

### **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 Baross	sa 7		Lot:	
S38-7	7C		Lot/con.	
Municipality Bradford	Postal code	Plan number/ other description		
B. Individual who reviews and takes responsibility for design	gn activities			
Name David DaCosta		Firm	gtaDesigns Inc.	
Street address 2985 Drew Roa	d, Suite 202		Unit no.	Lot/con.
Municipality	Postal code	Province	E-mail	
Mississauga Telephone number	L4T 0A4 Fax number	Ontario	hvac@gtadesi Cell number	gns.ca
(905) 671-9800	I ax Hullibel		Cell Humber	
C. Design activities undertaken by individual identified in S	ection B. [Bu	ilding Code Table 3	.5.2.1 of Division C]	
☐ House ☑ HVAC – H	louse		☐ Building Structural	
☐ Small Buildings ☐ Building Se	ervices		☐ Plumbing – House	
☐ Large Buildings ☐ Detection,	Lighting and Pov	wer	☐ Plumbing – All Buildings	3
☐ Complex Buildings ☐ Fire Protect	ction		☐ On-site Sewage System	IS
Description of designer's work Mod	del Certification	1	Project #:	PJ-00041
Water to the total of the total		D. Salan	Layout #:	JB-07354
Heating and Cooling Load Calculations Main Air System Design Alternate	X	Builder Project	Bayview Wellingto Green Valley East	
Residential mechanical ventilation Design Summary Area Sq ft:	2931		Barossa 7	•
Residential System Design per CAN/CSA-F280-12		Model	S38-7C	
Residential New Construction - Forced Air		SB-12	Package A1	
D. Declaration of Designer				
l David DaCosta	declare that (c	choose one as appro	priate):	
(print name)				
I review and take responsibility for the second				
3.2.4 Division C of the Building Coc classes/categories.	de. I am qualified	d, and the firm is registe	ered, in the appropriate	
Individual BCIN:				
Firm BCIN:				
☑ I review and take responsibility for "other designer" under subsection	•		. 0,	
Individual BCIN:	3296	64		
Basis for exemp	tion from registra	ation:	vivision C 3.2.4.1. (4)	
☐ The design work is exempt from the	e registration and			
Basis for exemp	tion from registra	ation and qualification:		
I contifue the ch				
I certify that:  1. The information contained in this schedule is true to the best of many contained in the schedule is the schedule in the schedule is the schedule in the schedule in the schedule is the schedule in t	ny knowledae			
I have submitted this application with the knowledge and consent	-			
		Mare La	·/	
July 22, 2021		- Cane - De	6 C	
Date		Signature of Des	signer	

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 qualifications under Subsections 3.2.4. and 3.2.5.of Division C.

2. Schedule 1 does not require to be completed a holder of a license, temporay license, or a certificate of authorization, issed by the Ontario Associstion of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited licence to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

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Heat loss and gain calcu	lation summary sheet CSA-F280-M12 Standard
These documents issued for the use of	Bayview Wellington Layout No.
and may not be used by any other persons without authorization. Docume	nts for permit and/or construction are signed in red.  JB-07354
Building	Location
Address (Model): S38-7C	Site: Green Valley East
Model: Barossa 7	Lot:
City and Province: Bradford	Postal code:
Calculatio	ns based on
Dimensional information based on:	VA3 Design13/May/2021
Attachment: Detached	Front facing: East/West Assumed? Yes
No. of Levels: 3 Ventilated? Included	Air tightness: 1961-Present (ACH=3.57) Assumed? Yes
Weather location: Bradford	Wind exposure: Sheltered
HRV? VanEE V150H75NS	Internal shading: Light-translucent Occupants: 5
Sensible Eff. at -25C 60% Apparent Effect. at -0C 83%	Units: Imperial Area Sq ft: 2931
Sensible Eff. at -0C 75%	
Heating design conditions	Cooling design conditions
Outdoor temp -9.4 Indoor temp: 72 Mean soil temp: 48	Outdoor temp 86 Indoor temp: 75 Latitude: 44
Above grade walls	Below grade walls
Style A: As per OBC SB12 Package A1 R 22	Style A: As per OBC SB12 Package A1 R 20ci
Style B:	Style B:
Style C:	Style C:
Style D:	Style D:
Floors on soil	Ceilings
Style A: As per Selected OBC SB12 Package A1	Style A: As per Selected OBC SB12 Package A1 R 60
Style B:	Style B: As per Selected OBC SB12 Package A1 R 31
Exposed floors	Style C:
Style A: As per Selected OBC SB12 Package A1 R	31 Doors
Style B:	Style A: As per Selected OBC SB12 Package A1 R 4.00
Windows	Style B:
Style A: As per Selected OBC SB12 Package A1 R 3	.55 Style C:
Style B:	Skylights
Style C:	Style A: As per Selected OBC SB12 Package A1 R 2.03
Style D:	Style B:
Attached documents: As per Shedule 1 Heat Los	s/Gain Caculations based on CSA-F280-12 Effective R-Values
Notes: Residential Net	v Construction - Forced Air
Calculations	performed by
Name: David DaCosta	Postal code: L4T 0A4
Company: gtaDesigns Inc.	Telephone: (905) 671-9800
Address: 2985 Drew Road, Suite 202	Fax:
City: Mississauga	E-mail hvac@gtadesigns.ca
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Builder:

Bayview Wellington

### Air System Design

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

SB-12 Package A1 Date: July 22, 2021

Barossa 7

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under Division C subsection 3.2.5. of the

