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**		
BRAMPTON				

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@hvacdesigns.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	☒ HVAC – House	❑ Building Structural
❑ Small Buildings	❑ Building Services	❑ Plumbing – House
❑ Large Buildings	❑ Detection, Lighting and Power	❑ Plumbing – All Buildings
❑ Complex Buildings	❑ Fire Protection	❑ 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:** 7001 - ELEV C **Project:** VALES OF HUMBER SOUTH

D. Declaration of Designer

I MICHAEL O'ROURKE 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: 19669
Basis for exemption from registration and qualification: O.B.C SENTENCE 3.2.4.1 (4)

❑ 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.

July 9, 2024
Date

Michael O'Rourke
Signature of Designer

NOTE:

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

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Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: VALES OF HUMBER SOUTH | DATE Jul-24 | WINTER NATURAL AIR CHANGE RATE 0.241 | HEAT LOSS ΔT °F. 74 | CSA-F280-12
BUILDER: ROYAL PINE HOMES | TYPE: 7001 - ELEV C | GFA: 5590 | LO# 95344 | SUMMER NATURAL AIR CHANGE RATE 0.078 | HEAT GAIN ΔT °F. 11 | SB-12 PERFORMANCE

ROOM USE			GREAT			KIT			PANT			DIN			LIV			FOY			LIBR			PWD-1			PWD-2			MD/LN				
EXP. WALL			48			32			20			26			30			20			33			3			8			33				
CLG. HT.			21			11			11			11			11			23			11			11			11			12				
	FACTORS																																	
GRS.WALL AREA	LOSS	GAIN	1008			352			220			286			330			460			363			33			88			396				
GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		
NORTH	20.8	15.5	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	0	0	25	519	387		
EAST	20.8	41.0	0	0	0	0	0	0	0	0	0	0	0	0	34	706	1396	33	686	1355	34	706	1396	0	0	0	0	0	0	0	0	0		
SOUTH	20.8	24.4	0	0	0	0	0	0	0	0	0	39	810	951	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
WEST	20.8	41.0	192	3989	7881	107	2223	4392	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
SKYLT.	34.1	100.3	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	0	0	0	0	0		
DOORS	24.7	3.7	0	0	0	20	493	73	0	0	0	0	0	0	0	0	0	60	1479	219	0	0	0	0	0	0	0	0	0	40	986	146		
NET EXPOSED WALL	3.5	0.5	816	2829	419	225	780	116	220	763	113	247	856	127	296	1026	152	367	1272	189	329	1141	169	33	114	17	88	305	45	331	1148	170		
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	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	0	0	0	0	0		
EXPOSED CLG	1.3	0.6	503	630	280	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	0		
NO ATTIC EXPOSED CLG	2.7	1.2	10	27	12	0	0	0	0	0	0	0	0	0	0	0	0	80	215	95	0	0	0	0	0	0	0	0	0	0	0	0		
EXPOSED FLOOR	2.5	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	0	0	0	0	0		
BASEMENT/CRAWL HEAT LOSS				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		
SUBTOTAL HT LOSS				7475			3496			763			1667			1733			3652			1847			114			305			2653		
SUB TOTAL HT GAIN					8593			4581			113			1078			1548			1858			1565			17			45			703	
LEVEL FACTOR / MULTIPLIER			0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37			
AIR CHANGE HEAT LOSS				2788			1304			285			622			646			1362			689			43			114			990			
AIR CHANGE HEAT GAIN					462			246			6			58			83			100			84			1			2			38	
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		
HEAT GAIN APPLIANCES/LIGHTS					967			967			0			967			967			0			967			0			0			967	
TOTAL HT LOSS BTU/H				10264			4800			1047			2288			2379			5014			2536			157			419			3643		
TOTAL HT GAIN x 1.3 BTU/H					13028			7532			155			2734			3377			2545			3400			23			62			2220	

ROOM USE			BAS		
EXP. WALL			250		
CLG. HT.			10		
	FACTORS				
GRS.WALL AREA	LOSS	GAIN	1750		
GLAZING				LOSS	GAIN
NORTH	20.8	15.5	0	0	0
EAST	20.8	41.0	0	0	0
SOUTH	20.8	24.4	12	249	293
WEST	20.8	41.0	12	249	493
SKYLT.	34.1	100.3	0	0	0
DOORS	24.7	3.7	20	493	73
NET EXPOSED WALL	3.5	0.5	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	750	2635	391
EXPOSED CLG	1.3	0.6	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0
EXPOSED FLOOR	2.5	0.4	0	0	0
BASEMENT/CRAWL HEAT LOSS			8939		
SLAB ON GRADE HEAT LOSS					
SUBTOTAL HT LOSS			12566		
SUB TOTAL HT GAIN					1249
LEVEL FACTOR / MULTIPLIER			0.50	1.17	
AIR CHANGE HEAT LOSS			14738		
AIR CHANGE HEAT GAIN					67
DUCT LOSS			0		
DUCT GAIN					0
HEAT GAIN PEOPLE	240		0		0
HEAT GAIN APPLIANCES/LIGHTS					
TOTAL HT LOSS BTU/H			27304		
TOTAL HT GAIN x 1.3 BTU/H					1711

TOTAL HEAT GAIN BTU/H: 66170 | TONS: 5.51 | LOSS DUE TO VENTILATION LOAD BTU/H: 6010 | STRUCTURAL HEAT LOSS: 84507 | TOTAL COMBINED HEAT LOSS BTU/H: 90517

