### **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	u and a seek light shares		ak commence and a super	salaya zaraya salaya salaya salaya	narry part assessing the property
Building number, street name				Unit no.	Lot/con.
Municipality	Postal code	Plan number/ other desc	ription		<u> </u>
BRAMPTON					
B. Individual who reviews and takes r	esponsibility for	design activities	eryana aserta angarta da	Street, and the Santa	Consultation (continues or the
Name		Firm			
MICHAEL O'ROURKE Street address		HVAC DESIGNS LTD.	Unit no.		Lot/con.
375 FINLEY AVE			202		N/A
Municipality	Postal code	Province	E-mail		
Talanhana number	L1S 2E2	ONTARIO	info@hvacdesi Cell number	gns.ca 	
Telephone number (905) 619-2300	Fax number (905) 619-2375		( )		
C. Design activities undertaken by inc	lividual identifie	d in Section B. [Buildi	l ing Code Tabl	e 3.5.2.1 OF Divis	ion C]
☐ House	⊠ HVAC	– House		Building Structura	al
☐ Small Buildings		g Services	□ F	Plumbing – Hous	е
☐ Large Buildings☐ Complex Buildings	☐ Detecti	on, Lighting and Pow		Plumbing – All Bu Dn-site Sewage :	
Description of designer's work	<u> </u>	Model:	1804 END		Systems .
HEAT LOSS / GAIN CALCULATIONS		Modell	1004 2110		
DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION	N DECICAL CLIMAN	A DV			
RESIDENTIAL MECHANICAL VENTILATION RESIDENTIAL SYSTEM DESIGN per CSA-I		Project:	FORESTSIDE		
	CONTRACTOR INTERCEMENTAL	Applicate property and the second and the	History with the		en e
I MICHAEL O'ROURKE			declare tha	at (choose one as ap	propriate):
(pri	nt name)				
☐ I review and take responsibility fo Division C, of the Building Code. classes/categories.				tion 3.2.4.of appropriate	
Individual BCIN: . Firm BCIN: _					
I review and take responsibility fo designer" under subsection 3.2		m qualified in the appropri on C, of the Building Code		an "other	
Individual BCIN:	19669				
Basis for exemption fr	om registration and	l qualification:	O.B.C SENT	ENCE 3.2.4.1	<u>(4)</u>
☐ The design work is exempt Basis for exemption from registra		on and qualification requir on:	rements of the B	uilding Code.	
I certify that:					
The information contained     I have submitted this applica		ule is true to the best of m			
June 19, 2018			Maka	1 Of Sunha	
Date	•			Signature of Des	igner

NOTE

<sup>1.</sup> 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.

<sup>2.</sup> 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.



