

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 VAUGHAN (WOODBIDGE)	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: 6002 - KINGSVIEW OPT 2ND - WOB Project: PINE VALLEY PH 2	
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.			
April 14, 2022 _____ 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: PINE VALLEY PH 2			OPT 2ND - WOB			DATE Apr-22			WINTER NATURAL AIR CHANGE RATE 0.410			HEAT LOSS ΔT °F. 76		CSA-F280-12				
BUILDER: GOLD PARK HOMES			TYPE: 6002 - KINGSVIEW			GFA: 5901			LO# 96144			SUMMER NATURAL AIR CHANGE RATE 0.137			HEAT GAIN AT °F. 13		SB-12 PACKAGE A1	
ROOM USE																		
EXP. WALL																		
CLG. HT.																		
	FACTORS																	
GRS.WALL AREA	LOSS	GAIN																
GLAZING																		
NORTH	21.3	16.0																
EAST	21.3	41.6																
SOUTH	21.3	24.9																
WEST	21.3	41.6																
SKYLT.	37.2	101.5																
DOORS	25.2	4.3																
NET EXPOSED WALL	4.5	0.8																
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6																
EXPOSED CLG	1.3	0.6																
NO ATTIC EXPOSED CLG	2.7	1.3																
EXPOSED FLOOR	2.6	0.4																
BASEMENT/CRAWL HEAT LOSS																		
SLAB ON GRADE HEAT LOSS																		
SUBTOTAL HT LOSS																		
SUB TOTAL HT GAIN																		
LEVEL FACTOR / MULTIPLIER																		
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																		

ROOM USE			OFFICE		FM/DN		KIT		GRT		CATER		PWD		FOY		MUD						WOB		BAS					
EXP. WALL			32		30		47		44		19		11		68		21						73		171					
CLG. HT.			11		11		11		11		11		11		11		11						10		10					
FACTORS																														
GRS.WALL AREA	LOSS	GAIN	355		333		522		488		211		122		755		233						737		1214					
GLAZING			LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN				
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	255	192					0	0	0	0	0	0	
EAST	21.3	41.6	67	1426	2784	0	0	0	0	0	0	0	0	0	0	102	2171	4238	0	0	0			0	0	0	0	0	0	
SOUTH	21.3	24.9	0	0	0	69	1468	1718	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	8	170	199		
WEST	21.3	41.6	0	0	0	0	0	0	120	2554	4986	54	1149	2244	14	298	582	0	0	0			169	3596	7022	0	0	0	0	
SKYLT.	37.2	101.5	0	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	25.2	4.3	0	0	0	0	0	0	20	505	85	0	0	0	10	252	43	0	0	0			20	505	85	20	505	85	85	
NET EXPOSED WALL	4.5	0.8	288	1286	217	264	1178	198	382	1703	287	434	1939	327	187	834	140	122	545	92			640	2855	481	221	987	166	166	
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			548	2447	412	0	0	0	0	
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116	149	68			0	0	0	0	0	0	0	
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	
EXPOSED FLOOR	2.6	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	0	
BASEMENT/CRAWL HEAT LOSS			0		0		0		0		0		0		0		0								3470					
SLAB ON GRADE HEAT LOSS			0		0		0		0		0		0		0		0						1216							
SUBTOTAL HT LOSS			2712		2646		4762		3088		1384		545		5503		1242						7764		5991					
SUB TOTAL HT GAIN			3001		1916		5358		2570		765		92		4843		358						7519		595					
LEVEL FACTOR / MULTIPLIER	0.30	0.66	0.30	0.66	0.30	0.66	0.30	0.66	0.30	0.66	0.30	0.66	0.30	0.66	0.30	0.66	0.30	0.66	0.50	1.75	0.50	1.75	0.50	1.75	0.50	1.75	0.50	1.75	0.50	1.75
AIR CHANGE HEAT LOSS			1786		1743		3136		2033		912		359		3624		818						24016		611					
AIR CHANGE HEAT GAIN			226		144		403		194		58		7		365		27						0		0					
DUCT LOSS			0		0		0		0		0		0		0		0						0		0					
DUCT GAIN			0		0		0		0		0		0		0		0						0		0					
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	
HEAT GAIN APPLIANCES/LIGHTS			1371		1371		1371		1371		1371		1371		1371		1371						0		0					
TOTAL HT LOSS BTU/H			4498		4389		7898		5121		2296		904		9127		2060						8981		30007					
TOTAL HT GAIN x 1.3 BTU/H			5977		4462		9273		5376		1069		128		6769		500						9775		1566					