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 MICHAEL O'ROURKE

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ROOM USE			PRI			ENS			DRESS			BED-2			BED-3			BED-4			BED-5			RETR			ENS-2			ENS-3		
EXP. WALL			25			27			11			13			20			24			30			10			6			20		
CLG. HT.			10			10			10			10			11			10			10			10			10			10		
	FACTORS																															
GRS.WALL AREA	LOSS	GAIN	250			270			110			130			220			240			300			100			60			200		
GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN
NORTH	20.8	15.5	0	0	0	0	0	0	0	0	0	27	561	418	0	0	0	0	0	0	0	0	0	0	0	0	9	187	139	0	0	0
EAST	20.8	41.0	0	0	0	0	0	0	0	0	0	0	0	0	16	340	672	32	665	1314	32	665	1314	0	0	0	0	0	0	28	582	1149
SOUTH	20.8	24.4	0	0	0	32	665	781	8	166	195	0	0	0	0	0	0	0	0	0	0	0	0	18	374	439	0	0	0	0	0	0
WEST	20.8	41.0	54	1122	2217	23	478	944	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	34.1	100.3	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	0	0	0	0	0
DOORS	24.7	3.7	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	0	0	0	0
NET EXPOSED WALL	3.5	0.5	196	680	101	215	745	111	102	354	52	103	357	53	204	706	105	208	721	107	268	929	138	82	284	42	51	177	26	172	596	88
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	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	0	0	0	0	0
EXPOSED CLG	1.3	0.6	546	684	304	180	226	100	165	207	92	325	407	181	211	264	118	352	441	196	216	271	120	310	388	173	66	83	37	91	114	51
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0	0	0	0	0	50	134	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	0	0	0	0	0	0	0	0	0	20	50	7	261	650	96	30	75	11	0	0	0	0	0	0	66	164	24	91	227	34
BASEMENT/CRAWL HEAT LOSS				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	
SUBTOTAL HT LOSS				2486			2114			727			1375			2094			1902			1865			1047			611			1519	
SUB TOTAL HT GAIN					2622			1936			340			659			1050			1628			1572			654			227			1322
LEVEL FACTOR / MULTIPLIER			0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33	
AIR CHANGE HEAT LOSS				830			706			243			459			700			635			623			350			204			507	
AIR CHANGE HEAT GAIN					141			104			18			35			56			88			85			35			12			71
DUCT LOSS				0			0			0			183			279			254			0			0			81			203	
DUCT GAIN					0			0			0			190			231			292			0			0			24			139
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240	1		240	0		0	0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					967			0			0			967			967			967			967			967			0			0
TOTAL HT LOSS BTU/H				3316			2820			969			2018			3073			2791			2488			1396			896			2229	
TOTAL HT GAIN x 1.3 BTU/H					5472			2652			465			2719			3307			4178			3722			2152			341			1992

ROOM USE			ENS-4			SHARED			WIC-4			STUDY			HALL		
EXP. WALL			0			6			6			0			0		
CLG. HT.			10			10			10			10			10		
	FACTORS																
GRS.WALL AREA	LOSS	GAIN	0			60			60			0			0		
GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN
NORTH	20.8	15.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	20.8	41.0	0	0	0	0	0	0	16	332	657	0	0	0	0	0	0
SOUTH	20.8	24.4	0	0	0	9	187	220	0	0	0	0	0	0	0	0	0
WEST	20.8	41.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	34.1	100.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	24.7	3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.5	0	0	0	51	177	26	44	153	23	0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	70	88	39	90	113	50	42	53	23	86	108	48	397	497	221
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	40	100	15	0	0	0	42	105	16	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				187			477			642			108			497	
SUB TOTAL HT GAIN					54			296			718			48			221
LEVEL FACTOR / MULTIPLIER			0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33		0.20	0.33	
AIR CHANGE HEAT LOSS				63			159			214			36			166	
AIR CHANGE HEAT GAIN					3			16			39			3			12
DUCT LOSS				25			0			86			0			0	
DUCT GAIN					6			0			76			0			0
HEAT GAIN PEOPLE	240		0		0	0		0	0		0	0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					0			0			0			0			0
TOTAL HT LOSS BTU/H				275			636			942			144			664	
TOTAL HT GAIN x 1.3 BTU/H					81			405			1082			66			303

TOTAL HEAT GAIN BTU/H: 66170 | TONS: 5.51 | LOSS DUE TO VENTILATION LOAD BTU/H: 6010 | STRUCTURAL HEAT LOSS: 84507 | TOTAL COMBINED HEAT LOSS BTU/H: 90517

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.

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SITE NAME: VALES OF HUMBER SOUTH
BUILDER: ROYAL PINE HOMES
TYPE: 7001 - ELEV C
DATE: Jul-24
GFA: 5590 LO# 95344
FURNACE 1

HEATING CFM	1105	COOLING CFM	1105	**FACTORY**	
TOTAL HEAT LOSS	59,851	TOTAL HEAT GAIN	36,787	**INSTALLED**	
AIR FLOW RATE CFM	18.46	AIR FLOW RATE CFM	30.04		

furnace pressure	0.6
furnace filter	0
a/c coil pressure	0.25
available pressure for s/a & r/a	0.35
plenum pressure s/a	0.18
max s/a dif press. loss	0.01
min adjusted pressure s/a	0.17

