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 Informatio	n					
Building number, street na	ame				Unit no.	Lot/con.
Municipality		Postal code	Plan number/ other des	cription	1	
BRAMPTON						
B. Individual who rev	iews and takes	responsibility fo	r design activities			
Name		-	Firm			
MICHAEL O'ROURKE			HVAC DESIGNS LTD.	II 1 2		11 -41
Street address 375 FINLEY AVE				Unit no. 202		Lot/con. N/A
Municipality		Postal code	Province	E-mail		N/A
AJAX		L1S 2E2	ONTARIO	info@hvacdes	signs.ca	
Telephone number		Fax number		Cell number		
(905) 619-2300		(905) 619-2375		()		
C. Design activities u	ndertaken by in	dividual identifie	ed in Section B. [Buil	ding Code Ta	ble 3.5.2.1 OF Divi	sion C]
☐ House		⊠ HVAC	– House		Building Structura	al
☐ Small Buildings			g Services		Plumbing – Hous	
Large BuildingsComplex Building	15	☐ Detecti	on, Lighting and Pov		Plumbing – All Bu On-site Sewage	
Description of designer's			Model:	5003	On one comage	- Jordania
HEAT LOSS / GAIN CAL			Wiodei.			
DUCT SIZING				OPT 2ND		
RESIDENTIAL MECHANI			ARY Project:	VALES OF HUM	MBER SOUTH	
RESIDENTIAL SYSTEM D. Declaration of Des		-F28U-12				
MICHAEL		int name)		declare th	nat (choose one as ap	propriate):
	he Building Code.		on behalf of a firm registe the firm is registered, in		ection 3.2.4.of appropriate	
	ividual BCIN: n BCIN:					
	ike responsibility for der subsection 3.2		m qualified in the approp n C, of the Building Code		s an "other	
	ividual BCIN: sis for exemption f	19669 rom registration and	d qualification:	O.B.C SEN	TENCE 3.2.4.1 ((4)
☐ The design wo Basis for exem		from the registrati	on and qualification requon:	irements of the I	Building Code.	
I certify that:						
	nation contained omitted this applica		ule is true to the best of nedge and consent of the			
March 4, 2	กวว			Micha	1 Okounha	-
Date	ULE	•			Signature of Des	igner
Dute					Signature of Des	.6

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.