SITE NAME:																		DATE:								HANGE RATE 0.428			LOSS					-F280-12
BUILDER:	ROYAL	. PINE I	HOMES					TYPE:	1804 EI					GFA:				LO# 7	78929				JMMER	R NATU	RAL AIR CI	HANGE RATE 0.147			T GAIN	N ΔT °	°F. 14	S	B-12 PACI	KAGE A1
ROOM USE				MBR			ENS			WIC			BED-2			BED-3						BATH						PWD-	-2					
EXP. WALL				16			20			13			10			23						0						12						
CLG. HT.				9			9			9			9			9						9						10						
	FACTO	RS																																
GRS.WALL AREA	LOSS	GAIN		144			180			117			90			207						0						120						
GLAZING				LOSS	GAIN		LOSS	GAIN	ı	Loss	GAIN		LOSS	GAIN		LOSS	GAIN				- 1	LOSS	GAIN					LOSS	S GAIN	N				
NORTH	20.8	16.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0				0	0	0					
EAST	20.8	41.9	0	0	0	0	0	0	0	0	0	32	665	1340	20	416	838				0	0	0				19	395	796	6				
SOUTH	20.8	25.2	0	0	0	0	0	0	20	416	505	0	0	0	0	0	0				0	0	0				0	0	0					
WEST	20.8	41.9	13	270	545	11	229	461	0	0	0	0	0	0	0	0	0				0	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					
DOORS	24.7	4.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0				0	0	0					
NET EXPOSED WALL	4.4	0.8	131	571	108	169	736	139	97	423	80	58	253	48	187	815	154				0	0	0				101	440	83	3				
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	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	205	257	125	100	125	61	100	125	61	117	147	71	148	185	90				91	114	55				0	0	0					
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0				0	0	0					
EXPOSED FLOOR	2.5	0.5	14	35	7	0	0	0	ō	0	ō	ō	0	0	ō	ō	0				0	0	0				ő	0	0					
BASEMENT/CRAWL HEAT LOSS	2.0	0.0		0	•	"	0	٠	ľ	0	٠	ľ	0	٠	ľ	0	٠				٠	0	ŭ					0	٠					
SLAB ON GRADE HEAT LOSS				0			0			0			0			0						0						0						
SUBTOTAL HT LOSS				1133			1090			964			1064			1416						114						835						
SUB TOTAL HT GAIN				1133	783		1030	660		304	645		1004	1459		1410	1082					114	55					000	879					
LEVEL FACTOR / MULTIPLIER			0.40	0.23	103	0.40	0.23	000	0.10	0.00	043	0.10	0.23	1433	0.10	0.00	1002				0.10	0.23	55					0.39		"				
AIR CHANGE HEAT LOSS			0.10			0.10			0.10	222		0.10	245		0.10						0.10						0.20							
				261	55		251	46		222	45		245	400		326	70					26						329		.				
AIR CHANGE HEAT GAIN				400	55		•	46		440	45		404	102			76						4					440	62	•				
DUCT LOSS				139			0	_		119			131			174						14	_					116		.				
DUCT GAIN			_		174			0	١.		69			222			182				_		6						94	١.				
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240				0		0				0		0					
HEAT GAIN APPLIANCES/LIGHTS					419			0			0			419			419						0						0					
TOTAL HT LOSS BTU/H				1533			1341			1304			1441			1916						155						1280		_				
TOTAL HT GAIN x 1.3 BTU/H																																		l
101712111 071117 110 21 0711					2484			919			987			3175			2597						85						1345	5				
ROOM USE			 	LV/DN	2484	1	FAM	919		KT/BR	987		OFF	3175		LAUN	2597		PWD			FOY	85		MUD	1			1345	15			BAS	3
				LV/DN 26	2484			919		KT/BR 13	987		OFF 26	3175		LAUN 10	2597					FOY 45	85		MUD 5				1345	15			BA\$	
ROOM USE EXP. WALL				26	2484		30	919	 	13	987		26	3175		10	2597		12			45	85		5				1345	15				
ROOM USE		)RS			2484			919	ı		987			3175			2597						85						1345	15			108	
ROOM USE EXP. WALL CLG. HT.	FACTO			26 10	2484		30 10	919	ı	13 10	987		26 9	3175		10 10	2597		12			45 11	85		5 10				1345	15			108	1
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA	FACTO			26 10 260			30 10 300			13 10 130			26 9 234			10 10 100			12 9 108	GAIN		45 11 495			5 10 50				1345	15			108 9 594	
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING	FACTO LOSS	GAIN	0	26 10 260 LOSS	GAIN	0	30 10 300 LOSS	GAIN		13 10 130 LOSS	GAIN	0	26 9 234 LOSS	GAIN	0	10 10 100 LOSS	GAIN		12 9 108 LOSS	GAIN 0		45 11 495 LOSS	GAIN	ı	5 10 50 OSS GAIN				1345	1.5			108 9 594 LOS	S GAIN
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH	FACTO LOSS 20.8	GAIN 16.3	0 32	26 10 260 LOSS 0	GAIN 0	0	30 10 300 LOSS 0	GAIN 0	0	13 10 130 LOSS 0	GAIN 0	0	26 9 234 LOSS 0	GAIN 0	0	10 10 100 LOSS 0	GAIN 0	0	12 9 108 LOSS (	0	0	45 11 495 LOSS 0	GAIN 0		5 10 50 OSS GAIN 0 0				1345	.5			108 9 594 LOS 0 0	S GAIN
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	FACTO LOSS 20.8 20.8	16.3 41.9	32	26 10 260 LOSS 0 665	GAIN 0 1340	0	30 10 300 LOSS 0	GAIN 0 0	0	13 10 130 LOSS 0 0	GAIN 0 0	0	26 9 234 LOSS 0	GAIN 0 0	0	10 10 100 LOSS 0 0	GAIN 0 0	0	12 9 108 LOSS 0 0	0	0	45 11 495 LOSS 0 0	GAIN 0 0	0 0	5 10 50 .OSS GAIN 0 0 0 0				1345	.5			108 9 594 LOS 0 0	S GAIN 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	FACTO LOSS 20.8 20.8 20.8	16.3 41.9 25.2	32 0	26 10 260 LOSS 0 665 0	GAIN 0	0	30 10 300 LOSS 0 0	GAIN 0 0	0 0 34	13 10 130 LOSS 0	GAIN 0 0 858	0	26 9 234 LOSS 0 0	GAIN 0 0	0	10 10 100 LOSS 0	GAIN 0 0	0 0 12	12 9 108 LOSS 0 0 249	0 0 303	0 0 0	45 11 495 LOSS 0 0	GAIN 0 0	0	5 10 50 COSS GAIN 0 0 0 0				1345	.5			108 9 594 LOS 0 0 0 0 3 62	S GAIN 0 0 76
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	FACTO LOSS 20.8 20.8 20.8 20.8	16.3 41.9 25.2 41.9	32 0 0	26 10 260 LOSS 0 665 0	GAIN 0 1340 0	0 0 70	30 10 300 LOSS 0 0 0	GAIN 0 0 0 2932	0 0 34 0	13 10 130 LOSS 0 0 706	GAIN 0 0 858 0	0 0 64	26 9 234 LOSS 0 0 0	GAIN 0 0 0 2681	0 0	10 10 100 LOSS 0 0 0	GAIN 0 0 0	0 0 12 0	12 9 108 LOSS 0 0 249 0	0 0 303 0	0 0 0	45 11 495 LOSS 0 0 0	GAIN 0 0 0	0 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0				1345	15			108 9 594 LOS 0 0 0 0 3 62 3 62	S GAIN 0 0 76 126
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	FACTO LOSS 20.8 20.8 20.8 20.8 36.4	16.3 41.9 25.2 41.9 102.1	32 0 0 0	26 10 260 LOSS 0 665 0	GAIN 0 1340 0 0	0 0 70 0	30 10 300 LOSS 0 0 0 1454	GAIN 0 0 0 2932	0 0 34 0	13 10 130 LOSS 0 0 706 0	GAIN 0 0 858 0	0 0 64 0	26 9 234 LOSS 0 0 0 1330	GAIN 0 0 0 2681	0 0 0	10 100 LOSS 0 0 0 0	GAIN 0 0 0 0	0 0 12 0	12 9 108 LOSS 0 0 249 0	0 0 303 0	0 0 0 0	45 11 495 LOSS 0 0 0	GAIN 0 0 0	0 0 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0				1345	1.5			108 9 594 LOS 0 0 0 0 3 62 3 62 0 0	S GAIN 0 0 76 126