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 62857 BTUH

r/a pressure	0.17
r/a grille press. Loss	0.02
adjusted pressure r/a	0.15

CARRIER
59SC6A080M17--16 **80**

FAN SPEED	
LOW	0
MEDLOW	1105
MEDIUM	1265
MEDIUM HIGH	0
HIGH	0

AFUE = 97 %
INPUT (BTU/H) = 80,000
OUTPUT (BTU/H) = **78,000**
DESIGN CFM = **1105**
CFM @ .6 " E.S.P.
TEMPERATURE RISE 65 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	20	8
R/A	0	0	0	5	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
ROOM NAME	GREAT	GREAT	GREAT	GREAT	GREAT	KIT	KIT	KIT	PANT	DIN	DIN	LIV
RM LOSS MBH.	2.05	2.05	2.05	2.05	2.05	1.60	1.60	1.60	1.05	1.14	1.14	1.19
CFM PER RUN HEAT	38	38	38	38	38	30	30	30	19	21	21	22
RM GAIN MBH.	2.61	2.61	2.61	2.61	2.61	2.51	2.51	2.51	0.15	1.37	1.37	1.69
CFM PER RUN COOLING	78	78	78	78	78	75	75	75	5	41	41	51
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
ACTUAL DUCT LGH.	31	25	21	23	28	35	47	53	55	50	62	78
EQUIVALENT LENGTH	100	100	120	140	120	110	90	110	100	120	110	100
TOTAL EFFECTIVE LENGTH	131	125	141	163	148	145	137	163	155	170	172	178
ADJUSTED PRESSURE	0.13	0.14	0.12	0.11	0.12	0.12	0.13	0.11	0.11	0.1	0.1	0.1
ROUND DUCT SIZE	**6**	**6**	**6**	**6**	**6**	**6**	**6**	5	4	4	4	5
HEATING VELOCITY (ft/min)	194	194	194	194	194	153	153	220	218	241	241	162
COOLING VELOCITY (ft/min)	398	398	398	398	398	382	382	551	57	470	470	374
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	F	F	F	E	E	E	E	D	D	C	C	A

RUN #	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	LIV	FOY	FOY	LIBR	LIBR	PWD-1	PWD-2	MD/LN	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.19	2.51	2.51	1.27	1.27	0.16	0.42	3.64	3.41	3.41	3.41	3.41
CFM PER RUN HEAT	22	46	46	23	23	3	8	67	63	63	63	63
RM GAIN MBH.	1.69	1.27	1.27	1.70	1.70	0.02	0.06	2.22	0.21	0.21	0.21	0.21
CFM PER RUN COOLING	51	38	38	51	51	1	2	67	6	6	6	6
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
ACTUAL DUCT LGH.	74	78	82	81	87	31	11	18	53	38	21	25
EQUIVALENT LENGTH	120	150	130	120	130	120	170	140	110	100	130	130
TOTAL EFFECTIVE LENGTH	194	228	212	201	217	151	181	158	163	138	151	155
ADJUSTED PRESSURE	0.09	0.08	0.08	0.09	0.08	0.11	0.1	0.11	0.11	0.12	0.11	0.11
ROUND DUCT SIZE	5	5	5	5	5	4	4	5	5	5	5	5
HEATING VELOCITY (ft/min)	162	338	338	169	169	34	92	492	463	463	463	463
COOLING VELOCITY (ft/min)	374	279	279	374	374	11	23	492	44	44	44	44
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	B	B	B	E	E	F	D	E	E	F

RUN #	25	26	27	28
ROOM NAME	BAS	BAS	BAS	BAS
RM LOSS MBH.	3.41	3.41	3.41	3.41
CFM PER RUN HEAT	63	63	63	63
RM GAIN MBH.	0.21	0.21	0.21	0.21
CFM PER RUN COOLING	6	6	6	6
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	52	58	71	78
EQUIVALENT LENGTH	110	110	110	100
TOTAL EFFECTIVE LENGTH	162	168	181	178
ADJUSTED PRESSURE	0.11	0.1	0.1	0.1
ROUND DUCT SIZE	5	5	5	5
HEATING VELOCITY (ft/min)	463	463	463	463
COOLING VELOCITY (ft/min)	44	44	44	44
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10
TRUNK	C	C	A	B

SUPPLY AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK A	153	0.08	6.9	8	x	8	344
TRUNK B	155	0.08	7	8	x	8	349
TRUNK C	476	0.08	10.6	14	x	8	612
TRUNK D	112	0.11	5.7	8	x	8	252
TRUNK E	861	0.08	13.3	20	x	8	775
TRUNK F	244	0.11	7.6	10	x	8	439
TRUNK G	0	0.00	0	0	x	8	0
TRUNK H	0	0.00	0	0	x	8	0
TRUNK I	0	0.00	0	0	x	8	0
TRUNK J	0	0.00	0	0	x	8	0
TRUNK K	0	0.00	0	0	x	8	0
TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK O	0	0.06	0	0	x	8	0
TRUNK P	0	0.06	0	0	x	8	0
TRUNK Q	0	0.06	0	0	x	8	0
TRUNK R	0	0.06	0	0	x	8	0
TRUNK S	0	0.06	0	0	x	8	0
TRUNK T	0	0.06	0	0	x	8	0
TRUNK U	0	0.06	0	0	x	8	0
TRUNK V	0	0.06	0	0	x	8	0
TRUNK W	0	0.06	0	0	x	8	0
TRUNK X	1105	0.06	15.6	26	x	10	612
TRUNK Y	775	0.06	13.7	22	x	8	634
TRUNK Z	515	0.06	11.8	16	x	8	579
DROP	1105	0.06	15.6	24	x	10	663