				SOUTH	ł				OPT 2ND								DATE:								IANGE RATE			AT LOS				CSA-F	
BUILDER:	ROYAL	PINE I	HOMES	;				TYPE:	5003				GFA:	4036			LO# 9	5282			SUN	MER N	IATUR/	AL AIR CH	IANGE RATE	0.109	Н	EAT GAI	ΑΝ ΔΤ	°F. 11	S	B-12 PACKA	AGE A1
ROOM USE				MBR			ENS					BED-2	2		BED-3			BED-4		Е	ENS-2		EN	IS-3	MD/B	5	ВТ	H-4/5					
EXP. WALL				46			28					18			18			34			15		1	10	14			10					
CLG. HT.				10			9					9			10			11			9			9	9			9					
	FACTO	RS																															
GRS.WALL AREA	LOSS	GAIN		460			252					162			180			374			135		_	90	126			90					
GLAZING				LOSS	GAIN		LOSS	GAIN				LOSS	GAIN		LOSS	GAIN	ı	.oss g	AIN	L	.oss G	AIN	LC	SS GAIN	LOSS	GAIN	L	OSS GA	AIN				
NORTH	20.8	15.5	0	0	0	22	457	340			24	499	371	0	0	0	0	-	0	0	-	- 1		0 0	0 0	0		0 0	-				
EAST	20.8	41.0	0	0	0	0	0	0			0	0	0	44	914	1806	44			0				70 534	0 0	0		0 0	-				
SOUTH	20.8	24.4	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0				-	0 0	22 457	537		208 24					
WEST	20.8	41.0	46	956	1888	13	270	534			0	0	0	0	0	0	0	0	0	0		0	0	0 0	0 0	0	0	0 0	0				
SKYLT.	36.4	100.7	0	0	0	0	0	0			0	0	0	0	0	0	0	•	0	0	-	•	-	0 0	0 0	0		0 0	-				
DOORS		3.7	0	0	0	0	0	0			0	0	0	0	0	0	0	-	0	0	0	- 1	-	0 0	0 0	0	_	0 0					
NET EXPOSED WALL	4.4	0.6	414	1804	267	217	945	140			138	601	89	136	593	88	330							35 50	104 453	67		149 52					
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					
EXPOSED CLG	1.3	0.6	593	743	330	195	244	109			360	451	201	249	312	139	84			66				75 33	350 439	195		13 95					
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0			0	0	0	31	83	37	182			0		-		0 0	0 0	0	1 -	0 0					
EXPOSED FLOOR	2.5	0.4	0	0	0	0	0	0			80	199	30	280	697	103	0		0	66		24		49 22	0 0	0	0	0 0	٥				
BASEMENT/CRAWL HEAT LOSS				0			0					0			0			0			0			0	0			0					
SLAB ON GRADE HEAT LOSS				0			0					0			0			0			0			0	0		Ι.	0					
SUBTOTAL HT LOSS SUB TOTAL HT GAIN				3503	2486		1917	1123				1750	CO4		2599	2472		2946	283		999	386	8	30 639	1349		1 '	'69 39					
LEVEL FACTOR / MULTIPLIER				0.32	2400	0.00	0.32	1123			0.20	0.32	691	0.20	0.32	2173	0.20			0.20			.20 0.		0.20 0.32	799	0.20		90				
AIR CHANGE HEAT LOSS			0.20	1112		0.20	609				0.20	556		0.20	825		0.20	935	Ι,		317	ľ		.32 64	428			.32					
AIR CHANGE HEAT GAIN				1112	159		009	72				330	44		025	139			46			25		41	420	51	1	. 44 2!					
DUCT LOSS				0	155		0	12				231	44		342	139		0	40		132	25	4	09	0	31		0	29				
DUCT GAIN				U	0		U	0				231	179		342	337		-	0			41	'	68		0		0	,				
HEAT GAIN PEOPLE	240		2		480	0		0			1		240	1		240	1		_	0			0	0	1	240	0	0	-				
HEAT GAIN APPLIANCES/LIGHTS	240		_		816	"		0			'		816	•		816	•		16	٠		ŏ	•	0		816	ľ	0	-				
TOTAL HT LOSS BTU/H				4614	0.0		2526	·				2536	0.0		3767	0.0		3881			1448	١.	12	203	1777		1	014	Ĭ				
TOTAL HT GAIN x 1.3 BTU/H					5124			1553					2561			4817			531			587		972		2478	1	54	40				
											-								•												-		-
ROOM USE EXP. WALL																																	
				FAM			DIN			/DN		LIV			LIB			PWD			FOY			ND								BAS	
				39			16		4	0		13			32			7			20		2	25								202	
CLG. HT.	EACTO	DC								0													2										
CLG. HT.	FACTO			39 11			16 11		1	0 1		13 11			32 11			7 11			20 20		1	25 11								202 10	
CLG. HT. GRS.WALL AREA				39 11 429	GAIN		16 11 176	GAIN	4	0 1 40	N	13 11 143	GAIN		32 11 352	GAIN		7 11 77	ΔIN		20 20 400	AIN	2 2	25 1 75								202 10 2020	GAIN
CLG. HT. GRS.WALL AREA GLAZING	LOSS	GAIN	۰	39 11 429 LOSS	GAIN 0		16 11 176 LOSS	GAIN 0	4 1 LC	0 1 40 SS GAI		13 11 143 LOSS	GAIN	0	32 11 352 LOSS	GAIN 0		7 11 77 LOSS G	AIN 0	ı	20 20 400 LOSS G		2 2 LO	25 1 75 SS GAIN								202 10 2020 LOSS	
CLG. HT. GRS.WALL AREA GLAZING NORTH	LOSS 20.8		0	39 11 429 LOSS 0		0	16 11 176	GAIN 0 0	4 LC	0 1 40 SS GAI 0 0	0	13 11 143	0	0 49	32 11 352 LOSS 0	GAIN 0 2011		7 11 77 LOSS G.	0	L O	20 20 400 LOSS G	0 :	2 2 LC 20 4	25 1 75								202 10 2020	62
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	20.8 20.8	GAIN 15.5		39 11 429 LOSS	0	0	16 11 176 LOSS 0	0	4 LC 0	0 1 40 SS GAI 0 0	0	13 11 143 LOSS 0	0	0 49 0	32 11 352 LOSS	0	0	7 11 77 LOSS G 0	0	L O	20 20 400 LOSS G 0 810 1	0 601	2 2 LC 20 4 0	25 11 75 OSS GAIN 16 309								202 10 2020 LOSS 4 83 0 0	62 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	20.8 20.8 20.8 20.8	15.5 41.0	0	39 11 429 LOSS 0	0		16 11 176 LOSS 0	0	4 LC 0	0 1 40 SS GAII 0 0 0 0	0 0 28	13 11 143 LOSS 0	0	49	32 11 352 LOSS 0 1018	0 2011	0	7 11 77 LOSS G. 0 0	0	L 0 39	20 20 400 LOSS G 0 810 1	0 601 0	2 1 2 LC 20 4 0	25 11 75 OSS GAIN 16 309 0 0								202 10 2020 LOSS 4 83 0 0	62 0 195
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	20.8 20.8	15.5 41.0 24.4	0	39 11 429 LOSS 0 0	0 0 0	0 24	16 11 176 LOSS 0 0 499	0 0 585	4 LC	0 1 40 8SS GAI 0 0 0 0 0 0	0 0 28	13 11 143 LOSS 0 0	0 0 683	49 0	32 11 352 LOSS 0 1018	0 2011 0	0 0 0	7 11 77 LOSS G. 0 0 0	0 0 0	0 39 0	20 20 400 LOSS G 0 810 1 0	0 601 0 0	2 1 2 LC 20 4 0 0	25 11 75 OSS GAIN 16 309 0 0								202 10 2020 LOSS 4 83 0 0 8 166	62 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	20.8 20.8 20.8 20.8 20.8	15.5 41.0 24.4 41.0	0 0 84	39 11 429 LOSS 0 0 0	0 0 0	0 24 0	16 11 176 LOSS 0 0 499 0	0 0 585 0	4 LC 0 0 0 0 0 0 0 0 0 0 12	0 1 40 8SS GAII 0 0 0 0 0 0 67 250 0 0	0 0 28 4 0	13 11 143 LOSS 0 0 582 0	0 0 683 0	49 0 0	32 11 352 LOSS 0 1018 0	0 2011 0 0	0 0 0	7 11 77 LOSS G. 0 0 0	0 0 0 0 0	0 39 0 0	20 20 400 LOSS G 0 810 1 0 0	0 : 601 0 0	2 1 2 LC 20 4 0 0	25 11 75 DSS GAIN 16 309 0 0								202 10 2020 LOSS 4 83 0 0 8 166 8 166	62 0 195 328
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	20.8 20.8 20.8 20.8 20.8 36.4	15.5 41.0 24.4 41.0 100.7	0 0 84 0	39 11 429 LOSS 0 0 0 1745	0 0 0 3448 0	0 24 0 0	16 11 176 LOSS 0 0 499 0	0 0 585 0	4 LC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 40 SS GAII 0 0 0 0 0 0 0 0 67 250 0 0 47 37	0 0 28 4 0 0	13 11 143 LOSS 0 0 582 0	0 0 683 0	49 0 0 0	32 11 352 LOSS 0 1018 0 0	0 2011 0 0 0	0 0 0 0	7 11 77 LOSS G. 0 0 0 0 0	0 0 0 0 0	0 39 0 0 0	20 20 400 LOSS G 0 810 1 0 0 0	0 : 601 0 0 0 0	22 LC 20 4 0 0 0 0	25 11 75 DSS GAIN 16 309 0 0 0 0								202 10 2020 LOSS 4 83 0 0 8 166 8 166 0 0	62 0 195 328 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	20.8 20.8 20.8 20.8 20.8 36.4 24.7	15.5 41.0 24.4 41.0 100.7 3.7	0 0 84 0	39 11 429 LOSS 0 0 0 1745 0	0 0 0 3448 0	0 24 0 0	16 11 176 LOSS 0 0 499 0	0 0 585 0 0	4 LC 0 0 0 0 0 61 12 0 10 2	0 1 1 40 SS GAI 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 4 0 0	13 11 143 LOSS 0 0 582 0	0 0 683 0 0	49 0 0 0 0	32 11 352 LOSS 0 1018 0 0	0 2011 0 0 0 0	0 0 0 0	7 11 77 LOSS G 0 0 0 0 0 0 0 0 335	0 0 0 0 0	0 39 0 0 0	20 20 400 LOSS G 0 810 1 0 0 0 986 3	0 : 601 0 0 0 0 146 : 207 2	22 LC 20 4 0 0 0 0 0 0 0 0 0 0 225 9	25 11 75 DSS GAIN 16 309 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 0 8 166 8 166 0 0 20 493	62 0 195 328 0 73