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	FACTO LOSS 20.8 20.8 20.8 20.8 36.4 24.7	16.3 41.9 25.2 41.9 102.1 4.7	32 0 0 0 0	26 10 260 LOSS 0 665 0 0	GAIN 0 1340 0 0 0	0 0 70 0	30 10 300 LOSS 0 0 0 1454 0	GAIN 0 0 0 2932 0	0 0 34 0 0	13 10 130 LOSS 0 0 706 0	GAIN 0 0 858 0 0	0 0 64 0	26 9 234 LOSS 0 0 0 1330 0	GAIN 0 0 0 2681 0	0 0 0 0 20	10 100 LOSS 0 0 0 0 0 493	GAIN 0 0 0 0 0	0 0 12 0 0	12 9 108 LOSS 0 0 249 0 0	0 0 303 0 0	0 0 0 0 0 40	45 11 495 LOSS 0 0 0 0 0	GAIN 0 0 0 0 0	0 0 0 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 493 93				1345	15			108 9 594 LOS 0 0 0 0 3 62 3 62 0 0	S GAIN 0 0 76 126 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	FACTO LOSS 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	32 0 0 0 0 0 228	26 10 260 LOSS 0 665 0 0 0	GAIN 0 1340 0 0 0 0	0 0 70 0 0 230	30 10 300 LOSS 0 0 0 1454 0 0	GAIN 0 0 0 2932 0 0	0 0 34 0 0 0	13 10 130 LOSS 0 0 706 0 0 0	GAIN 0 0 858 0 0 0	0 0 64 0 0 170	26 9 234 LOSS 0 0 0 1330 0 0 741	GAIN 0 0 0 2681 0 0	0 0 0 0 20 80	10 100 LOSS 0 0 0 0 0 493 349	GAIN 0 0 0 0 0 93 66	0 0 12 0 0 0	12 9 108 LOSS 0 0 249 0 0 0 418	0 0 303 0 0 0 79	0 0 0 0 0 40 455	45 11 495 LOSS 0 0 0 0 0 986 1982	GAIN 0 0 0 0 0 186 374	0 0 0 0 0 0 20 30	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 493 93 131 25				1345	15			108 9 594 LOS 0 0 0 0 3 62 3 62 0 0 0 0	S GAIN 0 0 76 126 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR	FACTO LOSS 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	32 0 0 0 0 228 0	26 10 260 LOSS 0 665 0 0 0 993	GAIN 0 1340 0 0 0	0 0 70 0 0 230 0	30 10 300 LOSS 0 0 0 1454 0 0 1002 0	GAIN 0 0 0 2932 0 0 189	0 0 34 0 0 0 96	13 10 130 LOSS 0 0 706 0 0 418	GAIN 0 0 858 0 0 0 79	0 0 64 0 0 170	26 9 234 LOSS 0 0 0 1330 0 0 741	GAIN 0 0 0 2681 0 0 140	0 0 0 0 20 80	10 100 LOSS 0 0 0 0 0 493 349 0	GAIN 0 0 0 0 0 93 66	0 0 12 0 0 0 96	12 9 108 LOSS 0 0 249 0 0 0 418	0 0 303 0 0 0 79	0 0 0 0 0 40 455	45 11 495 LOSS 0 0 0 0 0 986 1982 0	GAIN 0 0 0 0 0 186 374 0	0 0 0 0 0 0 20 30	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 493 93 131 25 0 0				1345	15			108 9 594 LOS 0 0 0 0 3 62 3 62 0 0 0 0 0 0 378 1328	S GAIN 0 0 76 126 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE OR EXPOSED CLG	FACTO LOSS 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	32 0 0 0 0 228 0	26 10 260 LOSS 0 665 0 0 0 993 0	GAIN 0 1340 0 0 0 187 0	0 0 70 0 0 230 0	30 10 300 LOSS 0 0 1454 0 0 1002 0	GAIN 0 0 0 2932 0 0 189 0	0 0 34 0 0 0 96 0	13 10 130 LOSS 0 0 706 0 0 418 0	GAIN 0 0 858 0 0 0 79 0	0 0 64 0 0 170 0	26 9 234 LOSS 0 0 1330 0 0 741 0	GAIN 0 0 0 2681 0 0 140 0	0 0 0 0 20 80 0	10 100 LOSS 0 0 0 0 0 493 349 0	GAIN 0 0 0 0 0 93 66 0	0 0 12 0 0 0 96	12 9 108 LOSS 0 0 249 0 0 418 0	0 0 303 0 0 0 79 0	0 0 0 0 0 40 455 0	45 11 495 LOSS 0 0 0 0 0 986 1982 0	GAIN 0 0 0 0 0 186 374 0	0 0 0 0 0 0 20 30 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 493 93 131 25 0 0 0 0 0				1345	15			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 0 378 1326 0 0	S GAIN 0 0 76 126 0 0 0
ROOM USE EXP. WALL CLG. HT. 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	FACTO LOSS 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	32 0 0 0 0 228 0 0	26 10 260 LOSS 0 665 0 0 0 993 0 0	GAIN 0 1340 0 0 0 187 0	0 0 70 0 0 230 0 0	30 10 300 LOSS 0 0 0 1454 0 0 1002 0 0	GAIN 0 0 0 2932 0 0 189 0	0 0 34 0 0 0 96 0	13 10 130 LOSS 0 0 706 0 0 418 0	GAIN 0 0 858 0 0 79 0	0 0 64 0 0 170 0	26 9 234 LOSS 0 0 1330 0 0 741 0	GAIN 0 0 0 2681 0 0 140 0	0 0 0 0 20 80 0	10 10 100 LOSS 0 0 0 0 0 493 349 0 0	GAIN 0 0 0 0 0 93 66 0	0 0 12 0 0 0 96 0	12 9 108 LOSS 0 0 0 249 0 0 418 0 0	0 0 303 0 0 0 79 0	0 0 0 0 40 455 0	45 11 495 LOSS 0 0 0 0 0 986 1982 0 0	GAIN 0 0 0 0 0 186 374 0	0 0 0 0 0 20 30 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 493 93 131 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 0 378 1320 0 0	S GAIN 0 0 76 126 0 0 0 8 251
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSM WALL ABOVE OR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR	FACTO LOSS 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	32 0 0 0 0 228 0	26 10 260 LOSS 0 665 0 0 0 993 0	GAIN 0 1340 0 0 0 187 0	0 0 70 0 0 230 0	30 10 300 LOSS 0 0 1454 0 0 1002 0	GAIN 0 0 0 2932 0 0 189 0	0 0 34 0 0 0 96 0	13 10 130 LOSS 0 0 706 0 0 418 0	GAIN 0 0 858 0 0 0 79 0	0 0 64 0 0 170 0	26 9 234 LOSS 0 0 0 1330 0 741 0 0	GAIN 0 0 0 2681 0 0 140 0	0 0 0 0 20 80 0	10 100 LOSS 0 0 0 0 0 493 349 0	GAIN 0 0 0 0 0 93 66 0	0 0 12 0 0 0 96	12 9 108 LOSS 0 0 249 0 0 418 0	0 0 303 0 0 0 79 0	0 0 0 0 0 40 455 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0	GAIN 0 0 0 0 0 186 374 0	0 0 0 0 0 0 20 30 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 493 93 131 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 0 3378 1328 0 0 0	S GAIN 0 0 76 126 0 0 8 251 0
ROOM USE EXP. WALL 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 CLOR BASEMENT/CRAWL HEAT LOSS	FACTO LOSS 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	32 0 0 0 0 228 0 0	26 10 260 LOSS 0 665 0 0 0 993 0 0 0 513	GAIN 0 1340 0 0 0 187 0	0 0 70 0 0 230 0 0	30 10 300 LOSS 0 0 1454 0 1002 0 0	GAIN 0 0 0 2932 0 0 189 0	0 0 34 0 0 0 96 0	13 10 130 LOSS 0 0 706 0 0 418 0 0 179 0	GAIN 0 0 858 0 0 79 0	0 0 64 0 0 170 0	26 9 234 LOSS 0 0 1330 0 741 0 0 0	GAIN 0 0 0 2681 0 0 140 0	0 0 0 0 20 80 0	10 10 100 LOSS 0 0 0 0 0 493 349 0 0 0	GAIN 0 0 0 0 0 93 66 0	0 0 12 0 0 0 96 0	12 9 108 LOSS 0 0 249 0 0 418 0 0 0	0 0 303 0 0 0 79 0	0 0 0 0 40 455 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0	GAIN 0 0 0 0 0 186 374 0	0 0 0 0 0 20 30 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 493 93 131 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 0 378 1320 0 0	S GAIN 0 0 76 126 0 0 8 251 0
ROOM USE EXP. WALL CLG, HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMIT WALL ABOVE OR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG SEXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	FACTO LOSS 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	32 0 0 0 0 228 0 0	26 10 260 LOSS 0 665 0 0 993 0 0 0 513 0	GAIN 0 1340 0 0 0 187 0	0 0 70 0 0 230 0 0	30 10 300 LOSS 0 0 1454 0 1002 0 0 0	GAIN 0 0 0 2932 0 0 189 0	0 0 34 0 0 0 96 0 0 0 72	13 10 130 LOSS 0 0 706 0 0 418 0 0 0 179 0	GAIN 0 0 858 0 0 79 0	0 0 64 0 0 170 0	26 9 234 LOSS 0 0 1330 0 741 0 0 0	GAIN 0 0 0 2681 0 0 140 0	0 0 0 0 20 80 0	10 10 100 LOSS 0 0 0 0 493 349 0 0 0	GAIN 0 0 0 0 0 93 66 0	0 0 12 0 0 0 96 0	12 9 108 LOSS 0 0 249 0 0 418 0 0 0 0	0 0 303 0 0 0 79 0	0 0 0 0 40 455 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0 0	GAIN 0 0 0 0 0 186 374 0	0 0 0 0 0 20 30 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 493 93 131 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 5944 LOS 0 0 0 3 622 0 0 0 0 0 0 0 0 0 378 1324 0 0 0 0 0 0 368	S GAIN 0 0 76 126 0 0 0 8 251 0