RETURN AIR #	1	2	3	4	5											**BR**
AIR VOLUME	330	155	360	130	130	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
ACTUAL DUCT LGH.	15	55	55	63	60	1	1	1	1	1	1	1	1	1	1	16
EQUIVALENT LENGTH	145	205	200	205	165	0	0	0	0	0	0	0	0	0	0	185
TOTAL EFFECTIVE LH	160	260	255	268	225	1	1	1	1	1	1	1	1	1	1	201
ADJUSTED PRESSURE	0.09	0.06	0.06	0.06	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.07
ROUND DUCT SIZE	9	7.5	10.3	7	6.8	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	14	30	14	14	0	0	0	0	0	0	0	0	0	0	0

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SITE NAME: VALES OF HUMBER SOUTH
BUILDER: ROYAL PINE HOMES

TYPE: 7001 - ELEV C | DATE: Jul-24 | GFA: 5590 | LO# 95344 | **FURNACE 2**

HEATING CFM	925	COOLING CFM	925	**FACTORY**	furnace pressure	0.6	
TOTAL HEAT LOSS	24,656	TOTAL HEAT GAIN	28,938	**INSTALLED**	furnace filter	0	
AIR FLOW RATE CFM	37.52	AIR FLOW RATE CFM	31.96		a/c coil pressure	0.26	
					available pressure for s/a & r/a	0.34	

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 27661 BTUH

CARRIER
59SC6A040M14--10 **40**
AFUE = 96 %
INPUT (BTU/H) = 40,000
OUTPUT (BTU/H) = **39,000**

FAN SPEED	
LOW	0
MEDLOW	545
MEDIUM	770
MEDIUM HIGH	925
HIGH	0

DESIGN CFM = **925**
CFM @ .6 " E.S.P.
TEMPERATURE RISE 39 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	22	0	0
R/A	0	0	7	0	0

plenum 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 0.14

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	15	16	17	18	19	20	21
ROOM NAME	PRI	PRI	PRI	ENS	ENS	DRESS	BED-2	BED-2	ENS-2	WIC-4	BED-3	BED-3	ENS-3	BED-4	BED-4	ENS-4	BED-5	BED-5	SHARED	RETR
RM LOSS MBH.	1.11	1.11	1.11	2.11	0.70	0.97	1.01	1.01	0.90	0.94	1.54	1.54	2.23	1.40	1.40	0.27	1.24	1.24	0.64	1.40
CFM PER RUN HEAT	41	41	41	79	26	36	38	38	34	35	58	58	84	52	52	10	47	47	24	52
RM GAIN MBH.	1.82	1.82	1.82	1.99	0.66	0.47	1.36	1.36	0.34	1.08	1.65	1.65	1.99	2.09	2.09	0.08	1.86	1.86	0.41	2.15
CFM PER RUN COOLING	58	58	58	64	21	15	43	43	11	35	53	53	64	67	67	3	59	59	13	69
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	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	84	69	63	90	85	85	43	38	33	41	37	42	49	64	58	39	94	88	80	92
EQUIVALENT LENGTH	190	200	210	160	170	200	180	180	110	110	120	130	130	190	220	110	170	170	170	190
TOTAL EFFECTIVE LENGTH	274	269	273	250	255	285	223	218	143	151	157	172	179	254	278	149	264	258	250	282
ADJUSTED PRESSURE	0.06	0.06	0.06	0.07	0.07	0.06	0.07	0.08	0.12	0.11	0.11	0.1	0.09	0.07	0.06	0.11	0.06	0.06	0.07	0.06
ROUND DUCT SIZE	5	5	5	**6**	4	5	5	4	4	4	5	5	**6**	**6**	**6**	4	**6**	**6**	4	**6**
HEATING VELOCITY (ft/min)	301	301	301	403	298	264	279	436	390	402	426	426	428	265	265	115	240	240	275	265
COOLING VELOCITY (ft/min)	426	426	426	326	241	110	316	493	126	402	389	389	326	342	342	34	301	301	149	352
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	4X10	4X10	3X10	4X10
TRUNK	A	A	A	A	A	A	B	B	B	D	D	B	B	C	C	D	C	C	C	C

RUN #	40	42
ROOM NAME	STUDY	HALL
RM LOSS MBH.	0.14	0.66
CFM PER RUN HEAT	5	25
RM GAIN MBH.	0.07	0.30
CFM PER RUN COOLING	2	10
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH.	55	54
EQUIVALENT LENGTH	170	180
TOTAL EFFECTIVE LENGTH	225	234
ADJUSTED PRESSURE	0.07	0.07
ROUND DUCT SIZE	4	4
HEATING VELOCITY (ft/min)	57	287
COOLING VELOCITY (ft/min)	23	115
OUTLET GRILL SIZE	3X10	3X10
TRUNK	C	C

SUPPLY AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK A	264	0.06	9.2	10	x	8	475	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	516	0.06	11.8	16	x	8	581	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	304	0.06	9.6	12	x	8	456	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	407	0.06	10.8	18	x	8	407	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	0	0.00	0	0	x	8	0	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 TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK O	0	0.05	0	0	x	8	0
TRUNK P	0	0.05	0	0	x	8	0
TRUNK Q	0	0.05	0	0	x	8	0
TRUNK R	0	0.05	0	0	x	8	0
TRUNK S	0	0.05	0	0	x	8	0
TRUNK T	0	0.05	0	0	x	8	0
TRUNK U	0	0.05	0	0	x	8	0
TRUNK V	0	0.05	0	0	x	8	0
TRUNK W	0	0.05	0	0	x	8	0
TRUNK X	925	0.05	15.3	28	x	8	595
TRUNK Y	510	0.05	12.3	18	x	8	510
TRUNK Z	210	0.05	8.8	10	x	8	378
DROP	925	0.05	15.3	24	x	10	555