SITE NAME: PINE VALLEY PH 2				OPT 2ND - WOB				DATE Apr-22				WINTER NATURAL AIR CHANGE RATE 0.410				HEAT LOSS AT °F. 76				CSA-F280-12			
BUILDER: GOLD PARK HOMES				TYPE: 6002 - KINGSVIEW				GFA: 5901				SUMMER NATURAL AIR CHANGE RATE 0.137				HEAT GAIN ΔT °F. 13				SB-12 PACKAGE A1			
ROOM USE				PRI				ENS				WIC				WIC-2				BED-2			
EXP. WALL				21				35				39				0				14			
CLG. HT.				9				9				9				9				9			
FACTORS																							
GRS.WALL AREA				191				319				355				0				127			
GLAZING				LOSS GAIN				LOSS GAIN				LOSS GAIN				LOSS GAIN				LOSS GAIN			
NORTH				21.3	16.0	0	0	0	0	0	0	0	0	0	0	20	426	319					
EAST				21.3	41.6	0	0	0	0	0	0	0	0	0	0	0	0	0					
SOUTH				21.3	24.9	0	0	0	0	0	0	9	192	224	0	0	0	0					
WEST				21.3	41.6	44	936	1828	28	596	1163	32	681	1330	0	0	0	0					
SKYLT.				37.2	101.5	0	0	0	0	0	0	0	0	0	0	0	0	0					
DOORS				25.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0					
NET EXPOSED WALL				4.5	0.8	147	656	111	291	1296	218	314	1401	236	0	0	0	107	479	81			
NET EXPOSED BSMT WALL ABOVE GR				3.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
EXPOSED CLG				1.3	0.6	440	565	259	304	390	179	375	481	220	165	212	97	285	366	167			
NO ATTIC EXPOSED CLG				2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
EXPOSED FLOOR				2.6	0.4	0	0	0	0	0	0	0	0	0	55	140	24	218	556	94			
BASEMENT/CRAWL HEAT LOSS						0			0			0			0			0					
SLAB ON GRADE HEAT LOSS						0			0			0			0			0					
SUBTOTAL HT LOSS						2157			2282			2755			352			1827					
SUB TOTAL HT GAIN							2197			1560			2010		121			661					
LEVEL FACTOR / MULTIPLIER				0.20	0.46			0.20	0.46			0.20	0.46		0.20	0.46							
AIR CHANGE HEAT LOSS						987			1044			1260			161			836					
AIR CHANGE HEAT GAIN							165			117			151		9			50					
DUCT LOSS						0			0			0			51			266					
DUCT GAIN							0		0				0		13			232					
HEAT GAIN PEOPLE				240		2		480	0		0	0		0	1			240					
HEAT GAIN APPLIANCES/LIGHTS								1371			0			0				1371					
TOTAL HT LOSS BTU/H						3144			3326			4015			564			2928					
TOTAL HT GAIN x 1.3 BTU/H							5478			2181			2810		185			3321					

ROOM USE			BED-4			ENS-4			LAUN			BED-5			ENS-5										
EXP. WALL			31			5			7			14			7										
CLG. HT.			9			9			9			9			9										
FACTORS																									
GRS.WALL AREA			282			46			64			127			64										
GLAZING			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN										
NORTH			21.3	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST			21.3	41.6	67	1426	2784	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH			21.3	24.9	0	0	0	9	192	224	9	192	224	20	426	498	9	192	224						
WEST			21.3	41.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SKYLT.			37.2	101.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS			25.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL			4.5	0.8	215	960	162	37	163	27	55	244	41	107	479	81	55	244	41						
NET EXPOSED BSMT WALL ABOVE GR			3.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
EXPOSED CLG			1.3	0.6	332	426	195	56	72	33	220	282	129	414	531	243	78	100	46						
NO ATTIC EXPOSED CLG			2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
EXPOSED FLOOR			2.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
BASEMENT/CRAWL HEAT LOSS						0			0			0			0			0							
SLAB ON GRADE HEAT LOSS						0			0			0			0			0							
SUBTOTAL HT LOSS						2812			426			718			1436			536							
SUB TOTAL HT GAIN							3141			284			394			822			311						
LEVEL FACTOR / MULTIPLIER				0.20	0.46			0.20	0.46		0.20	0.46		0.20	0.46		0.20	0.46							
AIR CHANGE HEAT LOSS						1286			195			328			657			245							
AIR CHANGE HEAT GAIN							236			21		30			62			23							
DUCT LOSS						0			0			0			0			0							
DUCT GAIN							0		0			0			0			0							
HEAT GAIN PEOPLE			240		1		240		0		0		0	1		240		0		0					
HEAT GAIN APPLIANCES/LIGHTS							1371			0		1371			1371			0							
TOTAL HT LOSS BTU/H						4098			621			1046			2093			781							
TOTAL HT GAIN x 1.3 BTU/H							6485			398		2334			3244			435							

TOTAL HEAT GAIN BTU/H: 81365 TONS: 6.78 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 107034 TOTAL COMBINED HEAT LOSS BTU/H: 113190

SITE NAME: PINE VALLEY PH 2
BUILDER: GOLD PARK HOMES

OPT 2ND - WOB
TYPE: 6002 - KINGSVIEW

DATE: Apr-22

GFA: 5901 LO# 96144

FURNACE 1

HEATING CFM 1340 COOLING CFM 1340
TOTAL HEAT LOSS 75,279 TOTAL HEAT GAIN 44,897
AIR FLOW RATE CFM 17.8 AIR FLOW RATE CFM 29.85

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35

FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 78357 BTUH

\$*LENNOX

ML196UH090XE48C

FAN SPEED 90

LOW 0

MEDLOW 1080

MEDIUM 1190

MEDIUM HIGH 1340

HIGH 1575

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,600

DESIGN CFM = 1340
CFM @ .6" E.S.P.

