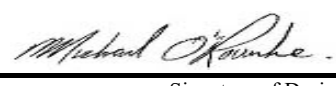


Schedule 1: Designer Information

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 BRAMPTON	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: 7001 OPT LAUN Project: VALES OF HUMBER SOUTH	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):	
☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate 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.			
July 9, 2024 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: VALES OF HUMBER SOUTH										OPT LAUN				DATE Jul-24				WINTER NATURAL AIR CHANGE RATE 0.241								HEAT LOSS AT °F. 74				CSA-F280-12											
BUILDER: ROYAL PINE HOMES										TYPE: 7001				GFA: 5543				LO# 95297				SUMMER NATURAL AIR CHANGE RATE 0.078								HEAT GAIN AT °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			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	25	519	387								
EAST			20.8	41.0	0	0	0	0	0	0	0	0	0	0	0	0	41	852	1683	56	1163	2299	41	852	1683	0	0	0	0	0	0	0	0	0	0	0					
SOUTH			20.8	24.4	0	0	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						
WEST			20.8	41.0	192	3989	7881	112	2327	4597	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					
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	0						
DOORS			24.7	3.7	0	0	0	15	370	55	0	0	0	0	0	0	0	0	45	1109	164	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	289	1002	149	359	1245	185	322	1116	166	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	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	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	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	0						
BASEMENT/CRAWL HEAT LOSS					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						
SUBTOTAL HT LOSS					7475		3477		763		1667		1854		3732		1968		114		305		2653																		
SUB TOTAL HT GAIN						8593		4768		113		1078		1832		2743		1848		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												
AIR CHANGE HEAT LOSS					2737		1273		279		610		679		1366		721		42		112		971																		
AIR CHANGE HEAT GAIN						421		233		6		53		90		134		90		1		2		34																	
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																		
HEAT GAIN APPLIANCES/LIGHTS						989		989		0		989		989		0		989		0		0		989																	
TOTAL HT LOSS BTU/H					10212		4750		1042		2277		2533		5099		2689		156		417		3624																		
TOTAL HT GAIN x 1.3 BTU/H					13003		7787		154		2756		3783		3741		3807		23		62		2245																		

ROOM USE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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TOTAL HEAT GAIN BTU/H: 72214 TONS: 6.02 LOSS DUE TO VENTILATION LOAD BTU/H: 6010 STRUCTURAL HEAT LOSS: 85620 TOTAL COMBINED HEAT LOSS BTU/H: 91630

SITE NAME: VALES OF HUMBER SOUTH

OPT LAUN

DATE Jul-24

WINTER NATURAL AIR CHANGE RATE 0.241

HEAT LOSS AT °F. 74

CSA-F280-12

BUILDER: ROYAL PINE HOMES

TYPE: 7001

GFA: 5543

LO# 95297

SUMMER NATURAL AIR CHANGE RATE 0.078

HEAT GAIN ΔT °F. 11

SB-12 PERFORMANCE

SOLDIER ROYAL FINE HOMES										FIVE TOWN										SOLDIER ROYAL FINE HOMES										COMMUNAL										SOLDIER ROYAL FINE HOMES										SOLDIER ROYAL FINE HOMES										SOLDIER ROYAL FINE HOMES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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GRS.WALL AREA										250										270										110										130										385										240										300										100										60										80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ROOM USE			ENS-4		SHARED		LAUN		HALL															
EXP. WALL			0		6		0		0															
CLG. HT.			10		10		10		10															
FACTORS																								
GRS.WALL AREA	LOSS	GAIN	0		60		0		0															
GLAZING				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									
EAST	20.8	41.0	0	0	0	0	0	0	0	0	0	0	0	0	0									
SOUTH	20.8	24.4	0	0	0	9	187	220	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									
SKYLT.	34.1	100.3	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									
NET EXPOSED WALL	3.5	0.5	0	0	0	51	177	26	0	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									
EXPOSED CLG	1.3	0.6	70	88	39	90	113	50	77	96	43	397	497	221										
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0	0	0	0	0										
EXPOSED FLOOR	2.5	0.4	40	100	15	0	0	0	0	0	0	0	0	0										
BASEMENT/CRAWL HEAT LOSS			0		0		0		0		0		0											
SLAB ON GRADE HEAT LOSS			0		0		0		0		0		0											
SUBTOTAL HT LOSS			187		477		96		497															
SUB TOTAL HT GAIN				54		296		43		221														
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										
AIR CHANGE HEAT LOSS			59		151		30		157															
AIR CHANGE HEAT GAIN				3		14		2		11														
DUCT LOSS			25		0		0		0		0		0											
DUCT GAIN				6		0		0		0		0		0										
HEAT GAIN PEOPLE	240		0		0	0	0	0	0	0	0	0	0	0										
HEAT GAIN APPLIANCES/LIGHTS					0		0		989		0		0											
TOTAL HT LOSS BTU/H			271		627		127		655															
TOTAL HT GAIN x 1.3 BTU/H				81		404		1344		302														