RETURN AIR #	1	2	3	4	5	6	7										**BR**
AIR VOLUME	225	95	200	105	105	75	120	0	0	0	0	0	0	0	0	0	0
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
ACTUAL DUCT LGH.	46	42	54	66	89	60	53	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	175	165	245	205	210	215	205	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	221	207	299	271	299	275	258	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.07	0.05	0.05	0.05	0.05	0.06	14.32	14.32	14.32	14.32	14.32	14.32	14.32	14.32	14.32	14.32
ROUND DUCT SIZE	8.6	6	8.6	6.8	6.8	6	6.8	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	14	30	14	14	14	14	0	0	0	0	0	0	0	0	0	0

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TYPE: 7001 - ELEV C LO # 95344
SITE NAME: VALES OF HUMBER SOUTH

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	8	@ 10.6 cfm	84.8	cfm
Other Rooms	7	@ 10.6 cfm	74.2	cfm
Table 9.32.3.A.		TOTAL	243.8	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	**95.4**	**cfm**

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	243.8	cfm
Less Principal Ventil. Capacity	150	cfm
Required Supplemental Capacity	93.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANEE V150H Location: BSMT

150.0 cfm [✓] HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM		ΔT °F		FACTOR		% LOSS
150.0 CFM	X	74 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
ENS-4	BY INSTALLING CONTRACTOR	50	✓	3.5

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANEE V150H INSTALL 2 HRV / ERV's

150 cfm high 35 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: ROYAL PINE 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: Michael O'Rourke.

HRAI # 001820

Date: July-24

I REVIEW AND TAKE RESPONIBILITY 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.

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CSA F280-12 Residential Heat Loss and Heat Gain Calculations

Formula Sheet (For Air Leakage / Ventiliation Calculation)

LO#: 95344 Model: 7001 - ELEV C Builder: ROYAL PINE HOMES Date: 7/9/2024

Volume Calculation

House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	2793	10	27930
First	2793	11	30723
Second	3336	10	33360
Third	0	9	0
Fourth	0	9	0
		Total:	92,013.0 ft³
		Total:	2605.5 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.241
SUMMER NATURAL AIR CHANGE RATE	0.078

Design Temperature Difference

	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-19	41	74
Summer DTDc	24	30	6	11

5.2.3.1 Heat Loss due to Air Leakage

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

0.241 x 723.76 x 41 °C x 1.2 = 8639 W

= **29475 Btu/h**

6.2.6 Sensible Gain due to Air Leakage

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

= 0.078 x 723.76 x 6 °C x 1.2 = 416 W

= **1421 Btu/h**

5.2.3.2 Heat Loss due to Mechanical Ventilation

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

x 2 HRV / ERV's

300 CFM x 74 °F x 1.08 x 0.25 = **6010 Btu/h**

6.2.7 Sensible heat Gain due to Ventilation

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

300 CFM x 11 °F x 1.08 x 0.25 = **891 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	29,475	12,566	1.173
2	0.3		23,705	0.373
3	0.2		17,649	0.334
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

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HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 7001 - ELEV C **BUILDER:** ROYAL PINE HOMES
SFQT: 5590 **LO#** 95344 **SITE:** VALES OF HUMBER SOUTH

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
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:	2.50	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft^3):	92013.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft^2):	1.30	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 63.0 ft	WIDTH: 62.0 ft	EXPOSED PERIMETER:	250.0 ft

2012 OBC - COMPLIANCE PACKAGE **Component**	**Compliance Package** **SB-12 PERFORMANCE**	
	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+1.5	21.40
Basement Walls Minimum RSI (R)-Value	20	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	1.6	-
Skylights Maximum U-Value	2.6	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.9	-

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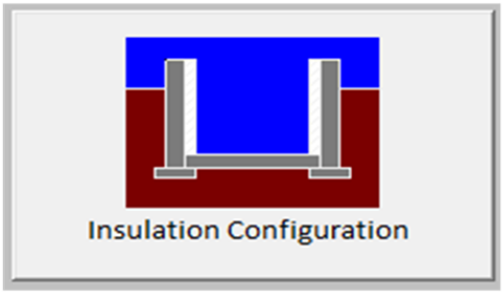
Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description	
Province:	Ontario
Region:	Brampton
Site Description	
Soil Conductivity:	Normal conductivity: dry sand, loam, clay
Water Table:	Normal (7-10 m, 23-33 ft)

Foundation Dimensions		
Floor Length (m):	**19.2**	 Insulation Configuration
Floor Width (m):	**18.9**	
Exposed Perimeter (m):	**0.0**	
Wall Height (m):	**3.0**	
Depth Below Grade (m):	**2.13**	
Window Area (m^2):	**2.2**	
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):	**2619**	