Project #

PJ-00041

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Project: Green	Valley Eas	st		Model:			Baros S38-					Sys	stem 1			uilding Co dividual E		32964	Mar	ne 16.	A	D	David DaCo	sta		ject # yout #		00041 07354
DESIGN LOAD SPECIFICATION	NS .		A	AIR DISTR	IBUTION &	& PRESSU	JRE				F	URNACE/A	IR HAND	LER DAT	١:		Е	BOILER/W	ATER HEA	ATER DAT	A:			А	VC UNIT D	ATA:		
Level 1 Net Load Level 2 Net Load Level 3 Net Load Level 4 Net Load	21,059 b 24,034 b 19,508 b	otu/h	A A	Additional Available [	t External Equipmen Design Pre anch Long	nt Pressui essure		1	0.5 "v 0.225 "v 0.275 "v 300 ft	w.c. w.c.	M	ake odel put Btu/h utput Btu/l		Aman AMEC9608 80000 76800	O3BNA )		N II	/lake /lodel nput Btu/h Dutput Btu			T	уре		C	Amana CondCoil		3.0 To 3.0 3.0	on
Total Heat Loss	64,601 b				m Pressur				0.138 "v			.s.p.		0.50		W.C.	N	/lin.Outpu	t Btu/h		A	WH						
Total Heat Gain	34,336 b	otu/h			n Pressur				0.14 "v			ater Temp				g. F.	L				W2		wer DATA:					
Building Volume Vb	38581 f			•	r Flow Pro	oportionin	g Facter		0.0181 cf 0.0341 cf	fm/btuh	Α	FUE ux. Heat		96%				•	eed Select							ss DC OE	CM BC 12.3.1.5	
Ventilation Load Ventilation PVC	1,188 E						R/A Temp		70 de		S	B-12 Packa	ige	Package	A1		н	leating Ch	neck	1172 c	fm			C	Cooling Ch	eck _	1172 cf	fm
Supply Branch and Grill Sizing	79.5 c	m		Diffuser lo	ss	0.01 '	S/A Temp		131 de	eg. F.	т	emp. Rise>	>>	61_de	a. F.		s	Selected c	fm>	1172 c	fm:		С	oolina Air	r Flow Rate	e	1172 cf	fm
- Cupply Brailer and Grill Gizing				Jiiiusei io		0.01						Jilip. Kises		u	·y. · ·			ocicotca o		1172				John Jan	- TIOW INGL		1172	
S/A Outlet No.	1	2	3	4			Leve	11							5	6	7	8	9	10	Level 11	12	13	14				
Room Use	BASE	BASE	BASE	BASE											KIT	KIT	DIN	MUD	-		STUDY	FOY	GRT	GRT				
Btu/Outlet	5265	5265	5265	5265											3900	3900	2960	890	880	2946	2946	2672	1470	1470				
Heating Airflow Rate CFM	96	96	96	96											71	71	54	16	16	53	53	48	27	27				
Cooling Airflow Rate CFM	17	17	17	17											102	102	134	4	4	87	87	38	67	67				
Duct Design Pressure	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Actual Duct Length	40	38	24	41											44	39	8	19	23	46	46	36	24	35				
Equivalent Length	90	130	100	130	70	70	70	70	70	70	70	70	70	70	110	140	80	160	130	110	120	100	110	90	70	70	70	70
Total Effective Length	130	168	124	171	70	70	70	70	70	70	70	70	70	70	154	179	88	179	153	156	166	136	134	125	70	70	70	70
Adjusted Pressure	0.10	0.08	0.10	0.08	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	80.0	0.07	0.15	0.07	0.08	0.08	0.08	0.10	0.10	0.10	0.19	0.19	0.19	0.19
Duct Size Round	6	6	6	6											6	6	6	3	3	6	6	5	5	5				
Outlet Size	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	3x10	4x10	4x10	3x10	3x10	3x10	4x10	4x10	4x10	4x10
Trunk	В	С	В	E											С	С	Α	D	D	E	Е	D	В	В				
							Leve														Level	4						
S/A Outlet No.	15	16	17	18	19	20	21	22	23	24																		
Room Use	MAST	BED 2	BATH	BED 3	BED 3		LAUND	BED 4	ENS 2	ENS																		
		1890	909	2475	2475	1183	1439	1519	1190	2691																		
Btu/Outlet	3737																											
Heating Airflow Rate CFM	68	34	16	45	45	21	26	28	22	49																		
Heating Airflow Rate CFM Cooling Airflow Rate CFM	68 78	34 46	16 17	48	48	9	20	46	31	65	0.42	0.42	0.42	0.42	0.42	0.12	0.42	0.42	0.42	0.12	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure	68 78 0.13	34 46 0.13	16 17 0.13	48 0.13	48 0.13	9 0.13	20 0.13	46 0.13	31 0.13	65 0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length	68 78 0.13 56	34 46 0.13	16 17 0.13 53	48 0.13 57	48 0.13 54	9 0.13 51	20 0.13 41	46 0.13 32	31 0.13 52	65 0.13 57																		
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length	68 78 0.13 56 120	34 46 0.13 37 110	16 17 0.13 53 160	48 0.13 57 150	48 0.13 54 140	9 0.13 51 130	20 0.13 41 150	46 0.13 32 100	31 0.13 52 130	65 0.13 57 140	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length	68 78 0.13 56 120 176	34 46 0.13 37 110 147	16 17 0.13 53 160 213	48 0.13 57 150 207	48 0.13 54 140 194	9 0.13 51 130 181	20 0.13 41 150 191	46 0.13 32 100 132	31 0.13 52 130 182	65 0.13 57 140 197	70 70	70 <b>70</b>	70 <b>70</b>	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure	68 78 0.13 56 120 176 0.07	34 46 0.13 37 110 147 0.09	16 17 0.13 53 160	48 0.13 57 150 207 0.06	48 0.13 54 140 194 0.07	9 0.13 51 130	20 0.13 41 150	46 0.13 32 100	31 0.13 52 130	65 0.13 57 140	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round	68 78 0.13 56 120 176 0.07	34 46 0.13 37 110 147 0.09	16 17 0.13 53 160 213 0.06	48 0.13 57 150 207	48 0.13 54 140 194 0.07	9 0.13 51 130 181 0.07 4	20 0.13 41 150 191 0.07	46 0.13 32 100 132 0.10	31 0.13 52 130 182 0.07 4	65 0.13 57 140 197 0.07 6	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure	68 78 0.13 56 120 176 0.07	34 46 0.13 37 110 147 0.09	16 17 0.13 53 160 213 0.06	48 0.13 57 150 207 0.06 5	48 0.13 54 140 194 0.07	9 0.13 51 130 181 0.07	20 0.13 41 150 191 0.07	46 0.13 32 100 132 0.10	31 0.13 52 130 182	65 0.13 57 140 197 0.07	70 70	70 <b>70</b>	70 <b>70</b>	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70	70 70
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Dutlet Size Round Outlet Size Trunk	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A	16 17 0.13 53 160 213 0.06 4 3x10	48 0.13 57 150 207 0.06 5 3x10	48 0.13 54 140 194 0.07 5 3x10	9 0.13 51 130 181 0.07 4 3x10	20 0.13 41 150 191 0.07 4 3x10	46 0.13 32 100 132 0.10 5 3x10	31 0.13 52 130 182 0.07 4 3x10	65 0.13 57 140 197 0.07 6 4x10	70 70 0.19	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk Return Branch And Grill Sizing	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A	16 17 0.13 53 160 213 0.06 4 3x10 D	48 0.13 57 150 207 0.06 5 3x10 D	48 0.13 54 140 194 0.07 5 3x10	9 0.13 51 130 181 0.07 4 3x10 D	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A	31 0.13 52 130 182 0.07 4 3x10	65 0.13 57 140 197 0.07 6 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Supply Trui	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk Return Branch And Grill Sizing R/A Inlet No.	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A	16 17 0.13 53 160 213 0.06 4 3x10 D	48 0.13 57 150 207 0.06 5 3x10 D	48 0.13 54 140 194 0.07 5 3x10 D	9 0.13 51 130 181 0.07 4 3x10 D	20 0.13 41 150 191 0.07 4 3x10	46 0.13 32 100 132 0.10 5 3x10	31 0.13 52 130 182 0.07 4 3x10	65 0.13 57 140 197 0.07 6 4x10	70 70 0.19	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19	70 70 0.19	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19	70 70 0.19	70 70 0.19 4x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A	16 17 0.13 53 160 213 0.06 4 3x10 D	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105	48 0.13 54 140 194 0.07 5 3x10 D	9 0.13 51 130 181 0.07 4 3x10 D	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4x10 C	70 70 0.19 4x10	70 70 0.19 4x10 <u>Re</u> Tr	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Supply Trui	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10 Sizing	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A	16 17 0.13 53 160 213 0.06 4 3x10 D	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12	48 0.13 54 140 194 0.07 5 3x10 D	9 0.13 51 130 181 0.07 4 3x10 D	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A	31 0.13 52 130 182 0.07 4 3x10	65 0.13 57 140 197 0.07 6 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Rec Tr	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Supply Trui	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10 Sizing	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Rect. \$	70 70 0.19 4x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A	16 17 0.13 53 160 213 0.06 4 3x10 D	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52	48 0.13 54 140 194 0.07 5 3x10 D	9 0.13 51 130 181 0.07 4 3x10 D 0.02 '	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4x10 C	70 70 0.19 4x10	70 70 0.19 4x10 Ree Tr Dr Z	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Supply Trui	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10 Sizing CFM Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Rect. \$	70 70 0.19 4x10 iize 24x10 14x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31	16 17 0.13 53 160 213 0.06 4 3x10 D	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205	48 0.13 54 140 194 0.07 5 3x10 D 5R 150 0.12 30 120	9 0.13 51 130 181 0.07 4 3x10 D 0.02 ' 6R 150 0.12 40 165	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4x10 C	70 70 0.19 4x10 11R 0.12	70 70 0.19 4x10  Ree Tr Dr Z	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Supply Truit	70 70 0.19 4x10 nk Duct S	70 70 0.19  4x10  Sizing  CFM Pi 1171 619 307	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5	70 70 0.19 4x10 Rect. \$ 32x8 18x8 12x8	70 70 0.19 4x10 size 24x10 14x10 10x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31 180 211	16 17 0.13 53 160 213 0.06 4 3x10 D Grill Press 3R 200 0.12 9 125 134	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205 257	48 0.13 54 140 194 0.07 5 3x10 D	9 0.13 51 130 181 0.07 4 3x10 D 0.02 6R 150 0.12 40 165 205	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A 8R 0.12	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4x10 C	70 70 0.19 4x10 11R 0.12 50	70 70 0.19 4x10 Ree Tr Dr Z	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Supply Trus	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10  Sizing  FM Pi 1171 619 307 436	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5 10.0 11.5	70 70 0.19 4x10 Rect. S 32x8 18x8 12x8 14x8	70 70 0.19 4x10 4x10 24x10 14x10 10x10 12x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure	68 78 0.13 56 120 176 0.07 6 4x10 B	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31 180 211 0.06	16 17 0.13 53 160 213 0.06 4 3x10 D Grill Press 3R 200 0.12 9 125 134 0.09	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205 257 0.05	48 0.13 54 140 194 0.07 5 3x10 D 5R 150 0.12 30 120 150 0.08	9 0.13 51 130 181 0.07 4 3x10 D 0.02 6R 150 0.12 40 165 205 0.06	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4x10 C	70 70 0.19 4x10 11R 0.12	70 70 0.19 4x10 Ree Tr Dr z Y X	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 Supply Trus	70 70 0.19 4x10 nk Duct S	70 70 0.19  4x10  Sizing  CFM Pi 1171 619 307	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5	70 70 0.19 4x10 Rect. \$ 32x8 18x8 12x8	70 70 0.19 4x10 size 24x10 14x10 10x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round	68 78 0.13 56 120 176 0.07 6 4x10 B 18 191 0.12 11 150 161 0.07 8.0	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31 180 211 0.06 11.0	16 17 0.13 53 160 213 0.06 4 3x10 D  Grill Press 3R 200 0.12 9 125 134 0.09 8.0	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205 257 0.05 6.0	48 0.13 54 140 194 0.07 5 3x10 D 5R 150 0.12 30 120 150 0.08 7.5	9 0.13 51 130 181 0.07 4 3x10 D 0.02 6R 150 0.12 40 165 205 0.06 8.0	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A 8R 0.12	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4x10 C	70 70 0.19 4x10 11R 0.12 50	70 70 0.19  4x10  Ree Tr  Dr  Z  Y  X  W	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 \$\frac{\sigma}{1}\$\$ \$\frac{\chi}	70 70 0.19 4x10 Supply Truit Trunk	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10  Sizing  FM Pi 1171 619 307 436	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5 10.0 11.5	70 70 0.19 4x10 Rect. S 32x8 18x8 12x8 14x8	70 70 0.19 4x10 4x10 24x10 14x10 10x10 12x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure	68 78 0.13 56 120 176 0.07 6 4x10 B 18 191 0.12 11 150 161 0.07 8.0 FLC	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31 180 211 0.06 11.0	16 17 0.13 53 160 213 0.06 4 3x10 D  Grill Press 3R 200 0.12 9 125 134 0.09 8.0 8	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205 257 0.05 6.0 8	48 0.13 54 140 194 0.07 5 3x10 D 5R 150 0.12 30 120 150 0.08 7.5 8	9 0.13 51 130 181 0.07 4 3x10 D 0.02 6R 150 0.12 40 165 205 0.06 8.0 8	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A 8R 0.12 50 0.24	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4×10 C	70 70 0.19 4x10 11R 0.12 50 50 0.24	70 70 0.19 4x10  Ree Tr Dr Z Y X W V U	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 <u>\$</u> 1	70 70 0.19 4x10 Supply Truk Trunk	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10  Sizing  FM Pi 1171 619 307 436	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5 10.0 11.5	70 70 0.19 4x10 Rect. S 32x8 18x8 12x8 14x8	70 70 0.19 4x10 4x10 24x10 14x10 10x10 12x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Inlet Size " "	68 78 0.13 56 120 176 0.07 6 4x10 B 18 191 0.12 11 150 161 0.07 8.0	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31 180 211 0.06 11.0	16 17 0.13 53 160 213 0.06 4 3x10 D  Grill Press: 3R 200 0.12 9 125 134 0.09 8.0 8 x	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205 257 0.05 6.0	48 0.13 54 140 194 0.07 5 3x10 D 5R 150 0.12 30 120 150 0.08 7.5 8 x	9 0.13 51 130 181 0.07 4 3x10 D 0.02 6 150 0.12 40 165 205 0.06 8.0 8	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A 8R 0.12	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4x10 C	70 70 0.19 4x10 11R 0.12 50	70 70 0.19  4x10  Ree Tr  Dr  Z  Y  X  W	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 \$\frac{\sigma}{1}\$\$ \$\frac{\chi}	70 70 0.19 4x10 Supply Truk Trunk	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10  Sizing  FM Pi 1171 619 307 436	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5 10.0 11.5	70 70 0.19 4x10 Rect. S 32x8 18x8 12x8 14x8	70 70 0.19 4x10 4x10 24x10 14x10 10x10 12x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Inlet Size	68 78 0.13 56 120 176 0.07 6 4x10 B 191 0.12 11 150 161 0.07 8.0 FLC x	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31 180 211 0.06 11.0	16 17 0.13 53 160 213 0.06 4 3x10 D  Grill Press 3R 200 0.12 9 125 134 0.09 8.0 8	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205 257 0.05 6.0 8 x	48 0.13 54 140 194 0.07 5 3x10 D 5R 150 0.12 30 120 150 0.08 7.5 8	9 0.13 51 130 181 0.07 4 3x10 D 0.02 6R 150 0.12 40 165 205 0.06 8.0 8	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A 8R 0.12 50 0.24	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4×10 C	70 70 0.19 4x10 11R 0.12 50 50 0.24	70 70 0.19 4x10  Ree Tr Dr z Y X W V U T	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 <u>\$</u> 1	70 70 0.19 4x10 Supply Truk Trunk	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10  Sizing  FM Pi 1171 619 307 436	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5 10.0 11.5	70 70 0.19 4x10 Rect. S 32x8 18x8 12x8 14x8	70 70 0.19 4x10 4x10 24x10 14x10 10x10 12x10	70 70 0.19
Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Inlet Size " "	68 78 0.13 56 120 176 0.07 6 4x10 B 191 0.12 11 150 161 0.07 8.0 FLC x	34 46 0.13 37 110 147 0.09 5 3x10 A 2R 376 0.12 31 180 211 0.06 11.0	16 17 0.13 53 160 213 0.06 4 3x10 D  Grill Press: 3R 200 0.12 9 125 134 0.09 8.0 8 x	48 0.13 57 150 207 0.06 5 3x10 D ure Loss 4R 105 0.12 52 205 257 0.05 6.0 8 x	48 0.13 54 140 194 0.07 5 3x10 D 5R 150 0.12 30 120 150 0.08 7.5 8 x	9 0.13 51 130 181 0.07 4 3x10 D 0.02 6 150 0.12 40 165 205 0.06 8.0 8	20 0.13 41 150 191 0.07 4 3x10 D	46 0.13 32 100 132 0.10 5 3x10 A 8R 0.12 50 0.24	31 0.13 52 130 182 0.07 4 3x10 C	65 0.13 57 140 197 0.07 6 4×10 C	70 70 0.19 4x10 11R 0.12 50 50 0.24	70 70 0.19 4x10  Ref Tr  Dr Z Y X W V U T S	70 70 0.19 4x10 eturn Trur	70 70 0.19 4x10	70 70 0.19 4x10 zing Pi	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10	70 70 0.19 4x10 <u>\$</u> T	70 70 0.19 4x10 Supply Truk Trunk	70 70 0.19 4x10 nk Duct S	70 70 0.19 4x10  Sizing  FM Pi 1171 619 307 436	70 70 0.19 4x10 ress. R 0.06 0.07 0.07	70 70 0.19 4x10 Round 16.5 12.5 10.0 11.5	70 70 0.19 4x10 Rect. S 32x8 18x8 12x8 14x8	70 70 0.19 4x10 4x10 24x10 14x10 10x10 12x10	70 70 0.19