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	20.8 20.8 20.8 20.8 20.8 36.4 24.7 4.4	15.5 41.0 24.4 41.0 100.7 3.7 0.6	0 0 84 0 0 345	39 11 429 LOSS 0 0 0 1745 0 0 1503	0 0 0 3448 0	0 24 0 0 0 152	16 11 176 LOSS 0 0 499 0 0 0	0 0 585 0 0 0	4 LC 0 0 0 61 12 0 10 2 369 16	0 1 1 40 SS GAII 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 4 0 0 0 115	13 11 143 LOSS 0 0 582 0 0 0	0 0 683 0 0 0	49 0 0 0 0 0 303	32 11 352 LOSS 0 1018 0 0 0	0 2011 0 0 0 0 0	0 0 0 0 0 0	7 11 77 LOSS G. 0 0 0 0 0 0 0 0 335	0 0 0 0 0 0 0 0	0 39 0 0 0 40 321	20 20 400 LOSS G 0 810 1 0 0 986 7 1399 2	0 : 601 0 0 0 0 146 : 207 2	2 LC 20 4 0 0 0 0 0 0 0 0 0 0 225 9	25 111 75 DSS GAIN 16 309 0 0 0 0 0 0 0 0								2020 10 2020 LOSS 4 83 0 0 8 166 8 166 0 0 20 493 0 0	62 0 195 328 0 73 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMIT WALL ABOVE GR	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5	0 0 84 0 0 345 0	39 11 429 LOSS 0 0 1745 0 0 1503 0	0 0 3448 0 0 223	0 24 0 0 0 152 0	16 11 176 LOSS 0 0 499 0 0 0 662	0 0 585 0 0 0 98	4 LC C C C C C C C C C C C C C C C C C C	0 1 40 (SS GAII) 0 0 0 0 0 0 0 0 47 37 008 238 0 0 0 0 0	0 0 28 4 0 0 0 115	13 11 143 LOSS 0 0 582 0 0 0 501	0 0 683 0 0 0 74	49 0 0 0 0 0 303 0	32 11 352 LOSS 0 1018 0 0 0	0 2011 0 0 0 0 196	0 0 0 0 0 0	7 11 77 LOSS G. 0 0 0 0 0 0 0 0 335	0 0 0 0 0 0 0 0	0 39 0 0 0 40 321	20 20 400 LOSS G 0 810 1 0 0 0 986 1 1399 2	0 : 601 0 0 0 146 : 207 2 0 43	2 LC LC 20 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	75 PSS GAIN 16 309 0 0 0 0 0 0 0 0 40 110 80 145 0 0								2020 LOSS 4 83 0 0 8 166 8 166 0 0 20 493 0 0	62 0 195 328 0 73 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED FLOOR	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6	0 0 84 0 0 345 0	39 11 429 LOSS 0 0 1745 0 0 1503 0	0 0 3448 0 0 223 0	0 24 0 0 0 152 0	16 11 176 LOSS 0 0 499 0 0 0 662 0	0 0 585 0 0 0 98 0	4 LC C C C C C C C C C C C C C C C C C C	0 1 40 (SS GAII) 0 0 0 0 0 0 0 47 37 08 238 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 4 0 0 0 115 0	13 11 143 LOSS 0 0 582 0 0 0 501 0	0 0 683 0 0 0 74 0	49 0 0 0 0 303 0	32 11 352 LOSS 0 1018 0 0 0 1320 0	0 2011 0 0 0 0 196 0	0 0 0 0 0 0 77 0	7 11 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 50 0	0 39 0 0 0 40 321 0	20 20 400 LOSS G 0 810 1 0 0 0 986 1 1399 2	0 : 601 0 0 0 0 1446 : 207 2 0 43 0	2 LC 20 4 0 0 0 0 0 0 0 0 0 0 225 9 0 0 0	75 PSS GAIN 16 309 0 0 0 0 0 0 0 40 110 80 145 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 0 8 8 166 0 0 0 20 493 0 0 0 0 0 0 0	62 0 195 328 0 73 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0	39 11 429 LOSS 0 0 1745 0 1503 0 0 27 0	0 0 3448 0 0 223 0 0	0 24 0 0 0 152 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0	0 0 585 0 0 0 98 0	4 LC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 28 4 0 0 0 115 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0	0 0 683 0 0 74 0 0	49 0 0 0 0 303 0 0	32 11 352 LOSS 0 1018 0 0 0 0 1320 0 0	0 2011 0 0 0 0 196 0	0 0 0 0 0 0 77 0	7 11 77 LOSS G. 0 0 0 0 0 0 0 335 0 0 0	0 0 0 0 0 0 0 50 0	0 39 0 0 40 321 0 77	20 20 400 LOSS G 0 810 1 0 0 986 1 1399 2 0 96 0	0 :: 601 :: 0 :: 0 :: 0 :: 146 :: 207 :: 2 :: 0 :: 43 ::	2 LC 20 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	25 11 75 PSS GAIN 16 309 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 0 8 166 8 166 0 0 20 493 0 0 0 0 0 0	62 0 195 328 0 73 0 0
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CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0	39 11 429 LOSS 0 0 1745 0 1503 0 0 27 0	0 0 3448 0 0 223 0 0 12	0 24 0 0 0 152 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0	0 0 585 0 0 0 98 0 0	4 LC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 40 SSS GAII 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 4 0 0 0 115 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0	0 0 683 0 0 0 74 0 0	49 0 0 0 0 303 0 0	32 11 352 LOSS 0 1018 0 0 0 0 1320 0 0	0 2011 0 0 0 0 196 0 0	0 0 0 0 0 0 77 0	7 111 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 77 0	20 20 400 LOSS G 0 810 1 0 0 0 986 1 1399 2 0 96 0 0 0 0 3291	0 : 601 0 0 0 0 146 : 207 2 0 43 0 0	2 LC 20 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	25 11 75 SSS GAINN 16 309 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 0 8 8 166 0 0 0 20 493 0 0 0 0 0 0 0	62 0 195 328 0 73 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG ON ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0 10	39 11 429 LOSS 0 0 1745 0 0 1503 0 0 27 0 0 0 3275	0 0 3448 0 0 223 0 0	0 24 0 0 0 152 0 0	16 11 176 LOSS 0 0 499 0 0 662 0 0 0	0 0 585 0 0 0 98 0	4 LC 0 0 0 0 0 0 10 2 369 16 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 40 SSS GAII 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 4 0 0 0 115 0 0 0 0	13 11 143 LOSS 0 0 582 0 0 501 0 0 0 0 1083	0 0 683 0 0 74 0 0	49 0 0 0 0 303 0 0 0	32 11 352 LOSS 0 1018 0 0 0 1320 0 0 0 0 0	0 2011 0 0 0 0 196 0	0 0 0 0 0 77 0 0	7 11 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 77 0	20 20 400 LOSS G 0 810 1 0 0 986 7 1399 2 0 96 0 0 0 0 3291	0 :: 601 :: 0 :: 0 :: 146 :: 207 :: 2 :: 0 :: 43 :: 0 :: 0 ::	2 LC LC 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	25 11 75 75 75 75 75 75 7								202 10 2020 LOSS 4 83 0 8 166 8 166 0 0 0 20 493 0 0 0 0 0 0 0 0 0 7197 8105	62 0 195 328 0 73 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG SYPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0	39 11 429 LOSS 0 0 0 1745 0 0 1503 0 0 27 0 0 0 3275	0 0 3448 0 0 223 0 0 12	0 24 0 0 0 152 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0 0 1161	0 0 585 0 0 0 98 0 0	4 LC C C C C C C C C C C C C C C C C C C	0 1 1 40 SSS GAII 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 4 0 0 0 115 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0 0 0 1083	0 0 683 0 0 0 74 0 0	49 0 0 0 0 303 0 0	32 11 352 LOSS 0 1018 0 0 0 1320 0 0 0 0 0 2338	0 2011 0 0 0 0 196 0 0	0 0 0 0 0 77 0 0	7 11 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 77 0	20 20 400 LOSS G 0 810 1 0 0 0 986 1 1399 2 0 0 0 0 0 0 3291 1 0.47	0 :: 601 :: 0 :: 0 :: 146 :: 207 :: 2 :: 0 :: 43 :: 0 :: 0 ::	2 LC	25 11 75 75 75 75 75 75 7								202 10 2020 LOSS 4 83 0 0 8 166 8 166 0 0 20 493 0 0 0 0 0 0 0 0 7197 8105	62 0 195 328 0 73 0 0 0 0