TEMPERATURE RISE 59 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	17	7
R/A	0	0	0	4	1

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

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

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	FOY	FOY	FOY	OFFCE	OFFCE	FM/DN	FM/DN	GRT	GRT	GRT	KIT	KIT	KIT	KIT	CATER	MUD	PWD	BAS	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH.	3.04	3.04	3.04	2.25	2.25	2.19	2.19	1.71	1.71	1.71	1.97	1.97	1.97	1.97	2.30	2.06	0.90	5.57	5.57	5.57	5.57	5.57	5.57	5.57
CFM PER RUN HEAT	54	54	54	40	40	39	39	30	30	30	35	35	35	35	41	37	16	99	99	99	99	99	99	99
RM GAIN MBH.	2.26	2.26	2.26	2.99	2.99	2.23	2.23	1.79	1.79	1.79	2.32	2.32	2.32	2.32	1.07	0.50	0.13	1.62	1.62	1.62	1.62	1.62	1.62	1.62
CFM PER RUN COOLING	67	67	67	89	89	67	67	53	53	53	69	69	69	69	32	15	4	48	48	48	48	48	48	48
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.16	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	0.16	0.16	0.16
ACTUAL DUCT LGH.	58	60	52	51	58	37	27	45	45	36	31	32	32	42	49	36	32	36	33	41	28	28	52	41
EQUIVALENT LENGTH	150	180	150	160	190	110	170	120	110	110	190	140	130	110	120	120	120	120	110	110	130	130	160	110
TOTAL EFFECTIVE LENGTH	208	240	202	211	248	147	197	165	155	146	221	172	162	152	169	156	152	156	143	151	158	158	212	151
ADJUSTED PRESSURE	0.08	0.07	0.09	0.08	0.07	0.12	0.09	0.1	0.11	0.12	0.08	0.1	0.11	0.11	0.1	0.11	0.11	0.1	0.11	0.1	0.1	0.1	0.08	0.11
ROUND DUCT SIZE	6	6	6	6	6	5	5	5	5	5	6	6	6	6	4	4	4	6	6	6	6	6	6	6
HEATING VELOCITY (ft/min)	275	275	275	204	204	286	286	220	220	220	178	178	178	178	470	424	184	505	505	505	505	505	505	505
COOLING VELOCITY (ft/min)	342	342	342	454	454	492	492	389	389	389	352	352	352	352	367	172	46	245	245	245	245	245	245	245
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10
TRUNK	A	A	A	A	A	B	B	C	C	C	E	E	E	E	E	E	B	E	C	C	C	B	A	B

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
1	FOY	3.04	54	2.26	67	0.17	58	150	208	0.08	6	275	342	4X10	A
2	FOY	3.04	54	2.26	67	0.17	60	180	240	0.07	6	275	342	4X10	A
3	FOY	3.04	54	2.26	67	0.17	52	150	202	0.09	6	275	342	4X10	A
4	OFFCE	2.25	40	2.99	89	0.16	51	160	211	0.08	6	204	454	4X10	A
5	OFFCE	2.25	40	2.99	89	0.16	58	190	248	0.07	6	204	454	4X10	A
6	FM/DN	2.19	39	2.23	67	0.17	37	110	147	0.12	5	286	492	3X10	B
7	FM/DN	2.19	39	2.23	67	0.17	27	170	197	0.09	5	286	492	3X10	B
8	GRT	1.71	30	1.79	53	0.17	45	120	165	0.1	5	220	389	3X10	C
9	GRT	1.71	30	1.79	53	0.17	45	110	155	0.11	5	220	389	3X10	C
10	GRT	1.71	30	1.79	53	0.17	36	110	146	0.12	5	220	389	3X10	C
11	KIT	1.97	35	2.32	69	0.17	31	190	221	0.08	6	178	352	4X10	E
12	KIT	1.97	35	2.32	69	0.17	32	140	172	0.1	6	178	352	4X10	E
13	KIT	1.97	35	2.32	69	0.17	32	130	162	0.11	6	178	352	4X10	E
14	KIT	1.97	35	2.32	69	0.17	42	110	152	0.11	6	178	352	4X10	E
15	CATER	2.30	41	1.07	32	0.17	49	120	169	0.1	4	470	367	3X10	E
16	MUD	2.06	37	0.50	15	0.17	36	120	156	0.11	4	424	172	3X10	E
17	PWD	0.90	16	0.13	4	0.17	32	120	152	0.11	4	184	46	3X10	B
18	BAS	5.57	99	1.62	48	0.16	33	110	143	0.1	6	505	245	4X10	E
19	BAS	5.57	99	1.62	48	0.16	33	110	151	0.11	6	505	245	4X10	C
20	BAS	5.57	99	1.62	48	0.16	41	130	158	0.1	6	505	245	4X10	C
21	BAS	5.57	99	1.62	48	0.16	28	130	158	0.1	6	505	245	4X10	C
22	BAS	5.57	99	1.62	48	0.16	28	130	158	0.1	6	505	245	4X10	B
23	BAS	5.57	99	1.62	48	0.16	52	160	212	0.08	6	505	245	4X10	A
24	BAS	5.57	99	1.62	48	0.16	41	110	151	0.11	6	505	245	4X10	B