TYPE: 7001 - ELEV C
LO# 95344

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

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description	
Province:	Ontario
Region:	Brampton
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):	7.32
Building Configuration	
Type:	Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m^3):	2605.5
Air Leakage/Ventilation	
Air Tightness Type:	Energy Star Detached (2.5 ACH)
Custom BDT Data:	ELA @ 10 Pa. 2432.2 cm^2
	2.50 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply 70.8 / Total Exhaust 70.8
Flue Size	
Flue #:	#1 #2 #3 #4
Diameter (mm):	0 0 0 0
Natural Infiltration Rates	
Heating Air Leakage Rate (ACH/H):	**0.241**
Cooling Air Leakage Rate (ACH/H):	**0.078**

TYPE: 7001 - ELEV C

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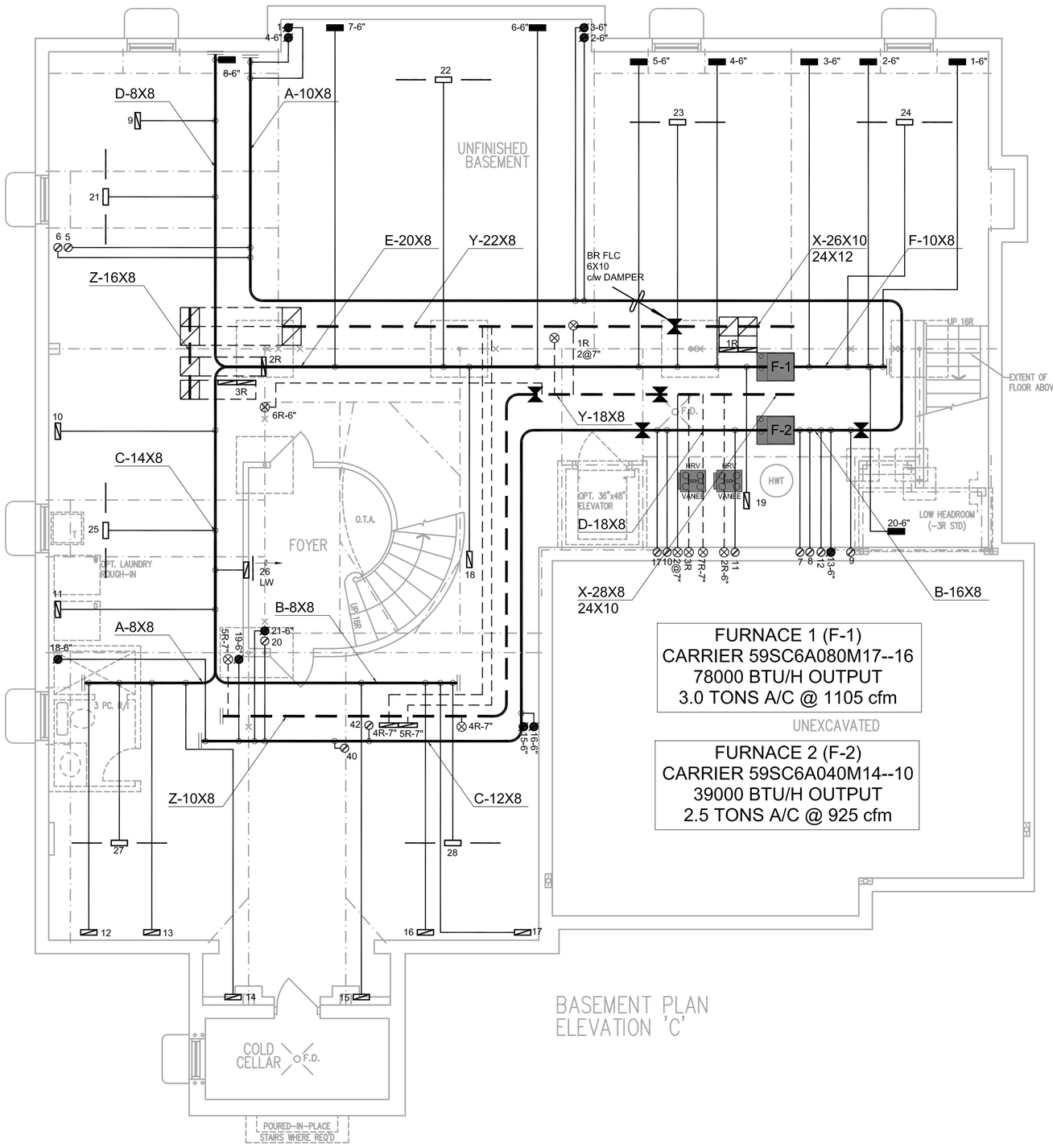
ALL S/A DIFFUSERS "4x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

SUPPLEMENTAL EXHAUST FAN (MINIMUM 100 CFM) DISCHARGING DIRECTLY TO THE EXTERIOR WILL BE PROVIDED IN THE KITCHEN. EXHAUST DUCTS SERVING THE KITCHEN SHALL NOT BE SMALLER THAN RECOMMENDED BY THE MANUFACTURER OF THE FANS AND MUST AT LEAST MEET O.B.C. STATED MINIMUMS.



