Schedule 1: Designer Information

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

A. Project Information					
Building number, street name				Unit no.	Lot/con.
Municipality	Postal code	Plan number/ other desc	cription		
RICHMOND HILL					
B. Individual who reviews and takes r	L responsibility fo	r design activities			
Name	coponicionity to	Firm			
MICHAEL O'ROURKE		HVAC DESIGNS LTD.			
Street address			Unit no.		Lot/con.
375 FINLEY AVE		T	202		N/A
Municipality	Postal code L1S 2E2	Province	E-mail		
AJAX		ONTARIO	info@hvacdes	signs.ca	
Telephone number (905) 619-2300	Fax number (905) 619-2375		Cell number		
,	` ,		,		
C. Design activities undertaken by in	dividual identific	ed in Section B. [Build	ding Code Ta	ble 3.5.2.1 OF Divi	sion C]
☐ House		– House		Building Structura	
☐ Small Buildings		g Services		Plumbing – Hous	
□ Large Buildings□ Complex Buildings	☐ Detection	on, Lighting and Pow		Plumbing – All Bu On-site Sewage S	
Description of designer's work			2011	On site dewage (- Jystems
HEAT LOSS / GAIN CALCULATIONS		lwiodei.	2011		
DUCT SIZING			FIN BSMT		
RESIDENTIAL MECHANICAL VENTILATIO	N DESIGN SUMM	ARY Project:	CENTREFIELD (WEST GORMLEY)	
RESIDENTIAL SYSTEM DESIGN per CSA-	F280-12	.,		,	
D. Declaration of Designer					
I MICHAEL O'ROURKE	nt name)		declare th	at (choose one as ap	propriate):
"	•				
 I review and take responsibility for Division C, of the Building Code. classes/categories. 	or the design work of lam qualified, and	on behalf of a firm registe the firm is registered, in t	red under subse he	ection 3.2.4.of appropriate	
Individual BCIN: _ Firm BCIN: _					
I review and take responsibility for designer under subsection 3.2		m qualified in the appropr n C, of the Building Code		s an "other	
Individual BCIN:	19669				
Basis for exemption fr	om registration and	d qualification:	O.B.C SEN	TENCE 3.2.4.1 (<u>4)</u>
☐ The design work is exempt Basis for exemption from registra		on and qualification requi	rements of the I	Building Code.	
I certify that:					
 The information contained I have submitted this application 		ule is true to the best of medge and consent of the f			
April 21, 2021			Maha	1 Ofambe	•
Date	•			Signature of Desi	gner
					-

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.



		: CENTRI : ROYAL			ORMLEY))	FIN BSMT TYPE: 2011 furnace pressure 0.6				DATE:	Apr-21			GFA:	1792	LO#	87545	37545					
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM	25.57		TOTAL H		28,711 30.48		а	furn a/c coil vailable p	ace filter pressure									060-14V SPEED LOW	*CARRIE 60 820	R	OUTPUT		60,000 58,000	
RUN COUNT S/A R/A All S/A diffusers 4"x10" unl All S/A runs 5"Ø unless no				1st 7 2 out.	Bas 4 1		max	s/a dif pr	ssure s/a ess. loss ssure s/a	0.02		grille pre	pressure ess. Loss essure r/a	0.02			N	EDLOW MEDIUM M HIGH HIGH	875 0 0 1520	-	DESIO		.6 " E.S.P.	°F
RID ## 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	1 MBR 1.48 38 2.00 61 0.17 72 190 262 0.07 5 279 448 3X10 A	2 ENS 1.18 30 0.74 23 0.17 64 180 244 0.07 4 344 264 3X10 A	3 BED-2 1.02 26 1.60 49 0.17 38 110 148 0.12 5 191 360 3X10 D	4 BED-2 1.02 26 1.60 49 0.17 33 120 153 0.11 4 298 562 3X10 D	5 BED-3 2.21 56 2.81 86 0.16 35 170 205 0.08 6 286 438 4X10 D	6 BED-3 2.21 56 2.81 86 0.16 32 150 182 0.09 6 286 438 4X10 D	7 BATH 0.82 21 0.56 17 0.17 45 130 175 0.1 4 241 195 3X10 C			10 MBR 1.48 38 2.000 61 0.17 62 150 212 0.08 5 279 448 3X10 A	11 DEN 1.67 43 2.14 65 0.17 7 150 157 0.11 5 316 477 3X10 D	12 DEN 1.67 43 2.14 65 0.17 11 130 141 0.12 5 316 477 3X10 D	13 GRT 2.14 55 1.91 58 0.17 55 150 205 0.08 5 404 426 3X10 A	14 KT/BR 1.93 49 2.83 86 0.16 47 140 187 0.09 6 250 438 4X10 A	15 KT/BR 1.93 49 2.83 86 0.16 50 130 180 0.09 6 250 438 4X10 B			18 PWD 0.42 11 0.07 2 0.17 22 110 132 0.13 4 126 23 3X10 C	19 FOY 2.72 70 1.06 32 0.17 25 110 135 0.13 5 514 235 3X10 C		21 BAS 3.26 83 0.54 16 0.16 69 130 199 0.08 6 423 82 4X10 B	22 BAS 3.26 83 0.54 16 0.16 61 180 241 0.07 6 423 82 4X10 A	23 B-BATH 0.52 13 0.00 0 0.17 24 120 144 0.12 4 149 0 3X10 B	24 BAS 3.26 83 0.54 16 0.16 110 126 0.13 6 423 82 4X10 D
RUN # ROOM NAME RM LOSS MBH. CFM PER RUN HEATI RM GAIN MBH. CFM PER RUN COOLING ADJUSTED PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE ROUND DUCT SIZE HEATING VELOCITY ((t/min) COOLING VELOCITY ((t/min) OUTLET GRILL SIZE TRUNK																								
SUPPLY AIR TRUNK SIZE	TOURIN	07470	DOUBLE	DEOT			VELOCITY.			TOUNK	074710	DOUBLE	DEGE			VELOCITY	RETURN A			DOLIND	PEGT			VELOOP!
TRUNK A TRUNK B TRUNK C TRUNK D TRUNK E TRUNK F	145 540 873 0	STATIC PRESS. 0.07 0.08 0.07 0.07 0.00 0.00 0.00	9.2 6.8 11.5 13.8 0	10 8 16 22 0	x x x x x	8 8 8 8 8	VELOCITY (ft/min) 527 326 608 714 0 0		TRUNK G TRUNK H TRUNK I TRUNK J TRUNK K TRUNK L	TRUNK CFM 0 0 0 0 0 0 0	STATIC PRESS. 0.00 0.00 0.00 0.00 0.00 0.00 0.00	ROUND DUCT 0 0 0 0 0 0 0	RECT DUCT 0 0 0 0 0 0	x x x x x	8 8 8 8 8	VELOCITY (ft/min) 0 0 0 0 0	TRUNK O TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V	TRUNK CFM 0 0 0 0 0 0 0 0 0	STATIC PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05	0 0 0 0 0 0 0 0	RECT DUCT 0 0 0 0 0 0 0	x x x x x x	8 8 8 8 8	VELOCITY (ft/min) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
RETURN AIR #	1 0	2	3	4 0	5 0	6 0	0	0	0	0	0	0	0	0	0	BR	TRUNK W TRUNK X	0 875	0.05 0.05	0 15	0 26	X X X	8	0 606
AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LH ADJUSTED PRESSURE ROUND DUCT SIZE INLET GRILL SIZE INLET GRILL SIZE	120 0.15 68 195 263 0.06 6.8 8 X	85 0.15 45 215 260 0.06 6 8 X	85 0.15 45 195 240 0.06 6 8 X	115 0.15 52 235 287 0.05 7 8 X 14	300 0.15 37 200 237 0.06 9.6 8 X 30	120 0.15 20 135 155 0.10 6 6 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	0 0.15 1 0 1 14.80 0 0 X	50 0.15 42 175 217 0.07 4.7 8 X 14	TRUNK Y TRUNK Z DROP	705 420 875	0.05 0.05 0.05 0.05	13.8 11.4 15	22 16 24	x x x	8 8 10	577 473 525