SUPPLY AIR TRUNK SIZE															RETURN AIR TRUNK SIZE														
TRUNK	STATIC	ROUND	RECT	VELOCITY					TRUNK	STATIC	ROUND	RECT	VELOCITY					TRUNK	STATIC	ROUND	RECT	VELOCITY							
CFM	PRESS.	DUCT	DUCT				(ft/min)	CFM	PRESS.	DUCT	DUCT				(ft/min)	CFM	PRESS.	DUCT	DUCT				(ft/min)						
TRUNK A	341	0.07	9.7	14	x	8	438	TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.06	0	0	x	8	0						
TRUNK B	633	0.07	12.2	18	x	8	633	TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.06	0	0	x	8	0						
TRUNK C	387	0.10	9.3	10	x	8	697	TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.06	0	0	x	8	0						
TRUNK D	1020	0.07	14.6	24	x	8	765	TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.06	0	0	x	8	0						
TRUNK E	317	0.08	9.1	12	x	8	476	TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.06	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	TRUNK T	0	0.06	0	0	x	8	0						

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	130	340	420	185	0	0	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	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	58	53	44	34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	195	200	150	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	253	253	194	194	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.06	0.08	0.08	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	14.80	14.80	14.80
ROUND DUCT SIZE	7	10.1	10.1	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	0	0	0	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	X
INLET GRILL SIZE	14	30	30	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE NAME: PINE VALLEY PH 2
BUILDER: GOLD PARK HOMES

OPT 2ND - WOB
TYPE: 6002 - KINGSVIEW

DATE: Apr-22

GFA: 5901 LO# 96144

FURNACE 2

HEATING CFM 1110 COOLING CFM 1110
TOTAL HEAT LOSS 31,755 TOTAL HEAT GAIN 35,950
AIR FLOW RATE CFM 34.96 AIR FLOW RATE CFM 30.88

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35

FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 34833 BTUH

\$LENNOX
ML196UH045XE36B
FAN SPEED 45
LOW 620
MEDLOW 685
MEDIUM 980
MEDIUM HIGH 1110
HIGH 0

AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = 42,800

DESIGN CFM = 1110
CFM @ .6" E.S.P.

TEMPERATURE RISE 36 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	22	0	0
R/A	0	0	6	0	0

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

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

RUN #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
ROOM NAME	PRI	PRI	ENS	ENS	WIC	WIC-2	BED-2	BED-2	ENS-2	WIC	WIC-3	ENS-3	BED-3	BED-3	BED-3	BED-4	BED-4	BED-4	ENS-4	LAUN	BED-5	ENS-5
RM LOSS MBH.	1.57	1.57	1.25	2.08	2.01	0.56	1.46	1.46	0.97	2.01	0.53	0.97	2.22	2.22	2.22	1.37	1.37	1.37	0.62	1.05	2.09	0.78
CFM PER RUN HEAT	55	55	44	73	70	20	51	51	34	70	18	34	78	78	78	48	48	48	22	37	73	27
RM GAIN MBH.	2.74	2.74	0.82	1.36	1.40	0.19	1.66	1.66	0.36	1.40	0.13	0.36	2.74	2.74	2.74	2.16	2.16	2.16	0.40	2.33	3.24	0.43
CFM PER RUN COOLING	85	85	25	42	43	6	51	51	11	43	4	11	85	85	85	67	67	67	12	72	100	13
ADJUSTED PRESSURE	0.16	0.16	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	0.16	0.17
ACTUAL DUCT LGH.	53	67	61	57	55	26	40	42	43	50	40	47	57	53	50	59	79	72	60	49	47	55
EQUIVALENT LENGTH	230	170	170	160	200	180	190	200	110	200	140	120	160	170	180	150	190	170	160	160	170	200
TOTAL EFFECTIVE LENGTH	283	237	231	217	255	206	230	242	153	250	180	167	217	223	230	209	269	242	220	209	217	255
ADJUSTED PRESSURE	0.06	0.07	0.07	0.08	0.07	0.08	0.07	0.07	0.11	0.07	0.1	0.1	0.07	0.07	0.07	0.08	0.06	0.07	0.08	0.08	0.07	0.07
ROUND DUCT SIZE	6	6	5	6	6	4	5	5	4	6	4	4	6	6	6	5	6	6	4	5	6	4
HEATING VELOCITY (ft/min)	280	280	323	372	357	229	374	374	390	357	207	390	398	398	398	352	245	245	252	272	372	310
COOLING VELOCITY (ft/min)	433	433	184	214	219	69	374	374	126	219	46	126	433	433	433	492	342	342	138	529	510	149
OUTLET GRILL SIZE	4X10	4X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	4X10	4X10	3X10	4X10	4X10	3X10	3X10	4X10	3X10
TRUNK	B	B	B	B	B	B	B	B	C	B	C	C	C	C	C	A	A	A	A	A	A	B

