Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

Building number, street name Municipality BRAMPTON B. Individual who reviews and takes re Name MICHAEL O'ROURKE	Postal code			
BRAMPTON B. Individual who reviews and takes re Name MICHAEL O'ROURKE	Postal code		Unit no.	Lot/con.
B. Individual who reviews and takes re Name MICHAEL O'ROURKE		Plan number/ other des	scription	
Name MICHAEL O'ROURKE				
MICHAEL O'ROURKE	esponsibility 1	or design activities		
		Firm		
		HVAC DESIGNS LTD.		II
Street address 375 FINLEY AVE			Unit no. 202	Lot/con.
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 inc	lividual identif	fied in Section B. [Build	ding Code Table 3.5.2.1 O	F Division C]
☐ House	⊠ HVA	C – House	☐ Building St	ructural
☐ Small Buildings		ing Services	Plumbing -	
☐ Large Buildings☐ Complex Buildings		ction, Lighting and Po Protection		- All Buildings wage Systems
Description of designer's work		Model:		go oyetee
HEAT LOSS / GAIN CALCULATIONS		illouci.	1703	
DUCT SIZING				
RESIDENTIAL MECHANICAL VENTILATION RESIDENTIAL SYSTEM DESIGN per CSA-F		MARY Project	: FORESTSIDE	
D. Declaration of Designer	200-12			
			-ll	
I <u>MICHAEL O'ROURKE</u> (pri	nt name)		declare that (choose or	ie as appropriate).
☐ I review and take responsibility for Division C, of the Building Code. I classes/categories.				oriate
Individual BCIN: _ Firm BCIN: _				
		am qualified in the approp sion C, of the Building Cod		
Firm BCIN: I review and take responsibility for designer" under subsection 3.2 Individual BCIN:	5.of Di vis			<u>2.4.1 (4)</u>
Firm BCIN: I review and take responsibility for designer" under subsection 3.2 Individual BCIN:	.5.of Di vison 19669 om registration a from the registr	sion C, of the Building Cod nd qualification: ation and qualification requ	e	
Firm BCIN: I review and take responsibility for designer" under subsection 3.2 Individual BCIN: Basis for exemption from	.5.of Di vison 19669 om registration a from the registr	sion C, of the Building Cod nd qualification: ation and qualification requ	e. O.B.C SENTENCE 3.	
Firm BCIN: I review and take responsibility for designer" under subsection 3.2 Individual BCIN: Basis for exemption from The design work is exempt Basis for exemption from registrat	5.of Di vis 19669 om registration a from the registr ion and qualifica in this sche	sion C, of the Building Cod Ind qualification: ation and qualification requition: ation:	e. O.B.C SENTENCE 3. sirements of the Building Code my knowledge.	
Firm BCIN: I review and take responsibility for designer" under subsection 3.2 Individual BCIN: Basis for exemption from The design work is exempt Basis for exemption from registrat I certify that: 1. The information contained	5.of Di vis 19669 om registration a from the registr ion and qualifica in this sche	sion C, of the Building Cod Ind qualification: ation and qualification requition: ation:	e. O.B.C SENTENCE 3. sirements of the Building Code my knowledge.	

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.