SITE NAME:					MLEY))			FIN BSMT							DATE: Apr-21					HANGE RATE 0.236	HEAT LOSS					A-F280-12
BUILDER:	ROYAL	. PINE I	HOMES					TYPE:	2011			_	1792			LO# 87545				R NATURAL AIR CH	HANGE RATE 0.071	HEAT GAIN		13		12 PERFO	RMANCE
ROOM USE				MBR			ENS				BED-2	2		BED-3				BATH					В	B-BATH			
EXP. WALL				32			15				10			37				9						0			
CLG. HT.				9			9				9			9				9						10			
	FACTO																										
	LOSS	GAIN		288			135				90			333				81						0			
GLAZING					GAIN		LOSS				LOSS			LOSS										LOSS (
NORTH	21.8	16.0	0	0	0	0	0	0		0		0	0	0	0		0	0	0				0	0	0		
EAST	21.8	41.6	0	0	0	0	0	0		2		1163	36		1496		0	0	0				0	0	0		
SOUTH	21.8	24.9	28	610	697	16	349	398		9		0	46		1145		12	261	299				0	0	0		
WEST	21.8	41.6	22	479	914	0	0	0		0		0	0	0	0		0	0	0				0	0	0		
SKYLT.	35.8	101.2	0	0	0	0	0	0		9		0	0	0	0		0	0	0				0	0	0		
DOORS	25.8	4.3	0	0	0	0	0	0		1		0	0	0	0		0	0	0				0	0	0		
NET EXPOSED WALL	4.2	0.7	238	1001	165	119	500	82		6		43	251	1056	174		69	290	48				0	0	0		
NET EXPOSED BSMT WALL ABOVE GR	3.7	0.6	0	0	0	0	0	0		0		0	0	0	0		0	0	0				0	0	0		
EXPOSED CLG NO ATTIC EXPOSED CLG	1.3 2.8	0.6	330	434	194 0	120 0	158 0	71 0		18		106	126 75	166 211	74 94		112 0	147 0	66 0				0	0	0		
EXPOSED FLOOR	2.6	1.3 0.4	0	0	0	0	0	0		18		0 77	75	196	32		0	0	0				0	0	0		
BASEMENT/CRAWL HEAT LOSS	2.0	0.4	U	0	U	١ '	0	U		10	0	"	15	0	32		١ '	0	U				١ ٠		۰		
SLAB ON GRADE HEAT LOSS				0			0				0			0				0						314 0			
SUBTOTAL HT LOSS				2524			1007				1577			3414				699						314			
SUB TOTAL HT GAIN				2324	1970		1007	551			15//	1389			3015			033	412					314	0		
LEVEL FACTOR / MULTIPLIER			0.20	0.18	1570		0.18			0:	20 0.18	1000	0.20	0.18	00.0		0.20	0.18	7.2				0.50	0.65	١		
AIR CHANGE HEAT LOSS			0.20	444		0.20	177			"	277		0.20	600			0.20	123					0.00	204			
AIR CHANGE HEAT GAIN					77			21				54		000	117			0	16						0		
DUCT LOSS				0			0				185	04		401				0						0	١		
DUCT GAIN				•	0		•	0				224			392			•	0					•	0		
HEAT GAIN PEOPLE	240		2		480	0		0		1		240	1		240		0		0				0		0		
HEAT GAIN APPLIANCES/LIGHTS					552			0				552			552				0						0		
TOTAL HT LOSS BTU/H				2968			1184				2040			4416				822						518			
TOTAL HT GAIN x 1.3 BTU/H					4002			745				3196			5612				557						0		
																									U		
					-1002										0012										U		
ROOM USE				DEN			GRT		KT/BR						0012	PWD		FOY								BA	
EXP. WALL				33	1002		19		33						0012	8		21								12	5
	EACTO	npe.			1,002										0012												5
EXP. WALL CLG. HT.	FACTO			33 10	1002		19 10		33 10						0012	8 10		21 11								12! 10	5
EXP. WALL CLG. HT. GRS.WALL AREA				33 10 330			19 10 190	GAIN	33 10 330	SAIN					55.12	8 10 80		21 11 231								12: 10 87:	5
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING	LOSS	GAIN		33 10 330 LOSS	GAIN		19 10 190 LOSS	GAIN 0	33 10 330 LOSS						00.12	8 10 80 LOSS GAIN		21 11 231 LOSS	GAIN							129 10 879 LOS	5 5 SS GAIN
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH	LOSS 21.8	GAIN 16.0	0 37	33 10 330 LOSS 0	GAIN 0		19 10 190	GAIN 0 0	33 10 330	GAIN 0 0					3012	8 10 80 LOSS GAIN 0 0 0	0	21 11 231 LOSS 0	GAIN 0							12: 10 87:	5 5 SS GAIN 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	21.8 21.8	16.0 41.6	37	33 10 330 LOSS 0 806	GAIN 0 1537	0 0	19 10 190 LOSS 0	0 0	33 10 330 LOSS 0 0	0					3012	8 10 80 LOSS GAIN 0 0 0	0	21 11 231 LOSS 0	GAIN 0 0							129 10 879 LOS 0 0	5 5 SS GAIN 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	21.8 21.8 21.8 21.8	GAIN 16.0		33 10 330 LOSS 0	GAIN 0	0	19 10 190 LOSS 0	0	33 10 330 LOSS 0 0 0 0 34 741	0					3012	8 10 80 LOSS GAIN 0 0 0	0	21 11 231 LOSS 0	GAIN 0							129 10 879 LOS 0 0	5 5 6S GAIN 0 0 6 224
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	21.8 21.8	16.0 41.6 24.9	37 37	33 10 330 LOSS 0 806 806	GAIN 0 1537 921	0 0 28	19 10 190 LOSS 0 0 610	0 0 697	33 10 330 LOSS 0 0 0 0 34 741	0 0 847					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0	0 0 20	21 11 231 LOSS 0 0 436	GAIN 0 0 498							129 10 879 LOS 0 0 0 0 9 190	5 5 6S GAIN 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.8 21.8 21.8 21.8 21.8	16.0 41.6 24.9 41.6	37 37 0	33 10 330 LOSS 0 806 806	GAIN 0 1537 921	0 0 28 0	19 10 190 LOSS 0 0 610	0 0 697 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394	0 0 847 2659					3012	80 LOSS GAIN 0 0 0 0 0 0 0 0 0	0 0 20 0	21 11 231 LOSS 0 0 436 0	GAIN 0 0 498 0							129 100 879 LOS 0 0 0 0 0 9 190 3 65	5 5 6SS GAIN 0 0 0 6 224 6 125 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	21.8 21.8 21.8 21.8 21.8 35.8	16.0 41.6 24.9 41.6 101.2	37 37 0 0	33 10 330 LOSS 0 806 806	GAIN 0 1537 921 0	0 0 28 0	19 10 190 LOSS 0 0 610 0	0 0 697 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0	0 0 847 2659 0					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0	21 11 231 LOSS 0 0 436 0	GAIN 0 0 498 0							129 100 879 LOS 0 0 0 0 9 199 3 65 0 0	5 5 6 6 6 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR	21.8 21.8 21.8 21.8 21.8 35.8 25.8	16.0 41.6 24.9 41.6 101.2 4.3	37 37 0 0	33 10 330 LOSS 0 806 806 0	GAIN 0 1537 921 0 0	0 0 28 0 0 20	19 10 190 LOSS 0 0 610 0 0	0 0 697 0 0	330 LOSS 0 0 0 0 34 741 64 1394 0 0	0 0 847 2659 0					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0 0 40	21 11 231 LOSS 0 0 436 0 0	GAIN 0 0 498 0 0							129 100 879 LOS 0 0 0 0 9 199 3 65 0 0 20 51	5 SS GAIN 0 0 0 6 224 5 125 0 7 85 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG	21.8 21.8 21.8 21.8 35.8 25.8 4.2	16.0 41.6 24.9 41.6 101.2 4.3 0.7	37 37 0 0 0 256	33 10 330 LOSS 0 806 806 0 0	GAIN 