SUPPLY AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)
TRUNK A	276	0.06	9.3	14	x	8
TRUNK B	516	0.06	11.8	16	x	8
TRUNK C	836	0.06	14.1	24	x	8
TRUNK D	0	0.00	0	0	x	8
TRUNK E	0	0.00	0	0	x	8
TRUNK F	0	0.00	0	0	x	8

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)
TRUNK O	0	0.05	0	0	x	8
TRUNK P	0	0.05	0	0	x	8
TRUNK Q	0	0.05	0	0	x	8
TRUNK R	0	0.05	0	0	x	8
TRUNK S	0	0.05	0	0	x	8
TRUNK T	0	0.05	0	0	x	8
TRUNK U	0	0.05	0	0	x	8
TRUNK V	0	0.05	0	0	x	8
TRUNK W	270	0.05	9.7	12	x	8
TRUNK X	1110	0.05	16.4	32	x	8
TRUNK Y	550	0.05	12.6	20	x	8
TRUNK Z	420	0.05	11.4	16	x	8
DROP	1110	0.05	16.4	24	x	10

RETURN AIR #

	1	2	3	4	5	6
AIR VOLUME	270	155	135	110	130	310
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	90	31	48	78	91	75
EQUIVALENT LENGTH	110	135	175	200	150	195
TOTAL EFFECTIVE LH	200	166	223	278	241	270
ADJUSTED PRESSURE	0.07	0.09	0.07	0.05	0.06	0.05
ROUND DUCT SIZE	8.9	6.8	6.8	6.9	7	10.2
INLET GRILL SIZE	8	8	8	8	8	8
INLET GRILL SIZE	X	X	X	X	X	X
INLET GRILL SIZE	30	14	14	14	14	30

TYPE: 6002 - KINGSVIEW
SITE NAME: PINE VALLEY PH 2

LO # 96144
OPT 2ND - WOB

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	☒ Direct vent (sealed combustion) only	
b)	☐ Positive venting induced draft (except fireplaces)	
c)	☐ Natural draft, B-vent or induced draft gas fireplace	
d)	☐ Solid Fuel (including fireplaces)	
e)	☐ No Combustion Appliances	

HEATING SYSTEM	
☒ Forced Air	☐ Non Forced Air
☐ Electric Space Heat	

HOUSE TYPE		9.32.1(2)
☒ I	Type a) or b) appliance only, no solid fuel	
☐ II	Type I except with solid fuel (including fireplaces)	
☐ III	Any Type c) appliance	
☐ IV	Type I, or II with electric space heat	
☐	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
☐ 1	Exhaust only/Forced Air System	
☐ 2	HRV with Ducting/Forced Air System	
☒ 3	HRV Simplified/connected to forced air system	
☐ 4	HRV with Ducting/non forced air system	
☐	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Kitchen & Bathrooms	<u>7</u> @ 10.6 cfm	<u>74.2</u> cfm
Other Rooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>222.6</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>95.4</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>222.6</u>	cfm
Less Principal Ventil. Capacity	<u>150</u>	cfm
Required Supplemental Capacity	<u>72.6</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE V150H
Location:	BSMT
<u>150.0</u> cfm	☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
150.0 CFM	X 76 F	X 1.08	X	0.25

SUPPLEMENTAL FANS		BY INSTALLING CONTRACTOR		
Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	☒	3.5
ENS-2	BY INSTALLING CONTRACTOR	50	☒	3.5
ENS-3	BY INSTALLING CONTRACTOR	50	☒	3.5
PWD	BY INSTALLING CONTRACTOR	50	☒	3.5

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE V150H	INSTALL 2 HRV / ERV's
<u>150</u>	cfm high	<u>35</u> cfm low
<u>75</u>	% Sensible Efficiency @ 32 deg F (0 deg C)	☒ HVI Approved

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

BUILDER:	
GOLD PARK HOMES	
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:	April-22