Total Heat Loss

Total Heat Gain

64,601 btu/h

34,336 btu/h

### Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800

e-mail hvac@gtadesigns.ca

Mana Mate

David DaCosta

Package A1

			Builder:	Bayview W	llington			Date:			July 22, 20	021					Weather	r Data	Ві	radford	44	-9.4 86	22	48.2					Page 4
Light   The Control of State   The Control	2012 OBC		Project:	Groon Vall	w East		Ma	adal:			Barossa S38-70	7			System 1		Heat I	T^ 220	81 4 den I	=	Ht gain ^T	11 den	F	GTA:	2031		Project	# P.	J-00041
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Mary																												4	
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Memory College   275																													
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Mary Configuration   1.762   0.45	Not					421																						-	
Exposed Cellings 8 29.2 1.37 0.45							0.0																						
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Head Gas   1,000   1	Total Conductive				4	10239																							
Case 2																													
Case	Air Leakage					10528	54																						
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Appliament stacks 1 - 229 percent   4292   1405   1511   1511   1505   1511   1505   1511   1505   1511   1505   1511   1511   1505   1511   1511   1505   1511   1505   1511   1511   1511   1505   1511   1511   1505   1511   1511   1505   1511   1511   1505   1511   1																													
Duct and Pipe loss   105   1																													
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Level 2   Run It. apposed wall A   SI A   30 A   5 A   12 A   37 A   20 A   22 A   B   B   B   B   B   B   B   B   B	A	Appliances Loads	1 =.25 pe	rcent 492																									
Runt   Ru	De Level HL Total	Appliances Loads Ouct and Pipe loss 21,059	Tot	10% al HL for per room	1	21059																							
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Runth. exposed valid la Colling height of Collin	De Level HL Total	Appliances Loads Duct and Pipe loss 21,059 2,009	Tot	10% al HL for per room	1		2009																						
Caling height   11.0   11.0   13.0   13.0   13.0   13.0   12.0   12.0   13.0	Level HL Total Level HG Total	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2	Tot	10% al HL for per room	3	KIT	2009		DIN											et T									
Figure - Fig	Level HL Total Level HG Total Run f	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A	Tot	10% al HL for per room	58 A	КІТ	2009	30 A	DIN		5 A		12 A		37 A		Α		22 A	TT.									
Exposed Cellings	Level HL Total Level HG Total Run f	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B	Tot	10% al HL for per room	58 A	КІТ		30 A B	DIN		5 A B		12 A B		37 A B		Α		22 A B	eT.	В		В		В			В	
Exposed Collings   Figure	Level HL Total Level HG Total Run f	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2  ft. exposed wall A Ceiling height	Tot	10% al HL for per room	58 A E 11.0	KIT		30 A B 11.0		13.0	5 A B 0		12 A B 11.0	1	37 A B 2.0	12.0	A B		22 A B 11.0	TT.	B 11.0	11.	.0		B 11.0		11.	B .0	
Exposed Floors by Mal	Level HL Total Level HG Total Run f	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area	Tot	10% al HL for per room	58 A E 11.0 388 A	KIT 3		30 A B 11.0 350 Are		13.0	5 A B 0 6 Area		12 A B 11.0 33 Area	1	37 A B 2.0 129 Area	12.0 93 /	A B Area		22 A B 11.0 217 Area	TT.	B 11.0 Area	11.	B .0 Area		11.0 Ar		11.	B .0 Area	
Gross Exp Wall A Cornes Exp Wa	Level HL Total Level HG Total  Run f	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Celling height Floor area xposed Cellings A	Tot	10% al HL for per room	58 A E 11.0 388 A	KIT 3		30 A B 11.0 350 Are		13.0	5 A B 0 6 Area A		12 A B 11.0 33 Area A	1	37 A B 2.0 129 Area 129 A	12.0 93 /	A B Area A		22 A B 11.0 217 Area 5 A	eT.	B 11.0 Area A	11.	B .0 Area A		11.0 Ar A		11.	B .0 Area A	
Components   Reviews   Loss   Gain   Loss	Level HL Total Level HG Total  Run f Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B	Tot	10% al HL for per room	58 A E 11.0 388 A E	KIT		30 A B 11.0 350 Are A B		13.0	5 A B 0 6 Area A B		12 A B 11.0 33 Area A B	1	37 A B 2.0 129 Area 129 A B	12.0 93 /	A B Area A B		22 A B 11.0 217 Area 5 A B	TT.	B 11.0 Area A B	11.	B .0 Area A B		B 11.0 Ar A B		11.	B .0 Area A B	
Second Head of Seco	Level HL Total Level HG Total  Run f Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors	Tot	10% al HL for per room	58 A 11.0 388 A A	KIT		30 A B 11.0 350 Are A B Fir		13.: 2	5 A B 0 6 Area A B Fir		12 A B 11.0 33 Area A B FIr	1	37 A B 2.0 129 Area 129 A B FIr	12.0 93 /	A B Area A B		22 A B 11.0 217 Area 5 A B Fir	ī	B 11.0 Area A B	11.	B .0 Area A B		B 11.0 Ar A B		11.	B .0 Area A B	
EastWest   3.55   22.93   29.56   26   596   7e9   30   688   887	Level HL Total Level HG Total  Run f Run f	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A	Tot	10% al HL for per room	58 A 11.0 388 A A	KIT		30 A B 11.0 350 Are A B Fir		13.: 2	5 A B 0 6 Area A B Fir		12 A B 11.0 33 Area A B FIr	1	37 A B 2.0 129 Area 129 A B FIr	12.0 93 /	A B Area A B		22 A B 11.0 217 Area 5 A B Fir	īT	B 11.0 Area A B	11.	B .0 Area A B		B 11.0 Ar A B		11.	B .0 Area A B Fir	
South   3.55   22.93   22.50   114   2614   2565   2.50	Level HL Total Level HG Total  Run f Run f	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components	Total I	rcent 492 190 al HL for per room HG per room x 1.	58 A E 11.0 388 A A E 638	KIT S surea		30 A B 11.0 350 Are A B Fir 330	ea	13. 2	5 A B 0 6 Area A B Fir		12 A B 11.0 33 Area A B FIr	1	37 A B 2.0 129 Area 129 A B FIr 144 Loss Gair	12.0 93 / 93 / 1 1 240	A B Area A B FIr		22 A B 11.0 217 Area 5 A B Flr 242		B 11.0 Area A B FIr		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Existing Windows 1.99 40.90 23.66   Skylight 2.03 40.10 88.23	Level HL Total Level HG Total  Run f Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Gross Exp Wall B Components North Shaded	Total I	rcent 492 al HL for per room x 1.  poss Gain 22.93 11.6	58 A E 11.0 388 A A E 638	KIT	Sain	30 A B 11.0 350 Are A B Fir 330	ea ss Ga	13.0 20 6:	5 A B 0 6 Area A B Fir		12 A B 11.0 33 Area A B FIr	Gain	37 A B 2.0 129 Area 129 A B FIr 444  Loss Gair 53 1215	12.0 93 / 93 / 1 240	A B Area A B Fir	Gain	22 A B 11.0 217 Area 5 A B Fir 242 Loss	Gain	B 11.0 Area A B FIr		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Skylight   2.03   40.10   88.23   2.75   1.00   1	Level HL Total Level HG Total  Run f Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Celling height Floor area xposed Cellings B Exposed Floors Gross Exp Wall B Components North Shaded EastWest	Total I  Total I  R-Values L  3.55	rcent 492 1072 al HL for per room x 1.  Reper room x 1.  See Gain 22.93 11.6 22.93 22.5	58 A E 11.0 388 A E F 638	KIT  A  B  A  A  A  B  A  C  File  OSS	Sain 769	30 A B 11.0 350 Are A B Fir 330	ea ss Ga	13.0 20 6:	5 A B 0 6 Area A B Fir		12 A B 11.0 33 Area A B FIr	Gain	37 A B 2.0 129 Area 129 A B FIr 444  Loss Gair 53 1215	12.0 93 / 93 / 1 240	A B Area A B Fir	Gain	22 A B 11.0 217 Area 5 A B Fir 242 Loss	Gain	B 11.0 Area A B FIr		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Net exposed walls A   17.03   4.78   0.65   48   238   322   300   1434   194   44   210   28   132   631   85   38   166   218   194   927   125   190   908   123   30   328   3	Level HL Total Level HG Total  Run f Run f C	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South	R-Values Lu 3.55 3.55 3.55	rcent 492 107 al HL for per room x 1.  Doss Gain 22.93 11.6 22.93 22.5 22.93 22.5	58 A 11.0 388 A A B 638 L	KIT  A  B  A  A  A  B  A  C  File  OSS	Sain 769	30 A B 11.0 350 Are A B Fir 330	ea ss Ga	13.0 20 6:	5 A B 0 6 Area A B Fir		12 A B 11.0 33 Area A B FIr	Gain	37 A B 2.0 129 Area 129 A B FIr 444  Loss Gair 53 1215	12.0 93 / 93 / 1 240	A B Area A B Fir	Gain	22 A B 11.0 217 Area 5 A B Fir 242 Loss	Gain	B 11.0 Area A B FIr		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Net exposed walls A 17.03 4.78 0.65 498 2380 322 300 1434 194 44 210 28 132 631 85 338 1616 218 194 927 125 190 908 123	Level HL Total Level HG Total  Run f Run f C	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows	R-Values Lt. 3.55 3.55 3.55 1.99	rcent 492 al HL for per room x 1.  poss Gain 22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6	58 A E 11.0 388 A E 638	KIT  A  B  A  A  A  B  A  C  File  OSS	Sain 769	30 A B 11.0 350 Are A B Fir 330	ea ss Ga	13.0 20 6:	5 A B 0 6 Area A B Fir		12 A B 11.0 33 Area A B FIr	Gain	37 A B 2.0 129 Area 129 A B FIr 444  Loss Gair 53 1215	12.0 93 / 93 / 1 240	A B Area A B Fir	Gain	22 A B 11.0 217 Area 5 A B Fir 242 Loss	Gain	B 11.0 Area A B FIr		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Net exposed Cellings   Net Exposed Cellings   Net Sport Cellings   Net	Level HL Total Level HG Total  Run f Run f C	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Celling height Floor area xposed Cellings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight	R-Values Lu 3.55 3.55 3.55 1.99 2.03	oss Gain 22.93 11.6 22.93 22.5 40.90 23.6 4920 1822	58 A E E 11.0 388 A A E F 638 L L L L L L L L L L L L L L L L L L L	KIT  A  B  A  A  A  B  A  C  File  OSS	Sain 769	30 A B 11.0 350 Are A B Fir 330	ea ss Ga	13.1 24 66 887	5 A B 0 0 16 Area A B Fir 15 Loss	Gain	12 A B 11.0 33 Area A B FIr	Gain	37 A B 2.0 129 Area 129 A B FIr 444  Loss Gair 53 1215	12.0 93 / 93 / 1 240 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A B Area A B B Fir Loss C 459	Gain 591	22 A B 11.0 217 Area 5 A B Fir 242 Loss	Gain	B 11.0 Area A B FIr		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Exposed Ceilings A 59.22 1.37 0.64  Exposed Ceilings B 27.65 2.94 1.37  Exposed Floors 29.80 2.73 0.17  Foundation Conductive Heatloss  Total Conductive Heat Gain	Level HL Total Level HG Total  Run f Run f C	Appliances Loads Duct and Pipe loss 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors	R-Values L. 3.55 3.55 3.55 1.99 2.03 4.00	rcent 492 107 al HL for per room x 1.  