0 1537 921 0 0	0 0 28 0 0 20 142 0	19 10 190 LOSS 0 0 610 0 0 517 597	0 0 697 0 0 85	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 0 0	0 0 847 2659 0 0					3012	80 LOSS GAIN 0	0 0 20 0 0 40 171	21 11 231 LOSS 0 0 436 0 0 1034 719	GAIN 0 0 498 0 0 170							124 100 874 LOS 0 0 0 0 9 196 3 65 0 0 20 517 0 0	5 SS GAIN 0 0 0 6 224 5 125 0 7 85 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMM WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6	37 37 0 0 0 256	33 10 330 LOSS 0 806 806 0 0 0	GAIN 0 1537 921 0 0 0 177	0 0 28 0 0 20 142 0	19 10 190 LOSS 0 0 610 0 0 517 597 0	0 0 697 0 0 85 98	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 232 976 0 0	0 0 847 2659 0 0 161					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 80 336 55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0 0 40 171	21 11 231 LOSS 0 0 436 0 0 1034 719 0	GAIN 0 0 498 0 0 170 118							12: 10 879 LOS 0 0 0 9 199 3 65 0 0 0 20 51: 0 0 375 138	5 5 5 5 5 5 5 5 5 5 6 5 6 5 6 5 6 6 5 6 6 5 6
EXP. WALL CLG. HT. 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	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6	37 37 0 0 0 256 0	33 10 330 LOSS 0 806 806 0 0 0 1077 0	GAIN 0 1537 921 0 0 177 0	0 0 28 0 0 20 142 0	19 10 190 LOSS 0 0 610 0 517 597 0	0 0 697 0 0 85 98 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 232 976 0 0	0 0 847 2659 0 0 161 0					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0 0 40 171 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0	GAIN 0 0 498 0 170 118 0							12! 100 87! LOS 0 0 0 9 19! 3 65 0 0 0 20 51! 0 0 0 375 138 0 0 0 0 0 0	5 GAIN 0 0 0 6 224 6 125 0 7 85 0 11 227 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0	33 10 330 LOSS 0 806 806 0 0 1077 0 0 0	GAIN 0 1537 921 0 0 177 0	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 610 0 517 597 0 0 0	0 0 697 0 0 85 98 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 232 976 0 0 0 0 0 0	0 0 847 2659 0 0 161 0					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0 0 40 171 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0	GAIN 0 0 498 0 170 118 0							12! 100 879 LOS 0 0 0 9 199 3 655 0 0 0 20 51: 0 0 0 375 1388 0 0 0	5 GAIN 0 0 0 6 224 6 125 0 7 85 0 11 227 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NO ATTIC EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG SEXPOSED CLG SEXPOSED CLG NO ATTIC EXPOSED CLG SEXPOSED CLG SEXPOSED CLG SEXPOSED CLG NO ATTIC EXPOSED SEXPOSED CLG SEXPOSED CLG NO ATTIC EXPOSED CLG SEXPOSED CLG SEXPOSED CLOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0	33 10 330 LOSS 0 806 806 0 0 1077 0 0 0	GAIN 0 1537 921 0 0 177 0	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 610 0 517 597 0 0 0	0 0 697 0 0 85 98 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 232 976 0 0 0 0 0 0	0 0 847 2659 0 0 161 0					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0 0 40 171 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0	GAIN 0 0 498 0 170 118 0							12! 100 87! LOS 0 0 0 9 19! 3 65 0 0 0 20 51! 0 0 0 375 138 0 0 0 0 0 378	5 SS GAIN 0 0 0 6 224 5 125 0 7 85 0 11 227 0 0 0 11
EXP. WALL CLG. HT. 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 SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0	33 10 330 LOSS 0 806 806 0 0 1077 0 0 0	GAIN 0 1537 921 0 0 0 177 0 0	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 610 0 517 597 0 0 0	0 0 697 0 0 85 98 0 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 232 976 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 847 2659 0 0 161 0 0					3012	80 LOSS GAIN 0 336	0 0 20 0 0 40 171 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0	GAIN 0 0 498 0 0 170 118 0 0							12! 100 87! LOS 0 0 0 9 19! 3 65 0 0 0 20 51! 0 0 0 375 138 0 0 0 0 0 0	5 S GAIN 0 0 0 6 224 6 125 0 7 85 0 0 0 0 11 227 0 0 0 11
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0	33 10 330 LOSS 0 806 0 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 177 0	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 0 610 0 517 597 0 0 0 0	0 0 697 0 0 85 98 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 0 0 232 976 0 0 0 0 0 0 0 0 0 0 3110	0 0 847 2659 0 0 161 0					3012	80 LOSS GAIN 0 555	0 0 20 0 40 171 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 0 2189	GAIN 0 0 498 0 170 118 0							128 100 879 LOS 0 0 0 0 0 9 199 3 65 0 0 0 20 511 0 0 0 375 138 0 0 0 0 0 375 378	5 SS GAIN 0 0 0 6 224 6 125 0 7 85 0 0 11 227 0 0 0 11 207 11 10 661
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOONS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0	33 10 330 LOSS 0 806 0 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 0 177 0 0	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 0 610 0 0 517 597 0 0 0 0 1724 0.24	0 0 697 0 0 85 98 0 0	33 10 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 847 2659 0 0 161 0 0					3012	8 10	0 0 20 0 0 40 171 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 2189	GAIN 0 0 498 0 0 170 118 0 0							12! 10 87! LOS 0 0 0 0 9 19! 3 65 0 0 0 20 51: 0 0 0 375 138 0 0 0 0 375 594	5