	FORES	TSIDE																DATE: Apr-19				WINTE	R NAT	JRAL AIR	CHANGE RATE 0.43	3 HEAT LOS	S AT °F	. 74	CSA-F2	280-12
BUILDER:	ROYAL	. PINE I	HOMES	3				TYPE:	1703					GFA:	2534			LO# 78684							CHANGE RATE 0.14		IN ΔT °F	. 14	SB-12 PACKA	GE A1
ROOM USE				MBR			ENS						BED-2			BED-3					BATH									
EXP. WALL				17			0						5			13					0									
CLG. HT.				9			9						9			9					9									
	FACTO	RS																												
GRS.WALL AREA				153			0						45			117					0									
GLAZING		O,			GAIN		LOSS	GAIN						GAIN		LOSS	GAIN				-	GAIN								
NORTH	20.8	16.3	0	0	0	0	0	0				0	0	0	0	0	0			0	0	0								
EAST	20.8	41.9	ō	0	0	0	0	ō				20	416	838	34	706	1424			0	0	0								
SOUTH		25.2	0	0	0	0	0	0				0	0	0	0	0	0			0	0	0								
WEST	20.8	41.9	57	1184	2388	0	0	0				0	0	0	ő	0	0			0	0	0								
SKYLT.	36.4	102.1	0	0	0	0	0	0				0	0	0	0	0	0			0	0	0								
			0	0	0		0	0				0	0	0		0	0			0	0	0								
DOORS NET EXPOSED WALL	24.7 4.4	4.7 0.8	96	418	79	0	0	0					109	21	0 83	362	68			0	0	0								
NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR			0		79		0	0				25 0	0		0	362 0					-	0								
EXPOSED CLG	3.5	0.7	-	0	0	0		0				0	0	0			0			0	0	0								
	1.3	0.6	0	0	•		0	٠ ا						0	0	0														
NO ATTIC EXPOSED CLG	2.7	1.3	238	639	310	221	593	288				185	496	241	234	628	305			221	593	288								
EXPOSED FLOOR	2.5	0.5	67	167	31	0	0	0				0	0	0	0	0	0			0	0	0								
BASEMENT/CRAWL HEAT LOSS				0			0						0			0					0									
SLAB ON GRADE HEAT LOSS				0			0						0			0					0									
SUBTOTAL HT LOSS	l			2408			593						1021			1696					593				1	1				
SUB TOTAL HT GAIN					2808			288						1099			1797					288								
LEVEL FACTOR / MULTIPLIER			0.10	0.27		0.10						0.10	0.27		0.10	0.27				0.10	0.27									
AIR CHANGE HEAT LOSS				642			158						272			452					158									
AIR CHANGE HEAT GAIN					273			28						107			175					28								
DUCT LOSS				305			75						0			0					75									
DUCT GAIN					414			32						0			0					32								
HEAT GAIN PEOPLE	240		2		480	0		0				1		240	1		240			0		0								
HEAT GAIN APPLIANCES/LIGHTS					579			0						579			579					0								
TOTAL HT LOSS BTU/H				3355			827						1293			2148					827									
TOTAL HT GAIN x 1.3 BTU/H					5920			452						2632			3628					452								
ROOM USE				LIV/DIN	ı					KIT			DEN			LAUN		W/R			FOY			MUD					BAS	
EXP. WALL																														
				17						21			12			7		0			6			11					34	
CLG. HT.				17 10																									34 9	
	FACTO			10						21 12			12 10			7 10		0 10			6 10			11 10					9	
GRS.WALL AREA				10 170						21 12 252			12 10 120			7 10 70		0 10 0			6 10 60			11 10 110					9 204	
GRS.WALL AREA GLAZING	LOSS			10 170 LOSS	GAIN					21 12 252	GAIN		12 10 120 LOSS	GAIN		7 10	GAIN	0 10 0 LOSS	GAIN		6 10 60 LOSS			11 10 110 LOSS GA					9	
GRS.WALL AREA GLAZING NORTH	LOSS 20.8	GAIN 16.3	0	10 170 LOSS 0	0				0	21 12 252 LOSS 0	GAIN 0	0	12 10 120 LOSS 0	0	0	7 10 70	0	0 10 0 LOSS	GAIN 0	0	6 10 60 LOSS 0	0	0	11 10 110 LOSS GA 0 0					9 204 LOSS 0 0	0
GRS.WALL AREA GLAZING NORTH EAST	20.8 20.8	16.3 41.9	45	10 170 LOSS 0 935					0 0	21 12 252 LOSS 0 0	0	32	12 10 120 LOSS 0 665		0	7 10 70 LOSS	0	0 10 0 LOSS 0 0		4	6 10 60 LOSS 0 83	0 168	0	11 10 110 LOSS GA 0 0					9 204 LOSS	0 503
GRS.WALL AREA GLAZING NORTH	20.8 20.8	GAIN 16.3		10 170 LOSS 0	0				0	21 12 252 LOSS 0	0		12 10 120 LOSS 0	0		7 10 70 LOSS 0	0	0 10 0 LOSS	0		6 10 60 LOSS 0	0		11 10 110 LOSS GA 0 0					9 204 LOSS 0 0	0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	20.8 20.8 20.8 20.8 20.8	16.3 41.9 25.2 41.9	45	10 170 LOSS 0 935	0 1885				0 0	21 12 252 LOSS 0 0	0	32	12 10 120 LOSS 0 665	0 1340	0	7 10 70 LOSS 0	0	0 10 0 LOSS 0 0	0 0	4 0 0	6 10 60 LOSS 0 83	0 168	0	11 10 110 LOSS GA 0 0					9 204 LOSS 0 0 12 249	0 503
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	20.8 20.8 20.8 20.8 20.8 36.4	16.3 41.9 25.2	45 0	10 170 LOSS 0 935 0	0 1885 0				0 0 0 75 0	21 12 252 LOSS 0 0	0 0 0 3142 0	32 0	12 10 120 LOSS 0 665 0	0 1340 0	0	7 10 70 LOSS 0	0 0	0 10 0 LOSS 0 0 0 0	0 0 0	4 0 0 0	6 10 60 LOSS 0 83 0 0	0 168 0	0	11 10 110 LOSS GA 0 0 0 0 0 0					9 204 LOSS 0 0 12 249	0 503 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	20.8 20.8 20.8 20.8 20.8 36.4	16.3 41.9 25.2 41.9	45 0 0 0 0	10 170 LOSS 0 935 0	0 1885 0 0				0 0 0 75 0 20	21 12 252 LOSS 0 0 0	0 0 0 3142 0 93	32 0 0 0 0	12 10 120 LOSS 0 665 0 0	0 1340 0 0 0	0 0	7 10 70 LOSS 0 0 0	0 0 0 0	0 10 0 LOSS 0 0 0 0 0 0	0 0 0	4 0 0 0 0 20	6 10 60 LOSS 0 83 0 0 0	0 168 0 0 0 93	0 0 0 0 20	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3				9 204 LOSS 0 0 12 249 0 0 0 0	0 503 0 0
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	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8	45 0 0 0 0 125	10 170 LOSS 0 935 0 0 0 545	0 1885 0 0 0 0 103				0 0 75 0 20	21 12 252 LOSS 0 0 0 1558 0 493 684	0 0 0 3142 0	32 0 0 0 0 0	12 10 120 LOSS 0 665 0 0 0 0 383	0 1340 0 0 0 0 0 72	0 0 0 0 0 0 70	7 10 70 LOSS 0 0 0 0 0 0 0 305	0 0 0 0 0 0	0 10 0 LOSS 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	4 0 0 0 20 36	6 10 60 LOSS 0 83 0 0 0 493 157	0 168 0 0 0 93 30	0 0 0 0 20 90	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0	0 503 0 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL	20.8 20.8 20.8 20.8 20.8 36.4 24.7	16.3 41.9 25.2 41.9 102.1 4.7	45 0 0 0 0	10 170 LOSS 0 935 0 0	0 1885 0 0 0				0 0 0 75 0 20	21 12 252 LOSS 0 0 0 1558 0 493	0 0 0 3142 0 93	32 0 0 0 0	12 10 120 LOSS 0 665 0 0	0 1340 0 0 0	0 0 0 0 0	7 10 70 LOSS 0 0 0 0	0 0 0 0	0 10 0 LOSS 0 0 0 0 0 0 0 0	0 0 0 0	4 0 0 0 0 20	6 10 60 LOSS 0 83 0 0 0	0 168 0 0 0 93	0 0 0 0 20	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0	0 503 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG	20.8 20.8 20.8 20.8 20.8 36.4 24.7 4.4	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8	45 0 0 0 0 125	10 170 LOSS 0 935 0 0 0 545	0 1885 0 0 0 0 103				0 0 75 0 20	21 12 252 LOSS 0 0 0 1558 0 493 684	0 0 3142 0 93 129	32 0 0 0 0 0	12 10 120 LOSS 0 665 0 0 0 0 383	0 1340 0 0 0 0 0 72	0 0 0 0 0 0 70	7 10 70 LOSS 0 0 0 0 0 0 0 305	0 0 0 0 0 0	0 10 0 LOSS 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	4 0 0 0 20 36	6 10 60 LOSS 0 83 0 0 0 493 157	0 168 0 0 0 93 30	0 0 0 0 20 90	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0	0 503 0 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5	16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7	45 0 0 0 0 125 0	10 170 LOSS 0 935 0 0 0 545	0 1885 0 0 0 0 103				0 0 75 0 20 157	21 12 252 LOSS 0 0 0 1558 0 493 684 0	0 0 0 3142 0 93 129 0	32 0 0 0 0 0 88 0	12 10 120 LOSS 0 665 0 0 0 0 383	0 1340 0 0 0 0 72	0 0 0 0 0 70	7 10 70 LOSS 0 0 0 0 0 0 0 0	0 0 0 0 0 0 58	0 10 0 LOSS 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	4 0 0 0 20 36 0	6 10 60 LOSS 0 83 0 0 0 493 157	0 168 0 0 0 93 30	0 0 0 0 20 90	110 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 0 102 358	0 503 0 0 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6	45 0 0 0 0 125 0	10 170 LOSS 0 935 0 0 0 545 0	0 1885 0 0 0 0 103 0				0 0 75 0 20 157 0	21 12 252 LOSS 0 0 1558 0 493 684 0	0 0 0 3142 0 93 129 0	32 0 0 0 0 0 88 0	12 10 120 LOSS 0 665 0 0 0 0 383 0	0 1340 0 0 0 0 72 0	0 0 0 0 0 70 0	7 10 70 LOSS 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 58	0 10 0 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	4 0 0 0 20 36 0	6 10 60 LOSS 0 83 0 0 0 493 157 0	0 168 0 0 0 93 30 0	0 0 0 0 20 90 0	11 10 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 10 0 102 358 0 0	0 503 0 0 0 0 0 0 68
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 545 0 0	0 1885 0 0 0 0 103 0 0				0 0 75 0 20 157 0	21 12 252 LOSS 0 0 1558 0 493 684 0 0	0 0 0 3142 0 93 129 0 0	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0	0 1340 0 0 0 0 72 0 0	0 0 0 0 0 70 0	7 10 70 LOSS 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 58 0	0 10 0 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 493 157 0 0	0 168 0 0 0 93 30 0	0 0 0 0 20 90 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 0	0 503 0 0 0 0 0 0 68 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BBMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 545 0 0	0 1885 0 0 0 0 103 0 0				0 0 75 0 20 157 0	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0	0 0 0 3142 0 93 129 0 0	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0 0	0 1340 0 0 0 0 72 0 0	0 0 0 0 0 70 0	7 10 70 LOSS 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 58 0	0 10 0 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 493 157 0 0	0 168 0 0 0 93 30 0	0 0 0 0 20 90 0	11 10 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 102 358 0 0 0 0 0 0	0 503 0 0 0 0 0 0 68 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG 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	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 545 0 0 0	0 1885 0 0 0 0 103 0 0				0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 941	0 0 0 3142 0 93 129 0 0	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0 0	0 1340 0 0 0 0 72 0 0	0 0 0 0 0 70 0	7 10 70 LOSS 0 0 0 0 0 0 0 305 0 0	0 0 0 0 0 0 58 0	0 10 0 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 493 157 0 0 0	0 168 0 0 0 93 30 0	0 0 0 0 20 90 0	11 10 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 102 358 0 0 0 0 0 0	0 503 0 0 0 0 0 0 68 0