TOTAL HEAT GAIN BTU/H:

72214

TONS: 6.02

LOSS DUE TO VENTILATION LOAD BTU/H: 6010

STRUCTURAL HEAT LOSS: 85620

TOTAL COMBINED HEAT LOSS BTU/H: 91630



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

TYPE: 7001
OPT LAUN

DATE: Jul-24

GFA: 5543 LO# 95297

FURNACE 1

HEATING CFM 1265
TOTAL HEAT LOSS 60,015
AIR FLOW RATE CFM 21.08

COOLING CFM 1265
TOTAL HEAT GAIN 39,065
AIR FLOW RATE CFM 32.38

**FACTORY
INSTALLED**

furnace pressure 0.6
furnace filter 0
a/c coil pressure 0.27
available pressure for s/a & r/a 0.33

**FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 63020 BTUH**
**CARRIER
59SC6A080M17--16**
**CARRIER
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 = **1265**
CFM @ .6" E.S.P.

TEMPERATURE RISE 57 °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	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	GREAT	GREAT	GREAT	GREAT	GREAT	KIT	KIT	KIT	PANT	DIN	DIN	LIV	LIV	FOY	FOY	LIBR	LIBR	PWD-1	PWD-2	MD/LN	BAS	BAS	BAS	BAS
RM LOSS MBH.	2.04	2.04	2.04	2.04	2.04	1.58	1.58	1.58	1.04	1.14	1.14	1.27	1.27	2.55	2.55	1.34	1.34	0.16	0.42	3.62	3.40	3.40	3.40	3.40
CFM PER RUN HEAT	43	43	43	43	43	33	33	33	22	24	24	27	27	54	54	28	28	3	9	76	72	72	72	72
RM GAIN MBH.	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.15	1.38	1.38	1.89	1.89	1.87	1.87	1.90	1.90	0.02	0.06	2.24	0.21	0.21	0.21	0.21
CFM PER RUN COOLING	84	84	84	84	84	84	84	84	5	45	45	61	61	61	61	62	62	1	2	73	7	7	7	7
ADJUSTED PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	31	25	21	23	28	35	47	53	55	50	62	78	74	78	82	81	87	31	11	18	53	38	21	25
EQUIVALENT LENGTH	100	100	120	140	120	110	90	110	100	120	110	100	120	150	130	120	130	120	170	140	110	100	130	130
TOTAL EFFECTIVE LENGTH	131	125	141	163	148	145	137	163	155	170	172	178	194	228	212	201	217	151	181	158	163	138	151	155
ADJUSTED PRESSURE	0.12	0.12	0.11	0.09	0.1	0.1	0.11	0.09	0.1	0.1	0.09	0.09	0.08	0.07	0.08	0.08	0.07	0.11	0.09	0.1	0.1	0.12	0.11	0.1
ROUND DUCT SIZE	6	6	6	6	6	6	6	6	4	4	5	5	5	5	5	5	5	4	4	6	5	5	5	5
HEATING VELOCITY (ft/min)	219	219	219	219	219	168	168	168	252	275	176	198	198	396	396	206	206	34	103	388	529	529	529	529
COOLING VELOCITY (ft/min)	428	428	428	428	428	428	428	428	57	516	330	448	448	448	448	455	455	11	23	372	51	51	51	51
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10
TRUNK	F	F	F	E	E	E	E	D	D	C	C	A	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.	3.40	3.40	3.40	3.40
CFM PER RUN HEAT	72	72	72	72
RM GAIN MBH.	0.21	0.21	0.21	0.21
CFM PER RUN COOLING	7	7	7	7
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	52	58	71	78
EQUIVALENT LENGTH	110	110	110	100
TOTAL EFFECTIVE LENGTH	162	168	181	178
ADJUSTED PRESSURE	0.1	0.1	0.09	0.09
ROUND DUCT SIZE	5	5	5	5
HEATING VELOCITY (ft/min)	529	529	529	529
COOLING VELOCITY (ft/min)	51	51	51	51
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10
TRUNK	C	C	A	B