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 NO ATTIC EXPOSED CLG SEXPOSED CLG NO ATTIC EXPOSED CLG NO ATTIC EXPOSED CLG SEXPOSED CLG NO ATTIC EXPOSED CLG NO ATTIC EXPOSED CLG SEXPOSED CLG NO ATTIC EXPOSED CLG SEXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0	33 10 330 LOSS 0 806 0 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 0 1777 0 0 0 0 2636	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 0 610 0 517 597 0 0 0 0	0 0 697 0 85 98 0 0 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 0 0 232 976 0 0 0 0 0 0 0 0 0 0 3110	0 0 847 2659 0 0 161 0 0 0					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0 40 171 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 0 2189	GAIN 0 0 498 0 0 170 118 0 0 0 0							128 100 879 LOS 0 0 0 0 0 9 199 3 65 0 0 0 20 511 0 0 0 375 138 0 0 0 0 0 375 378	5 S GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BASIT WALL ABOVE OR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0	33 10 330 LOSS 0 806 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 0 177 0 0	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 0 610 0 0 517 597 0 0 0 0 1724	0 0 697 0 0 85 98 0 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 232 976 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 847 2659 0 0 161 0 0					3012	80 LOSS GAIN 0	0 0 20 0 40 171 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 2189	GAIN 0 0 498 0 0 170 118 0 0							128 10 879 LOS 0 0 0 9 199 3 65 0 0 0 20 511 0 0 375 138 0 0 0 0 375 594	5
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 BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 35.8 25.8 4.2 3.7 1.3 2.8	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0	33 10 330 LOSS 0 806 0 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 0 1777 0 0 0 0 2636	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 0 610 0 0 517 597 0 0 0 0 1724 0.24	0 0 697 0 0 85 98 0 0 0	33 10 LOSS 0 0 0 0 34 741 64 1394 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 847 2659 0 0 161 0 0 0					3012	8 10 80 LOSS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 20 0 40 171 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 2189	GAIN 0 0 498 0 0 1770 118 0 0 0							12! 10 87! LOS 0 0 0 0 9 19! 3 65 0 0 0 20 51: 0 0 0 375 138 0 0 0 0 375 594	5 SS GAIN 0 0 0 6 224 6 125 0 7 85 0 0 11 227 0 0 0 11 5 11 5 11 26
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOONS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN DUCT LOSS	21.8 21.8 21.8 21.8 35.8 35.8 4.2 3.7 1.3 2.8 2.6	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0 0	33 10 330 LOSS 0 806 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 0 1777 0 0 0 0 2636 103 0	0 0 28 0 0 20 0 142 0 0	19 10 190 LOSS 0 0 610 0 0 517 597 0 0 0 0 1724	0 0 697 0 0 855 98 0 0 0 0	33 10 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 232 976 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 847 2659 0 0 161 0 0 0 3666					3012	8 10	0 0 20 0 40 171 0 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 2189	GAIN 0 0 0 498 0 0 1770 1118 0 0 0 0 7866							129 100 879 LOS 0 0 0 0 0 9 199 3 655 0 0 0 20 517 0 0 0 375 138 0 0 0 0 0 376 594 0.50 0.66 385	5
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED ULG NO ATTIC 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 GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE	21.8 21.8 21.8 21.8 35.8 35.8 4.2 3.7 1.3 2.8 2.6	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0	33 10 330 LOSS 0 806 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 0 1777 0 0 0 0 2636 103 0 0	0 0 28 0 0 20 142 0 0	19 10 190 LOSS 0 0 610 0 0 517 597 0 0 0 0 1724	0 0 697 0 0 85 98 0 0 0 0	33 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 232 976 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 847 22659 0 0 161 0 0 0 0 3666					3012	80 LOSS GAIN 0	0 0 20 0 40 171 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 2189	GAIN 0 0 498 0 0 1770 118 0 0 0							128 10 879 LOS 0 0 0 9 199 3 65 0 0 0 20 511 0 0 375 138 0 0 0 0 375 594	5 SS GAIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BAST WALL ABOVE OR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN PEOPLE	21.8 21.8 21.8 21.8 35.8 35.8 4.2 3.7 1.3 2.8 2.6	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0 0	33 10 330 LOSS 0 806 0 0 0 1077 0 0 0 0 2689 0.24 651	GAIN 0 1537 921 0 0 0 1777 0 0 0 0 2636 103 0	0 0 28 0 0 20 0 142 0 0	19 10 190 LOSS 0 0 610 0 0 517 597 0 0 0 0 0 1724 417	0 0 697 0 0 855 98 0 0 0 0	33 10 330 LOSS 0 0 0 0 0 34 741 64 1394 0 0 0 0 0 0 232 976 0	0 0 847 2659 0 0 161 0 0 0 3666					3012	8 10	0 0 20 0 40 171 0 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 2189	GAIN 0 0 0 498 0 0 170 118 0 0 0 0 786 31 0 0							128 100 879 LOS 0 0 0 0 0 9 199 3 655 0 0 0 20 517 0 0 0 375 138 0 0 0 0 378 594 0.50 0.66 385	5 SS GAIN 0 0 0 6 224 6 125 0 0 11 227 0 0 0 11 25 11 5 11 5 11 5 11 5 11 5 11
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED ULG NO ATTIC 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 GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE	21.8 21.8 21.8 21.8 35.8 35.8 4.2 3.7 1.3 2.8 2.6	16.0 41.6 24.9 41.6 101.2 4.3 0.7 0.6 0.6 1.3	37 37 0 0 0 256 0 0 0	33 10 330 LOSS 0 806 0 0 1077 0 0 0 0 2689	GAIN 0 1537 921 0 0 0 1777 0 0 0 0 2636 103 0 0	0 0 28 0 0 20 0 142 0 0 0	19 10 190 LOSS 0 0 610 0 0 517 597 0 0 0 0 1724	0 0 697 0 0 85 98 0 0 0 0	33 10 10 330 LOSS 0 0 0 0 34 741 64 1394 0 0 0 232 976 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 847 22659 0 0 161 0 0 0 0 3666					3012	80 LOSS GAIN 0 80 336 55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 5 55 0.30 0.24 81 2 0 0	0 0 20 0 40 171 0 0 0	21 11 231 LOSS 0 0 436 0 0 1034 719 0 0 0 0 2189	GAIN 0 0 0 498 0 0 170 118 0 0 0 0 786 31 0 0							129 100 879 LOS 0 0 0 0 0 9 199 3 655 0 0 0 20 517 0 0 0 375 138 0 0 0 0 0 376 594 0.50 0.66 385	5 SS GAIN 0 0 0 6 224 6 125 0 0 11 227 0 0 0 11 25 11 5 11 5 11 5 11 5 11 5 11