ROOM USE EXP. WALL CLG. HT. 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	FACTO LOSS 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	32 0 0 0 0 228 0 0	26 10 260 LOSS 0 665 0 0 0 993 0 0 0 513	GAIN 0 1340 0 0 0 187 0 0 0	0 0 70 0 0 230 0 0	30 10 300 LOSS 0 0 1454 0 1002 0 0	GAIN 0 0 0 2932 0 0 189 0 0 0 0	0 0 34 0 0 0 96 0 0 0 72	13 10 130 LOSS 0 0 706 0 0 418 0 0 179 0	GAIN 0 0 858 0 0 0 79 0 0 0 34	0 0 64 0 0 170 0	26 9 234 LOSS 0 0 1330 0 741 0 0 0	GAIN 0 0 0 2681 0 0 1440 0 0 0 0	0 0 0 0 20 80 0	10 10 100 LOSS 0 0 0 0 0 493 349 0 0 0	GAIN 0 0 0 0 0 0 93 666 0 0 0 0	0 0 12 0 0 0 96 0	12 9 108 LOSS 0 0 249 0 0 0 418 0 0 0 0 0 668	0 0 303 0 0 0 79 0 0	0 0 0 0 40 455 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0	GAIN 0 0 0 0 1866 374 0 0	0 0 0 0 0 20 30 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 493 93 131 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 0 3378 1328 0 0 0	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0
ROOM USE EXP. WALL CLG. HT. 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 LOSI	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 993 0 0 513 0 0	GAIN 0 1340 0 0 0 187 0	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 1454 0 0 1002 0 0 0 0 2456	GAIN 0 0 0 2932 0 0 189 0	0 0 34 0 0 0 96 0 0 0	13 10 130 LOSS 0 0 706 0 0 418 0 0 179 0	GAIN 0 0 858 0 0 79 0	0 0 64 0 0 170 0 0	26 9 234 LOSS 0 0 1330 0 741 0 0 0 0 2070	GAIN 0 0 0 2681 0 0 140 0	0 0 0 0 20 80 0 0 0	10 10 100 LOSS 0 0 0 0 0 493 349 0 0 0 0	GAIN 0 0 0 0 0 93 66 0	0 0 12 0 0 0 96 0 0	12 9 108 LOSS 0 0 249 0 0 0 418 0 0 0 0 668	0 0 303 0 0 0 79 0 0 0	0 0 0 0 40 455 0 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0 0 0 0 2968	GAIN 0 0 0 0 0 186 374 0	0 0 0 0 0 20 30 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 378 1322 0 0 0 0 0 0 378 5133	S GAIN 0 0 76 126 0 0 0 0 0 8 251 0 0 0
ROOM USE EXP. WALL 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 EXPOSED CLG SASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	FACTO LOSS 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	32 0 0 0 0 228 0 0	26 10 260 LOSS 0 665 0 0 993 0 0 0 513 0 0 2171	GAIN 0 1340 0 0 0 187 0 0 0	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 1002 0 0 0 0 2456	GAIN 0 0 0 2932 0 0 189 0 0 0 0	0 0 34 0 0 0 96 0 0 0 72	13 10 130 LOSS 0 0 0 706 0 0 0 418 0 0 0 179 0 0 1304	GAIN 0 0 858 0 0 0 79 0 0 0 34	0 0 64 0 0 170 0	26 9 234 LOSS 0 0 1330 0 741 0 0 0 0 0 0	GAIN 0 0 0 2681 0 0 1440 0 0 0 0	0 0 0 0 20 80 0	10 10 100 LOSS 0 0 0 0 493 349 0 0 0 0 0	GAIN 0 0 0 0 0 0 93 666 0 0 0 0	0 0 12 0 0 0 96 0 0	12 9 108 LOSS 0 0 0 249 0 0 418 0 0 0 0 0 668	0 0 303 0 0 0 79 0 0 0	0 0 0 0 40 455 0 0	45 11 495 LOSS 0 0 0 0 0 0 986 1982 0 0 0 0 0 0 2968	GAIN 0 0 0 0 1866 374 0 0	0 0 0 0 0 20 30 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 622 3 622 0 0 0 0 0 0 378 1324 0 0 0 0 0 3683	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0 2 2 4 452
ROOM USE EXP. WALL 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 CLG SEXPOSED CLG NO ATTIC EXPOSED CLG SEXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT COSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 993 0 0 513 0 0	GAIN 0 1340 0 0 0 187 0 0 0 97	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 1454 0 0 1002 0 0 0 0 2456	GAIN 0 0 2932 0 0 189 0 0 0	0 0 34 0 0 0 96 0 0 0	13 10 130 LOSS 0 0 706 0 0 418 0 0 179 0	GAIN 0 0 858 0 0 0 79 0 0 0 34	0 0 64 0 0 170 0 0	26 9 234 LOSS 0 0 1330 0 741 0 0 0 0 2070	GAIN 0 0 0 2681 0 0 1440 0 0 0 0 0 2821	0 0 0 0 20 80 0 0 0	10 10 100 LOSS 0 0 0 0 0 493 349 0 0 0 0	GAIN 0 0 0 0 93 66 0 0 0	0 0 12 0 0 0 96 0 0	12 9 108 LOSS 0 0 249 0 0 0 418 0 0 0 0 668	0 0 303 0 0 0 79 0 0 0 0	0 0 0 0 40 455 0 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0 0 0 0 2968	GAIN 0 0 0 0 186 374 0 0	0 0 0 0 0 20 30 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 378 1322 0 0 0 0 0 0 378 5133	S GAIN 0 0 76 126 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG ON ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT COSA	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 993 0 0 0 2171 0.39 855	GAIN 0 1340 0 0 0 187 0 0 0	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 0 0 0 0 0 0 2456	GAIN 0 0 0 2932 0 0 189 0 0 0 0	0 0 34 0 0 0 96 0 0 0	13 10 130 LOSS 0 0 706 0 0 0 418 0 0 179 0 0 1304	GAIN 0 0 858 0 0 0 79 0 0 0 34	0 0 64 0 0 170 0 0	26 9 234 LOSS 0 0 0 1330 0 0 741 0 0 0 0 2070	GAIN 0 0 0 2681 0 0 1440 0 0 0 0	0 0 0 0 20 80 0 0 0	10 100 LOSS 0 0 0 0 493 349 0 0 0 0 0 842	GAIN 0 0 0 0 0 0 93 666 0 0 0 0	0 0 12 0 0 0 96 0 0	12 9 108 LOSS 0 0 249 0 0 0 418 0 0 0 0 668	0 0 303 0 0 0 79 0 0 0	0 0 0 0 40 455 0 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0 0 0 0 2968	GAIN 0 0 0 0 1866 374 0 0	0 0 0 0 0 20 30 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 622 3 622 0 0 0 0 0 0 378 1324 0 0 0 0 0 3683	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0 2 2 4 452
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED SEM WALL ABOVE OR EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT GAIN DUCT LOSS	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 993 0 0 0 513 0 0 2171	GAIN 0 1340 0 0 0 0 187 0 0 0 97	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 1002 0 0 0 0 2456	GAIN 0 0 0 2932 0 0 189 0 0 0 0	0 0 34 0 0 0 96 0 0 0	13 10 130 LOSS 0 0 0 706 0 0 0 418 0 0 0 179 0 0 1304	GAIN 0 0 858 0 0 79 0 0 34	0 0 64 0 0 170 0 0	26 9 234 LOSS 0 0 1330 0 741 0 0 0 0 0 0	GAIN 0 0 0 2681 0 0 140 0 0 0 0	0 0 0 0 20 80 0 0 0	10 10 100 LOSS 0 0 0 0 493 349 0 0 0 0 0	GAIN 0 0 0 0 0 93 666 0 0 0 0 159	0 0 12 0 0 0 96 0 0	12 9 108 LOSS 0 0 0 249 0 0 418 0 0 0 0 0 668	0 0 303 0 0 0 79 0 0 0 0 0 382	0 0 0 0 40 455 0 0	45 11 495 LOSS 0 0 0 0 0 0 986 1982 0 0 0 0 0 0 2968	GAIN 0 0 0 0 186 374 0 0 0 0 560 39	0 0 0 0 0 20 30 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	55			108 9 594 LOS 0 0 0 3 622 3 622 0 0 0 0 0 0 378 1324 0 0 0 0 0 3683	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0 2 2 452 4 9 32