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CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE OR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG EXPOSED FLOOR 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 LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0 10	39 11 429 LOSS 0 0 0 1745 0 0 1503 0 0 27 0 0 3275	0 0 3448 0 0 223 0 0 12	0 24 0 0 0 152 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0 0 1161	0 0 585 0 0 98 0 0	4 LC C C C C C C C C C C C C C C C C C C	0 1 1 40 SSS GAII 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 28 4 0 0 0 115 0 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 683 0 0 0 74 0 0	49 0 0 0 0 303 0 0 0	32 11 352 LOSS 0 1018 0 0 0 1320 0 0 0 0 2338	0 2011 0 0 0 0 196 0 0	0 0 0 0 0 77 0 0	7 111 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 77 0	20 20 400 LOSS G 0 810 1 0 0 0 986 2 1399 2 0 96 0 0 0 0 3291 1 0.47	0 :: 601 :: 0 :: 0 :: 146 :: 207 :: 2 :: 0 :: 43 :: 0 :: 0 ::	2 2 1 1 2 2 LC	25 1.1 75 9SS GAIN 16 309 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 8 166 8 166 0 0 0 0 0 0 0 0 0 0 0 0 7197 8105	62 0 195 328 0 73 0 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0 10	39 11 429 LOSS 0 0 0 1745 0 0 1503 0 0 27 0 0 0 3275	0 0 3448 0 0 223 0 0 12 0	0 24 0 0 0 152 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0 0 1161	0 0 585 0 0 98 0 0 0	4 LC C C C C C C C C C C C C C C C C C C	00 1 1 440	0 0 28 4 0 0 0 115 0 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0 0 0 1083	0 0 683 0 0 0 74 0 0 0 757	49 0 0 0 0 303 0 0 0	32 11 352 LOSS 0 1018 0 0 0 1320 0 0 0 0 0 2338	0 2011 0 0 0 0 196 0 0 0 0	0 0 0 0 0 77 0 0	7 111 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 77 0	20 20 400 LOSS G 0 810 1 0 0 986 1 1399 2 0 96 0 0 0 0 3291 1 0.47 1560	0 :: 601 0 0 0 146 :: 207 2 0 43 0 0 997 0	2 2 1 1 2 2 LC	25 1.1 75 DSS GAIN 16 309 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 0 8 166 8 166 0 0 20 493 0 0 0 0 0 0 0 0 7197 8105	62 0 195 328 0 73 0 0 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT LOSS DUCT GAIN	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7 2.5	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0 10 0	39 11 429 LOSS 0 0 0 1745 0 0 1503 0 0 27 0 0 3275	0 0 0 3448 0 0 223 0 0 12 0	0 24 0 0 0 152 0 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0 0 1161	0 0 585 0 0 98 0 0 0 0	4 LC C C C C C C C C C C C C C C C C C C	0 0 1 1 40 5 5 6 6 6 7 5 6 7 6 7 6 7 6 7 6 7 6 7 6	0 0 28 4 0 0 0 0 115 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 683 0 0 0 74 0 0 0 0 757	49 0 0 0 0 303 0 0 0	32 11 352 LOSS 0 1018 0 0 0 1320 0 0 0 0 2338	0 2011 0 0 0 196 0 0 0 0 22207	0 0 0 0 0 0 77 0 0 0	7 111 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 77 0 0	20 20 400 LOSS G 0 810 1 0 0 0 986 2 1399 2 0 96 0 0 0 0 3291 1 0.47	0 :: 601 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 1 1 2 2 LC	25 11 75 25S GAIN 16 309 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 0 68 8 166 8 166 0 0 20 20 493 0 0 0 0 0 0 7197 8105	62 0 195 328 0 73 0 0 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG NO ATTIC EXPOSED CLO BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT LOSS AUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT CAIN DUCT GAIN HEAT GAIN PEOPLE	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7 2.5	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0 10	39 11 429 LOSS 0 0 0 1745 0 0 1503 0 0 27 0 0 3275	0 0 0 3448 0 0 223 0 0 12 0	0 24 0 0 0 152 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0 0 1161	0 0 585 0 0 98 0 0 0 0 0	4 LC C C C C C C C C C C C C C C C C C C	00 1 1 40	0 0 28 4 0 0 0 0 115 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 683 0 0 74 0 0 0 757	49 0 0 0 0 303 0 0 0	32 11 352 LOSS 0 1018 0 0 0 1320 0 0 0 0 2338	0 2011 0 0 0 196 0 0 0 0 2207	0 0 0 0 0 77 0 0	7 111 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 77 0	20 20 400 LOSS G 0 810 1 0 0 0 986 2 1399 2 0 96 0 0 0 0 3291 1 0.47	0 : : : : : : : : : : : : : : : : : : :	2 2 1 1 2 2 LC	25 1.1 75 SSS GAIN 16 309 0 0 0 0 0 0 40 110 80 145 0 0 0 0 0 0 135 564 47 112 36 0 0 0 0								202 10 2020 LOSS 4 83 0 8 166 8 166 0 0 0 0 0 0 0 0 0 0 0 0 7197 8105	62 0 195 328 0 73 0 0 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED SMT WALL ABOVE GR EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7 2.5	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0 10 0	39 11 429 LOSS 0 0 0 1745 0 0 1503 0 0 27 0 0 3275 0.47 1552	0 0 0 3448 0 0 223 0 0 12 0	0 24 0 0 0 152 0 0 0	16 11 176 LOSS 0 0 499 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 585 0 0 98 0 0 0 0	4 LC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 28 4 0 0 0 0 115 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 111 143 LOSS 0 0 0 582 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 683 0 0 0 74 0 0 0 0 757	49 0 0 0 0 303 0 0 0	32 11 352 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 2011 0 0 0 196 0 0 0 0 22207	0 0 0 0 0 0 77 0 0 0	7 111 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 0 777 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 20 400 LOSS G 0 810 1 986 1399 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 :: 601 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 LC	25 1.1 75 28S GAIN 16 309 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								202 10 2020 LOSS 4 83 0 8 166 8 166 0 0 93 3 0 0 0 0 0 0 7197 8105 0.50 1.63 13225 0	62 0 195 328 0 73 0 0 0 0 0 0 42
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG NO ATTIC EXPOSED CLO BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT LOSS AUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT CAIN DUCT GAIN HEAT GAIN PEOPLE	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7 2.5	15.5 41.0 24.4 41.0 100.7 3.7 0.6 0.5 0.6 1.2	0 0 84 0 0 345 0 0 10 0	39 11 429 LOSS 0 0 0 1745 0 0 1503 0 0 27 0 0 3275	0 0 0 3448 0 0 223 0 0 12 0	0 24 0 0 0 152 0 0 0	16 11 176 LOSS 0 0 499 0 0 0 662 0 0 0 0 1161	0 0 585 0 0 98 0 0 0 0 0	4 LC C C C C C C C C C C C C C C C C C C	00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 28 4 0 0 0 0 115 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 143 LOSS 0 0 582 0 0 0 501 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 683 0 0 74 0 0 0 757	49 0 0 0 0 303 0 0 0	32 11 352 LOSS 0 1018 0 0 0 1320 0 0 0 0 2338	0 2011 0 0 0 196 0 0 0 0 2207	0 0 0 0 0 0 77 0 0 0	7 111 77 LOSS G. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 39 0 0 0 40 321 0 0 777 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 20 400 LOSS G 0 810 1 0 0 0 986 6 1399 2 2 1 1399 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 : : : : : : : : : : : : : : : : : : :	2 LC	25 1.1 75 SSS GAIN 16 309 0 0 0 0 0 0 40 110 80 145 0 0 0 0 0 0 135 564 47 112 36 0 0 0 0								202 10 2020 LOSS 4 83 0 0 68 8 166 8 166 0 0 20 20 493 0 0 0 0 0 0 7197 8105	62 0 195 328 0 73 0 0 0 0 0 0 42