FURNACE 1 (F-1)
CARRIER 59SC6A080M17--16
78000 BTU/H OUTPUT
3.0 TONS A/C @ 1105 cfm

FURNACE 2 (F-2)
CARRIER 59SC6A040M14--10
39000 BTU/H OUTPUT
2.5 TONS A/C @ 925 cfm

BASEMENT PLAN
ELEVATION 'C'

HVAC LEGEND

	SUPPLY AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT
	LINEAR BAR or LINEAR SLOT GRILLE
	SUPPLY AIR BOOT ABOVE
	6" SUPPLY AIR BOOT ABOVE
	SUPPLY AIR STACK
	6" SUPPLY AIR STACK
	14X8 RETURN AIR GRILLE
	30X8 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	FLEX DUCT
	EXHAUST FAN
LT	LINT TRAP by REVERSOMATIC
DV	DIRECT VENT
LW	LOW WALL
HW	HIGH WALL
CLG.	CEILING
Z.D.	MOTORIZED ZONE DAMPER
M.D.	MOTORIZED DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC HRV or ERV VENT KIT
	SINGLE WALL BOX by REVERSOMATIC
	DOUBLE WALL BOX by REVERSOMATIC
	TRIPLE WALL BOX by REVERSOMATIC
DF	DRYER BOOSTER FAN

No.	Revision	Date	By
3	UPDATED EQUIPMENT	JUL/2024	JW
2	REVISED TO PERFORMANCE PATH	APR/2022	KB
1	ISSUED FOR PERMIT	MAR/2022	EG

SB-12 PERFORMANCE PACKAGE

I Michael O'Rourke have reviewed and take responsibility for the design work and am qualified under division C,3.2.5 of the building code.

Michael O'Rourke BCIN # 19669
HVAC Designs Ltd.

	S/A	R/A	FANS
2ND	22	7	6
1ST	20	5	4
BAS	8	1	0

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Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

Client: ROYAL PINE HOMES
Project Name: VALES OF HUMBER SOUTH
BRAMPTON, ONTARIO
7001
ELEV C

Sheet Title: BASEMENT HEATING LAYOUT
Drawn By: EG
Checked By: MO
Scale: 3/16"=1'-0"
Date: MARCH 2022
LO #: 95344
Sheet No.: 1 / 3

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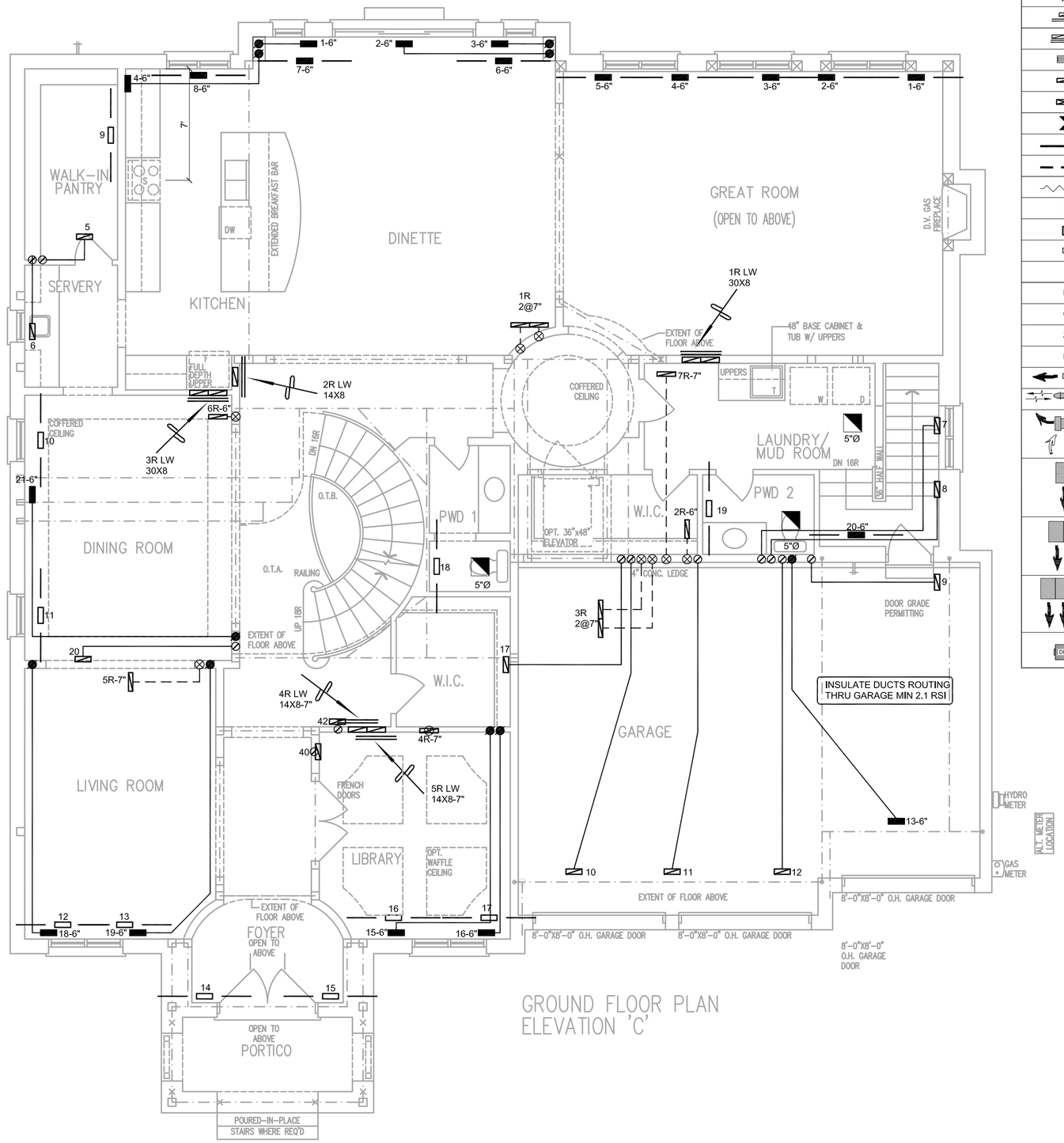