ROOM USE EXP. WALL 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 CLG SUBTOTAL HT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 993 0 0 0 2171 0.39 855	GAIN 0 1340 0 0 0 187 0 0 0 97	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 0 0 0 0 0 0 2456	GAIN 0 0 0 2932 0 0 0 189 0 0 0	0 0 34 0 0 0 96 0 0 0 72	13 10 130 LOSS 0 0 706 0 0 0 418 0 0 179 0 0 1304	GAIN 0 0 858 0 0 0 79 0 0 34 971 68 146	0 0 64 0 0 170 0 0 0	26 9 234 LOSS 0 0 0 1330 0 0 741 0 0 0 0 2070	GAIN 0 0 0 2681 0 0 140 0 0 0 2821 197 0	0 0 0 0 20 80 0 0 0	10 100 LOSS 0 0 0 0 493 349 0 0 0 0 0 842	GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 12 0 0 0 96 0 0 0	12 9 108 LOSS 0 0 249 0 0 0 418 0 0 0 0 668	0 0 303 0 0 0 79 0 0 0 0 0 382	0 0 0 0 40 455 0 0 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0 0 0 0 2968	GAIN 0 0 0 0 1866 374 0 0 0 5660 39 0	0 0 0 0 0 0 20 30 0 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	15.			108 9 594 LOS 0 0 0 3 622 3 622 0 0 0 0 0 0 378 1321 0 0 0 0 0 3683 5133	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0 2 2 4 5 2 4 5 2 4 5 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ROOM USE EXP. WALL CLG, HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE OR EXPOSED LG ON ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT COSS SUBTOTAL HT LOSS AUB TOTAL HT GAIN LEVEL FACTOR / MULT IPILER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT GAIN HEAT GAIN PEOPLE	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 993 0 0 0 2171 0.39 855	GAIN 0 1340 0 0 0 187 0 0 97 1625 114 216 0	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 0 0 0 0 0 0 2456	GAIN 0 0 0 2932 0 0 189 0 0 0 3121 218 0 0 0	0 0 34 0 0 0 96 0 0 0	13 10 130 LOSS 0 0 706 0 0 0 418 0 0 179 0 0 1304	GAIN 0 0 8588 0 0 0 79 0 0 0 34 4 971 68 146 0	0 0 64 0 0 170 0 0	26 9 234 LOSS 0 0 0 1330 0 0 741 0 0 0 0 2070	GAIN 0 0 0 2681 0 0 1440 0 0 0 2821 197 0 0 0	0 0 0 0 20 80 0 0 0	10 100 LOSS 0 0 0 0 493 349 0 0 0 0 0 842	GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 12 0 0 0 96 0 0	12 9 108 LOSS 0 0 249 0 0 0 418 0 0 0 0 668	0 0 303 0 0 0 79 0 0 0 0 0 382	0 0 0 0 40 455 0 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0 0 0 0 2968	GAIN 0 0 0 0 0 1866 374 0 0 0 0 5660 39 0 0	0 0 0 0 0 20 30 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	15.5			108 9 594 LOS 0 0 0 3 62 3 62 0 0 0 0 0 0 378 132: 0 0 0 0 0 368: 513:	S GAIN 0 0 76 126 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED EAST EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT COSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 0 0 0 0 0 0 0 2171 0.39 855 303	GAIN 0 1340 0 0 0 187 0 0 0 97	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 0 0 0 0 0 2456 0	GAIN 0 0 0 2932 0 0 0 189 0 0 0	0 0 34 0 0 0 96 0 0 0 72	13 10 130 LOSS 0 0 706 0 0 0 418 0 0 0 179 0 0 1304 0.39 513	GAIN 0 0 858 0 0 0 79 0 0 34 971 68 146	0 0 64 0 0 170 0 0 0	26 9 234 LOSS 0 0 0 1330 0 0 741 0 0 0 0 2070 0.56 1154	GAIN 0 0 0 2681 0 0 140 0 0 0 2821 197 0	0 0 0 0 20 80 0 0 0	10 10 100 LOSS 0 0 0 0 0 493 349 0 0 0 0 0 0 842 0.56 469	GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 12 0 0 0 96 0 0 0	12 9 108 LOSS 0 0 249 0 0 0 418 0 0 0 0 0 6668 0 0.56 372 0	0 0 303 0 0 0 79 0 0 0 0 0 382	0 0 0 0 40 455 0 0 0	45 11 495 LOSS 0 0 0 0 0 986 1982 0 0 0 0 0 2968 0.56 1654	GAIN 0 0 0 0 1866 374 0 0 0 5660 39 0	0 0 0 0 0 0 20 30 0 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	15.			108 9 594 LOS 0 0 0 0 3 62 3 62 0 0 0 0 0 0 378 132 0 0 0 0 0 368: 513: 0 0.40 1.040 532:	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0 2 2 5 452 4 9 32 0 0 419
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED SEM WALL ABOVE OR 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 HEAT GAIN APPLIANCES/LIGHTS TOTAL HT LOSS BTU/H	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 993 0 0 0 2171 0.39 855	GAIN 0 1340 0 0 0 0 187 0 0 97 1625 114 216 0 419	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 0 0 0 0 0 0 2456	GAIN 0 0 0 0 29322 0 0 0 1899 0 0 0 0 3121 218 0 0 0 419	0 0 34 0 0 0 96 0 0 0 72	13 10 130 LOSS 0 0 706 0 0 0 418 0 0 0 179 0 0 1304 0.39 513 182	GAIN 0 0 858 0 0 0 0 0 34 971 68 146 0 419	0 0 64 0 0 170 0 0 0	26 9 234 LOSS 0 0 0 1330 0 0 741 0 0 0 0 2070	GAIN 0 0 0 26811 0 0 0 1440 0 0 0 0 28221 1977 0 0 419	0 0 0 0 20 80 0 0 0	10 100 LOSS 0 0 0 0 493 349 0 0 0 0 0 842	GAIN 0 0 0 0 0 93 666 0 0 0 0 159 11 0 0 419	0 0 12 0 0 0 96 0 0 0	12 9 108 LOSS 0 0 0 249 0 0 0 418 0 0 0 0 668 0.566 372 0	0 0 303 0 0 0 79 0 0 0 0 0 0 0 382	0 0 0 0 40 455 0 0 0	45 11 495 LOSS 0 0 0 0 986 1982 0 0 0 0 0 2968	GAIN 0 0 0 0 186 374 0 0 0 0 560 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 20 30 0 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	15			108 9 594 LOS 0 0 0 3 622 3 622 0 0 0 0 0 0 378 1321 0 0 0 0 0 3683 5133	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0 2 2 4 5 2 4
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED EAST EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT COSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	FACTO LOSS 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	32 0 0 0 0 228 0 0 0 206	26 10 260 LOSS 0 665 0 0 0 0 0 0 0 0 0 0 2171 0.39 855 303	GAIN 0 1340 0 0 0 187 0 0 97 1625 114 216 0	0 0 70 0 0 230 0 0 0	30 10 300 LOSS 0 0 0 1454 0 0 0 0 0 0 0 2456 0	GAIN 0 0 0 2932 0 0 189 0 0 0 3121 218 0 0 0	0 0 34 0 0 0 96 0 0 0 72	13 10 130 LOSS 0 0 706 0 0 0 418 0 0 0 179 0 0 1304 0.39 513 182	GAIN 0 0 8588 0 0 0 79 0 0 0 34 4 971 68 146 0	0 0 64 0 0 170 0 0 0	26 9 234 LOSS 0 0 0 1330 0 0 741 0 0 0 0 2070 0.56 1154	GAIN 0 0 0 2681 0 0 1440 0 0 0 2821 197 0 0 0	0 0 0 0 20 80 0 0 0	10 10 100 LOSS 0 0 0 0 0 493 349 0 0 0 0 0 0 842 0.56 469	GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 12 0 0 0 96 0 0 0	12 9 108 LOSS 0 0 0 249 0 0 0 418 0 0 0 0 668 0.566 372 0	0 0 303 0 0 0 79 0 0 0 0 0 382	0 0 0 0 40 455 0 0 0	45 11 495 LOSS 0 0 0 0 0 986 1982 0 0 0 0 0 2968 0.56 1654	GAIN 0 0 0 0 0 1866 374 0 0 0 0 5660 39 0 0	0 0 0 0 0 0 20 30 0 0 0	5 10 50 COSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				1345	15			108 9 594 LOS 0 0 0 0 3 62 3 62 0 0 0 0 0 0 378 132 0 0 0 0 0 368: 513: 0 0.40 1.040 532:	S GAIN 0 0 76 126 0 0 0 8 251 0 0 0 2 2 5 452 4 9 32 0 0 419