TOTAL HEAT GAIN BTU/H:

48320

TONS: 4.03

LOSS DUE TO VENTILATION LOAD BTU/H: 1911

STRUCTURAL HEAT LOSS: 68771

TOTAL COMBINED HEAT LOSS BTU/H: 70683

Mehal Oxombe.



375 Finley Ave. Suite 202 Ajax, ON L1S 2E2 Tel: 905.619.2300 Fax: 905.619.2375

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	SITE NAME	: VALES O	F HUMBE	R SOUTH					OPT 2N	D												BC	N# 19669
	BUILDER:	ROYAL P	INE HOM	ES				TYPE	5003		AH -	1	DATE	: Mar-22		GFA:	4036	LO#	95282			PAG	E 2 of 3
UNIT OUTPUT @ 130 °F OUTLETS for UNIT BTU/H per OUTLET HEATING UNIT OUTPUT COOLING OUTLETS for UNIT BTU/H per OUTLET COOLING	30250 14 2241 18000 14 1333	BTU/H BTU/H	CFI	м / оит і 0	.ET =					Water He Make & I Input Storage o Efficiency	Model #		GLOW C95 95000 40 95.0	Btu/H US/gal. %		Ma	Air Max axAir 50e		CFM @:	30250 1.5" E.S.P. GN CFM = A/C SIZE A/C SIZE	580	- TONS	°F
FLOOR ROOM NAME RM LOSS MBH. # of RUNS red'd HEATING RM GAIN MBH. # of RUNS red'd COOLING # of OUTLETS INSTALLED	2 MBR 4.61 2 5.12 4	2 ENS 2.53 1 1.55	0.00 0 0.00 0	2 BED-2 2.54 1 2.56 2	2 BED-3 3.77 2 4.82 4	2 BED-4 3.88 2 4.53 3	2 ENS-2 1.45 1 0.59	2 ENS-3 1.20 1 0.97	2 MD/B5 1.78 1 2.48 2	2 BTH-4/5 1.01 0 0.54 0	1 FAM 4.83 2 6.16 5	1 DIN 1.71 1 2.01	1 KT/DN 4.60 2 4.90 4	1 LIV 1.60 1 2.11 2	1 LIB 3.45 2 4.11 3	1 PWD 0.49 0 0.07	1 FOY 4.85 2 2.76 2	1 LND 3.15 1 1.84	B BAS 21.33 10 0.91 1	0.00 0 0.00 0	0.00 0 0.00 0	0.00 0 0.00 0	0.00 0 0.00 0
II OF OUTLETS INSTALLED																					djusted T		
RETURN AIR # FLOOR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	BR B		RETURN				tual Insta	alled Fle	<u> </u>
AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUILVALENT LENGTH TOTAL EFFECTIVE LH ADJUSTED PRESSURE ROUND DUCT SIZE INLET GRILL SIZE	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	0 0.15 1 0 1 15 0 0 X	580 0.15 1 0 1 15 3.1 0 X		TRUNK O TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V	TRUNK CFM 0 0 0 0 0 0 0 0 0 580	STATIC PRESS. 15 15 15 15 15 15 15 15 15 15	ROUND DUCT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RECT DUCT 0 0 0 0 0 0 0	x x x x x x x	8 8 8 8 8 8 8 8
INSTALLATION OF COMBO HE TO COMPLY WITH UNIFIED CA GUIDELINE FOR INTERGRATEI HEATING SYSTEMS LATEST AL	ANADIAN O (COMBINA ODITION		+10%		SUPPLIE NOT EXC EXHAUS AIR INTA COMPLY	D TO PLU CEED 120	LOCAL	IXTURES C		YSTEM							TRUNK X TRUNK Y TRUNK Z DROP	580 0 0 580	15 15 15 15	3.1 0 0 3.1	1 0 0 1 1 1 1 1	x x x x x x x	8 8 8 10 12 14 16 18

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

70683

48320

77751

CODES & AUTHORITIES

TOTAL COMBINED HEAT LOSS BTU/H

TOTAL HEAT GAIN BTU/H

INDIVIDUAL BCIN: 19669 Michael O'Rourke





TYPE: 5003 VALES OF HUMBER SOUTH SITE NAME:

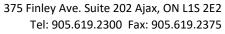
95282 OPT 2ND RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

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COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL V	ENTILATION CAPACITY			9.32.3.5.
a) Direct vent (sealed combustion) only		Total Ventilation Ca	pacity	212	_	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Venti	I. Capacity	95.4	_	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Suppleme	ntal Capacity	116.6	_	cfm
d) Solid Fuel (including fireplaces)						
e) No Combustion Appliances			IST FAN CAPACITY			
		Model:	VANEE V150H	Location:	BS	SMT
HEATING SYSTEM		95.4	_cfm		✓ H	IVI Approved
Forced Air Non Forced Air			IST HEAT LOSS CALCULATION			0/ 1.000
		CFM 95.4 CFM	ΔT °F X 74 F X	factor 1.08	Х	% LOSS 0.25
Electric Space Heat		SUPPLEMENTAL F	FANS BY INST	ALLING CON	TRACTO	R
		Location	Model	cfm	HVI	Sones
HOUSE TYPE	9.32.1(2)	ENS	BY INSTALLING CONTRACTOR	50	✓ ✓	3.5
✓ I Type a) or b) appliance only, no solid fuel		ENS-2 BTH-4/5	BY INSTALLING CONTRACTOR BY INSTALLING CONTRACTOR	50 50	√	3.5
Type a) or b) appliance only, no solid ruci		PWD	BY INSTALLING CONTRACTOR	50	✓	3.5
II Type I except with solid fuel (including fireplaces)						
		HEAT RECOVERY				9.32.3.11.
III Any Type c) appliance		Model: 150	VANEE V150H cfm high	35		cfm low
IV Type I, or II with electric space heat		130			_	CITTIOW
Other: Type I, II or IV no forced air		75	% Sensible Efficiency @ 32 deg F (0 deg C)		✓ H	IVI Approved
			TALL ATION			
SYSTEM DESIGN OPTIONS (D.N.H.W.P.	LOCATION OF INS	TALLATION			
STOTE III DESIGN OF FIGURE		Lot:		Concession		
1 Exhaust only/Forced Air System						
2 HRV with Ducting/Forced Air System		Township		Plan:		
2 THV With Buckling/Forced All Gysterin		Address				
HRV Simplified/connected to forced air system		Roll #		Building Peri	mit#	
4 HRV with Ducting/non forced air system		BUILDER:	ROYAL PINE HOMES			
Part 6 Design			ROTAL FINE HOWES			
FOTAL VENTILATION CAPACITY	9.32.3.3(1)	Name: Address:				
TOTAL VENTILATION CAPACITY	3.32.3.3(1)	Address.				
Basement + Master Bedroom 2 @ 21.2 cfm 42.4	cfm	City:				
Other Bedrooms <u>4</u> @ 10.6 cfm <u>42.4</u>	cfm	Telephone #:		Fax #:		
Kitchen & Bathrooms 6 @ 10.6 cfm 63.6	cfm	INSTALLING CONT	TRACTOR			
Other Rooms 6 @ 10.6 cfm 63.6	cfm	Name:				
Table 9.32.3.A. TOTAL <u>212.0</u>	cfm	Address:				
	-	City:				
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	T-1		F#-		
1 Bedroom 31.8	cfm	Telephone #:		Fax #:		
2 Bedroom 47.7	cfm		this ventilation system has been o	lesigned		
3 Bedroom 63.6	cfm	in accordance with t Name:	he Ontario Building Code. HVAC Designs Ltd.			
4 Bedroom 79.5	cfm	Signature:	Muha	1 Ofound	e .	
5 Bedroom 95.4	cfm	HRAI#	,	001820		
TOTAL 95.4 cfm		Date:		March-22		
I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUALI	FIED IN THE AP		"OTHER DESIGNER" UNDER DIVISION C		JILDING COL	DE.