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE									
TRUNK	STATIC	ROUND	RECT	VELOCITY						TRUNK	STATIC	ROUND	RECT	VELOCITY					
CFM	PRESS.	DUCT	DUCT	(ft/min)						CFM	PRESS.	DUCT	DUCT	(ft/min)					
TRUNK A	180	0.07	7.6	8	x	8	405			TRUNK G	0	0.00	0	0	x	8	0		
TRUNK B	182	0.07	7.7	8	x	8	410			TRUNK H	0	0.00	0	0	x	8	0		
TRUNK C	554	0.07	11.6	16	x	8	623			TRUNK I	0	0.00	0	0	x	8	0		
TRUNK D	127	0.09	6.3	8	x	8	286			TRUNK J	0	0.00	0	0	x	8	0		
TRUNK E	989	0.07	14.4	24	x	8	742			TRUNK K	0	0.00	0	0	x	8	0		
TRUNK F	277	0.10	8.2	10	x	8	499			TRUNK L	0	0.00	0	0	x	8	0		

RETURN AIR #	1	2	3	4	5	BR									
AIR VOLUME	330	155	360	130	130	0	0	0	0	0	0	0	0	0	160
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
ACTUAL DUCT LGH.	15	55	55	63	60	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	185
TOTAL EFFECTIVE LH	160	260	255	268	225	1	1	1	1	1	1	1	1	1	201
ADJUSTED PRESSURE	0.09	0.05	0.05	0.05	0.06	13.84	13.84	13.84	13.84	13.84	13.84	13.84	13.84	13.84	0.07
ROUND DUCT SIZE	9	7.8	10.8	7.3	7	0	0	0	0	0	0	0	0	0	7.3
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	24	30	14	14	0	0	0	0	0	0	0	0	0	14

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

TYPE: 7001
OPT LAUN

DATE: Jul-24

GFA: 5543

LO# 95297

FURNACE 2

HEATING CFM 925
TOTAL HEAT LOSS 25,606
AIR FLOW RATE CFM 36.12
COOLING CFM 925
TOTAL HEAT GAIN 32,704
AIR FLOW RATE CFM 28.28

**FACTORY
INSTALLED**

furnace pressure 0.6
furnace filter 0
a/c coil pressure 0.26
available pressure for s/a & r/a 0.34

**FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 28611 BTUH**
59SC6A040M14--10
CARRIER

AFUE = 96 %
INPUT (BTU/H) = 40,000
OUTPUT (BTU/H) = **39,000**

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	23	0	0
R/A	0	0	7	0	0

plenum pressure s/a 0.18
max s/a dif press. loss 0.01
min adjusted pressure s/a 0.17
r/a pressure 0.16
r/a grille press. Loss 0.02
adjusted pressure r/a 0.14

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

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
ROOM NAME	PRI	PRI	PRI	ENS	ENS	DRESS	BED-2	BED-2	ENS-2	BED-3	BED-3	BED-3	BED-3	ENS-3	BED-4	BED-4	ENS-4	BED-5	BED-5	SHARED	RETR	LAUN
RM LOSS MBH.	1.09	1.09	1.09	2.09	0.70	0.96	1.00	1.00	0.88	1.60	1.60	1.60	1.60	0.76	1.44	1.44	0.27	1.32	1.32	0.63	1.38	0.13
CFM PER RUN HEAT	39	39	39	75	25	35	36	36	32	58	58	58	58	27	52	52	10	48	48	23	50	5
RM GAIN MBH.	1.83	1.83	1.83	1.98	0.66	0.46	1.37	1.37	0.34	1.93	1.93	1.93	1.93	0.15	2.33	2.33	0.08	2.09	2.09	0.40	2.18	1.34
CFM PER RUN COOLING	52	52	52	56	19	13	39	39	10	55	55	55	55	4	66	66	2	59	59	11	62	38
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	84	69	63	90	85	85	43	38	33	41	37	42	49	39	64	58	39	94	88	80	92	62
EQUIVALENT LENGTH	190	200	210	160	170	200	180	180	110	110	120	130	130	120	190	220	110	170	170	190	190	220
TOTAL EFFECTIVE LENGTH	274	269	273	250	255	285	223	218	143	151	157	172	179	159	254	278	149	264	258	250	282	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	0.1	0.07	0.06	0.11	0.06	0.06	0.07	0.06	0.06
ROUND DUCT SIZE	6	6	6	6	4	5	4	4	4	5	5	5	5	4	6	6	4	6	6	4	6	5
HEATING VELOCITY (ft/min)	199	199	199	382	287	257	413	413	367	426	426	426	426	310	265	265	115	245	245	264	255	37
COOLING VELOCITY (ft/min)	265	265	265	286	218	95	447	447	115	404	404	404	404	46	337	337	23	301	301	126	316	279
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	4X10	4X10	3X10	4X10	3X10
TRUNK	A	A	A	A	A	A	B	B	B	D	D	B	B	B	C	C	D	C	C	C	C	C