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 EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 545 0 0 0 0	0 1885 0 0 0 0 103 0 0				0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 941 0	0 0 0 3142 0 93 129 0 0	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0 0 0	0 1340 0 0 0 0 72 0 0	0 0 0 0 0 70 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0	0 0 0 0 0 0 58 0	0 10 10 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 493 157 0 0 0	0 168 0 0 0 93 30 0	0 0 0 0 20 90 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 1063	0 503 0 0 0 0 0 0 68 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG 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	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 545 0 0 0 0	0 1885 0 0 0 103 0 0				0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 941 0 0 3676	0 0 0 3142 0 93 129 0 0 0	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0 0 0 0	0 1340 0 0 0 72 0 0	0 0 0 0 0 70 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0	0 0 0 0 0 58 0 0	0 10 10 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 493 157 0 0 0 0 0 733	0 168 0 0 0 93 30 0 0	0 0 0 0 20 90 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 1063	0 503 0 0 0 0 0 0 68 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMIT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 545 0 0 0 1480	0 1885 0 0 0 103 0 0				0 0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 941 0 0 3676	0 0 0 3142 0 93 129 0 0 0	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0 0 0 0	0 1340 0 0 0 72 0 0	0 0 0 0 0 70 0 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0 0 0 0 305	0 0 0 0 0 58 0 0	0 10 10 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 493 157 0 0 0 0 0 733	0 168 0 0 0 93 30 0 0	0 0 0 0 20 90 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 4				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 0 0 0 102 358 0 0 0 0 1063	0 503 0 0 0 0 0 0 68 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG EXPOSED CLG NO ATTIC EXPOSED CLG RASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 545 0 0 0 0 1480	0 1885 0 0 0 0 103 0 0 0				0 0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 941 0 0 3676	0 0 0 3142 0 93 129 0 0 0	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0 0 0 0 0 1048	0 1340 0 0 0 0 72 0 0 0	0 0 0 0 0 70 0 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 58 0 0	0 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 0 0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 0 493 157 0 0 0 0 0 733	0 168 0 0 0 93 30 0 0 0	0 0 0 0 20 90 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 102 358 1671 0.40 4.03	0 503 0 0 0 0 0 0 68 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BBMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL 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	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 545 0 0 0 0 1480	0 1885 0 0 0 103 0 0				0 0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 941 0 0 3676	0 0 0 3142 0 93 129 0 0 0 178	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 383 0 0 0 0 0 1048	0 1340 0 0 0 72 0 0	0 0 0 0 0 70 0 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 58 0 0 0	0 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 0 0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 0 493 157 0 0 0 0 0 733	0 168 0 0 0 93 30 0 0	0 0 0 0 20 90 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 102 358 1671 0.40 4.03	0 503 0 0 0 0 0 0 68 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED UG EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS	20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 0 545 0 0 0 1480 0.64	0 1885 0 0 0 0 103 0 0 0				0 0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 0 3676	0 0 0 3142 0 93 129 0 0 0 178	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 0 383 0 0 0 0 0 1048	0 1340 0 0 0 0 72 0 0 0	0 0 0 0 0 70 0 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 58 0 0 0	0 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 0 0 0 0 0 0 0	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 0 493 157 0 0 0 0 733	0 168 0 0 0 93 30 0 0 0	0 0 0 0 20 90 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 102 358 0 0 0 1063 1671 0.40 4.03 6734	0 503 0 0 0 0 0 0 68 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE OR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN 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	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 125 0 0	10 170 LOSS 0 935 0 0 0 0 545 0 0 0 1480 0.64	0 1885 0 0 0 0 103 0 0 0				0 0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 0 3676	0 0 0 3142 0 93 129 0 0 0 178	32 0 0 0 0 88 0 0	12 10 120 LOSS 0 665 0 0 0 0 383 0 0 0 0 0 1048	0 1340 0 0 0 0 72 0 0 0 0 1413	0 0 0 0 0 70 0 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 58 0 0 0 0	0 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 0 0 0 0 0 0 0 14	4 0 0 0 20 36 0 0 0	6 10 60 LOSS 0 83 0 0 0 493 157 0 0 0 0 733	0 168 0 0 93 30 0 0 0 0	0 0 0 0 20 90 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 1063 1671 0.40 4.03 6734	0 503 0 0 0 0 0 0 68 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN DUCT LOSS 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	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 0 125 0 0 0	10 170 LOSS 0 935 0 0 0 0 545 0 0 0 1480 0.64	0 1885 0 0 0 103 0 0 0 0 0				0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 0 3676	0 0 0 3142 0 93 129 0 0 178 3541	32 0 0 0 0 88 0 0 0	12 10 120 LOSS 0 665 0 0 0 0 383 0 0 0 0 0 1048	0 1340 0 0 0 0 72 0 0 0 0 1413	0 0 0 0 70 0 0 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 58 0 0 0 0	0 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 0 0 0 0 0 0 0 14	4 0 0 0 20 36 0 0	6 10 60 LOSS 0 83 0 0 0 493 157 0 0 0 0 733	0 168 0 0 0 93 30 0 0 0 0	0 0 0 0 20 90 0 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 102 358 0 0 0 1063 1671 0.40 4.03 6734	0 503 0 0 0 0 0 68 0 0 0 570
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG 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 DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	20.8 20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7 2.5	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 0 125 0 0 0	10 170 LOSS 0 935 0 0 0 545 0 0 0 1480 0.64 952	0 1885 0 0 0 103 0 0 0 0				0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 941 0 0 3676 0.64 2367	0 0 0 3142 0 93 129 0 0 0 178	32 0 0 0 0 88 0 0 0	12 10 120 LOSS 0 665 0 0 0 0 0 0 0 0 0 0 1048 1.70 1782	0 1340 0 0 0 0 72 0 0 0 0 1413	0 0 0 0 70 0 0 0	7 10 70 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 58 0 0 0 0	0 100 100 100 100 100 100 100 100 100 1	0 0 0 0 0 0 0 0 0 0 0 14	4 0 0 0 20 36 0 0 0	6 10 60 LOSS 0 83 0 0 493 157 0 0 0 0 0 733	0 168 0 0 0 93 30 0 0 0 0 0	0 0 0 0 20 90 0 0 0	11	7				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 0 102 358 0 0 0 0 1063 1671 0.40 4.03 6734 0	0 503 0 0 0 0 0 68 0 0 0 570
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE	20.8 20.8 20.8 20.8 20.8 36.4 24.7 4.4 3.5 1.3 2.7 2.5	GAIN 16.3 41.9 25.2 41.9 102.1 4.7 0.8 0.7 0.6 1.3	45 0 0 0 0 125 0 0 0	10 170 LOSS 0 935 0 0 0 0 545 0 0 0 1480 0.64	0 1885 0 0 0 103 0 0 0 0 0				0 0 75 0 20 157 0 0 378	21 12 252 LOSS 0 0 0 1558 0 493 684 0 0 0 0 3676 0.64 2367	0 0 0 3142 0 93 129 0 0 178 3541	32 0 0 0 0 88 0 0 0	12 10 120 LOSS 0 665 0 0 0 0 383 0 0 0 0 0 1048	0 1340 0 0 0 0 72 0 0 0 0 1413	0 0 0 0 70 0 0 0	7 10 70 LOSS 0 0 0 0 0 0 305 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 58 0 0 0 0	0 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 0 0 0 0 0 0 0 0 0 14	4 0 0 0 20 36 0 0 0	6 10 60 LOSS 0 83 0 0 0 493 157 0 0 0 0 733	0 168 0 0 0 93 30 0 0 0 0 0	0 0 0 0 20 90 0 0 0	11 10 110 LOSS GA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7				9 204 LOSS 0 0 12 249 0 0 0 0 0 0 0 0 0 102 358 0 0 0 102 358 0 0 0 1063 1671 0.40 4.03 6734	0 503 0 0 0 0 0 68 0 0 0 570