		•	Form	nula Sheet (For Air Lea	akage / Ventiliation C	alculation)						
LO#: 952	282	Model: 5003			er: ROYAL PINE HOMES				Date:	3/4/2022		
		Volume Calculat	ion		Air Change & Delta T Data							
				7						7		
ise Volume	El A (6:2)	I =	(6.3)				TURAL AIR CHANG		0.335	_		
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)			SUMMER NA	TURAL AIR CHANG	GE RATE	0.109]		
Bsmt	1883	10	18830 20713									
First Second	1883 2220	11 9	19980				Design Te	mperature Diff	oronco			
Third	0	9	0	+			Tin °C	Tout °C	ΔT °C	ΔT°F		
Fourth	0	9	0	-		Winter DTDh	22	-19	41	74		
1 our til		Total:	59,523.0 ft ³	-		Summer DTDc	24	30	6	11		
		Total:	1685.5 m³	†		Sammer Bibe						
		•	1	.								
	5.2.3	3.1 Heat Loss due to	Air Leakage			6.2.6	Sensible Gain due	to Air Leakage				
		V.					V.					
	$HL_{airb} =$	$LR_{airh} \times \frac{V_b}{3.6} \times$	$DTD_h \times 1.2$		Н	$IG_{salb} = LR_{airc} >$	$\times \frac{v_b}{2c} \times DTD_c$	× 1.2				
0.335		5.0		7752 144	- I		5.0			27414		
0.335	x 468.20	x 41 °C	X <u>1.2</u>	= 7752 W	= 0.109	x 468.20	x <u>6.C</u>	X	- =	374 W		
				= 26449 Btu/h	_T				=	1275 Btu/l		
				= 20449 Blu/II	1				-	12/3 Blu/1		
	5.2.3.2 He	at Loss due to Mech	nical Ventilation			6.2.7 Sei	nsible heat Gain d	ue to Ventilatio	n			
	$HL_{vairb} =$	$PVC \times DTD_h \times$	$1.08 \times (1 - E)$		HL	$_{vairb} = PVC \times D$	$TD_h \times 1.08 \times$	(1 - E)				
95 CFM	x 74 °F	x 1.08	x 0.25	= 1911 Btu/h	95 CFM	x <u>11</u> °F	x <u>1.08</u>	x 0.25	=	283 Btu/h		
			<u> </u>				_		-			
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Flo	or Multiplier Section)						
					\	()-					
		HL	_{airr} = Level Fact	$or \times HL_{airbv} \times \{(H_{airbv}) \times \{$	$(L_{agcr} + HL_{bgcr}) \div$	$(HL_{agclevel} + HL$	bgclevel)}					
				HLairve Air Leakage +	Level Conductive Heat	Air Laglage Heat La	aa BAwleimliam (1 F w					
		Level	Level Factor (LF)	Ventilation Heat Loss								
				(Btu/h)	Loss: (HL _{clevel})	HLairbv / I	ırıevei)					
		1	0.5		8,105	1.63	2					
		2	0.3	1	16,741	0.47	4					
		3	0.2	26,449	16,662	0.31	7					
		4	0		0	0.00	0					
		5	0		0	0.00	0					
				+ ventilation heat loss	·							







HEAT LOSS AND GAIN SUMMARY SHEET

		112711 200	574115 G74111 (JOHNIN HAT GITLLT	
MODEL:	5003	OPT	2ND	BUILDER: ROYAL PINE HOMES	
SFQT:	4036	LO# 9528	32	SITE: VALES OF HUMBER SO	DUTH
DESIGN A	SSUMPTIONS				
HEATING			°F	COOLING	°F
_	R DESIGN TEMP.		-2	OUTDOOR DESIGN TEMP.	86
	DESIGN TEMP.		- 72	INDOOR DESIGN TEMP. (MAX 75°F)	75
				,	
BUILDING	DATA				
ATT A CLUB	45NT	DETA	CUED	" OF STORIES (DASENAFAT)	2
ATTACHM	IENI:	DETA	ACHED	# OF STORIES (+BASEMENT):	3
FRONT FA	ACES:		EAST	ASSUMED (Y/N):	Υ
				(, ,	
AIR CHAN	IGES PER HOUR:		3.57	ASSUMED (Y/N):	Υ
ALD TIGUE	-N-50 04-T-500DV		-5.4.05	ACCUMATE (M/AN)	.,
AIR HGH	TNESS CATEGORY:	AVE	ERAGE	ASSUMED (Y/N):	Y
WIND EXF	POSURE:	SHEL ⁻	TERED	ASSUMED (Y/N):	Υ
		2		(,,,,,	
HOUSE V	OLUME (ft³):	59	9523.0	ASSUMED (Y/N):	Υ
INTERNAL	_ SHADING:	BLINDS/CUR	TAINS	ASSUMED OCCUPANTS:	6
INTERIOR	LIGHTING LOAD (Btu/	h/ft²)·	1.50	DC BRUSHLESS MOTOR (Y/N):	Υ
	E.G. Tinto Lorto (btd)	, ,.	1.50	20 21.03.112.03 WOTON (1714).	'
FOUNDAT	TION CONFIGURATION	В	CIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH:	57.0 ft	WIDTH:	44.0 ft	EXPOSED PERIMETER:	202.0 ft

2012 OBC - COMPLIANCE PACKAGE		
	Compliance	Package
Component	A	1
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	96%	-
HRV 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

We	ather Sta	tion Description
Province:	Ontario	•
Region:	Brampto	n
	Site D	escription
Soil Conductivity:	Normal o	conductivity: dry sand, loam, clay
Water Table:	Normal (7-10 m, 23-33 ft)
F	oundatio	n Dimensions
Floor Length (m):	17.4	
Floor Width (m):	13.4	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	Insulation Configuration
Window Area (m²):	1.9	
Door Area (m²):	1.9	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	ntion Loads
Heating Load (Watts):		2109