RUN #	42
ROOM NAME	HALL
RM LOSS MBH.	0.65
CFM PER RUN HEAT	24
RM GAIN MBH.	0.30
CFM PER RUN COOLING	9
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	54
EQUIVALENT LENGTH	180
TOTAL EFFECTIVE LENGTH	234
ADJUSTED PRESSURE	0.07
ROUND DUCT SIZE	4
HEATING VELOCITY (ft/min)	275
COOLING VELOCITY (ft/min)	103
OUTLET GRILL SIZE	3X10
TRUNK	C

SUPPLY AIR TRUNK SIZE

	TRUNK	STATIC	ROUND	RECT			VELOCITY		TRUNK	STATIC	ROUND	RECT		VELOCITY	
	CFM	PRESS.	DUCT	DUCT			(ft/min)		CFM	PRESS.	DUCT	DUCT		(ft/min)	
TRUNK A	252	0.06	9	10	x	8	454	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	499	0.06	11.6	16	x	8	561	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	302	0.06	9.6	12	x	8	453	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	428	0.06	11	18	x	8	428	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	STATIC	ROUND	RECT		VELOCITY	
	CFM	PRESS.	DUCT	DUCT		(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
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
ACTUAL DUCT LGH.	46	42	54	66	89	60	53	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
TOTAL EFFECTIVE LH	221	207	299	271	299	275	258	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
ROUND DUCT SIZE	8.6	6	8.6	6.8	6.8	6	6.8	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
	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

TYPE: 7001
SITE NAME: VALES OF HUMBER SOUTH

LO # 95297
OPT LAUN

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>8</u> @ 10.6 cfm <u>84.8</u> cfm	
Other Rooms	<u>8</u> @ 10.6 cfm <u>84.8</u> cfm	
Table 9.32.3.A.	TOTAL <u>254.4</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	95.4 cfm	

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>254.4</u> cfm	
Less Principal Ventil. Capacity	<u>150</u> cfm	
Required Supplemental Capacity	<u>104.4</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 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	
<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: 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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	July-24

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

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																												
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																												
LO#: 95297	Model: 7001	Builder: ROYAL PINE HOMES	Date: 7/9/2024																																																									
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>2786</td> <td>10</td> <td>27860</td> </tr> <tr> <td>First</td> <td>2786</td> <td>11</td> <td>30646</td> </tr> <tr> <td>Second</td> <td>3296</td> <td>10</td> <td>32960</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="2" style="text-align: right;">Total:</td> <td></td> <td>91,466.0 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>2590.0 m³</td> </tr> </tbody> </table>			Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2786	10	27860	First	2786	11	30646	Second	3296	10	32960	Third	0	9	0	Fourth	0	9	0	Total:			91,466.0 ft³	Total:			2590.0 m³	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 20%; text-align: center;">0.241</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td style="text-align: center;">0.078</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 style="text-align: center;">22</td> <td style="text-align: center;">-19</td> <td style="text-align: center;">41</td> <td style="text-align: center;">74</td> </tr> <tr> <td>Summer DTDc</td> <td style="text-align: center;">24</td> <td style="text-align: center;">30</td> <td style="text-align: center;">6</td> <td style="text-align: center;">11</td> </tr> </table>		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
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5.2.3.1 Heat Loss due to Air Leakage			6.2.6 Sensible Gain due to Air Leakage																																																									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.241 x 719.45 x 41 °C x 1.2 = 8587 W = 29300 Btu/h			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.078 x 719.45 x 6 °C x 1.2 = 414 W = 1412 Btu/h																																																									
5.2.3.2 Heat Loss due to Mechanical Ventilation			6.2.7 Sensible heat Gain due to Ventilation																																																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E) \times 2 \text{ HRV / ERV's}$ 300 CFM x 74 °F x 1.08 x 0.25 = 6010 Btu/h			$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 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	29,300	12,566	1.166																																																								
2	0.3		24,009	0.366																																																								
3	0.2		18,548	0.316																																																								
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: 7001	OPT LAUN	BUILDER: ROYAL PINE HOMES
SFQT: 5543	LO# 95297	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):	91466.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.45	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	-