poss Gain 22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6 40.10 88.2 20.35 2.7	58 A E 11.0 388 A A E E 638 L L 2 2 6 114 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	KIT	Gain 769 2565	30 A B 11.0 350 Are A B Fir 330 Los	ea ss Ga 688	13.1 21 6: 887	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58	12 A B 11.0 33 Area A B Fir 132 Loss	Gain	37 A B B 2.0 129 Area 129 A B Fir 1444  Loss Gair 53 1215 ( 53 1215 1	12.0 93 / 93 / 1 240 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A B Area A B B Fir Loss C 459	Gain 591 72	22 A B 11.0 217 Area 5 A B Fir 242 Loss	Gain 02 1537	B 11.0 Area A B Fir		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Exposed Ceilings B   27.65   2.94   1.37	Level HL Total Level HG Total  Run f Run f C	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A	R-Values Lt. 3.55 3.55 3.55 1.99 2.03 4.00 4.00 17.03	rcent 492 1 107 al HL for per room x 1.  poss Gain 22.93 11.6 22.93 22.5 22.93 22.5 40.10 88.2 20.35 2.7 4.78 0.6	58 A E 11.0 388 A E 638 L	KIT	Gain 769 2565	30 A B 11.0 350 Are A B Fir 330 Los	ea ss Ga 688	13.1 21 6: 887	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58	12 A B 11.0 33 Area A B Fir 132 Loss	Gain	37 A B B 2.0 129 Area 129 A B Fir 1444  Loss Gair 53 1215 ( 53 1215 1	12.0 93 / 93 / 1 240 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A B Area A B B Fir Loss C 459	Gain 591 72	22 A B 11.0 217 Area 5 A B Fir 242 Loss	Gain 02 1537	B 11.0 Area A B Fir		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Exposed Floors   29.80   2.73   0.17	Level HL Total Level HG Total  Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls B	R-Values Lu 3.55 3.55 3.55 1.99 2.03 4.00 17.03	oss Gain  22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6 4.78 0.6.8	58 A E 11.0 388 A A A E E 638 E 638 L L E 6 114 E 6 114 E 6 1 114 E 6 1 498	KIT	Gain 769 2565	30 A B 11.0 350 Are A B Fir 330 Los	ea ss Ga 688	13.1 21 6: 887	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58	12 A B 11.0 33 Area A B Fir 132 Loss	Gain	37 A B B 2.0 [29 Area 129 A B Fir 1444 [Loss Gair 1215 115 115] [17	12.0 93 / 93 / 1 240 1 516 567 20 26 218 194	A B Area A B B Fir Loss C 459	Gain 591 72	22 A B 11.0 11.0 217 Area 5 A B Fir 242  Loss 52 1115	Gain 02 1537	B 11.0 Area A B Fir		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Foundation Conductive Heatloss	Level HL Total Level HG Total  Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors at exposed walls A te exposed walls A	R-Values L. 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50	rcent 492 192 al HL for per room x 1.  poss Gain 22.93 11.6 22.93 22.5 40.90 23.6 40.10 88.2 40.10 88.2 50.35 2.7 4.78 0.6 9.58 1.37 0.6	58 A 11.0 388 A A 638 L	KIT	Gain 769 2565	30 A B 11.0 350 Are A B Fir 330 Los	ea ss Ga 688	13.1 21 6: 887	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58	12 A B 11.0 33 Area A B Fir 132 Loss	Gain	37 A B B 2.0 [29 Area 129 A B Fir 1444 [Loss Gair 1215 115 115] [17	12.0 93 / 93 / 1 240 1 516 567 20 26 218 194	A B Area A B B Fir Loss C 459	Gain 591 72	22 A B 11.0 11.0 217 Area 5 A B Fir 242  Loss 52 1115	Gain 02 1537	B 11.0 Area A B Fir		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Heat Gain   Feed   Heat Case	Level HL Total Level HG Total  Run f Run f Run f Run f Run f Run f Ex	Appliances Loads 21,059 2,009 2,009 2,009 2,009 2,009 2,009 2,009 4f. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A te exposed walls A xposed Ceilings A	R-Values L. 3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	rcent 492 al HL for per room HG per room x 1.  22.93 11.6 22.93 22.5 40.90 23.6 40.10 88.2 20.35 2.7 4.78 0.6 9.58 1.2 1.37 0.66 2.94 1.3	58 A A E F F 638	KIT	Gain 769 2565	30 A B 11.0 350 Are A B Fir 330 Los	ea ss Ga 688	13.1 21 6: 887	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58	12 A B 11.0 33 Area A B Fir 132 Loss	Gain	37 A B B 2.0 [29 Area 129 A B Fir 1444 [Loss Gair 1215 115 115] [17	12.0 93 / 93 / 1 240 1 516 567 20 26 218 194	A B Area A B B Fir Loss C 459	Gain 591 72	22 A B 11.0 11.0 217 Area 5 A B Fir 242  Loss 52 1115	Gain 02 1537	B 11.0 Area A B Fir		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Heat Gain   3655   1081   86   85   2484   788   11663	Level HL Total Level HG Total  Run f Run f Run f Run f Run f Run f Ex	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall A ft. exposed wall A ceilings height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls A to exposed walls A xposed Ceilings A xposed Ceilings A xposed Ceilings A xposed Ceilings B Exposed Floors uctive Heatloss	R-Values L. 3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	000   000	58 A A E F F 638	KIT A A A A A A A A A A A A A A A A A A A	Gain 769 2565	30 A B 11.0 350 Are A B Fir 330 Los 300	es Ga 688	13.1 21 6: 887	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58	12 A B 11.0 33 Area A B Fir 132 Loss	Gain	37 A B B 2.0   2.0   129 Area   129 A B Fir   144   Loss Gair   53	12.0 93 / 93 / 1 240 1 516 567 20 26 218 194	A B Area A B Fir Loss C 459	Gain 591 72	22 A B 11.0 217 Area 5 A B Fir 242 Loss 52 1119	Gain 1537 08 123 7 3	B 11.0 Area A B Fir		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Case     0.02   0.05	Level HL Total Level HG Total  Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skylight Doors et exposed Walls B xposed Ceilings A texposed Walls B xposed Floors ut we wall a forse Exp Wall B Components South Existing Windows Skylight Doors et exposed walls B xposed Ceilings B Exposed Floors uctive Heatloss Heat Loss	R-Values L. 3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	000   000	58 A A E F F 638	KIT A A A A A A A A A A A A A A A A A A A	769 2565 322	30 A B 11.0 350 Are A B Fir 330 Los 300	es <u>Ga</u> 688	13.1 24 6: 6: 887	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58 28	12 A B 11.0 33 Area A B Fir 132 Loss	Gain 85 :	37 A B B 2.0 129 Area 129 A B Fir 1444 145 53 1215 115 115 129 177 1423 1423	12.0 93 / 93 / 1 240 1 1616 1667 20 26 218 194	A B Area A B Fir Loss C 459	591 72 125	22 A B 11.0 217 Area 5 A B Fir 242 Loss 52 1119	Gain 32 1537 38 123 7 3	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Ventilation   Case 2   14.95   11.88     Case 3   x   0.03   0.05   159   187   60   55   18   4   18   4   120   127   55   40   60   85	Level HL Total Level HG Total  Run f	Appliances Loads 21,059 2,009	R-Values L. 3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	oss Gain 22.93 11.6 22.93 11.6 22.93 22.5 40.90 23.6 40.10 88.2 20.35 2.7 4.78 0.6 2.94 1.3 2.73 0.1 x	58 A E E E E E E E E E E E E E E E E E E	KIT (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	769 2565 322	30 A B 11.0 350 Are A B Fir 330 Los 300 1	es Ga 688	13.1 20 6: 4: 194 4:	5 A B 0 0 6 Area A B Fir 5 Loss 638	Gain 58 28 86	12 A B 11.0 33 Area A B Fir 132 Loss 631	Gain 85 :	37 A B B 2.0 [29 Area 129 A B Fir 1444 [153] 1215 115 1215 1215 1219 1777 [177] 177 [1	12.0 93 / 93 / 10 240 16 16 16 16 16 16 17 18 18 18 18 18	A B Area A B B B B B B B B B B B B B B B B B B	72 125	22 A B 11.0 217 Area 5 A B Fir 242 Loss 52 115	Gain 1537 188 123 7 3	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Case 3	Level HL Total Level HG Total  Run f	Appliances Loads 21,059 2,009  2,009	R-Values L. 3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	rcent 492 107 al HL for per room x 1.  room 408 22.93 11.6 22.93 22.5 40.10 88.2 20.35 2.7 40.90 88.2 20.35 2.7 4.78 0.6 2.94 1.3 2.73 0.1 x 0.3667 0.038	58 A E E 11.0 388 A A E E E E E E E E E E E E E E E E E	KIT (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	769 2565 322	30 A B 11.0 350 Are A B Fir 330 Los 300 1	es Ga 688	13.1 20 6: 4: 194 4:	5 A B 0 0 6 Area A B Fir 5 Loss 638	Gain 58 28 86	12 A B 11.0 33 Area A B Fir 132 Loss 631	Gain 85 :	37 A B B 2.0 [29 Area 129 A B Fir 1444 [153] 1215 115 1215 1215 1219 1777 [177] 177 [1	12.0 93 / 93 / 10 240 16 16 16 16 16 16 17 18 18 18 18 18	A B Area A B B B B B B B B B B B B B B B B B B	72 125	22 A B 11.0 217 Area 5 A B Fir 242 Loss 52 115	Gain 1537 188 123 7 3	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Heat Gain People   239   Appliances Loads   1 = 25 percent   4920   0.5   615   1.5   1845   1.0   1230   1.0   1230   1.0   1230   1.0   1230   1.0   1230   1.	