TYPE: 5003 **LO#** 95282

OPT 2ND



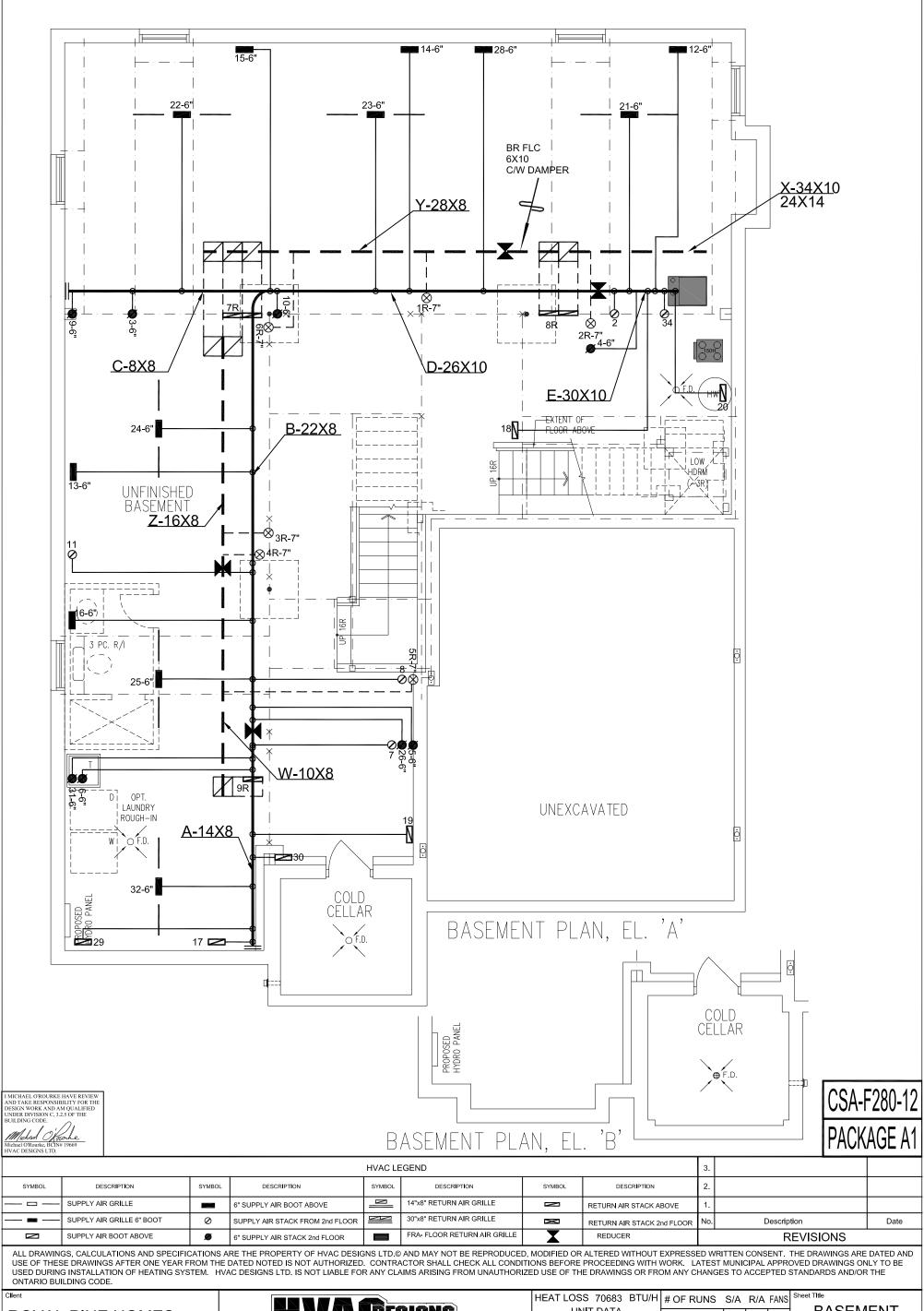
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Statio	n Des	cripti	ion			
Province:	Ontar	io				
Region:	Bram	pton				
Weather Station Location:	Open	flat te	rrain, g	grass		
Anemometer height (m):	10					
Local Sh	ieldin	g				
Building Site:	Subu	ban, f	orest			
Walls:	Heavy	/				
ue: Heavy						
Highest Ceiling Height (m):	7.01					
Building Cor	figura	ation				
Type:	Detac	hed				
Number of Stories:	Two					
Foundation:	Full					
House Volume (m³):	1685.	5				
Air Leakage/	Venti	latior	1			
Air Tightness Type:	Prese	nt (196	61-) (3.	57 ACH	H)	
Custom BDT Data:	ELA @	9 10 Pa	Э.		2246.8 cm ²	
	3.57				ACH @ 50 Pa	
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust	
		45.0			45.0	
Flue S	Size					
Flue #:	#1	#2	#3	#4		
Diameter (mm):	0	0	0	0		
Natural Infiltr	ation	Rate	:S			
Heating Air Leakage Rate (ACH/H):		C	.33	5		
Cooling Air Leakage Rate (ACH/H):		C	0.10	9		

TYPE: 5003 OPT 2ND

LO# 95282



ROYAL PINE HOMES

Project Name

VALES OF HUMBER SOUTH BRAMPTON, ONTARIO

OPT 2ND 5003

4036 sqft

375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

Specializing in Residential Mechanical Design Services

Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed. FAN SPEED

ILEVIT	.033 /0003	БТО/П	# OF RUNS	S/A	R/A	FAN5	
	UN I T DATA		3RD FLOOR				l
MAKE	CARRIER		2ND FLOOR	13	6	5	
MODEL				10		J .	
59	9SP5A-80-20		1ST FLOOR	12	3	2	
INPUT	80	MBTU/H	BASEMENT	6	1	0	Date
OUTPUT		MBTU/H	ALL S/A DIFFU	SERS	4 "x10)"	Sca
	78		UNLESS NOTE				
COOLING	4.0	TONS	ON LAYOUT. A	LL S/A	RUN	S 5"Ø	
	4.0		UNLESS NOTE	D OTH	IERW	ISE	I