STRUCTURAL HEAT LOSS: 34218 TOTAL HEAT GAIN BTU/H: 28930 TONS: 2.41 LOSS DUE TO VENTILATION LOAD BTU/H: 1336 TOTAL COMBINED HEAT LOSS BTU/H: 35554

Michael Oxounde.



TYPE: 2011 SITE NAME:

87545 LO# CENTREFIELD (WEST GORMLEY)

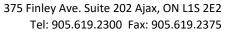
FIN BSMT

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY FIN BSMT

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL V	ENTILATION CAPACI	ТҮ		9.32.3.5.
a) Direct vent (sealed combustion) only		Total Ventilation Cap	pacity	148.4	_	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Ventil	I. Capacity	63.6	_	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplement	ntal Capacity	84.8	_	cfm
d) Solid Fuel (including fireplaces)						
e) No Combustion Appliances		PRINCIPAL EXHAU	ST FAN CAPACITY			
		Model:	VANEE 65H	Location:		BSMT
HEATING SYSTEM		63.6	cfm		✓	HVI Approved
Forced Air Non Forced Air		PRINCIPAL EXHAU	ST HEAT LOSS CALC	ULATION FACTOR		% LOSS
Florida Constitution		63.6 CFM	X 78 F	X 1.08	Х	0.25
Electric Space Heat		SUPPLEMENTAL F	ANS	BY INSTALLING CON	TRACT	OR
HOUSE TYPE	9.32.1(2)	Location ENS	Model BY INSTALLING CONT	cfm RACTOR 50	HVI	Sones 3.5
HOUSE TIPE	9.32.1(2)	BATH	BY INSTALLING CONT		·	3.5
Type a) or b) appliance only, no solid fuel		PWD	BY INSTALLING CONT	RACTOR 50	√	3.5
II Type I except with solid fuel (including fireplaces	5)	HEAT RECOVERY				9.32.3.11.
III Any Type c) appliance		Model:	VANEE 65H			
IV Type I, or II with electric space heat		155	cfm high	64		cfm low
Other: Type I, II or IV no forced air		75	_ % Sensible Effic @ 32 deg F (0 d		✓	HVI Approved
		LOCATION OF INS	TALLATION			
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	LOCATION OF INS	TALLATION			
1 Exhaust only/Forced Air System		Lot:		Concession		
		Township		Plan:		
2 HRV with Ducting/Forced Air System		Address				
→ 3 HRV Simplified/connected to forced air system		Roll #		Building Per	mit #	
4 HRV with Ducting/non forced air system		BUILDER:	ROYAL PINE H	OMES		
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 2 @ 10.6 cfm 21.2	cfm	Telephone #:		Fax#:		
Kitchen & Bathrooms 5 @ 10.6 cfm 53	cfm	INSTALLING CONT	RACTOR			
Other Rooms 3 @ 10.6 cfm 31.8	cfm	Name:				
Table 9.32.3.A. TOTAL 148.4	cfm	Address:				
		City:				
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)			F#-		
1 Bedroom 31.8	cfm	Telephone #:		Fax#:		
2 Bedroom 47.7	cfm	DESIGNER CERTIF I hereby certify that t	TICATION this ventilation system h	nas been designed		
3 Bedroom 63.6	cfm	in accordance with the Name:	he Ontario Building Coo HVAC Designs			
4 Bedroom 79.5	cfm	Signature:		Mehad Ofound	e	
5 Bedroom 95.4	cfm	HRAI#		001820		
TOTAL 63.6 cfm		Date:		April-21		
I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUAL	LIFIED IN THE AP		"OTHER DESIGNER" UNDER		JILDING C	ODE.