TOTAL HEAT GAIN BTU/H:

29765

TONS: 2.48

LOSS DUE TO VENTILATION LOAD BTU/H: 1274

STRUCTURAL HEAT LOSS: 39354

TOTAL COMBINED HEAT LOSS BTU/H: 40628

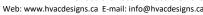
Michael O'Kounte.



	NAME:					TVD= 4004 EN				5475				054	0004		70000				
Ві	UILDER:	ROYAL	PINE HO	MES		TYPE: 1804 ENI				DATE: /	Apr-19			GFA:	2064	LO#	78929				
HEATING CFM TOTAL HEAT LOSS	970 39,354			LING CFM IEAT GAIN		furnace pressure furnace filter a/c coil pressure	0.6 0.05 0.2							59SP	#6 5A-60-12	CARRIEI 60	₹	INPUT	AFUE = (BTU/H) =		
AIR FLOW RATE CFM	24.65	Α	IR FLOW F	RATE CFM	32.85	available pressure								FAN	SPEED			OUTPUT	(BTU/H) =	58,000	
						for s/a & r/a	0.35								LOW	0					
RUN COUNT	4th	3rd	2nd	1st	Bas										EDLOW	785		DESI	GN CFM =		_
S/A	0	6	5	6	3	plenum pressure s/a	0.18			pressure	0.17				MEDIUM	845			CFM @ .	6 " E.S.P.	
R/A	0	3	1	1	1	max s/a dif press. loss	0.03			ess. Loss	0.02			MEDIL	JM HIGH	970					
All S/A diffusers 4"x10" unl				out.		min adjusted pressure s/a	0.15	adj	usted pre	ssure r/a	0.15				HIGH	1030	Т	EMPERAT	URE RISE	55	_ °F
All S/A runs 5"Ø unless not	ted othen	wise on la	ayout.																		
RUN#		2	3	_ 4	_ 5	7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME		ENS	WIC	BED-2	BED-3	BATH	MBR	KT/BR	LV/DN	PWD-2	FAM	FAM	OFF	LAUN	PWD	FOY	MUD	BAS	BAS	BAS	OFF
RM LOSS MBH.		1.34	1.30	1.44	1.92	0.15	1.53	2.00	3.33	1.28	1.71	1.71	1.61	1.31	1.04	4.62	0.97	3.49	3.49	3.49	1.61
CFM PER RUN HEAT		33	32	36	47	4	38	49	82	32	42	42	40	32	26	114	24	86	86	86	40
RM GAIN MBH.		0.92	0.99	3.17	2.60	0.08	2.48	2.08	3.08	1.34	2.44	2.44	2.23	0.77	0.53	0.78	0.16	0.39	0.39	0.39	2.23
CFM PER RUN COOLING		30	32	104	85	3	82	68	101	44	80	80	73	25	17	26	5	13	13	13	73
ADJUSTED PRESSURE		0.17	0.17	0.16	0.16	0.17	0.16	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.15	0.17	0.16	0.16	0.16	0.17
ACTUAL DUCT LGH.		57	67	64	66	42	47	23	50	49	41	34	14	16	7	40	25	10	16	22	24
EQUIVALENT LENGTH		180	200	170	190	180	200	170	130	160	150	150	100	110	120	120	100	110	120	110	120
TOTAL EFFECTIVE LENGTH		237	267	234	256	222	247	193	180	209	191	184	114	126	127	160	125	120	136	132	144
ADJUSTED PRESSURE		0.07	0.06	0.07	0.06	0.08	0.07	0.09	0.09	0.08	0.09	0.09	0.15	0.14	0.14	0.1	0.14	0.14	0.12	0.12	0.12
ROUND DUCT SIZE		4	4	6	6	4	6	5	6	4	5	5	4	4	4	6	4	6	6	6	5
HEATING VELOCITY (ft/min)		379	367	184	240	46	194	360	418	367	308	308	459	367	298	581	275	438	438	438	294
COOLING VELOCITY (ft/min)		344	367	530	433	34	418	499	515	505	587	587	837	287	195	133	57	66	66	66	536
OUTLET GRILL SIZE		3X10	3X10	4X10	4X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10	3X10
TRUNK		A	В	В	В	В	А	В	В	В	А	A	E	D	D	D	E	<u>E</u>	E	D	E

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
I KUNK

SUPPLY AIR TRUNK SIZE																	RETURN A	IR TRUN	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	155	0.07	7.2	10	Х	8	279		TRUNK G	0	0.00	0	0	Х	8	0	TRUNK O	0	0.05	0	0	Х	8	0
TRUNK B	282	0.06	9.4	14	Х	8	363		TRUNK H	0	0.00	0	0	Х	8	0	TRUNK P	0	0.05	0	0	Х	8	0
TRUNK C	437	0.06	11.1	20	Х	8	393		TRUNK I	0	0.00	0	0	Х	8	0	TRUNK Q	0	0.05	0	0	Х	8	0
TRUNK D	258	0.10	8	8	Х	8	581		TRUNK J	0	0.00	0	0	Х	8	0	TRUNK R	0	0.05	0	0	Х	8	0
TRUNK E	276	0.12	7.8	8	Х	8	621		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											BR	TRUNK W	0	0.05	0	0	X	8	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		TRUNK X	970	0.05	15.6	28	Х	8	624
AIR VOLUME	130	95	260	290	75	0	0	0	0	0	0	0	0	0	0	120	TRUNK Y	560	0.05	12.7	18	X	8	560
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	0	0.05	0	0	X	8	0
ACTUAL DUCT LGH.	55	70	41	50	74	1	1	1	1	1	1	1	1	1	1	14	DROP	970	0.05	15.6	24	Х	10	582
EQUIVALENT LENGTH	175	135	220	140	240	0	0	0	0	0	0	0	0	0	0	140								
TOTAL EFFECTIVE LH	230	205	261	190	314	1	1	1	1	1	1	1	1	1	1	154								
ADJUSTED PRESSURE	0.06	0.07	0.06	0.08	0.05	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10								
ROUND DUCT SIZE	7	6	9.1	8.8	6	0	0	0	0	0	0	0	0	0	0	6								
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	8								
	X	X	X	X	X	X	X	X	X	X	Χ	X	X	Χ	X	X								
INLET GRILL SIZE	14	14	30	30	14	0	0	0	0	0	0	0	0	0	0	14	1							





TYPE: 1804 END SITE NAME: FORESTSIDE

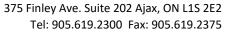
LO# 78929

#### RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL VEI	NTILATION CAPACITY		9.32.3.5.
a)		Total Ventilation Capa	city	180.2	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Ventil. (	Capacity	63.6	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplementa	al Capacity	116.6	cfm
d) Solid Fuel (including fireplaces)					
e) No Combustion Appliances		PRINCIPAL EXHAUST	FAN CAPACITY		
- Into Communication ( ) The Communication (		Model:	VANEE 65H	Location:	BSMT
HEATING SYSTEM		63.6	ofm 3.0	sones	✓ HVI Approved
Forced Air Non Forced Air			THEAT LOSS CALCULA		W.L.000
		CFM 63.6 CFM	ΔT °F X 74 F	FACTOR X 1.08	% LOSS X 0.25
Electric Space Heat		SUPPLEMENTAL FAI	NS.	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		PWD-2 PWD	QTXEN050C QTXEN050C	50 50	✓ 0.3 ✓ 0.3
II Type I except with solid fuel (including fireplace	es)				
III Any Type c) appliance		HEAT RECOVERY VE 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	C)	
		LOCATION OF INSTA	LLATION		
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	Lot:		Concession	
1 Exhaust only/Forced Air System		200		001100001011	
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 Perr	nit #
THEY WITH DUCTING/HOTH Torceu all system		BUILDER:	ROYAL PINE HOME	ES	
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>2</u> @ 10.6 cfm <u>21.2</u>	cfm	Telephone #:		Fax#:	
Kitchen & Bathrooms 5 @ 10.6 cfm 53	cfm	INSTALLING CONTR	ACTOR		
Other Rooms <u>6</u> @ 10.6 cfm <u>63.6</u>	cfm	Name:			
Table 9.32.3.A. TOTAL <u>180.2</u>	cfm	Address:			
		City:			
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	Telephone #:		Fax#:	
1 Bedroom 31.8	cfm	,		T GAT II.	
2 Bedroom 47.7	cfm		s ventilation system has b	peen designed	
3 Bedroom 63.6	cfm	in accordance with the Name:	Ontario Building Code. HVAC Designs Ltd.		
4 Bedroom 79.5	cfm	Signature:		Mehad Ofourhe	2.
5 Bedroom 95.4	cfm	HRAI#		001820	
TOTAL 63.6 cfm		Date:		April-19	
I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUA	ALIFIED IN THE AP	PROPRIATE CATEGORY AS AN "O	THER DESIGNER" UNDER DIVIS	SION C, 3.2.5 OF THE BU	ILDING CODE.