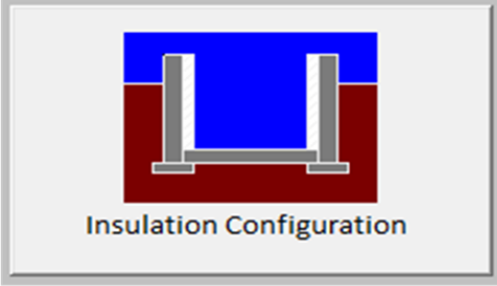
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



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
LO# 95297

OPT LAUN

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):	2590.0			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.		2417.8 cm ²	
	2.50		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):	0.241			
Cooling Air Leakage Rate (ACH/H):	0.078			

TYPE: 7001
LO# 95297

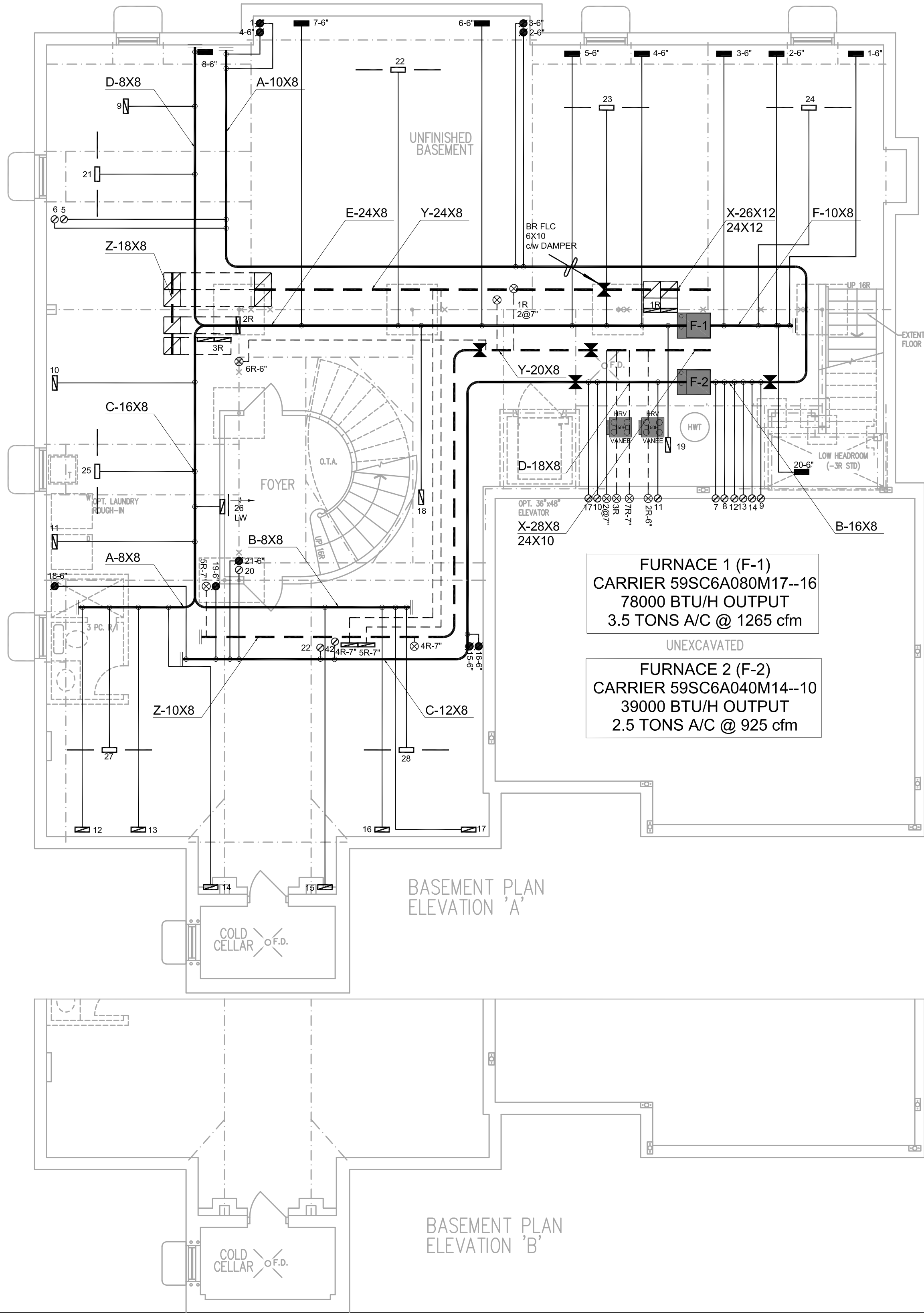
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ALL S/A DIFFUSERS "4x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

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.