TOTAL HEAT GAIN BTU/H:

29508

TONS: 2.46

LOSS DUE TO VENTILATION LOAD BTU/H: 1593

STRUCTURAL HEAT LOSS: 34092

TOTAL COMBINED HEAT LOSS BTU/H: 35685

Michael O'Kounte.



SITE NAME: FORESTSIDE **BUILDER: ROYAL PINE HOMES** TYPE: 1703 DATE: Apr-19 GFA: 2534 LO# 78684 furnace pressure 0.6 HEATING CFM 875 COOLING CFM 875 furnace filter 0.05 #CARRIER AFUE = 97 % 59SP5A-40-10 TOTAL HEAT LOSS 34,092 TOTAL HEAT GAIN 29,208 a/c coil pressure 0.2 40 INPUT (BTU/H) = 40,000 AIR FLOW RATE CFM 25.67 AIR FLOW RATE CFM 29.96 FAN SPEED OUTPUT (BTU/H) = 39,000 available pressure for s/a & r/a 0.35 LOW 0 **RUN COUNT** DESIGN CFM = 875 4th 3rd 2nd 1st Bas MEDLOW 0 plenum pressure s/a 0.18 r/a pressure 0.17 **MEDIUM** 0 CFM @ .6 " E.S.P. S/A R/A MEDIUM HIGH 710 0 4 1 max s/a dif press. loss 0.02 r/a grille press. Loss 0.02 All S/A diffusers 4"x10" unless noted otherwise on layout. min adjusted pressure s/a 0.16 HIGH TEMPERATURE RISE 41 adjusted pressure r/a 0.15 °F All S/A runs 5"Ø unless noted otherwise on layout. 5 10 11 14 15 16 17 18 19 20 22 23 RUN# 6 12 13 21 ROOM NAME MBR ENS BED-2 BED-3 BED-3 BATH MBR LIV/DIN LIV/DIN KIT KIT KIT DEN LAUN W/R FOY MUD BAS BAS BAS RM LOSS MBH 2.80 2.80 2.80 1.68 0.83 1.29 1.07 1.07 0.83 1.68 1.22 1.22 2.22 2.22 2.22 2.83 0.82 0.14 1.98 2.39 CFM PER RUN HEAT 33 28 43 72 43 21 28 21 31 31 57 57 57 73 21 3 51 61 72 72 RM GAIN MBH 2.96 0.45 2.63 1.81 1.81 0.45 2.96 1.79 1.79 2.13 2.13 2.13 3.08 0.83 0.02 0.41 0.24 0.52 0.52 0.52 CFM PER RUN COOLING 79 92 89 14 54 54 14 89 54 54 64 64 64 25 12 7 16 16 16 1 ADJUSTED PRESSURE 0.16 0.17 0.17 0.17 0.17 0.17 0.16 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 69 77 72 75 42 74 63 83 53 68 66 57 32 8 49 41 28 28 8 **EQUIVALENT LENGTH** 190 200 190 180 240 210 170 180 140 160 150 140 110 110 170 100 90 110 120 130 TOTAL EFFECTIVE LENGTH 273 269 267 252 315 252 244 243 193 228 216 197 142 118 219 141 97 138 148 138 ADJUSTED PRESSURE 0.06 0.06 0.06 0.07 0.05 0.07 0.07 0.07 0.09 0.08 0.08 0.09 0.11 0.15 0.08 0.12 0.18 0.12 0.12 0.12 ROUND DUCT SIZE 5 5 6 5 5 5 HEATING VELOCITY (ft/min) 219 241 168 206 241 219 228 228 419 419 419 372 241 34 585 448 529 529 206 529 COOLING VELOCITY (ft/min 454 161 403 396 396 161 454 396 396 470 470 470 469 287 11 138 51 117 117 117 **OUTLET GRILL SIZE** 4X10 3X10 4X10 3X10 3X10 3X10 4X10 3X10 3X10 3X10 3X10 4X10 3X10 3X10 3X10 3X10 3X10 3X10 3X10 3X10 TRUNK В В D D

RUN#
ROOM NAME
RM LOSS MBH.
CFM PER RUN HEAT
RM GAIN MBH.
CFM PER RUN COOLING
ADJUSTED PRESSURE
ACTUAL DUCT LGH.
EQUIVALENT LENGTH
TOTAL EFFECTIVE LENGTH
ADJUSTED PRESSURE
ROUND DUCT SIZE
HEATING VELOCITY (ft/min)
COOLING VELOCITY (ft/min)
OUTLET GRILL SIZE
TRUNK

SUPPLY AIR TRUNK SIZE																	RETURN A	IR TRUNI	K SIZE					
	TRUNK	STATIC	ROUND	RECT			VELOCITY			TRUNK	STATIC	ROUND	RECT			VELOCITY		TRUNK	STATIC	ROUND	RECT			VELOCITY
	CFM	PRESS.	DUCT	DUCT			(ft/min)			CFM	PRESS.	DUCT	DUCT			(ft/min)		CFM	PRESS.	DUCT	DUCT			(ft/min)
TRUNK A	302	0.06	9.6	12	X	8	453		TRUNK G	0	0.00	0	0	Х	8	0	TRUNK O	0	0.05	0	0	Х	8	0
TRUNK B	151	0.05	7.8	10	X	8	272		TRUNK H	0	0.00	0	0	Х	8	0	TRUNK P	0	0.05	0	0	Х	8	0
TRUNK C	453	0.05	11.7	20	Х	8	408		TRUNK I	0	0.00	0	0	Х	8	0	TRUNK Q	0	0.05	0	0	Х	8	0
TRUNK D	422	0.11	9.4	10	X	8	760		TRUNK J	0	0.00	0	0	Х	8	0	TRUNK R	0	0.05	0	0	Х	8	0
TRUNK E	875	0.05	15	26	Х	8	606		TRUNK K	0	0.00	0	0	Х	8	0	TRUNK S	0	0.05	0	0	Х	8	0
TRUNK F	0	0.00	0	0	Х	8	0		TRUNK L	0	0.00	0	0	Х	8	0	TRUNK T	0	0.05	0	0	Х	8	0
																	TRUNK U	0	0.05	0	0	Х	8	0
																	TRUNK V	0	0.05	0	0	Х	8	0
RETURN AIR #	1	2	3	4	5	6	7	8								BR	TRUNK W	0	0.05	0	0	Х	8	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		TRUNK X	875	0.05	15	26	Х	8	606
AIR VOLUME	75	75	75	170	155	75	75	75	0	0	0	0	0	0	0	100	TRUNK Y	400	0.05	11.2	14	Х	8	514
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	TRUNK Z	170	0.05	8.1	8	Х	8	383
ACTUAL DUCT LGH.	59	72	61	44	33	39	70	52	1	1	1	1	1	1	1	20	DROP	875	0.05	15	24	Х	10	525
EQUIVALENT LENGTH	235	205	210	120	150	175	165	165	0	0	0	0	0	0	0	165								ļ
TOTAL EFFECTIVE LH	294	277	271	164	183	214	235	217	1	1	1	1	1	1	1	185								ļ
ADJUSTED PRESSURE	0.05	0.05	0.05	0.09	0.08	0.07	0.06	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.08								ļ
ROUND DUCT SIZE	6	6	6	7	7	5.5	5.7	5.5	0	0	0	0	0	0	0	5.9								ļ
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	8								
	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X								ļ
INLET GRILL SIZE	14	14	14	14	14	14	14	14	0	0	0	0	0	0	0	14								



TYPE: 1703

FORESTSIDE SITE NAME:

LO# 78684

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

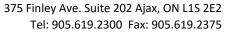
COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL VEN	TILATION CAPACITY		9.32.3.5.
a)		Total Ventilation Capac	sity	159	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Ventil. C	apacity	79.5	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplemental	I Capacity	79.5	cfm
d) Solid Fuel (including fireplaces)					
e) No Combustion Appliances		PRINCIPAL EXHAUST	FAN CAPACITY		
- Into Compactation Applications		Model:	VANEE 65H	Location:	BSMT
HEATING SYSTEM		79.5 c	fm <u>3.0</u>	sones	✓ HVI Approved
Forced Air Non Forced Air			HEAT LOSS CALCULA		W.L.000
		CFM 79.5 CFM	ΔT °F X 74 F	FACTOR X 1.08	% LOSS X 0.25
Electric Space Heat		SUPPLEMENTAL FAN	IS	NUTONE	
		Location	Model	cfm	HVI Sones
HOUSE TYPE	9.32.1(2)	ENS	QTXEN050C	50	✓ 0.3
		BATH	QTXEN050C	50	✓ 0.3 ✓ 0.3
✓ I Type a) or b) appliance only, no solid fuel		LAUN W/R	QTXEN050C QTXEN050C	50 50	✓ 0.3 ✓ 0.3
II Type I except with solid fuel (including fireplaces	s)				1
III Any Type c) appliance		HEAT RECOVERY VEI Model:	VANEE 65H		9.32.3.11.
IV Type I, or II with electric space heat		155	cfm high	64	cfm low
		75	% Sensible Efficiency		✓ HVI Approved
Other: Type I, II or IV no forced air			@ 32 deg F (0 deg C	5)	
		LOCATION OF INSTAI	LLATION		
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	Lot:		Concession	
1 Exhaust only/Forced Air System		200		Composition	
2 HRV with Ducting/Forced Air System		Township		Plan:	
		Address			
HRV Simplified/connected to forced air system HRV with Ducting/non forced air system		Roll #		Building Pern	nit #
4 THE WILL DUCLING HOLLING TO LOCK AN System		BUILDER:	ROYAL PINE HOME	S	
Part 6 Design		Name:			
TOTAL VENTILATION CAPACITY	9.32.3.3(1)	Address:			
Basement + Master Bedroom 2 @ 21.2 cfm 42.4	cfm	City:			
Other Bedrooms <u>3</u> @ 10.6 cfm <u>31.8</u>	cfm	Telephone #:		Fax #:	
Kitchen & Bathrooms 5 @ 10.6 cfm 53	cfm	INSTALLING CONTRA	ACTOR		
Other Rooms 3 @ 10.6 cfm 31.8	cfm	Name:			
Table 9.32.3.A. TOTAL <u>159.0</u>	cfm	Address:			
		City:			
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	Telephone #:		Fax#:	
1 Bedroom 31.8	cfm	·		T GA //T	
2 Bedroom 47.7	cfm		ventilation system has b	een designed	
3 Bedroom 63.6	cfm	in accordance with the Name:	Ontario Building Code. HVAC Designs Ltd.		
4 Bedroom 79.5	cfm	Signature:	M	Netal Ofounde	٤
5 Bedroom 95.4	cfm	HRAI#		001820	
TOTAL 79.5 cfm		Date:		April-19	
I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUA	LIFIED IN THE AP	PROPRIATE CATEGORY AS AN "OT	HER DESIGNER" UNDER DIVIS	SION C, 3.2.5 OF THE BU	ILDING CODE.

INDIVIDUAL BCIN: 19669
Maked Offiche.

MICHAEL O'ROURKE



	WINTER NA SUMMER NA Vinter DTDh ummer DTDc 6.2.6 9 x 230.44	Tin °C 22 22 ensible Gain due $\frac{V_b}{3.6} \times DTD_c$ x 8 °C	GE RATE GE RATE emperature Diffi Tout °C -19 30 to Air Leakage × 1.2 x 1.2	0.433 0.149 erence ΔT °C 41 8	ΔT °F 74 14 320 W				
Se Volume Level Floor Area (ft²) Floor Height (ft) Volume (ft³) Esmt 553 9 4977 First 553 10 5530 Second 960 10 9600 Third 1021 9 9189 Fourth 0 9 0 Total: 29,296.0 ft³ Total: 829.6 m³ Second 10 829.6 m³ Second 10 1021	WINTER NA SUMMER NA Vinter DTDh ummer DTDc 6.2.6 S $Salb = LR_{airc} \times 230.44$	TURAL AIR CHANGE TURAL AIR CHANGE TURAL AIR CHANGE TO THE TIME of the control of	GE RATE GE RATE emperature Diffi Tout °C -19 30 to Air Leakage × 1.2 x 1.2	0.149	74 14				
Level Floor Area (ft²) Floor Height (ft) Volume (ft³)	SUMMER NA Vinter DTDh ummer DTDc 6.2.6 S salb = LRairc × x 230.44	TURAL AIR CHANGE PRINTS TO PRINTS T	emperature Diff Tout °C -19 30 to Air Leakage × 1.2 x 1.2	0.149	74 14				
Level Floor Area (ft²) Floor Height (ft) Volume (ft³)	SUMMER NA Vinter DTDh ummer DTDc 6.2.6 S salb = LRairc × x 230.44	TURAL AIR CHANGE PRINTS TO PRINTS T	emperature Diff Tout °C -19 30 to Air Leakage × 1.2 x 1.2	0.149	74 14				
Bsmt 553 9 4977 First 553 10 5530 Second 960 10 9600 Third 1021 9 9189 Fourth 0 9 0 Total: 29,296.0 ft³ Total: 829.6 m³ 5.2.3.1 Heat Loss due to Air Leakage HL $_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ = 4934 W = 0.149 = 16836 Btu/h = 0.149 = 16836 Btu/h = HL $_{vairb} = PVC \times DTD_h \times 1.08 \times (1-E)$ HL $_{vairb} = PVC \times DTD_h \times 1.08 \times (1-E)$ HL $_{vairb} = PVC \times DTD_h \times 1.08 \times 0.25 = 1593$ Btu/h 80 CFM <	Vinter DTDh ummer DTDc $6.2.65$ $salb = LR_{airc} \times 230.44$	Pesign To Tin °C 22 22 22 22 22 24 25 $\frac{V_b}{3.6} \times DTD_c$ \times 8 °C	emperature Diffi Tout °C -19 30 to Air Leakage × 1.2 x1.2	erence	74 14				
First 553 10 5530 Second 960 10 9600 Third 1021 9 9189 Fourth 0 9 0 Total: 829.6 m³ W 5.2.3.1 Heat Loss due to Air Leakage HL_airb LR_{airh} $\times \frac{V_b}{3.6}$ $\times DTD_h$ $\times 1.2$	ummer DTDc $6.2.6 ext{ } 9$ $salb = LR_{airc} ext{ } \times $ $ ext{ } 230.44$	Tin °C 22 22 ensible Gain due $\frac{V_b}{3.6} \times DTD_c$ x 8 °C	Tout °C -19 30 to Air Leakage × 1.2 x 1.2	ΔΤ°C 41 8	74 14				
Second 960 10 9600 Third 1021 9 9189 Fourth 0 9 0 Total: 29,296.0 ft³ Total: 829.6 m³ 5.2.3.1 Heat Loss due to Air Leakage $HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ = 4934 W = 0.149 = 16836 Btu/h = 0.149 = HG	ummer DTDc $6.2.6 ext{ } 9$ $salb = LR_{airc} ext{ } \times $ $ ext{ } 230.44$	Tin °C 22 22 ensible Gain due $\frac{V_b}{3.6} \times DTD_c$ x 8 °C	Tout °C -19 30 to Air Leakage × 1.2 x 1.2	ΔΤ°C 41 8	74 14				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	ummer DTDc $6.2.6 ext{ } 9$ $salb = LR_{airc} ext{ } \times $ $ ext{ } 230.44$	Tin °C 22 22 ensible Gain due $\frac{V_b}{3.6} \times DTD_c$ x 8 °C	Tout °C -19 30 to Air Leakage × 1.2 x 1.2	ΔΤ°C 41 8	74 14				
Fourth 0 9 0 1 10tal: 29,296.0 ft³ 10tal: 829.6 m³ 5.2.3.1 Heat Loss due to Air Leakage $HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2 = 4934 \text{W} = 0.149$ $= 16836 \text{Btu/h}$ $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1-E)$ $= 1593 \text{Btu/h}$ 80 CFM × $74 ^{\circ}\text{F}$ × $1.08 \times 0.25 = 1593 \text{Btu/h}$	ummer DTDc $6.2.6 ext{ } 9$ $salb = LR_{airc} ext{ } \times $ $ ext{ } 230.44$	ensible Gain due $ \frac{V_b}{3.6} \times DTD_c $ × 8 °C	-19 30 **to Air Leakage** × 1.2 x 1.2	41 8	74 14				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	ummer DTDc $6.2.6 ext{ } 9$ $salb = LR_{airc} ext{ } \times $ $ ext{ } 230.44$	ensible Gain due $ \frac{V_b}{3.6} \times DTD_c $ × 8 °C	to Air Leakage × 1.2 x 1.2	= =	14 320 W				
	$6.2.63$ $salb = LR_{airc} \times $ $\times 230.44$	ensible Gain due $\frac{V_b}{3.6} \times DTD_c$ $\times 8 ^{\circ}C$	× 1.2 x 1.2	- = - =	320 W				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$salb = LR_{airc} \times $ $\times 230.44$	$\begin{array}{c} \frac{V_b}{3.6} \times DTD_c \\ \times 8 \text{ °C} \end{array}$	× 1.2 _ ×1.2	=					
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2 \\ = 16836 \text{ Btu/h} $ $= 16836 \text{ Btu/h}$ $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ $= 1593 \text{ Btu/h}$ $= 80 \text{ CFM}$ $= 1593 \text{ Btu/h}$ $= 80 \text{ CFM}$	$salb = LR_{airc} \times $ $\times 230.44$	$\begin{array}{c} \frac{V_b}{3.6} \times DTD_c \\ \times 8 \text{ °C} \end{array}$	× 1.2 _ ×1.2	=					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	x 230.44	x <u>8°C</u>	x 1.2	=					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	x 230.44	x <u>8°C</u>	x 1.2	=					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	x 230.44	x <u>8°C</u>	x 1.2	=					
=				=					
5.2.3.2 Heat Loss due to Mechanical Ventilation $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1-E) $ $HL_{va} \times 74 ^{\circ}F \times 1.08 \times 0.25 = 1593 \text{Btu/h} $ 80 CFM	6.2.7 Sei	sible heat Gain d			1091 Btu/				
5.2.3.2 Heat Loss due to Mechanical Ventilation $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1-E) $ $HL_{va} \times 74 \text{ °F} \times 1.08 \times 0.25 = 1593 \text{ Btu/h} $ 80 CFM	6.2.7 Sei	sible heat Gain d			1031 Btu/				
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ HL_{va} 80 CFM \times 74 °F \times 1.08 \times 0.25 \times 1593 Btu/h 80 CFM	6.2.7 Sei	sihle heat Gain d							
80 CFM x 74 °F x 1.08 x 0.25 = 1593 Btu/h 80 CFM	6.2.7 Sensible heat Gain due to Ventilation								
80 CFM x 74 °F x 1.08 x 0.25 = 1593 Btu/h 80 CFM									
	$_{irb} = PVC \times D^{\circ}$	$TD_h \times 1.08 \times$	(1 - E)						
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor	x <u>14 °F</u>	x <u>1.08</u>	x <u>0.25</u>	_ =	301 Btu/l				
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor									
,	Multiplier Section)								
$HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agcr} + HL_{bgcr}) + (HL_{agcr} + HL_{bgcr} + HL_{bgcr}) + (HL_{agcr} + HL_{bgcr} + HL_{bgcr} + HL_{bgcr}) + (HL_{agcr} + HL_{bgcr} + H$	HI. , , + HI.)3							
The alternative of the age of the	ragcievei i ra	gcievei))	-						
HLairve Air Leakage + Level Conductive Heat A	ir Leakage Heat Lo	s Multiplier (LF x							
Level Level Factor (LF) Ventilation Heat Loss Loss: (HL _{clevel})	HLairby / I								
(Btu/h)			1						
1 0.4 1,671	4.03		1						
2 0.3 2,971	1.70		1						
3 0.2 16,836 5,231	0.64		1						
4 0.1 6,312	0.26		1						
5 0 0 *HLairbv = Air leakage heat loss + ventilation heat loss	0.00	J	J						