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

Michael O'Rourke

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																												
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																												
LO#: 96144	Model: 6002 - KINGSVIEW	Builder: GOLD PARK HOMES	Date: 2022-04-14																																																									
Volume Calculation			Air Change & Delta T Data																																																									
House Volume <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr><td>Bsmt</td><td>2602</td><td>10</td><td>26280.2</td></tr> <tr><td>First</td><td>2602</td><td>11</td><td>28882.2</td></tr> <tr><td>Second</td><td>3415</td><td>9</td><td>31076.5</td></tr> <tr><td>Third</td><td>0</td><td>9</td><td>0</td></tr> <tr><td>Fourth</td><td>0</td><td>9</td><td>0</td></tr> <tr><td colspan="3" style="text-align: right;">Total:</td><td>86,238.9 ft³</td></tr> <tr><td colspan="3" style="text-align: right;">Total:</td><td>2442.0 m³</td></tr> </tbody> </table>			Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2602	10	26280.2	First	2602	11	28882.2	Second	3415	9	31076.5	Third	0	9	0	Fourth	0	9	0	Total:			86,238.9 ft³	Total:			2442.0 m³	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 30%;">0.410</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td>0.137</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="5" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> <td>42</td> <td>76</td> </tr> <tr> <td>Summer DTDc</td> <td>24</td> <td>31</td> <td>7</td> <td>13</td> </tr> </table>		WINTER NATURAL AIR CHANGE RATE	0.410	SUMMER NATURAL AIR CHANGE RATE	0.137	Design Temperature Difference						Tin °C	Tout °C	ΔT °C	ΔT °F	Winter DTDh	22	-20	42	76	Summer DTDc	24	31	7	13
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)																																																									
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5.2.3.1 Heat Loss due to Air Leakage			6.2.6 Sensible Gain due to Air Leakage																																																									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.410 x 678.34 x 42 °C x 1.2 = 14077 W = 48031 Btu/h			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.137 x 678.34 x 7 °C x 1.2 = 795 W = 2714 Btu/h																																																									
5.2.3.2 Heat Loss due to Mechanical Ventilation			6.2.7 Sensible heat Gain due to Ventilation																																																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E) \quad \times 2 \text{ HRV / ERV's}$ 300 CFM x 76 °F x 1.08 x 0.25 = 6156 Btu/h			$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 300 CFM x 13 °F x 1.08 x 0.25 = 1,037 Btu/h																																																									
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																												
$HL_{airr} = Level \ Factor \times HL_{airbv} \times \{ (HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel}) \}$																																																												
Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)																																																								
1	0.5	48,031	13,756	1.746																																																								
2	0.3		21,882	0.658																																																								
3	0.2		21,001	0.457																																																								
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 HLairve = 0																																																												
				Michael O'Rourke BCIN# 19669 																																																								

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 6002 - KINGSVIEW	OPT 2ND - WOB	BUILDER: GOLD PARK HOMES
SFQT: 5901	LO# 96144	SITE: PINE VALLEY PH 2

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75
		WINDOW SHGC	0.50

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):	86238.9	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.1 ft
LENGTH: 69.0 ft	WIDTH: 53.0 ft	EXPOSED PERIMETER:	171.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	73.0 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	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

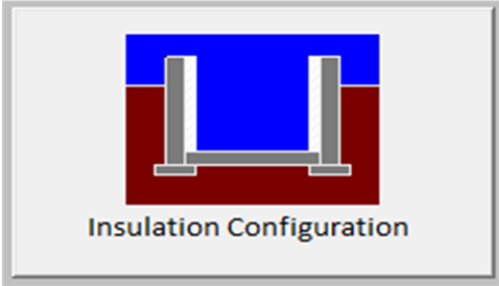
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

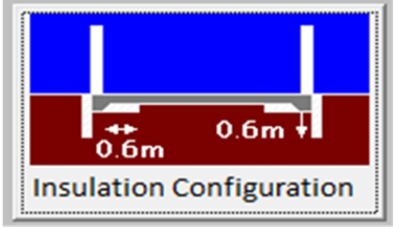
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	6.1	
Floor Width (m):	16.2	
Exposed Perimeter (m):	52.1	
Wall Height (m):	3.1	
Depth Below Grade (m):	1.93	
Window Area (m ²):	0.7	
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):		1017

TYPE: 6002 - KINGSVIEW
LO# 96144

OPT 2ND - WOB

Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	3.0	
Width (m):	16.2	
Exposed Perimeter (m):	22.3	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		356