			rom	nula Sheet (For Air Lea	ikage / Ventination C	aicuiationj				
LO#: 7892	29	Model: 1804 END		Builde	r: ROYAL PINE HOMES				Date:	4/22/2019
		Volume Calculation	n				Air Change & Delt	a T Data		
				7						
se Volume	FI A /6+2\	[]	\(\frac{1}{2}\)				TURAL AIR CHANG		0.428	
	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)			SUMMER NA	ATURAL AIR CHANG	JE RATE	0.147	
Bsmt First	434 434	9	3906 3906							
Second	817	10	8170	1			Design Te	mperature Diff	erence	
Third	827	9	7443				Tin °C	Tout °C	ΔT °C	ΔT °F
Fourth	0	9	0			Winter DTDh	22	-19	41	74
		Total:	23,425.0 ft <sup>3</sup>	1		Summer DTDc	22	30	8	14
		Total:	663.3 m³							
		•		-						
	5.2.3	3.1 Heat Loss due to A	ir Leakage			6.2.6	Sensible Gain due	to Air Leakage		
		$V_{b}$					$V_{h}$			
	$HL_{airb} =$	$LR_{airh} \times \frac{V_b}{3.6} \times R_b$	$DTD_h \times 1.2$		Н	$IG_{salb} = LR_{airc}$	$\times \frac{b}{2.6} \times DTD_c$	× 1.2		
0.428		_ x <u>41°C</u>		= 3904 W	= 0.147		x 8°C		= [	253 W
0.420	x 104.20	_ ^ <del>-11C</del>	_ ^ <u>1.2</u>	- 3304 VV	0.147	λ 104.20	_ ^	^	. – I	233 VV
				= 13321 Btu/h	ī <b> </b>				= [	863 Btu/h
				10011 0107	L .				L	555 210,1
	5.2.3.2 Hea	at Loss due to Mechar	nical Ventilation			6.2.7 Se	nsible heat Gain d	ue to Ventilatio	n	
	$HL_{vairb} =$	$PVC \times DTD_h \times 1$	$1.08 \times (1-E)$		$HL_1$	$_{vairb} = PVC \times D$	$TD_h \times 1.08 \times$	(1-E)		
					,				r	
64 CFM	x <u>74 °F</u>	x 1.08	x 0.25	= 1274 Btu/h	64 CFM	x <u>14 °F</u>	x 1.08	x 0.25	_ = [	240 Btu/h
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Floo	or Multiplier Section)				
		HI	· = Level Fact	or $\times$ $HL_{airbv}$ $\times$ {(H	+ HL, ) ÷	(HI. , , + HI.	)3			
		a	irr Beverraee	- A II Lairby A ((II	Lager ( 11Lbger) .	(11 agcievei   11 a	bgcievei )3			
				HLairve Air Leakage +	<b>Level Conductive Heat</b>	Air Leakage Heat Lo	ss Multiplier (LF x			
		Level	Level Factor (LF)	Ventilation Heat Loss	Loss: (HL <sub>clevel</sub> )	HLairby /				
				(Btu/h)						
		1	0.4	4	5,135	1.03				
		2	0.3	42.224	7,172	0.55				
		3	0.2	13,321	6,767	0.39				
		4	0.1	4	5,781	0.23				
		5	0		0	0.00	JU			







### **HEAT LOSS AND GAIN SUMMARY SHEET**

MODEL:	1804 END		BUILDER: ROYAL PINE HOMES	
SFQT:	2064	<b>LO#</b> 78929	SITE: FORESTSIDE	
DESIGN A	SSUMPTIONS			
HEATING		°F	COOLING	°F
_	R DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR I	DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72
BUILDING	G DATA			
ATTACHN	1ENT:	ATTACHED	# OF STORIES (+BASEMENT):	4
FRONT FA	ACES:	EAST	ASSUMED (Y/N):	Υ
AIR CHAN	IGES PER HOUR:	3.57	ASSUMED (Y/N):	Υ
AIR TIGH	TNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Υ
WIND EX	POSURE:	SHELTERED	ASSUMED (Y/N):	Υ
HOUSE V	OLUME (ft³):	23425.0	ASSUMED (Y/N):	Υ
INTERNA	L SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR	LIGHTING LOAD (Btu/h	n/ft²): 1.50	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDA	TION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	5.5 ft
LENGTH:	44.0 ft	WIDTH: 18.0 ft	EXPOSED PERIMETER:	108.0 ft

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

Wea	ther Sta	ation Description
		tion bescription
Province:	Ontario	
Region:	Brampto	
		Description
Soil Conductivity:	Normal	conductivity: dry sand, loam, clay
Water Table:	Normal	(7-10 m, 23-33 ft)
Fo	undatio	on Dimensions
Floor Length (m):	13.4	
Floor Width (m):	5.5	
Exposed Perimeter (m):	32.9	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.68	Insulation Configuration
Window Area (m²):	0.6	
Door Area (m²):	0.0	
	Radi	iant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	ation Loads
Heating Load (Watts):		1079