Level HL Total Level HG Total  Run f Run f Run f Run f Run f C C C C C C C C C C C C C C C C C C C	Appliances Loads 21,059 2,009	R-Values L. 3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	oss Gain  22.93 11.6 22.93 11.6 22.93 22.5 24.93 22.5 40.90 23.6 40.10 88.2 20.35 2.7 4.78 0.6 9.58 1.2 1.37 0.6 9.58 1.2 1.37 0.6 0.038 0.038 0.02 0.008	58 A A A A B E F 638	KIT (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	769 2565 322	30 A B 11.0 350 Are A B Fir 330 Los 300 1	es Ga 688	13.1 20 6: 4: 194 4:	5 A B 0 0 6 Area A B Fir 5 Loss 638	Gain 58 28 86	12 A B 11.0 33 Area A B Fir 132 Loss 631	Gain 85 :	37 A B B 2.0 [29 Area 129 A B Fir 1444 [153] 1215 115 1215 1215 1219 1777 [177] 177 [1	12.0 93 / 93 / 10 240 16 16 16 16 16 16 17 18 18 18 18 18	A B Area A B B B B B B B B B B B B B B B B B B	72 125	22 A B 11.0 217 Area 5 A B Fir 242 Loss 52 115	Gain 1537 188 123 7 3	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Appliances Loads   1=25 percent   4920   0.5   615   1.5   1845	Level HL Total Level HG Total  Run f Run f Run f Run f Run f C C C C C C C C C C C C C C C C C C C	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall A ft. exposed wall A ft. exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls A et exposed Walls A gross Exp Wall B Exposed Floors Exp Wall B Exposed Floors et exposed walls A heat Loss Heat Loss Heat Loss Heat Loss Heat Gain Heat Loss/Gain Case 2	R-Values L. 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	rcent 492 al HL for per room x 1.  rooms Gain 22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6 40.10 88.2 20.35 2.7 4.78 0.6 2.94 1.3 2.73 0.1  0.3667 0.038 0.02 0.03 0.02 0.03	58 A A E E E E E E E E E E E E E E E E E	KIT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	769 2565 322 3655 139	30 A B 11.0 350 Are A B Fir 330 Los 300 1	SSS Ga 6688	13.1.21669 69 69 69 69 69 69 69 69 69 69 69 69	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58 28	12 A B 11.0 33 Area A B Fir 132 Loss 631 631	Gain 85 :	37 A B B 2.0 [29 Area 129 A B Fir 1444 [253	12.0 93 / 1240 240 1516 667 20 26 27 28 29 20 20 218 194 83	A B B Area A B B Fir Loss C 459 927 1915 702	72 125 788 30	22 A B 11.0 217 Area 5 A B Fir 242  Loss 52 119 190 90 5	Gain 1537 1537 7 3 1663	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Duct and Pipe loss         10%           Level HL Total         24,034         Total HL for per room         7800         2960         890         880         5892         2672         2940	Level HL Total Level HG Total  Run f Run f Run f Run f Run f Coductive Air Leakage Ventilation	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components South Existing Windows Skylight Doors et exposed walls A te exposed walls A te exposed walls A te exposed walls B Exposed Floors et exposed walls A te exposed Heat Loss Heat Cash Heat Loss Heat Cash Heat Loss Gain Heat Loss/Gain Case 1 Case 2 Case 3	R-Values L. 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	rcent         492           1007         1007           al HL for per room         x 1.           per room         x 1.           22.93         11.6           22.93         22.5           40.90         23.5           40.10         88.2           20.35         2.7           4.78         0.6           9.58         1.2           1.37         0.6           2.94         1.3           2.73         0.1           x           0.3667         0.038           0.02         0.0           14.95         11.8           0.03         0.00	58 A E E E E E E E E E E E E E E E E E E	KIT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	769 2565 322 3655 139	30 A B 11.0 350 Are A B Fir 330 Los 300 1	SSS Ga 6688	13.1.21669 69 69 69 69 69 69 69 69 69 69 69 69	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58 28	12 A B 11.0 33 Area A B Fir 132 Loss 631 631	Gain 85 :	37 A B B 2.0 [29 Area 129 A B Fir 1444 [253	12.0 93 / 1240 240 1516 667 20 26 27 28 29 20 20 218 194 83	A B B Area A B B Fir Loss C 459 927 1915 702	72 125 788 30	22 A B 11.0 217 Area 5 A B Fir 242  Loss 52 119 190 90 5	Gain 1537 1537 7 3 1663	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Level HL Total         24,034         Total HL for per room         7800         2960         890         880         5892         2672         2940         900	Level HL Total Level HG Total  Run f Run f Run f Run f Run f Code  E  Net Ex  Foundation Condu Total Conductive Air Leakage Ventilation	Appliances Loads 21,059 2,009	R-Values Lu 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	rcent         492           107         107           al HL for per room         x 1.           dependence         x 1.           22.93         11.6           22.93         22.5           22.93         22.5           40.90         23.6           40.91         38.2           20.35         2.7           4.78         0.6           2.94         1.3           2.73         0.1           x         x           0.036         0.038           0.049         0.038           1.21         0.038           0.036         0.038           0.037         0.038           0.038         0.038           0.039         0.038           0.039         0.038           0.039         0.038           0.039         0.038           0.039         0.038           0.039         0.038           0.039         0.038           0.039         0.038           0.049         0.038           0.059         0.038           0.060         0.038           0.070	58 A A E E E E E E E E E E E E E E E E E	KIT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	769 2565 322 3655 139	30 A B 11.0 350 Are A B Fir 330 Los	sss Ga 688 688 11434 778 60	13.1 20 6: 4: 194 4. 1081 41	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58 28	12 A B 11.0 33 Area A B Fir 132 Loss 631 631	Gain 85 :	37 A B B 2.0 129 Area 129 A B Fir 1444  Loss Gair 1215 1: 338 1616 : : 129 177	12.0 93 / 240 1616 1667 20 26 218 194 83	A B B Area A B B Fir Loss C 459 927 1915 702	72 125 788 30	22 A B 11.0 217 Area 5 A B Fir 242  Loss 52 1118 190 90 5	Gain  1537  1537  7 3  7 1663 63 60 85	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Lavid 100 Tatal   20 200   Tatal 10 - 10   1000   1	Level HL Total Level HG Total  Run f	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall A ft. exposed wall A ft. exposed ceilings A fx. exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed Walls A ft exposed ceilings A ft exposed Ceilings A ft exposed Floors uctive Heatloss Heat Loss Heat Cain Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads	R-Values Lu 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	rcent 492 al HL for per room x 1.  al HL for per room x 1.  poss Gain 22.93 11.6 22.93 22.5 22.93 22.5 40.10 88.2 20.35 2.7 4.78 0.6 2.94 1.3 2.73 0.1  x 0.3667 0.038 0.02 0.03 1.495 1.8 0.03 0.0 23ccent 492	58 A E E E E E E E E E E E E E E E E E E	KIT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	769 2565 322 3655 139	30 A B 11.0 350 Are A B Fir 330 Los	sss Ga 688 688 11434 778 60	13.1 20 6: 4: 194 4. 1081 41	5 A B 0 0 66 Area A B Fir 55 Loss	Gain 58 28	12 A B 11.0 33 Area A B Fir 132 Loss 631 631	Gain 85 :	37 A B B 2.0 129 Area 129 A B Fir 1444  Loss Gair 1215 1: 338 1616 : : 129 177	12.0 93 / 240 1616 1667 20 26 218 194 83	A B B Area A B B Fir Loss C 459 927 1915 702	72 125 788 30	22 A B 11.0 217 Area 5 A B Fir 242  Loss 52 1118 190 90 5	Gain  1537  1537  7 3  7 1663 63 60 85	B 11.0 Area A B Fir Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain
Level HG Total         20,333         Total HG per room x 1.3         5976         3929         122         121         5116         1116         3954	Level HL Total  Level HG Total  Run f Run	Appliances Loads 21,059 2,009  Level 2 ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area Axposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A te exposed walls A gross Exp Wall a Gross Exp Wall B Components South Existing Windows Skylight Doors et exposed walls B texposed Ceilings B Exposed Floors uctive Heatloss Heat Gain Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads Appliances Loads	R-Values Li 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 29.80	rcent 492 107 al HL for per room x 1.  See 492 2.93 11.6 2.293 22.5 2.293 22.5 40.90 23.6 40.10 88.2 20.35 2.7 4.78 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.94 1.3.7 0.6 2.95 1.95 1.95 1.95 1.95 1.95 1.95 1.95 1	58 A E E 11.0 388 A A E E S S S S S S S S S S S S S S S S	KIT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	769 2565 322 3655 139 187 615	30 A B 11.0 350 Are A B Fir 330 Los	SS Ga 688 11434 1222 778 60 22960	13.1.21 6: 6: 4: 194 4: 1081 41 55 1845	5 A B 0 0 6 Area A B Fir 5 Loss   Loss   638 234	Gain  58 28  86 3	12 A B 11.0 33 Area A B Fir 132 Loss  132 631 231	Gain 85 :	37 A B B 2.0 129 Area 129 A B Fir 1444  Loss Gair 1215 1: 338 1616 : : 129 177	12.0 93 / 240 240 26 218 194 83 83	A B B Area A B B Fir	72 125 788 30	22 A B 11.0 217 Area 5 A B Fir 242  Loss 52 119 90 5 110 110	Gain  1537  1537  7 3  7 1663 63 60 85 1230	B 11.0 Area A B Fir  Loss		B .0 Area A B Fir	Gain	B 11.0 Ar A B Fir	,		B .0 Area A B Fir	Gain