TYPE: 6002 - KINGSVIEW
LO# 96144

OPT 2ND - WOB

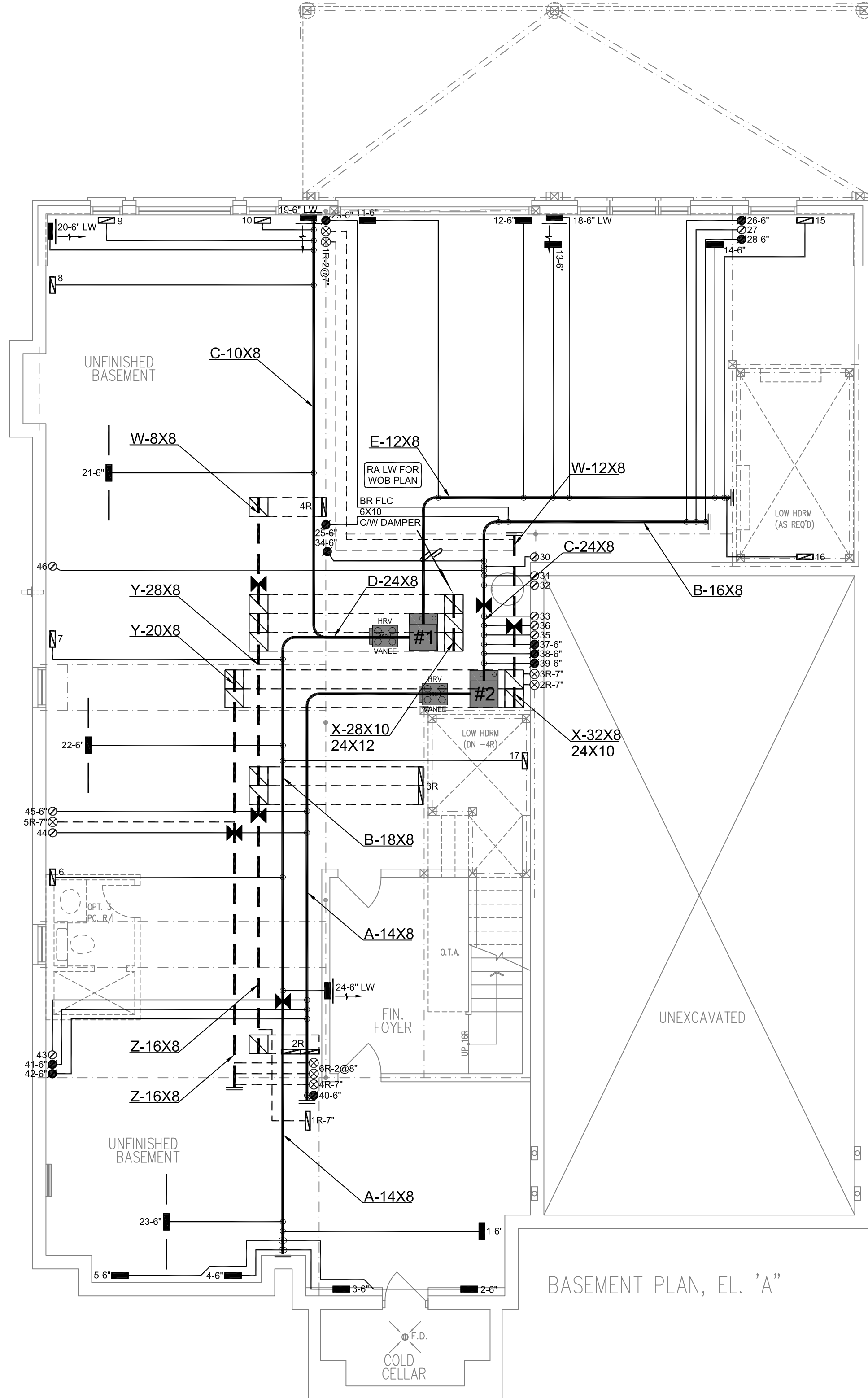
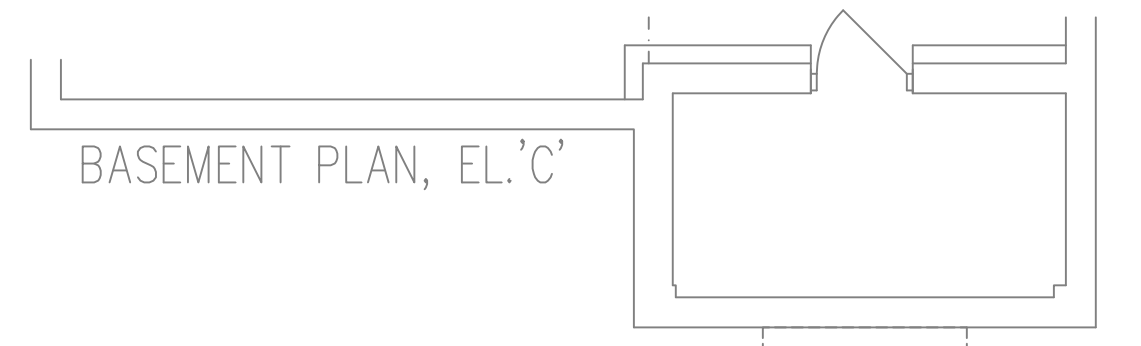
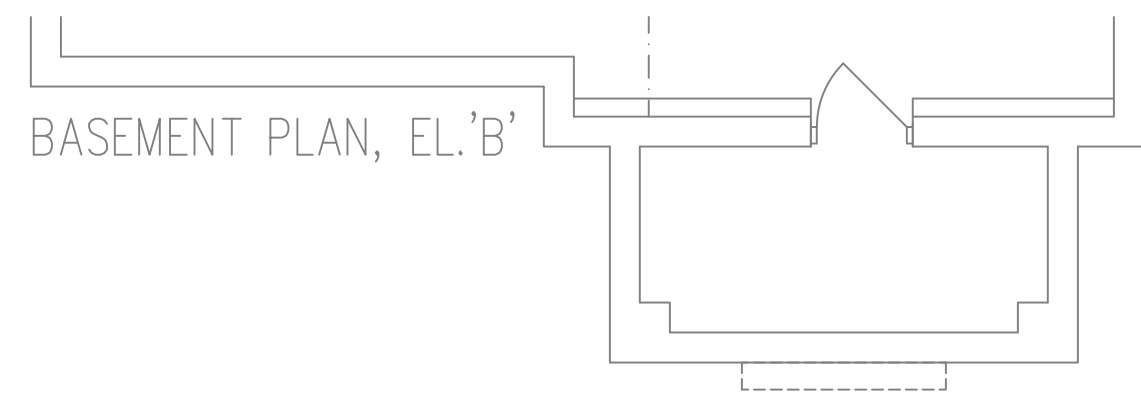
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
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):	9.24			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	2442.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.		3255.3 cm ²	
	3.57		ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply		Total Exhaust	
	70.8		70.8	
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.410			
Cooling Air Leakage Rate (ACH/H):	0.137			