GROUND FLOOR PLAN
ELEVATION 'C'

HVAC LEGEND

	SUPPLY AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT
	LINEAR BAR or LINEAR SLOT GRILLE
	SUPPLY AIR BOOT ABOVE
	6" SUPPLY AIR BOOT ABOVE
	SUPPLY AIR STACK
	6" SUPPLY AIR STACK
	14X8 RETURN AIR GRILLE
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	FLOOR RETURN AIR GRILLE
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Client: ROYAL PINE HOMES

Project Name: VALES OF HUMBER SOUTH
BRAMPTON, ONTARIO
7001
ELEV C

Sheet Title: FIRST FLOOR HEATING LAYOUT
Drawn By: EG
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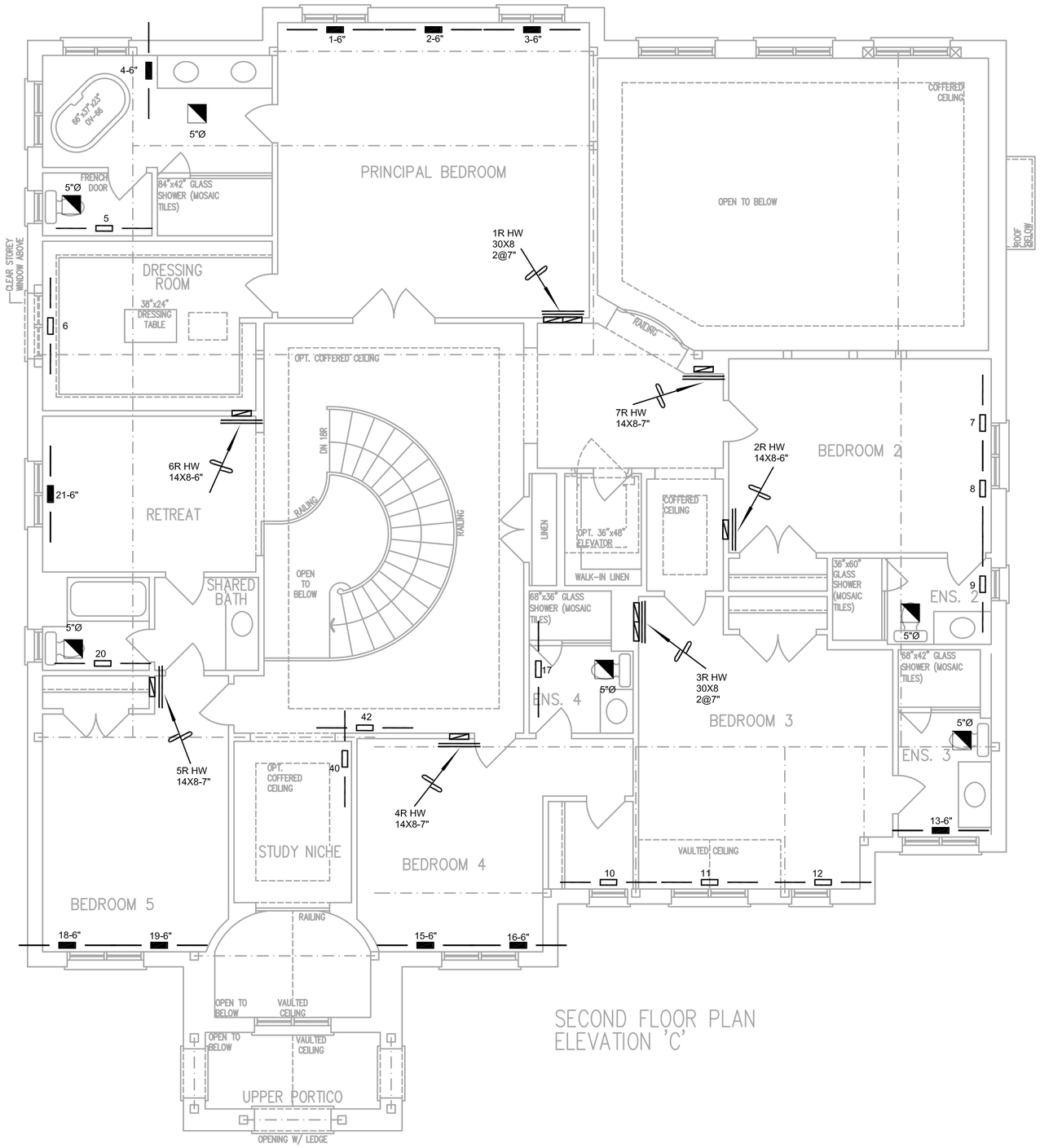

SECOND FLOOR PLAN
ELEVATION 'C'

HVAC LEGEND

	SUPPLY AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT
	LINEAR BAR or LINEAR SLOT GRILLE
	SUPPLY AIR BOOT ABOVE
	6" SUPPLY AIR BOOT ABOVE
	SUPPLY AIR STACK
	6" SUPPLY AIR STACK
	14X8 RETURN AIR GRILLE
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	FLOOR RETURN AIR GRILLE
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Client: ROYAL PINE HOMES

Project Name: VALES OF HUMBER SOUTH
BRAMPTON, ONTARIO
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ELEV C

Sheet Title: SECOND FLOOR HEATING LAYOUT
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Sheet No.: 3 / 3