Division C subsection 3.2.5. of the Building Code. Individual BCIN:



Total Heat Loss

**Total Heat Gain** 

64,601

34,336

otu/h

htu/h

### Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800

e-mail hvac@gtadesigns.ca

**Bayview Wellington** July 22, 2021 Weather Data Bradford 44 -9.4 86 22 48.2 Page 5 Barossa 7 Project # P.I-00041 System 1 2012 OBC Heat Loss ^T 81.4 deg. F Project: **Green Valley East** Model: S38-7C Ht gain ^T 11 deg. F GTA: 2931 Layout # JB-07354 Level 3 MAST BED 2 BATH BED 3 WIC 3 LAUND BED 4 ENS 2 **ENS** Run ft. exposed wall A 33 A 18 A 6 A 34 A 13 A 18 A 13 A 11 A 24 A Run ft. exposed wall B В R В R В В R В В В Ceiling height 11.0 9.0 9.0 9.0 9.0 9.0 356 Area 72 Area 283 Area 40 Area 177 Area 59 Area 147 Area Floor area 172 Area 89 Area Area Area **Exposed Ceilings A** 356 A 172 A 72 A 283 A 40 A 89 A 177 A 59 A 147 A Α Α Exposed Ceilings B В В В Exposed Floors Flr 33 Flr 45 Flr 157 Flr 40 Flr 10 Flr Flr Flr Flr Flr Flr Gross Exp Wall A 363 306 117 162 117 99 216 Gross Exp Wall B Gain Components R-Values Loss Gain Loss Gain Gain Gain Loss 58 North Shaded 3.55 22.93 11.62 34 780 395 115 532 28 642 828 206 562 19 22 504 East/West 3.55 22.93 29.56 South 3.55 22.93 22.50 33 757 743 22 504 495 **Existing Windows** 1.99 40.90 23.66 Skylight 2.03 40.10 88.23 Doors 4.00 20.35 2.75 Net exposed walls A 17.03 4.78 0.65 330 1577 213 144 688 93 46 220 30 244 1166 158 112 535 72 153 731 99 98 468 63 80 382 52 172 822 111 Net exposed walls B 8.50 9.58 1.29 **Exposed Ceilings A** 59.22 1.37 0.64 356 489 228 172 236 110 72 283 389 182 40 55 26 89 122 57 177 243 114 59 81 38 147 202 94 Exposed Ceilings B 27.65 2.94 1.37 Exposed Floors 2.73 0.17 33 45 123 157 429 26 109 10 27 29.80 Foundation Conductive Heatloss Heat Loss 2823 1428 625 3406 814 1087 1147 899 2033 **Total Conductive** 1351 Heat Gain 1184 741 320 1588 163 424 738 651 Air Leakage Heat Loss/Gain 0.2953 0.0380 834 45 421 28 185 12 1006 60 240 321 339 28 265 25 600 51 Case 1 0.02 0.05 Ventilation Case 2 14.95 11.88 Case 3 0.03 0.05 61 38 97 23 31 33 33 **Heat Gain People** 239 478 239 239 239 4920 Appliances Loads 81 441 183 105 **Duct and Pipe loss** 10% 32 3737 1190 2691 Level HL Total 19,508 Total HL for per room 1890 909 4949 1183 1439 1519 Level HG Total 11,993 Total HG per room x 1.3 2298 1360 495 2798 252 600 1356 922 1913 Level 4 Run ft. exposed wall A Run ft. exposed wall B Ceiling height Area Area Area Floor area Area Area Area **Area** Area Area Area Area **Exposed Ceilings A** Exposed Ceilings B В В В В В В В В В Exposed Floors Flr Gross Exp Wall A Gross Exp Wall B Components R-Values Loss Gain Loss Gain Gain Gain Gain Loss Gain Loss Loss Loss Loss Loss Loss Loss North Shaded 3.55 22.93 11.62 East/West 3.55 22.93 29.56 South 3.55 22.93 22.50 **Existing Windows** 1.99 40.90 23.66 2.03 40.10 88.23 Skylight Doors 4 00 20 35 2 75 Net exposed walls A 17.03 4.78 0.65 Net exposed walls B 8.50 9.58 1.29 **Exposed Ceilings A** 59.22 1.37 0.64 Exposed Ceilings B 27.65 2.94 1.37 Exposed Floors 29.80 2.73 0.17 Foundation Conductive Heatloss Heat Loss **Total Conductive** Heat Gain Air Leakage 0.0000 0.0380 Heat Loss/Gain Case 1 0.00 0.05 Ventilation 14.95 11.88 Case 3 0.03 0.05 Heat Gain People 239 **Appliances Loads** 4920 10% **Duct and Pipe loss** Level HL Total Total HL for per room Total HG per room x 1.3 Level HG Total