			Form	nula Sheet (For Air Lea	kage / Ventiliation C	alculation)			<u></u>	-
LO#: 875	45	Model: 2011		Builde	r: ROYAL PINE HOMES				Date:	4/21/2021
		Volume Calculat	ion				Air Change & Delt	a T Data		
				1						7
ise Volume	51 4 (6.2)	FI 11 1 1 (6)	(6.3)				TURAL AIR CHANG		0.236	4
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)			SUMMER NA	SE RATE	0.071]	
Bsmt	782 782	10	7820							
First Second	1010	10 9	7820 9090				Design Te	mperature Diff	oronco	
Third	0	9	0	1			Tin °C	Tout °C	ΔT °C	ΔT °F
Fourth	0	9	0			Winter DTDh	22	-21	43	78
Tourth		Total:	24,730.0 ft ³			Summer DTDc	24	31	7	13
		Total:	700.3 m ³	1		Summer Dibe				
			•	1						
	5.2.3	3.1 Heat Loss due to	Air Leakage			6.2.6	Sensible Gain due	to Air Leakage		
		V_{r}					V.			
	$HL_{airb} =$	$LR_{airh} \times \frac{V_b}{3.6} \times$	$DTD_h \times 1.2$		Н	$IG_{salb} = LR_{airc} >$	$\langle \frac{v_b}{2c} \times DTD_c \rangle$	× 1.2		
0.336		5.0		2276 111			5.0			110111
0.236	x <u>194.52</u>	x 43 °C	_ x <u>1.2</u>	= 2376 W	= 0.071	x <u>194.52</u>	x7°C	x <u>1.2</u>	- =	119 W
				= 8108 Btu/h	_!				_	404 Dt/b
				= 8108 Btu/h	l				=	404 Btu/h
	5.2.3.2 He	at Loss due to Mech	anical Ventilation			6.2.7 Sei	nsible heat Gain d	ue to Ventilatio	n	
	$HL_{vairb} =$	$PVC \times DTD_h \times$	$1.08 \times (1 - E)$		HL	$_{vairb} = PVC \times D$	$TD_h \times 1.08 \times$	(1 - E)		
64 CFM	x 78 °F	x 1.08	x 0.25	= 1336 Btu/h	64 CFM	x 13 °F	x 1.08	x 0.25	=	220 Btu/h
	<u> </u>				·				•	
			5.2.3.3 Calcula	tion of Air Change Heat	oss for Each Room (Flo	or Multiplier Section)				
					`	,	\.			
		HL	_{airr} = Level Fact	$or \times HL_{airbv} \times \{(H_{airbv}) \times \{$	$L_{agcr} + HL_{bgcr}) \div$	$(HL_{agclevel} + HL$	bgclevel)}			
				HLairve Air Leakage +	Lavel Canductine Heat	Alutados attachta	BAINIII/IE			
		Level	Level Factor (LF)	Ventilation Heat Loss	Level Conductive Heat					
				(Btu/h)	Loss: (HL _{clevel})	HLairbv / I	HLIevel)			
		1	0.5	15.50/10	6,254	0.64	.8			
		2	0.3	1	10,048	0.24	-2			
		3	0.2	8,108	9,220	0.17	6			
		4	0	1	0	0.00	0			
		5	0	1	0	0.00	0			
*HLairbv = Air leakage heat loss + ventilation heat loss										







HEAT LOSS AND GAIN SUMMARY SHEET

MODEL:	2011	F	N BSMT	BUILDER: ROYAL PINE HOMES	5
SFQT:	1792	LO# 8	7545	SITE: CENTREFIELD (WEST	Γ GORMLEY)
DESIGN AS	SSUMPTIONS				
LIFATING			0F	COOLING	°F
HEATING	DESIGN TEMP.		°F -6	COOLING OUTDOOR DESIGN TEMP.	F 88
	ESIGN TEMP.		-0 72	INDOOR DESIGN TEMP. (MAX 75°F)	75
			_	(,	
BUILDING	DATA				
ATTACHMI	ENT:	A ⁻	TTACHED	# OF STORIES (+BASEMENT):	3
FRONT FAC	CES:		EAST	ASSUMED (Y/N):	Υ
AIR CHANG	GES PER HOUR:		2.50	ASSUMED (Y/N):	Υ
AIR TIGHTI	NESS CATEGORY:		TIGHT	ASSUMED (Y/N):	Υ
WIND EXP	OSURE:	SH	IELTERED	ASSUMED (Y/N):	Υ
HOUSE VO	LUME (ft³):		24730.0	ASSUMED (Y/N):	Υ
INTERNAL	SHADING:	BLINDS/C	URTAINS	ASSUMED OCCUPANTS:	4
INTERIOR I	LIGHTING LOAD (Btu/	h/ft²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDATI	ION CONFIGURATION		BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH:	51.0 ft	WIDTH:	22.0 ft	EXPOSED PERIMETER:	125.0 ft

2012 OBC - COMPLIANCE PACKAGE		
	Compliance	Package
Component	SB-12 PERI	ORMANCE
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.20
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.70
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22+1.5	18.50
Basement Walls Minimum RSI (R)-Value	20	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	1.6	-
Skylights Maximum U-Value	2.6	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	TE=94%	-

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE





Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

We	eather Sta	tion Description
Province:	Ontario	·
Region:	Richmon	d Hill
	Site D	escription
Soil Conductivity:	Normal o	conductivity: dry sand, loam, clay
Water Table:	Normal (7-10 m, 23-33 ft)
	Foundatio	n Dimensions
Floor Length (m):	15.5	
Floor Width (m):	6.7	
Exposed Perimeter (m):	38.1	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	Insulation Configuration
Window Area (m²):	1.1	
Door Area (m²):	1.9	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	tion Loads
Heating Load (Watts):		1200