**TYPE:** 1804 END **LO#** 78929

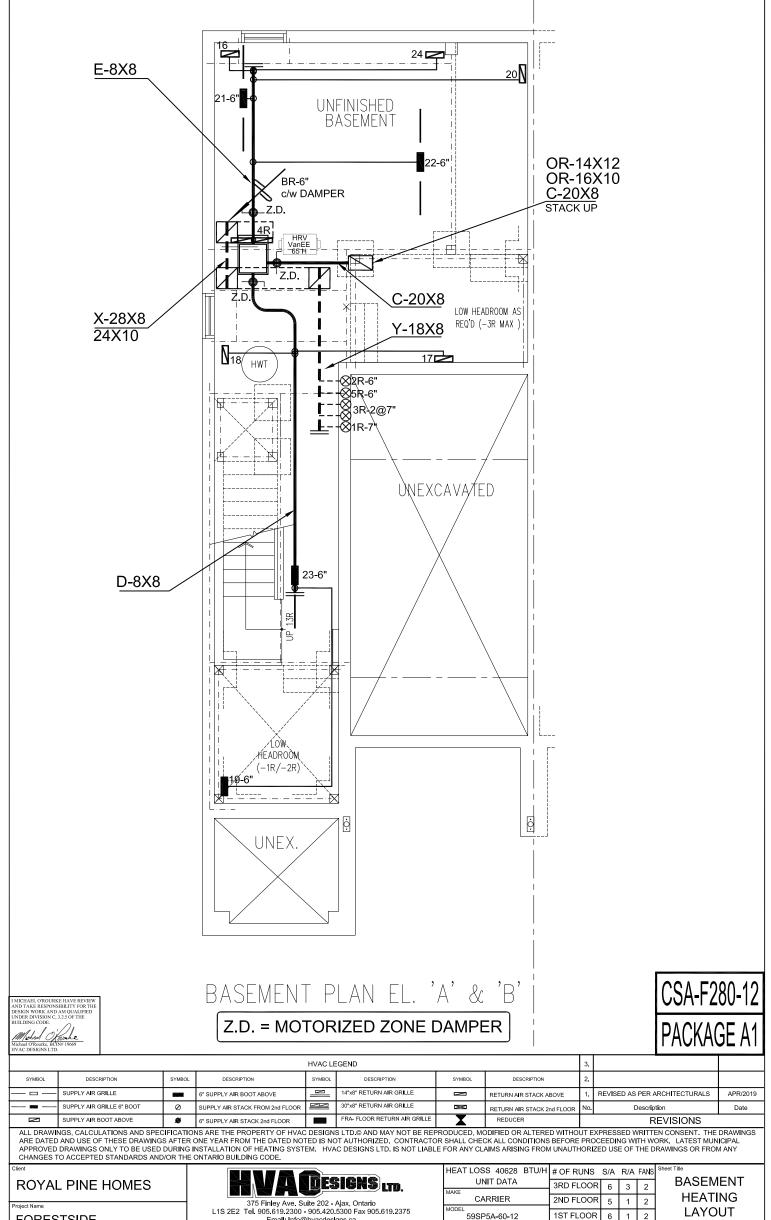


# **Air Infiltration Residential Load Calculator**

Supplemental tool for CAN/CSA-F280

Weather Sta	ition Des	cripti	on		
Province:	Ontar	io			
Region:	Bramı	oton			
Weather Station Location:	Open	flat te	rrain, g	rass	
Anemometer height (m):	10				
	Shieldin	g			
Building Site:	Subur	ban, fo	orest		
Walls:	Heavy	1			
Flue:	Heavy	1			
Highest Ceiling Height (m):	9.60				
Building (	Configura	ation			
Type:	Semi				
Number of Stories:	Three				
Foundation:	Full				
House Volume (m³):	663.3				
Air Leakag	ge/Ventil	ation	)		
Air Tightness Type:	Prese	nt (196	51-) (3.	57 ACH	H)
Custom BDT Data:	ELA @	10 Pa	١.		884.2 cm <sup>2</sup>
	3.57				ACH @ 50 Pa
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust
		30.0			30.0
Flu	ue Size				
Flue #:	#1	#2	#3	#4	
Diameter (mm):	0	0	0	0	
Natural Inf	filtration	Rate	S		
Heating Air Leakage Rate (ACH/I	H):	0	.42	8	
Cooling Air Leakage Rate (ACH/H	H):	0	.14	7	

**TYPE:** 1804 END **LO#** 78929



**FORESTSIDE** BRAMPTON, ONTARIO

1804 - END

Emall: Info@hvacdeslgns.ca

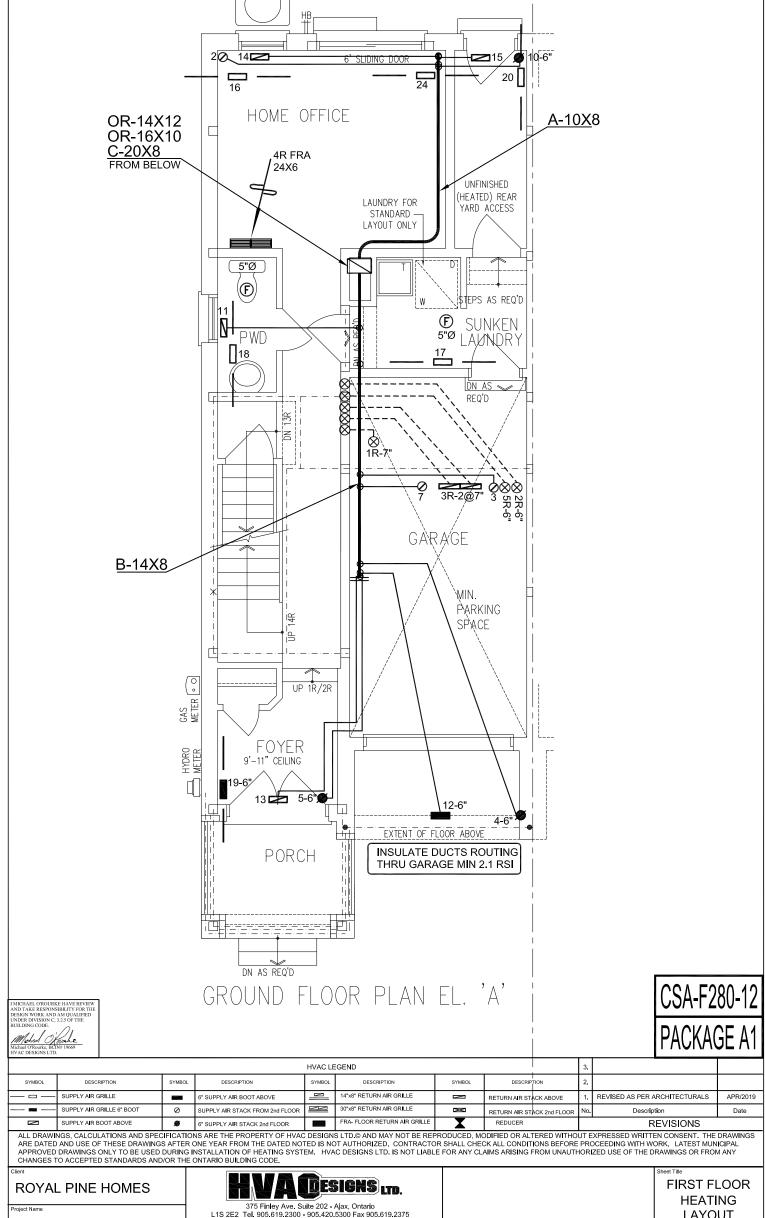
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

HEALL		B10/H	# OF RUNS	S/A	R/A	FANS	Oncor
	UNIT DATA		3RD FLOOR	6	3	2	
MAKE	CARRIER		2ND FLOOR	5	1	2	
MODEL 59	9SP5A-60-12		1ST FLOOR	6	1	2	
INPUT	60	MBTU/H	BASEMENT	3	1	0	Date
OUTPUT		мвти/н	ALL S/A DIFFU	SERS	4 "x10	,	Scale
	58		UNLESS NOTE				
COOLING	0.5	TONS	ON LAYOUT. A				
	2.5		UNLESS NOTE			SE	. (
FAN SPEEI	970	cfm @ 0.6" w.c.	ON LAYOUT. U DOORS 1" min.				LC

JUNE/2018

3/16" = 1'-0" BCIN# 19669

78929



**FORESTSIDE** BRAMPTON, ONTARIO

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.

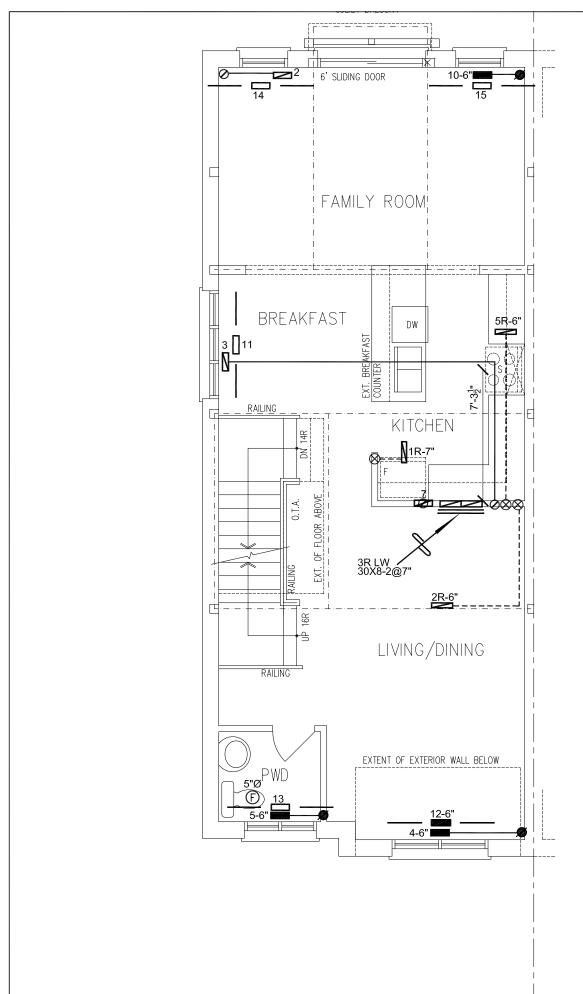
LAYOUT

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

BCIN# 19669

LO# 78929

1804 - END



MAIN FLOOR PLAN EL. 'A'

CSA-F280-12 PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE	N	RETURN AIR STACK ABOVE	1.	REVISED AS PER ARCHITECTURALS	APR/2019
	SUPPLY AIR GRILLE 6" BOOT	0	SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE	×	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE	Ø	6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE	X	REDUCER		REVISIONS	

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**ROYAL PINE HOMES** 

**FORESTSIDE** BRAMPTON, ONTARIO DESIGNS LTD.

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

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

BCIN# 19669

78929

1804 - END