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under

Division C subsection 3.2.5. of the Building Code. Individual BCIN:

Name Malesta

David DaCosta

SB-12 Package Package A1



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

System Design Option
Exhaust only / forced air system

HRV WITH DUCTING / forced air system

Part 6 design

HRV simplified connection to forced air system

HRV full ducting/not coupled to forced air system

1 2

3 x

4

Project # Layout # Page 6 PJ-00041 JB-07354

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under

Division C subsection 3.2.5. of the Building Code. Individual BCIN: 32964 flow Model. David DaCosta

Package: Project:	Package A1 Bradford	Model:	S38-7C
Froject.			
	RESIDENTIAL MECHANICAL		
	For systems serving one dwelling unit & co	nforming to the Untario Buildi	ng Code, O.reg 332/12
	Location of Installation	Total	Ventilation Capacity 9.32.3.3(1)
Lot #	Plan #		, , ,
Tarres alaira		Bsmt & Master Bdrn	
Township	Bradford	Other Bedrooms  Bathrooms & Kitche	3 @ 10.6 cfm 31.8 cfm n 5 @ 10.6 cfm 53 cfm
Roll #	Permit #	Other rooms	5 @ 10.6 cfm 53 cfm
			Total 180.2
Address			
		Drinein	Nontilation Compaits 0.22.2.4/4
	Builder	Principa	al Ventilation Capacity 9.32.3.4(1)
Name	Ballaci	Master bedroom	1 @ 31.8 cfm 31.8 cfm
	Bayview Wellington	Other bedrooms	3 @ 15.9 cfm47.7 cfm
Address			Total
City			
City		Pri	ncipal Exhaust Fan Capacity
Tel	Fax	Make	Model Location
		VanEE	V150H75NS Base
Name	Installing Contractor	140 cfm	Sones or Equiv.
ramo		110 0111	201100 01 24411.
Address			Heat Recovery Ventilator
O.L.		Make	VanEE
City		Model	V150H75NS  140 cfm high 80 cfm low
Tel	Fax	Sensible efficiency (	
		Sensible efficiency	
		Note: Installer to be	alance HRV/ERV to within 10 percent of PVC
	Combustion Appliances 9.32.3.1(1)	Supp	olemental Ventilation Capacity
a) x	Direct vent (sealed combustion) only Positive venting induced draft (except fireplaces)	Total ventilation can	acity 180.2
b)	Natural draft, B-vent or induced draft fireplaces	Total ventilation cap Less principal exhau	•
d)	Solid fuel (including fireplaces)		nental vent. Capacity 100.7 cfm
e)	No combustion Appliances		
,	••		
			upplemental Fans 9.32.3.5.
	Heating System	Location	cfm Model Sones
Х	Forced air Non forced air	Ens Ens 2	50 XB50 0.3 50 XB50 0.3
	Electric space heat (if over 10% of heat load)	Bath	50 XB50 0.3
	Electric space fleat (ii over 10 % of fleat load)	Datii	30 AB30 0.3
<b>N</b>		<u> </u>	
	House Type 9.32.3.1(2)	,,,	
l x	Type a) or b) appliances only, no solid fuel	all fans HVI listed	Make Broan or Equiv.
<u>  </u>	Type I except with solid fuel (including fireplace)  Any type c) appliance		Designer Certification
III IV	Type I or II either electric space heat	I hereby certify that t	his ventilation system has been designed
Other	Type I, II or IV no forced air		he Ontario Building Code.

	Designer (	Certification	
I hereby certify t	hat this ventilatio	n system has been	designed
in accordance w	rith the Ontario B	uilding Code.	•
		_	
Name	David D	aCosta	
	47	16000	
Signature	2 60.00	. 400	
HRAI#	5190	BCIN #	32964
Date	July 22	, 2021	

# ♦GTA\DESIGNS

### **Energy Efficiency Design Summary: Prescriptive Method**

(Building Code Part 9, Residential)

Page 7

Project # PJ-00041 Layout # JB-07354

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643 e-mail dave@gtadesigns.ca

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sidelights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

				For use by f	Princip	al Authori	V				
Application	n No:						tification Nu	mber			
Α.	Project Information										
	umber, street name			Barossa 7				Unit num	nber	Lot/Con	
				S38-7C							
Municipali	ty Bradford			Postal code		Reg. Plan	number / otl	her descr	iption		
	Bradioid										
В.	Prescriptive Compliance [indica	te the bu	ilding cod	e compliance ¡	packa	ge being e	mployed in	the hous	se design]		
										0.4.4.0	^
	SB-12 Prescriptive (input design pa	ckage):		<u> 1</u>	Раска	age A1			lable	: <u>3.1.1.2./</u>	<u>4</u>
C.	Project Design Conditions										
	Climatic Zone (SB-1):		Heat. E	quip. Efficie	ency			Spa	ce Heating F	uel Sourc	e
~	Zone 1 (< 5000 degree days)		√ ≥ 92	2% AFUE		<b>V</b>	Gas		Propane		Solid Fuel
	Zone 2 (≥ 5000 degree days)		_ ≥ 8	34% < 92% AF	UE		Oil		Electric		Earth Energy
F	Ratio of Windows, Skylights & Glas	s (W, S	& G) to	Wall Area				Other	Building Ch	aracterist	ics
A	£ Malla 444 E2 m2 a. 4794 O	ft²				☐ Log/P	ost&Beam		ICF Above	Grade	☐ ICF Basement
Area o	$f Walls = 444.53 m^2 \text{ or } 4784.9$	11-	W,S &	G % = <u>12</u>	.5%	☐ Slab-	on-ground		Walkout B	asement	
						☑ Air Co	onditioning		Combo Un	it	
Area of	W, S & G = $55.74$ m <sup>2</sup> or $600.0$	ft²	Utilize \	Vindow $\square$	Yes	☐ Air S	ourced Hea	t Pump (	ASHP)		
			Avera	aging 🔽	No	☐ Grou	nd Source I	Heat Pur	np (GSHP)		
D.	Building Specifications [provide	values a	nd ratings	of the energy	/ efficie	ency comp	onents pro	posed]			
	Energy Efficiency Substitutions										
	ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))										
	Combined space heating and domestic	water he	ating sys	tems (3.1.1.2(7	7) / 3.1	1.1.3.(7))					
	Airtightness substitution(s)		Table 3.	I.1.4.B Req	uired:				Permitted	Substitution	:
	Airtightness test required		Table 3.	Requ	uired:				Permitted	Substitution	:
(F	Refer to Design Guide Attached)		Table 5.		uired:				Permitted	Substitution	:
	Building Component			SI/R-Values on U-Value <sup>1</sup>	or		Buile	ding Co	mponent		Efficiency Ratings
Therma	Il Insulation	Non	ninal	Effectiv	е	Window	s & Doo	<b>rs</b> Provi	de U-Value <sup>(1)</sup>	or ER rating	
Ceiling v	vith Attic Space	6	0	59.22		Windows	/Sliding G	lass Do	ors		1.6
Ceiling v	vithout Attic Space	3	1	27.65		Skylights					2.8
Exposed	l Floor	3	1	29.80		Mechan	icals				
Walls Ab	oove Grade	22		17.03		Heating I	Equip.(AFL	JE)			96%
Baseme	nt Walls		20.0ci	21.12		HRV Effi	ciency (SR	RE% at 0	°C)		75%
Slab (all	>600mm below grade)	2	×	Х		DHW He	ater (EF)				0.80
Slab (ed	ge only ≤600mm below grade)	1	0	11.13		DWHR (	CSA B55.1	(min. 42%	6 efficiency))		#Showers 2
Slab (all	≤600mm below grade, or heated)	1	0	11.13		Combine	d Heating	System			
(1) U valu	ue to be provided in either W/(m²·K) or Bto	u/(h·ft·F) b	out not bo	th.							
E.	Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso	on(s) providing	jinforr	mation her	ein to subst	antiate tl	nat design mee	ets building o	code]
Name				BCI	N		Signature			1 1	,
	David DaCosta				329	964			Mane	146	<del>√6 </del>



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

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Project # PJ-00041
Layout # JB-07354

Package:Package A1System:System 1Project:BradfordModel:S38-7C

#### Air Leakage Calculations **Building Air Leakage Heat Loss Building Air Leakage Heat Gain** HL^T В LRairh Vb HLleak В LRairh ٧b HG^T **HG Leak** 0.018 0.372 38581 81.4 21056 0.018 0.092 38581 Levels Air Leakage Heat Loss/Gain Multiplier Table (Section 11) 1 2 3 4 Building Level Conductive Air Leakage Heat Loss Level (LF) (LF) (LF) (LF) Multiplier Factor (LF) **Heat Loss** Level 1 0.5 10239 1.0282 1.0 0.6 0.5 0.4 Level 2 0.3 17227 0.3667 0.3 0.3 0.4 21056 0.2953 Level 3 0.2 14263 0.2 0.2 Level 4 0 0.0000 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 700 0.0380 3 **BUILDING CONDUCTIVE HEAT GAIN** 18422 Ventilation Calculations **Ventilation Heat Loss Ventilation Heat Gain** Vent Vent **Ventilation Heat Loss** Ventilation Heat Gain **PVC** (1-E) HRV HLbvent PVC HG^T **HGbvent** 1.08 81.4 0.17 1188 79.5 944 79.5 11 Case 1 Case 1 **Ventilation Heat Loss (Exhaust only Systems)** Ventilation Heat Gain (Exhaust Only Systems) Case 1 - Exhaust Only Case 1 - Exhaust Only Multiplier Case Case LVL Cond. HL HGbvent 944 Level LF HLbvent Multiplier 0.05 Level 1 0.5 10239 0.06 Building 18422 Level 2 17227 0.3 0.02 1188 14263 Level 3 0.2 0.02 Level 4 0 0 0.00 Case 2 Case 2 **Ventilation Heat Loss (Direct Ducted Systems)** Ventilation Heat Gain (Direct Ducted Systems) Case Multiplier Multiplier C HL^T (1-E) HRV С HG^T 14.95 11.88 1.08 81.4 0.17 1.08 11 Case 3 Case 3 Ventilation Heat Loss (Forced Air Systems) **Ventilation Heat Gain (Forced Air Systems)** Case **HLbvent** Multiplier Vent Heat Gain Multiplier HGbvent HG\*1.3 Total Ventilation Load 1188 0.03 944 0.05 944 Foundation Conductive Heatloss Level 1 Level 1 2641 Watts 9010 Btu/h **Foundation Conductive Heatloss Level 2** Level 2 Watts Btu/h Slab on Grade Foundation Conductive Heatloss Watts Btu/h Walk Out Basement Foundation Conductive Heatloss Watts Btu/h