TYPE: 2011 **LO#** 87545

FIN BSMT



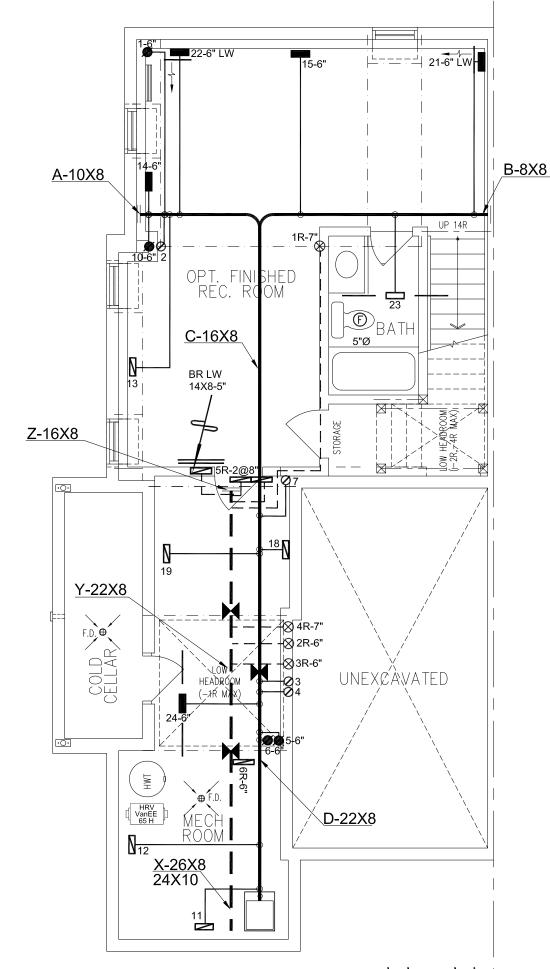
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description								
Province:	Ontar	io						
Region:	Richm	ond H	ill					
Weather Station Location:	Open	flat te	rrain, g	grass				
Anemometer height (m):	10							
Local Sh	ieldin	g						
Building Site:	Subur	ban, fo	orest					
Walls:	Heavy	/						
Flue:	Heavy	/						
Highest Ceiling Height (m):	6.71							
Building Co	nfigura	ation						
Type:	Semi							
Number of Stories:	Two							
Foundation:	Full							
House Volume (m³):	700.3							
Air Leakage/	'Ventil	atior	1					
Air Tightness Type:	Energ	y Star	Detach	ned (2.5	5 ACH)			
Custom BDT Data:	ELA @	10 Pa).		653.7 cm ²			
	2.50				ACH @ 50 Pa			
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust			
		30.0			30.0			
Flue	Size							
Flue #:	#1	#2	#3	#4				
Diameter (mm):	0	0	0	0				
Natural Infilt	ration	Rate	S					
Heating Air Leakage Rate (ACH/H):		C	.23	6				
Cooling Air Leakage Rate (ACH/H):		C	.07	1				

TYPE: 2011 **LO#** 87545

FIN BSMT



OPT. FINISHED BASEMENT PLAN, EL. 'A' & 'B'

I MICHAEL O'ROURKE HAVE REVIEW
AND TAKE RESPONSIBILITY FOR TH
DESIGN WORK AND AM QUALFIED
UNDER DIVISION C, 3.2.5 OF THE
BUILDING CODE.

Muchael Of where

CSA-F280-12

SB-12 PERFORMANCE

								_		
				HVAC LE	EGEND			3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	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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Cllent

ROYAL PINE HOMES

Project Name

CENTREFIELD (WEST GORMLEY) RICHMOND HILL, 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.

OUTPUT

COOLING

	HEAT L	OSS 35554	BTU/H	# OF RUNS	S/A	R/A	FANS	Sh
		UNIT DATA		3RD FLOOR				
	MAKE	CARRIER		2ND FLOOR	8	4	2	
	MODEL 59	TN6A-060-14\	/	1ST FLOOR	7	2	2	
	INPUT	60	MBTU/H	BASEMENT	4	1	1	Da
_	OUTPUT		MBTU/H	ALL S/A DIFFU	SERS	4 "x10)"	Sc
		58		UNLESS NOTE	D OT	HERW	ISE	
Э	COOLING	2.5	TONS	ON LAYOUT. A				