HEAT LOSS AND GAIN SUMMARY SHEET

14005:	4702		DUMBER DOWN BING HOLDE	,
MODEL:	1703 2534	LO# 78684	BUILDER: ROYAL PINE HOMES SITE: FORESTSIDE	•
SFQT:	2534	LU# /8084	SITE: FORESTSIDE	
DESIGN A	ASSUMPTIONS			
LIFATING		°F	COOLING	°F
HEATING	R DESIGN TEMP.	-2	COOLING OUTDOOR DESIGN TEMP.	F 86
	DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72
mboon.	D 201011 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	, <u>-</u>		,_
BUILDING	G DATA			
ATTACHN	ИFNT:	ATTACHED	# OF STORIES (+BASEMENT):	4
71117101111		7 THORIES	" or oromes (* 5/1021/121/17).	•
FRONT FA	ACES:	EAST	ASSUMED (Y/N):	Υ
AID CHAN	NGES PER HOUR:	3.57	ASSLIMED (V/NI).	Y
AIR CHAN	NGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGH	TNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Υ
WIND EX	POSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE V	OLUME (ft³):	29296.0	ASSUMED (Y/N):	Υ
	, ,		, , ,	
INTERNA	L SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR	R LIGHTING LOAD (Btu,	/h/ft²): 1.50	DC BRUSHLESS MOTOR (Y/N):	Υ
	(_ •••/	, ,		
FOUNDA	TION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
I ENGTH:	22 N ft	W/IDTH+ 17.0 f+	EVENCED DEDIMETED.	34.0 ft
LENGTH:	33.0 ft	WIDTH: 17.0 ft	EXPOSED PERIMETER:	34.

2012 OBC - COMPLIANCE PACKAGE		
	Compliance	Package
Component	Α	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	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE





Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

W	eather Stat	ion Description
Province:	Ontario	-
Region:	Brampton	ı
	Site De	escription
Soil Conductivity:	Normal co	onductivity: dry sand, loam, clay
Water Table:	Normal (7	7-10 m, 23-33 ft)
	Foundation	n Dimensions
Floor Length (m):	10.1	
Floor Width (m):	5.2	
Exposed Perimeter (m):	10.4	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	Insulation Configuration
Window Area (m²):	1.1	
Door Area (m²):	0.0	
	Radia	int Slab
Heated Fraction of the Slab:	o	
Fluid Temperature (°C):	33	
	Design	Months
Heating Month	1	
	Foundat	tion Loads
Heating Load (Watts):	<u> </u>	311