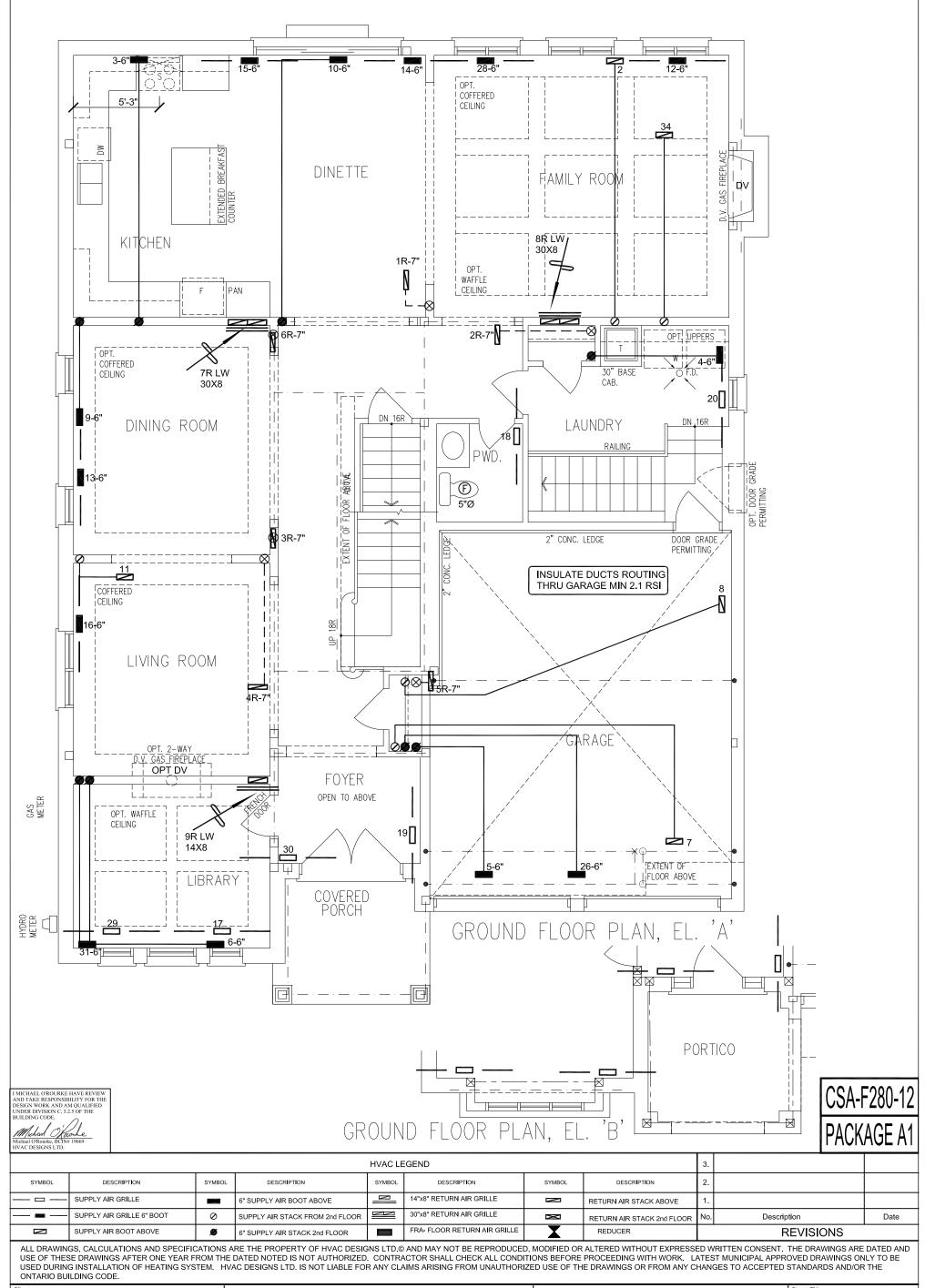
ON LAYOUT. UNDERCUT

DOORS 1" min. FOR R/A

cfm @ 0.6" w.c

1600

	BASEMENT								
	HEATING								
		LAYOUT							
	Date	MAR/2022							
	Scale :	3/16" = 1'-0"							
ø	BCIN# 19669								
	LO#	95282							



ROYAL PINE HOMES

Project Name

VALES OF HUMBER SOUTH BRAMPTON, ONTARIO

OPT 2ND 5003

4036 sqft

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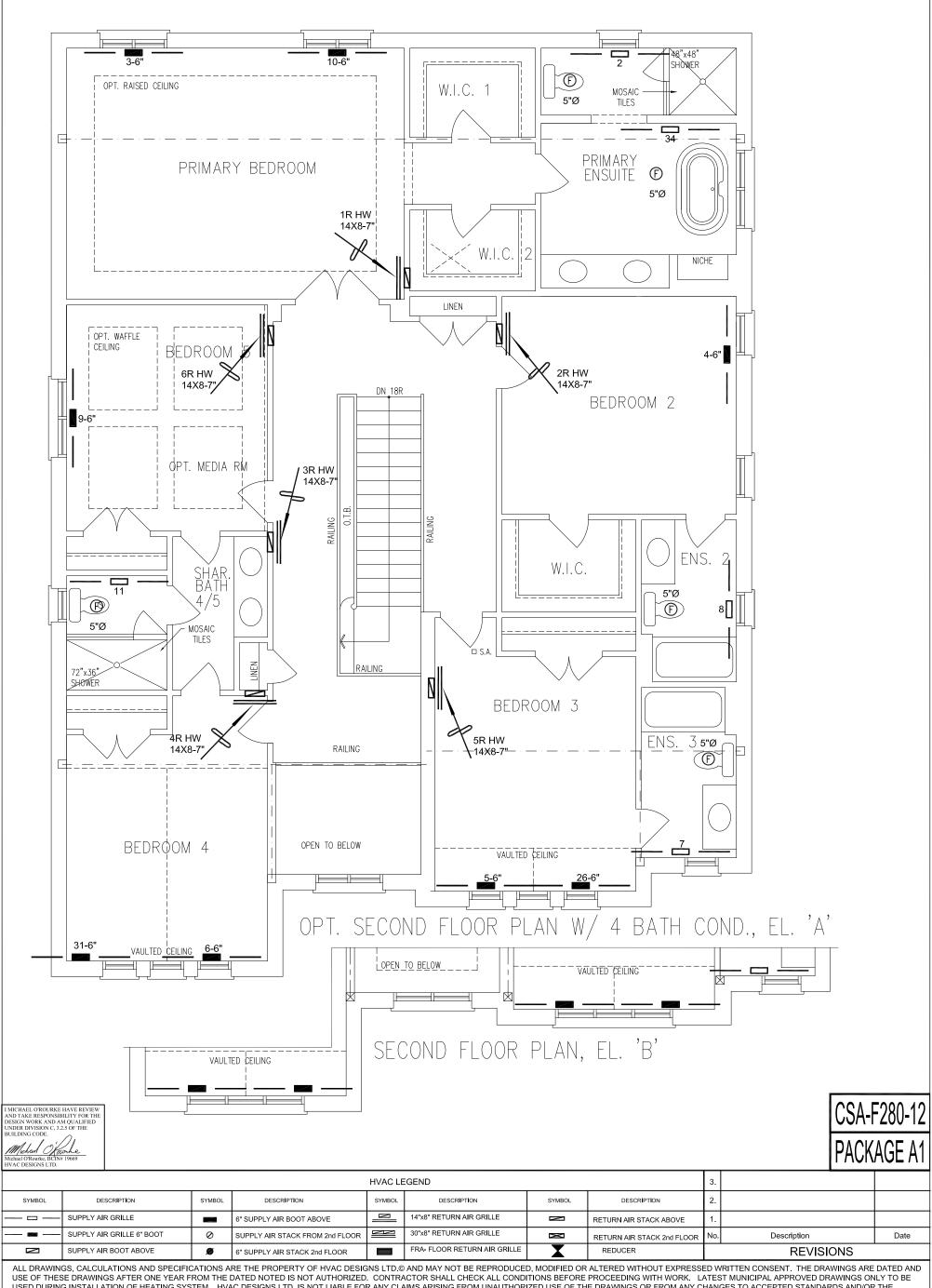
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FIRST FLOOR
HEATING
LAYOUT

Date MAR/2022 Scale 3/16" = 1'-0"

BCIN# 19669 LO# 95282



USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

ROYAL PINE HOMES

VALES OF HUMBER SOUTH BRAMPTON, ONTARIO

OPT 2ND 5003

4036 sqft

375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

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SECOND FLOOR **HEATING LAYOUT**

MAR/2022 3/16" = 1'-0"

BCIN# 19669 95282 LO#