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
	LINT TRAP by REVERSOMATIC
	DIRECT VENT
	LOW WALL
	HIGH WALL
	CEILING
	MOTORIZED ZONE DAMPER
	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
	DRYER BOOSTER FAN

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

SB-12 PERFORMANCE PACKAGE

I Michael O'Rourke have reviewed and take responsibility for the design work and am qualified under division C3.2.5 of the building code.

Michael O'Rourke
Michael O'Rourke BCIN# 19689
HVAC Designs Ltd.

	S/A	R/A	FANS
2ND	23	7	7
1ST	20	5	4
BAS	8	1	0

HVACDESIGNS LTD.
375 Finley Ave - Unit 202 - Ajax, Ontario L1S 2E2
Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdsgns.ca
Web: www.hvacdsgns.ca
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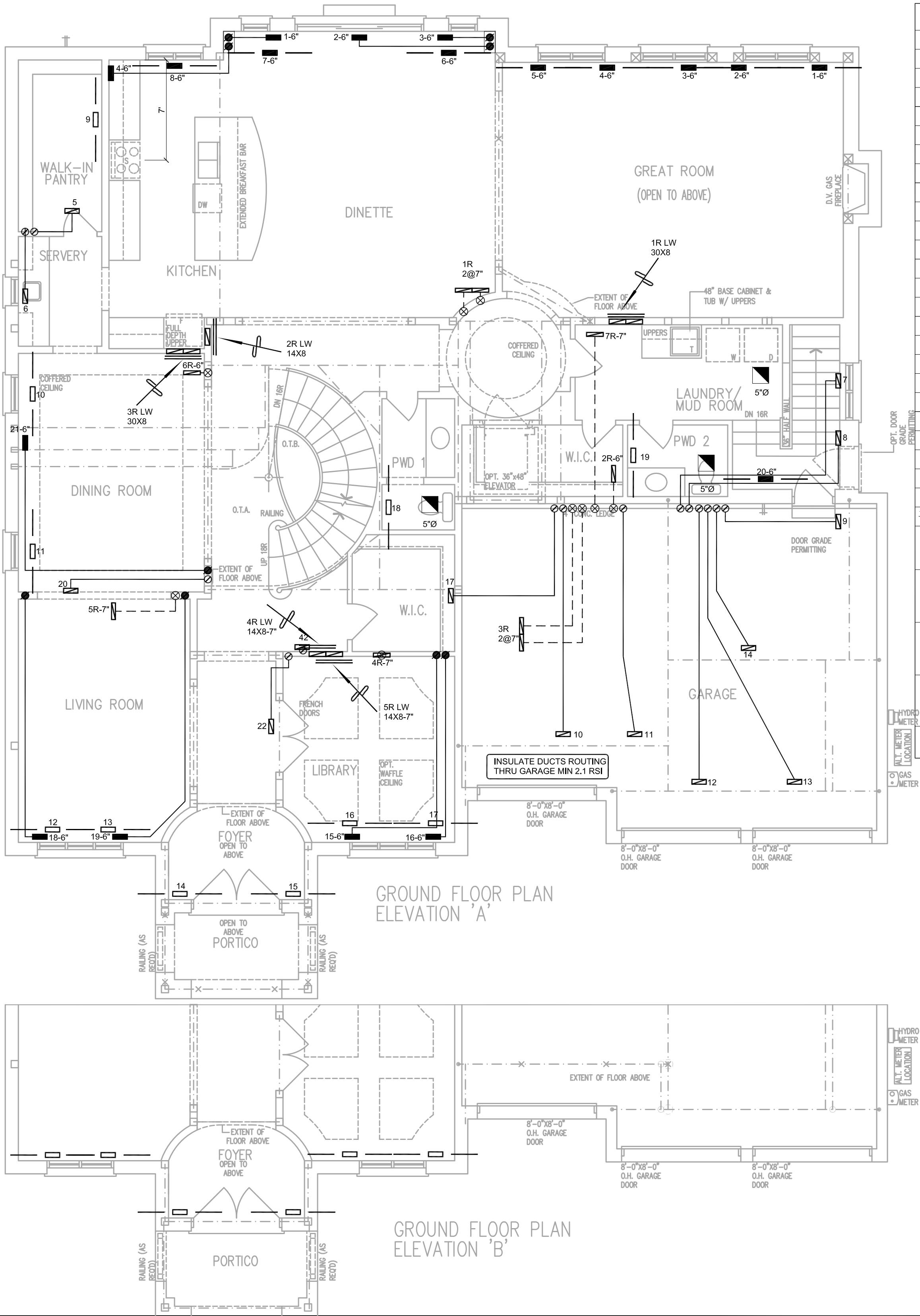
Client	ROYAL PINE HOMES		
Project Name	VALES OF HUMBER SOUTH BRAMPTON, ONTARIO		
	7001 OPT LAUN		
Copyright & Copy: © 2024 HVAC Designs Ltd.			
Sheet Title	BASEMENT		HEATING LAYOUT
Drawn By	EG	Checked By	MO
Scale	3/16"=1'-0"		Sheet No.
Date	MARCH 2022		1 3
LO #	95297		