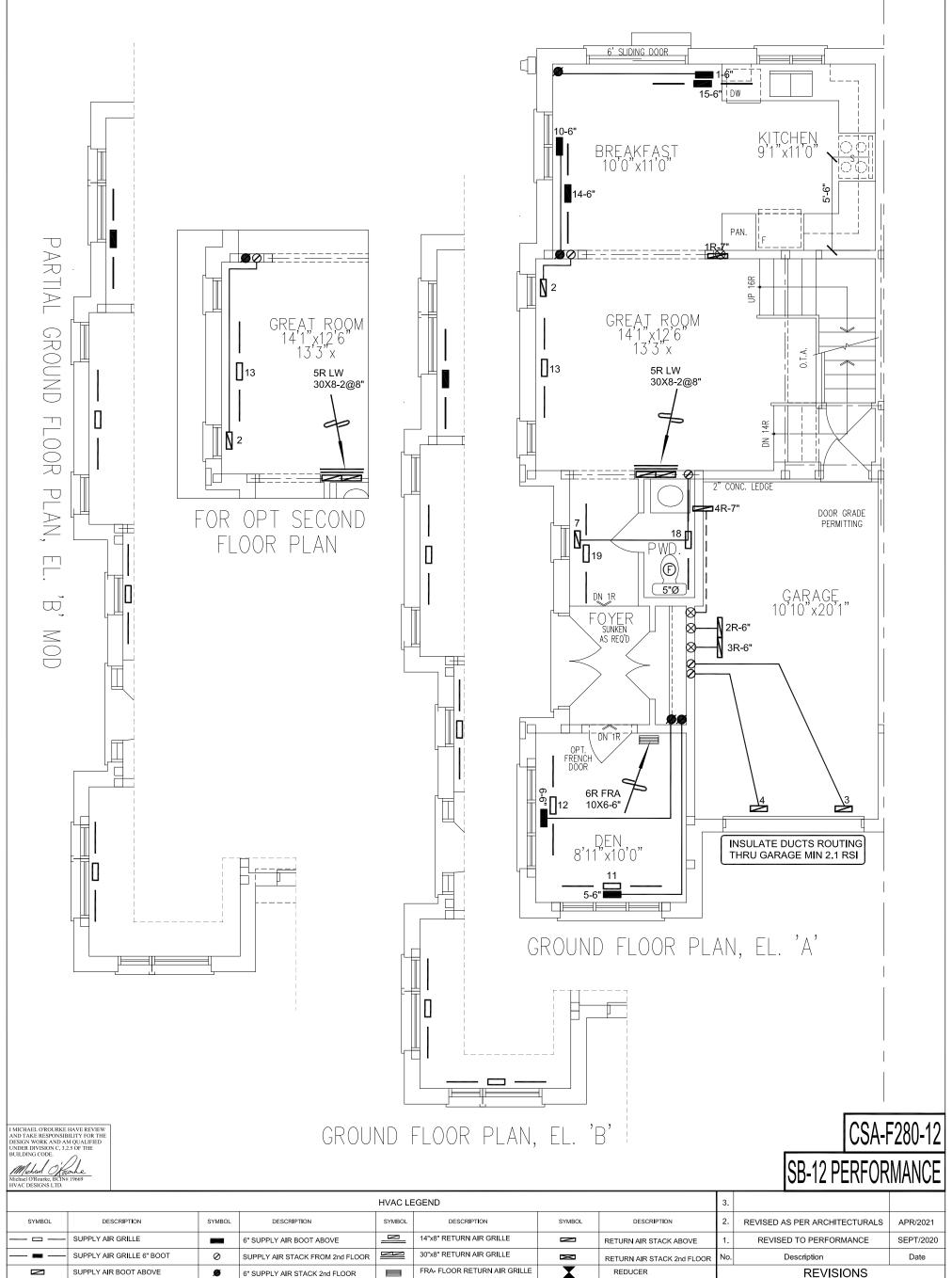
875

ON LAYOUT. UNDERCUT

DOORS 1" min. FOR R/A

ıs	Sheet	Title	
_		BASEME	:NT
		_,	
		HEATIN	IG
		LAYOU	ΙT
		LATOU	' 1
	Date	SEPT/20	20
	Scale	3/16" = 1'-0)"
Ø		BCIN# 196	369
)# 875	545

2011 - FIN BSMT 1792 sqft



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Cllent

ROYAL PINE HOMES

ONTARIO BUILDING CODE.

2011 - FIN BSMT

Project Name

CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO

1792 sqft

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Specializing in Residential Mechanical Design Services

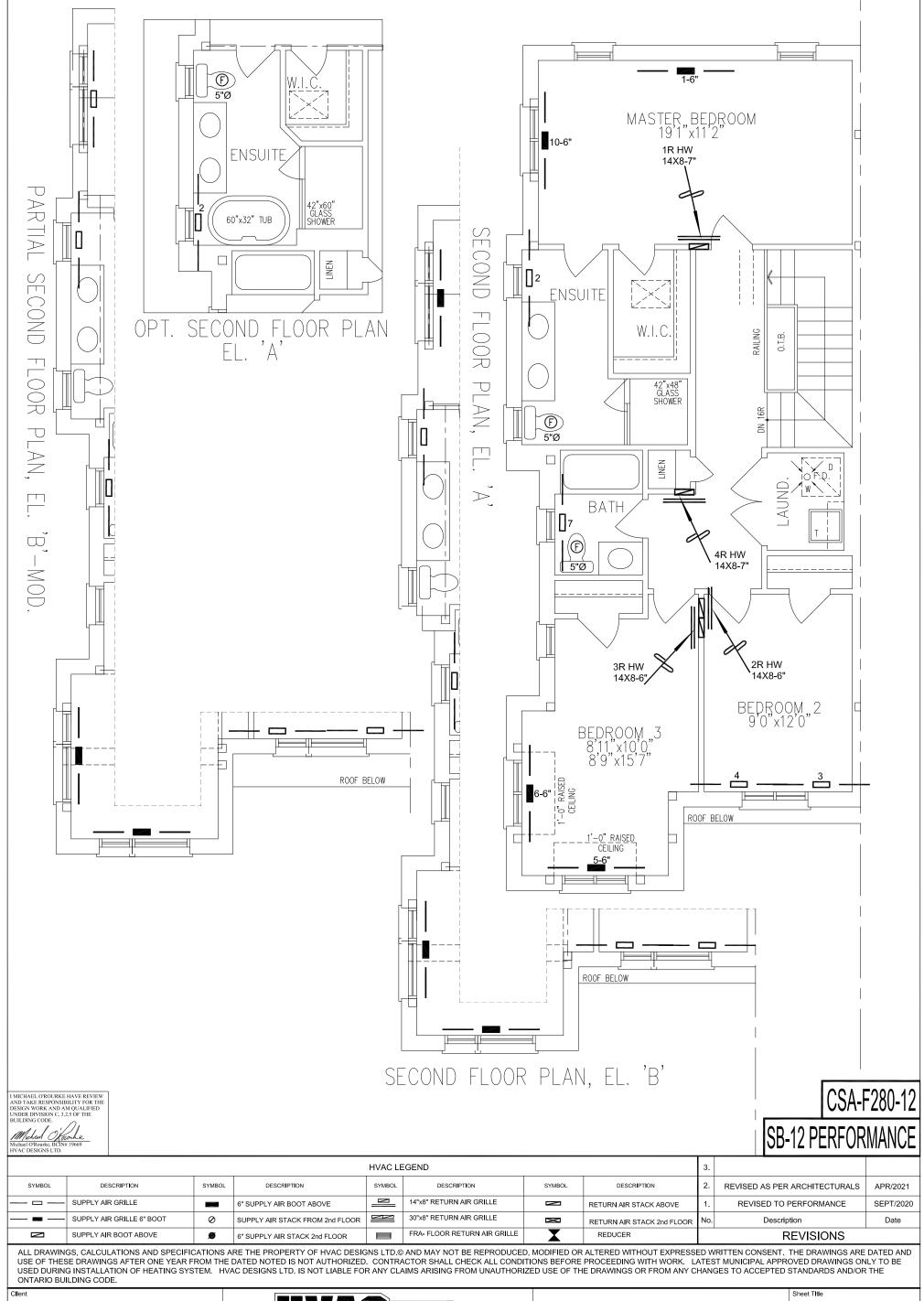
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

FIRST FLOOR
HEATING
LAYOUT

Date SEPT/2020

Scale SEPT/2020
Scale 3/16" = 1'-0"
BCIN# 19669

LO# 87545



ROYAL PINE HOMES

2011 - FIN BSMT

Project Name

CENTREFIELD (WEST GORMLEY)
RICHMOND HILL, ONTARIO

1792 sqft

HVA DESIGNS LTD.

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SECOND FLOOR HEATING LAYOUT

Date SEPT/2020 Scale 3/16" = 1'-0"

BCIN# 19669

LO# 87545