TYPE: 1703 **LO#** 78684

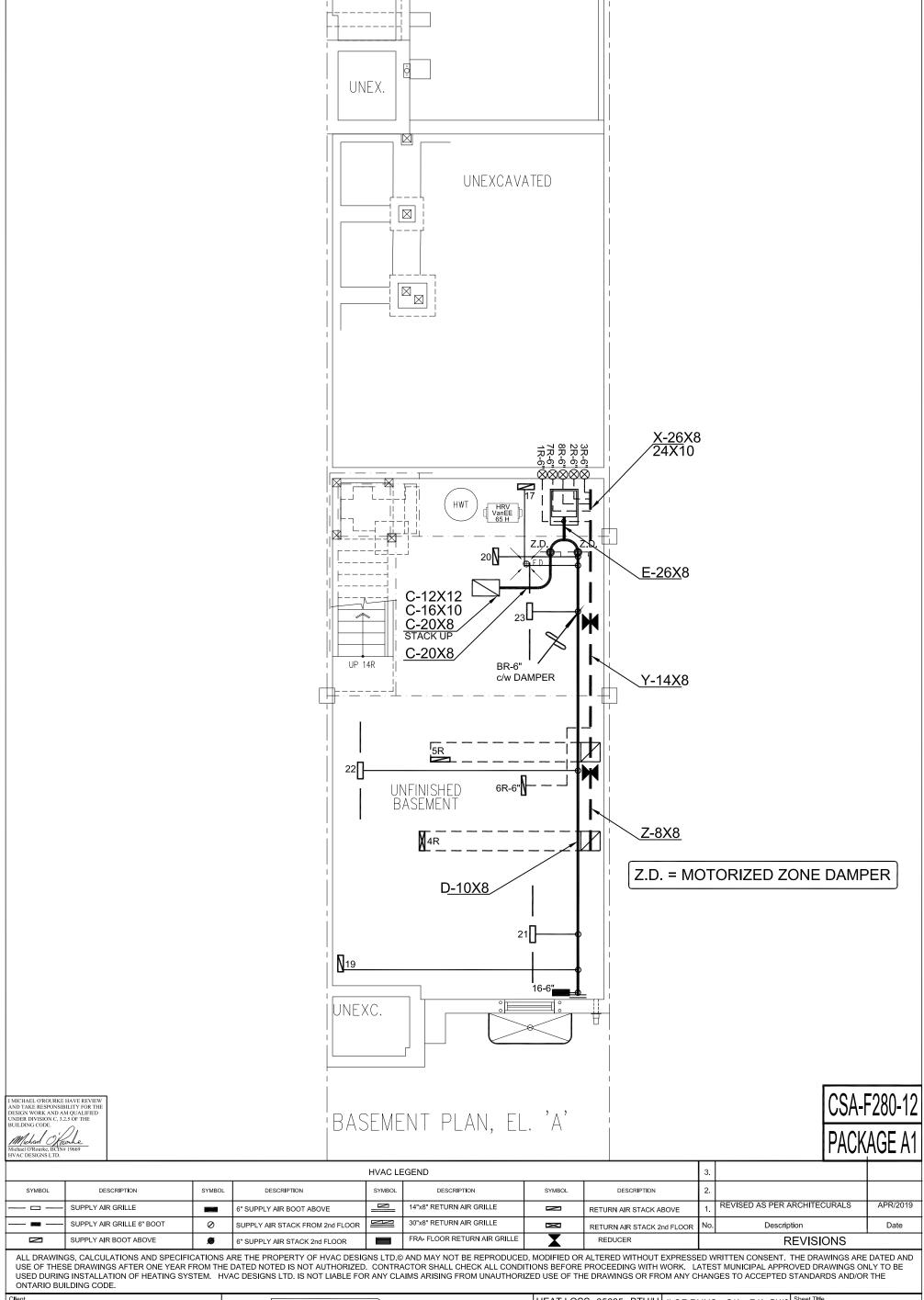


Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Stati	ion Des	cripti	ion				
Province:	Ontar	io					
Region:	Bram	pton					
Weather Station Location:	Open	flat te					
Anemometer height (m):	10						
Local S	hieldin	g					
Building Site:	Subur	ban, f	orest				
Walls:	Heavy	/					
Flue:	Heavy	/					
Highest Ceiling Height (m): 9.75							
Building Co	onfigura	ation					
Туре:	Semi						
Number of Stories:	Three	!					
Foundation: Full							
House Volume (m³):	829.6						
Air Leakage	/Ventil	atior	1				
Air Tightness Type:	Prese	nt (196	61-) (3.	57 ACH	⊣)		
Custom BDT Data:	ELA @	9 10 Pa	Э.		1105.8 cm ²		
	3.57				ACH @ 50 Pa		
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust		
		37.5			37.5		
Flue	Size						
Flue #:	#1	#2	#3	#4			
Diameter (mm):	0	0	0	0			
Natural Infil	tration	Rate	es				
Heating Air Leakage Rate (ACH/H)):	C	.43	3			
Cooling Air Leakage Rate (ACH/H)	:	C).14	9			

TYPE: 1703 **LO#** 78684



Cllent

ROYAL PINE HOMES

Project Name

FORESTSIDE BRAMPTON, ONTARIO

HVA DESIGNS LTD.

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

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.

	HEAT LOSS 35685	B10/H	# OF RUNS	S/A	R/A	FANS	٦
	UNIT DATA		3RD FLOOR	7	4	2	
	MAKE CARRIER		2ND FLOOR	6	2	2	
	59SP5A-40-10		1ST FLOOR	4	2	2	
	INPUT 40	MBTU/H	BASEMENT	3	1	0	Di
_	OUTPUT	MBTU/H	ALL S/A DIFFU	SERS	4 "x10)"	Sc
	39		UNLESS NOTE				
,	cooling 2.5	TONS	ON LAYOUT. A UNLESS NOTE				Ŀ

ON LAYOUT. UNDERCUT

DOORS 1" min. FOR R/A

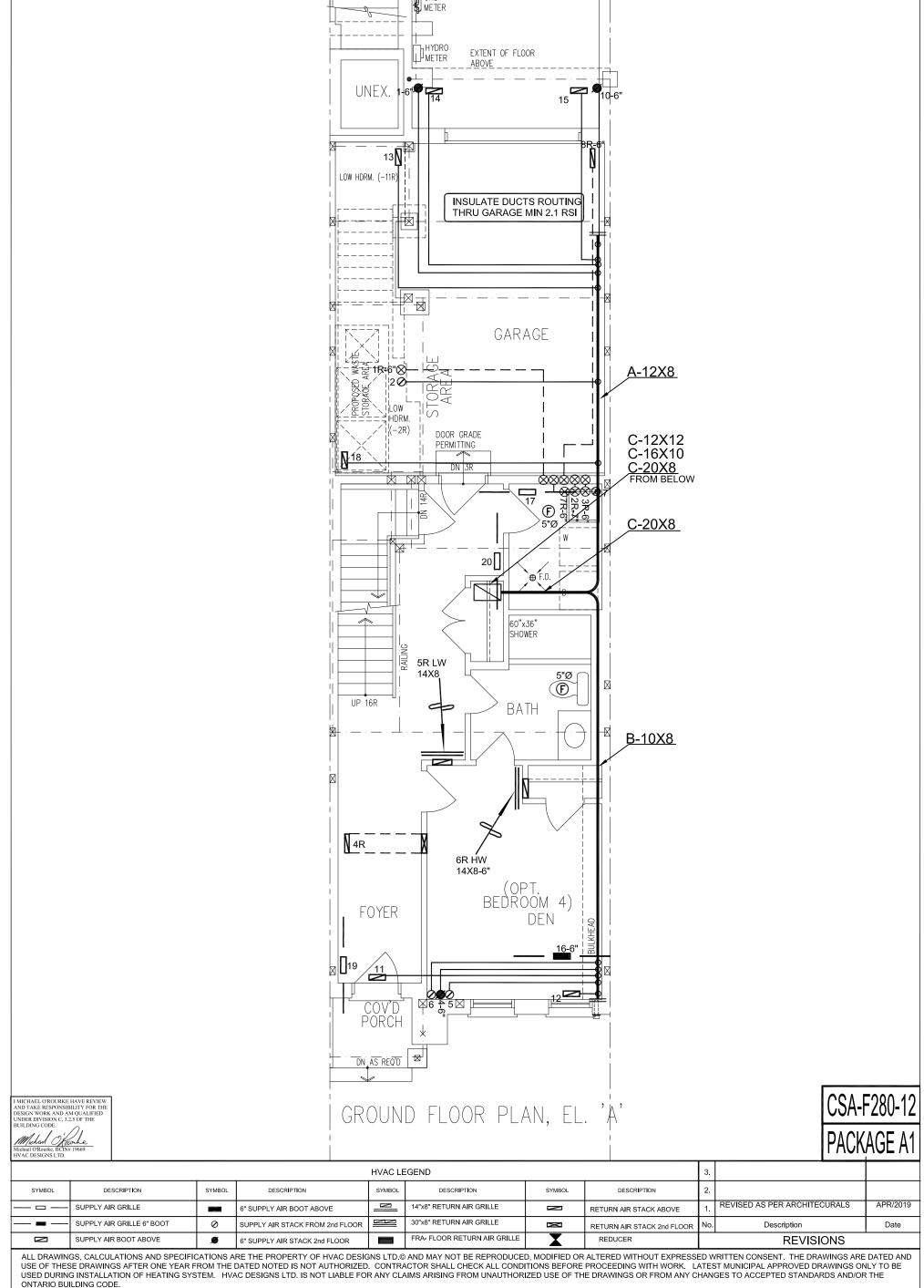
cfm @ 0.6" w.c

FAN SPEED

875

٧S	Sheet Title								
	BA	SEMENT							
:		IEATING							
		_AYOUT							
)	Date	MAY/2018							
	Scale	3/16" = 1'-0"							
BCIN# 19669									
	LO#	78684							

1703 2534 sc



Cllent

ROYAL PINE HOMES

Project Name

FORESTSIDE BRAMPTON, ONTARIO

HVA DESIGNS LTD.

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

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.