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Michael O'Rourke
Michael O'Rourke BCIN# 19689
HVAC Designs Ltd.

	S/A	R/A	FANS
2ND	23	7	7
1ST	20	5	4
BAS	8	1	0

HVACDESIGNS LTD.

375 Finley Ave - Unit 202 - Ajax, Ontario L1S 2E2
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Web: www.hvacdsgns.ca
Specializing in Residential Mechanical Design Services

Client **ROYAL PINE HOMES**

Project Name **VALES OF HUMBER SOUTH
BRAMPTON, ONTARIO**

**7001
OPT LAUN**

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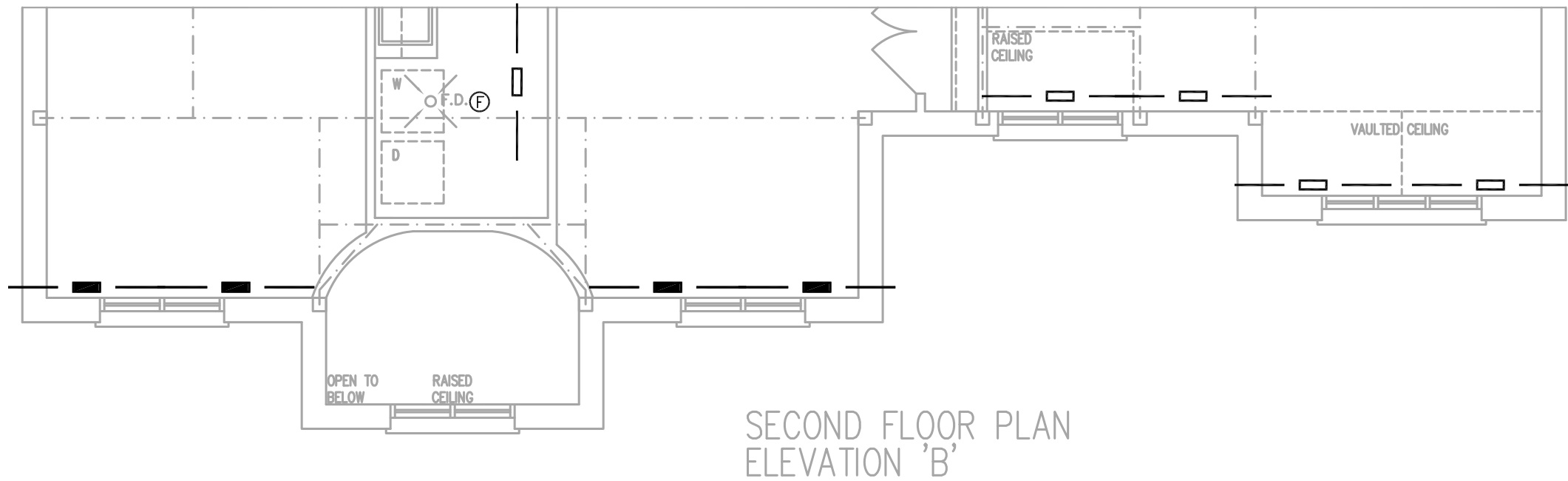
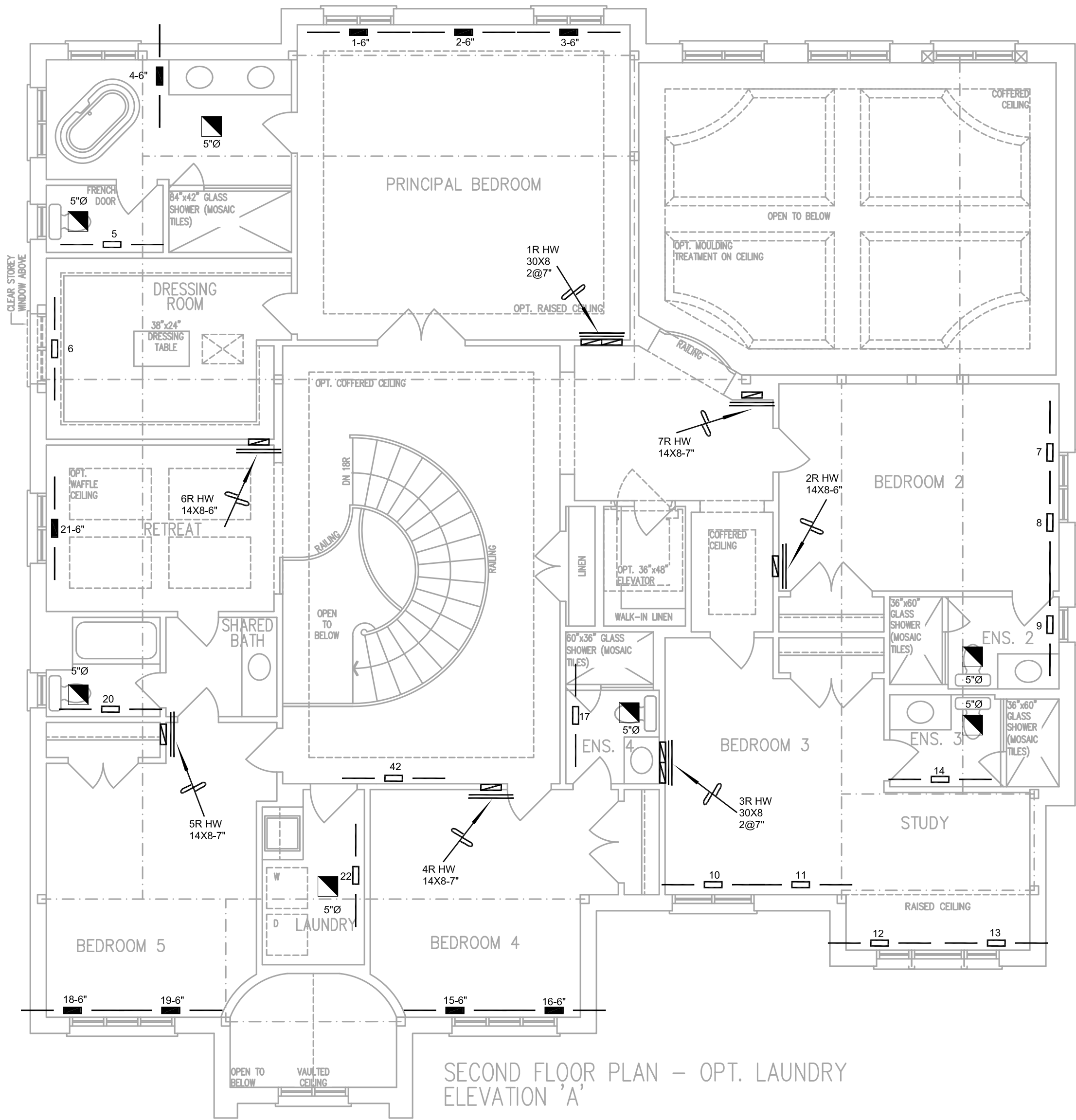
Sheet Title	FIRST FLOOR	HEATING LAYOUT
Drawn By	EG	Checked By MO
Scale	3/16"=1'-0"	Sheet No.
Date	MARCH 2022	2
LO #	95297	3

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INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY BRANCH OUTLETS SHALL BE EQUIPPED WITH MANUAL BALANCING DAMPER. DUCTWORK WHICH PASSES THROUGH THE GARAGE OR UNHEATED SPACES SHALL BE ADEQUATELY INSULATED AND GAS-PROOFED

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.



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

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

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# 19689
HVAC Designs Ltd.

	S/A	R/A	FANS
2ND	23	7	7
1ST	20	5	4
BAS	8	1	0

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Sheet Title	SECOND FLOOR	HEATING LAYOUT
Drawn By EG	Checked By MO	
Scale 3/16"=1'-0"		Sheet No. 3
Date MARCH 2022		
LO # 95297		3