TYPE: 6002 - KINGSVIEW
LO# 96144

OPT 2ND - WOB



FURNACE 1
LENNOX ML196UH090XE48C
85,600 BTU/H OUTPUT
3.5 TONS A/C @ 1340 cfm

FURNACE 2
LENNOX ML196UH045XE36B
42,800 BTU/H OUTPUT
3.0 TONS A/C @ 1110 cfm

	S/A	R/A	FANS
2ND	22	6	6
1ST	17	4	2
BAS	7	1	0

HVAC LEGEND	
	OUTLET BY AIRMAX
	4"x10" SUPPLY GRILLE - 8' BOOT
	4"x10" SUPPLY GRILLE - 4' BOOT
	FLEX DUCT
	1400 SUPPLY AIR STACK
	1400 RETURN AIR GRILLE
	3000 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	LINT TRAP by REVERSOMATIC
	EXHAUST FAN
	DRYER BOOSTER FAN PROVIDES ACCESS PANEL, see Page
	DIRECT VENT
	LOW WALL
	HIGH WALL
	CEILING
	MOTORIZED ZONE DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC HRV or ERV VENT KIT
	SINGLE WALL BOLE by REVERSOMATIC
	DOUBLE WALL BOLE by REVERSOMATIC
	TRIPLE WALL BOLE by REVERSOMATIC
	CONCENTRIC HRV VENT by REVERSOMATIC

UNLESS OTHERWISE NOTED, THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN WORK AND ANY NECESSARY PERMITS. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN WORK AND ANY NECESSARY PERMITS. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN WORK AND ANY NECESSARY PERMITS.

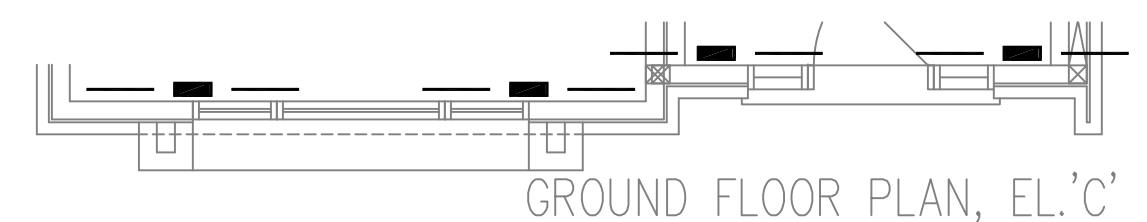
1	ISSUED FOR PERMIT	APRIL 2022	AK
2	Revised	Date	By

SB-12 PACKAGE **A1**

HVACDESIGNS LTD.
375 Finley Ave - Unit 202 - Ajax, Ontario L1S 2E2
Tel: 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacadesigns.ca
Web: www.hvacadesigns.ca
Specializing in Residential Mechanical Design Services

Client: GOLDPARK HOMES
Project Name: PINE VALLEY PH2
VAUGHAN, ONTARIO
6002 - KINGSVIEW
OPT 2ND - WOB
5901 SQFT

Sheet Title: BASEMENT HVAC LAYOUT	Checked By: MO	Sheet No: 1
Drawn By: AK	Scale: 3/16"=1'-0"	
Date: APRIL 2022	LO #	
LO #	96144	



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

Michael O'Rourke, BCIN# 13669
HVAC DESIGNS LTD.

SB-12 PACKAGE **A1**

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Specializing In Residential Mechanical Design Services

Client	GOLDPARK HOMES		
Project Name	PINE VALLEY PH2 VAUGHAN, ONTARIO 6002 - KINGSVIEW OPT 2ND - WOB 5901 SQFT Copyright & Copy: © 2022 HVAC Designs L.L.		
Sheet Title	FIRST FLOOR HVAC LAYOUT		
Drawn By	AK	Checked By	MO
Scale	3/16"=1'-0"		
Date	APRIL 2022		
LO #	96144		2