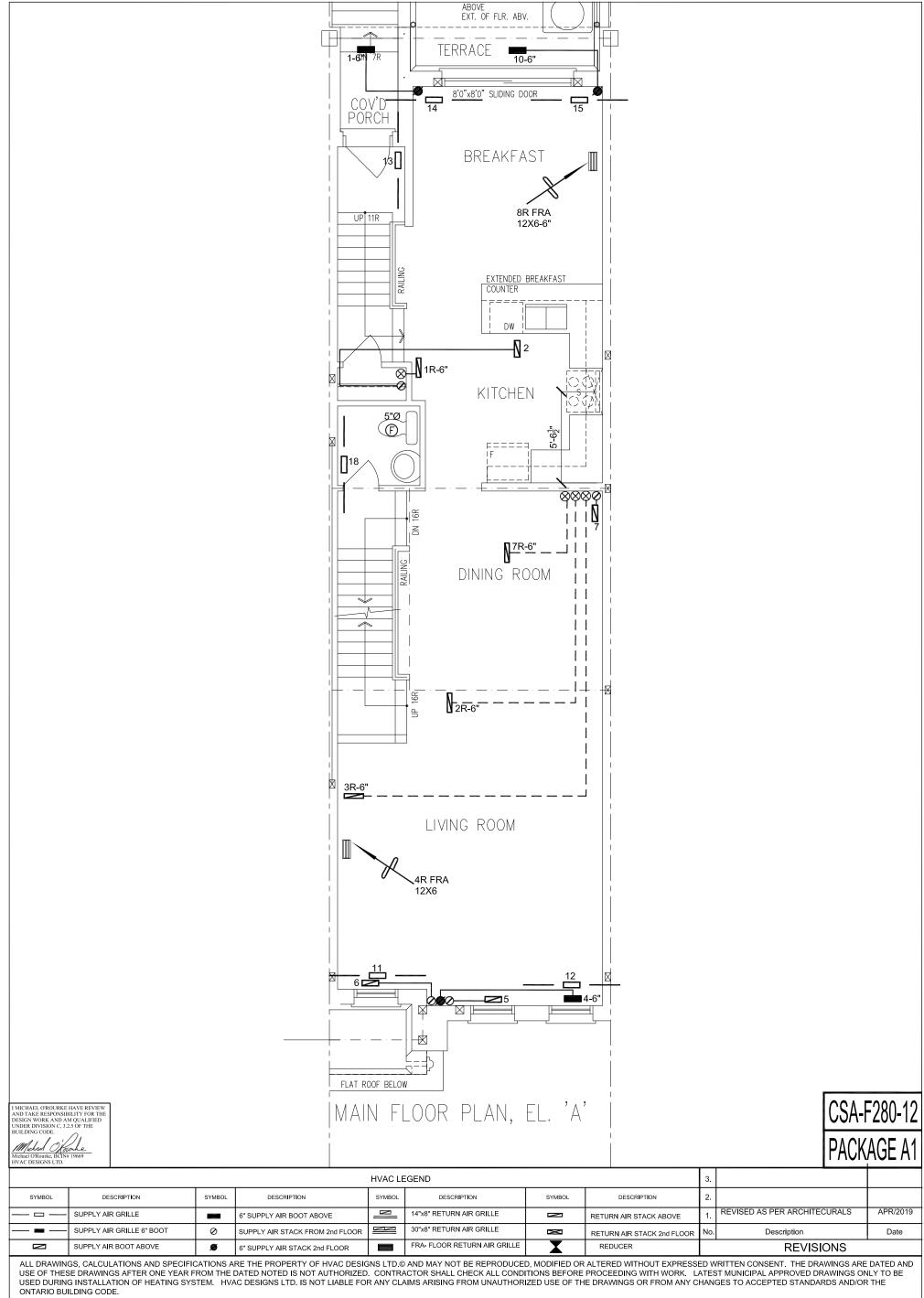
FIRST FLOOR HEATING LAYOUT

Date MAY/2018
Scale 3/16" = 1'-0"

BCIN# 19669 LO# 78684

1703

534 sqft



ROYAL PINE HOMES

Project Name

FORESTSIDE BRAMPTON, ONTARIO

DESIGNS LTD.

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

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.

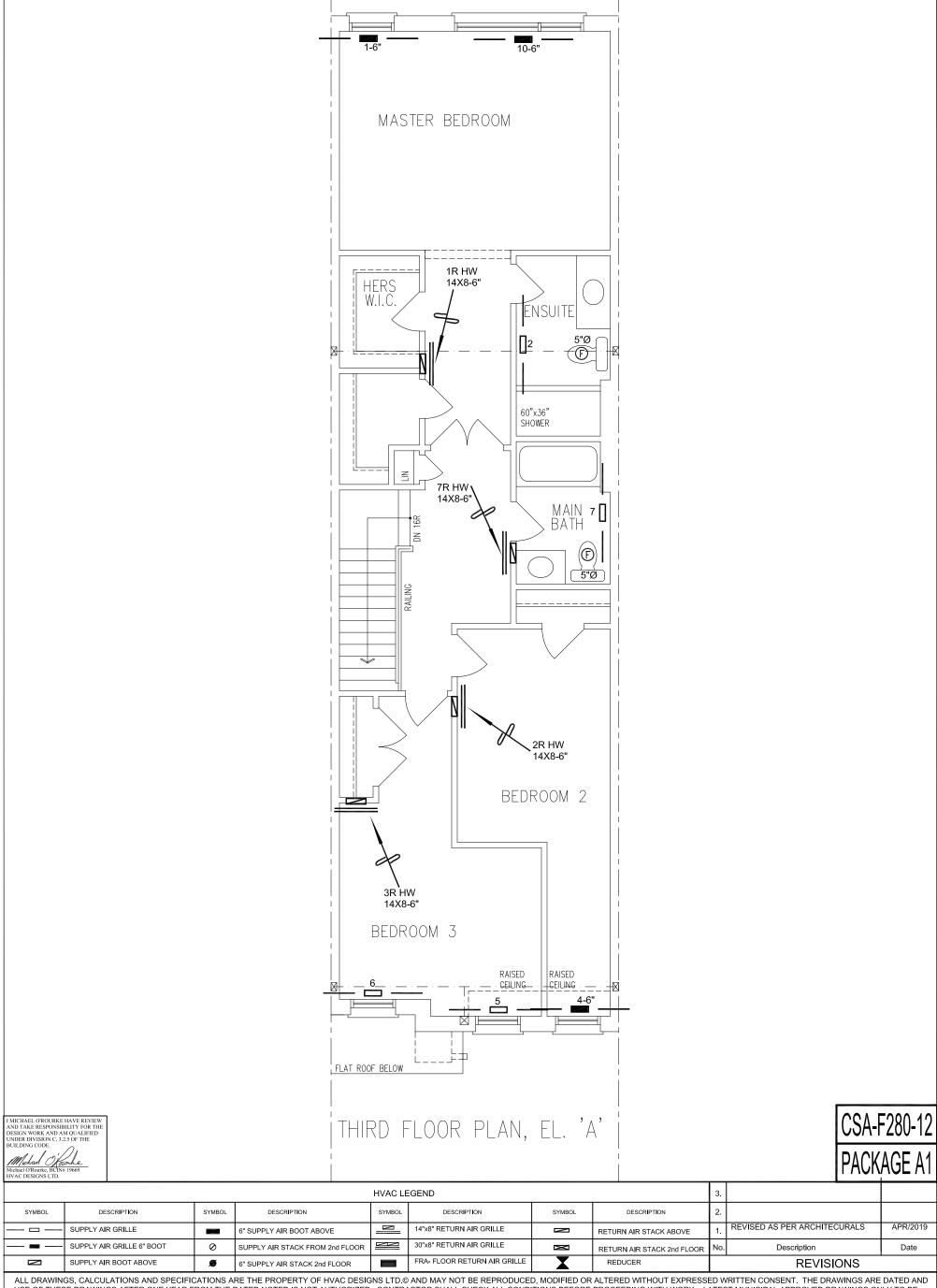
SECOND FLOOR **HEATING LAYOUT**

MAY/2018 3/16" = 1'-0"

LO#

BCIN# 19669 78684

1703



ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Cllent

ROYAL PINE HOMES

Project Name

FORESTSIDE BRAMPTON, ONTARIO

HVA DESIGNS LTD.

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

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.

THIRD FLOOR
HEATING
LAYOUT

Date MAY/2018
Scale 3/16" = 1'-0"

BCIN# 19669 LO# 78684

1703

534 sqft