 2.1 RSI

GARAGE

GROUND FLOOR PLAN 'A'

Town of Innisfil Certified Model

01/12/2017 4:18:50 PM Agaveis

I, MICHAEL OROURKE HAVE REVIEWED
THIS DRAWING AND AM QUALIFIED
TO SIGN IT AS A PROFESSIONAL ENGINEER
UNDER DIVISION C, 32.5 OF THE
BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

BAYVIEW WELLINGTON

ALCONA
INNISFIL, ONTARIO

48-1 WOB 3103 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

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Installation to comply with the latest Ontario Building Code. All supply
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adequately insulated and be gas-proofed.

Sheet Title

FIRST FLOOR
HEATING
LAYOUT

Date JUNE/2017

Scale 3/16" = 1'-0"

BCIN# 19669

LO# 74601

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

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USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE
USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE
ONTARIO BUILDING CODE.

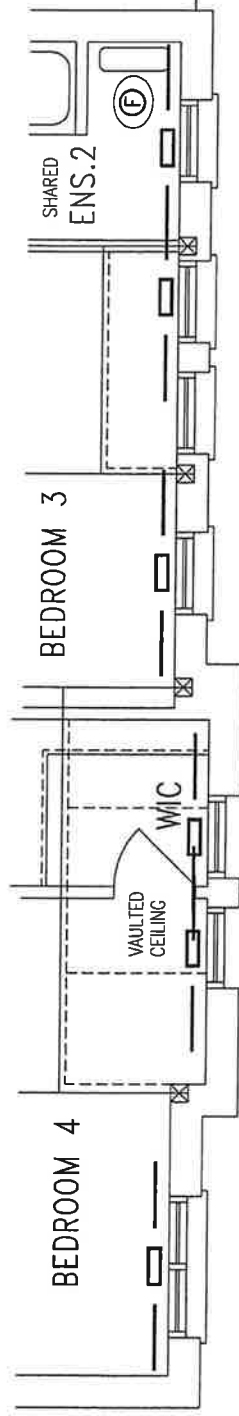
REVISIONS

No.

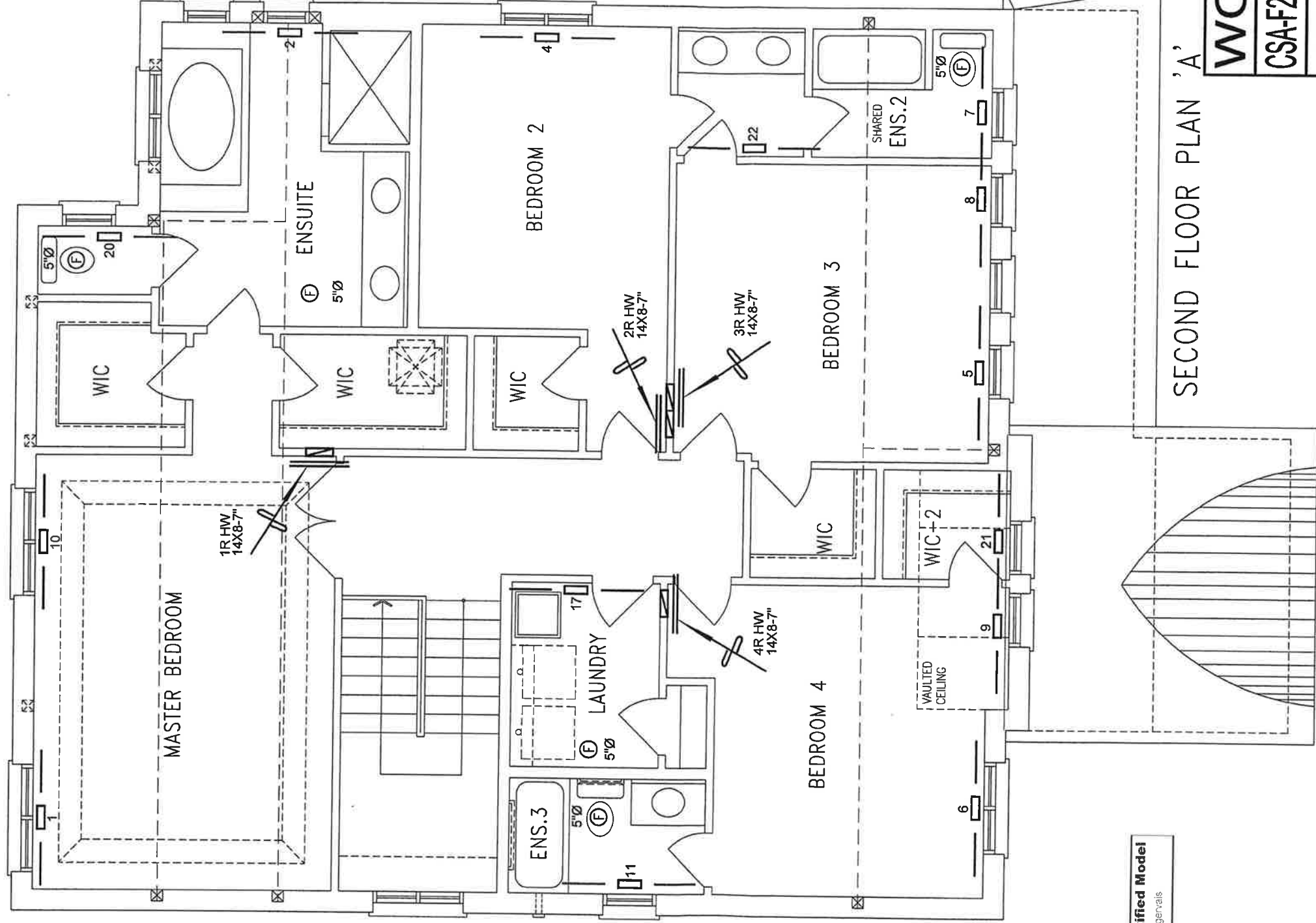
Description

Date

WOB
CSA-F280-12
PACKAGE A1



PARTIAL SECOND FLOOR PLAN 'B'



Town of Innisfil Certified Model
01/12/2017 4:19:02 PM laganvils

I MICHAEL OROURKE HAVE REVIEWED AND CERTIFIED THIS DRAWING FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.12.2 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

SECOND FLOOR PLAN 'A'
WOB
CSA-F280-12
PACKAGE A1

HVAC LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR
			14"x8" RETURN AIR GRILLE
			30"x8" RETURN AIR GRILLE
			FRA- FLOOR RETURN AIR GRILLE
			RETURN AIR STACK ABOVE
			RETURN AIR STACK 2nd FLOOR
			REDUCER

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REVISIONS

No. Description Date

1. RETURN AIR STACK ABOVE

2. RETURN AIR STACK 2nd FLOOR

3. REDUCER

Client

BAYVIEW WELLINGTON

ALCONA
INNISFIL, ONTARIO

375 Finley Ave - Suite 202 - Ajax, Ontario
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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.

Sheet Title

SECOND FLOOR
HEATING
LAYOUT

Date JUNE/2017

Scale 3/16" = 1'-0"

BCIN# 19669

LO# 74601

48-1 WOB

3103 sqft