# **Envelope Air Leakage Calculator**

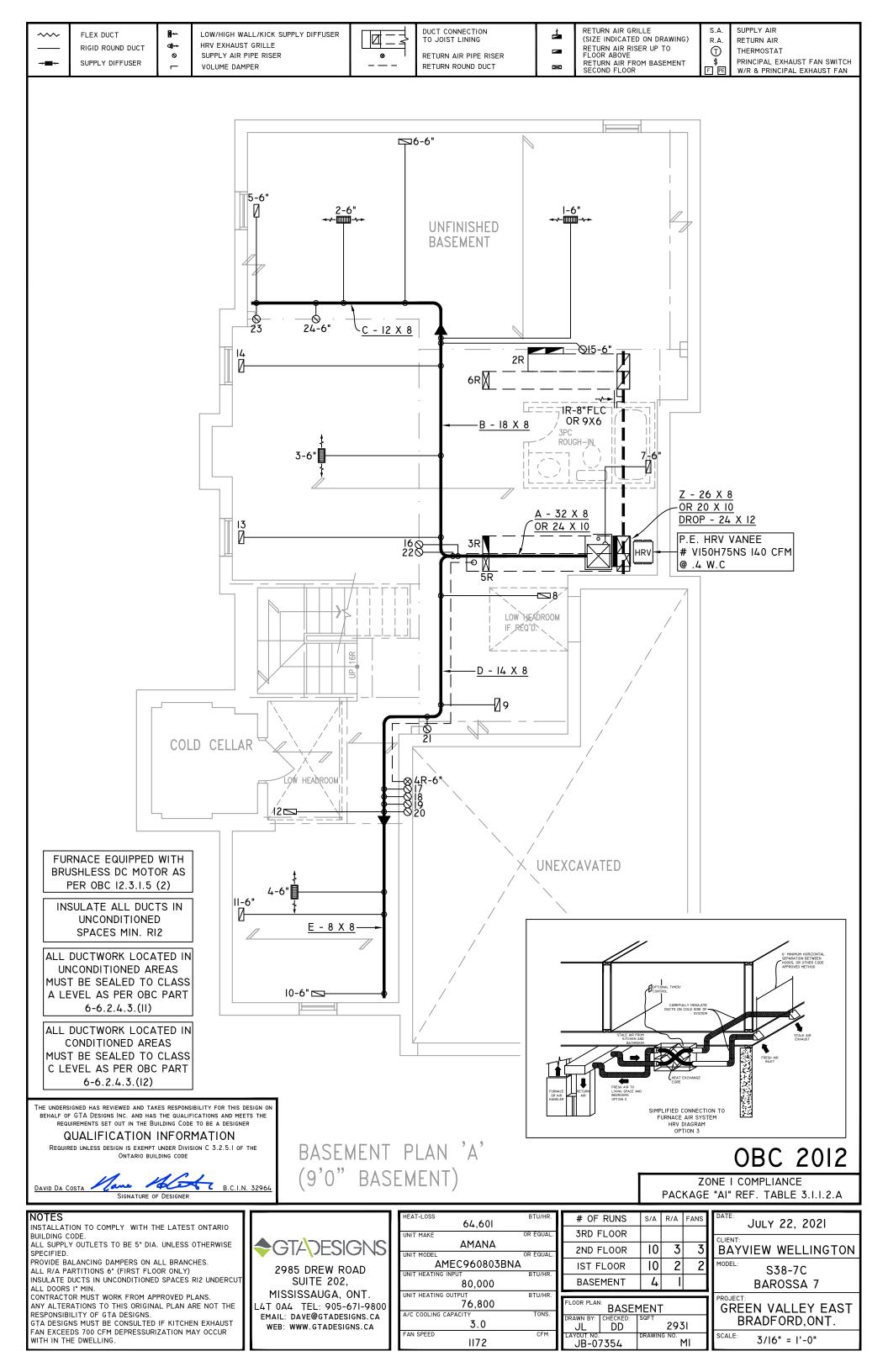
Supplemental tool for CAN/CSA-F280

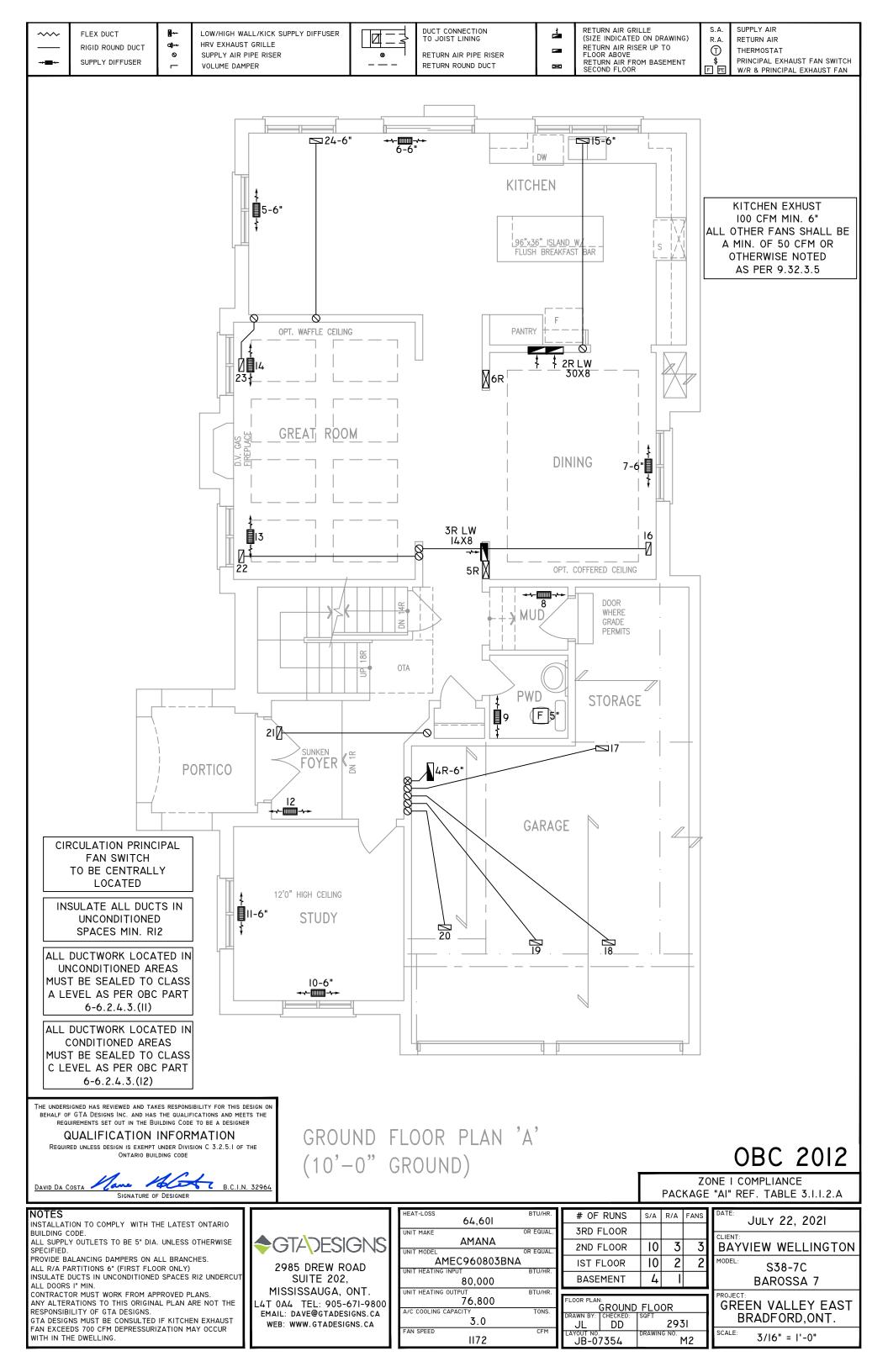
Weather Station	Description
Province:	Ontario
Region:	Bradford ▼
Weather Station Location:	Open flat terrain, grass
Anemometer height (m):	10
Local Shiel	ding
Building Site:	Suburban, forest
Walls:	Heavy ▼
Flue:	Heavy ▼
Highest Ceiling Height (m):	7.92
Building Confi	guration
Туре:	Detached
Number of Stories:	Two
Foundation:	Shallow
House Volume (m³):	1092.61
Air Leakage/Ve	entilation
Air Tightness Type:	Present (1961-) (ACH=3.57)
0 / 007.0 /	ELA @ 10 Pa. 322.44 cm <sup>2</sup>
Custom BDT Data:	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply: Total Exhaust:
	39.75
Flue #:	#1 #2 #3 #4
Diameter (mm):	0 0 0 0
Heating Air Leakage Rate (ACH/H):	0.372
Cooling Air Leakage Rate (ACH/H):	0.092

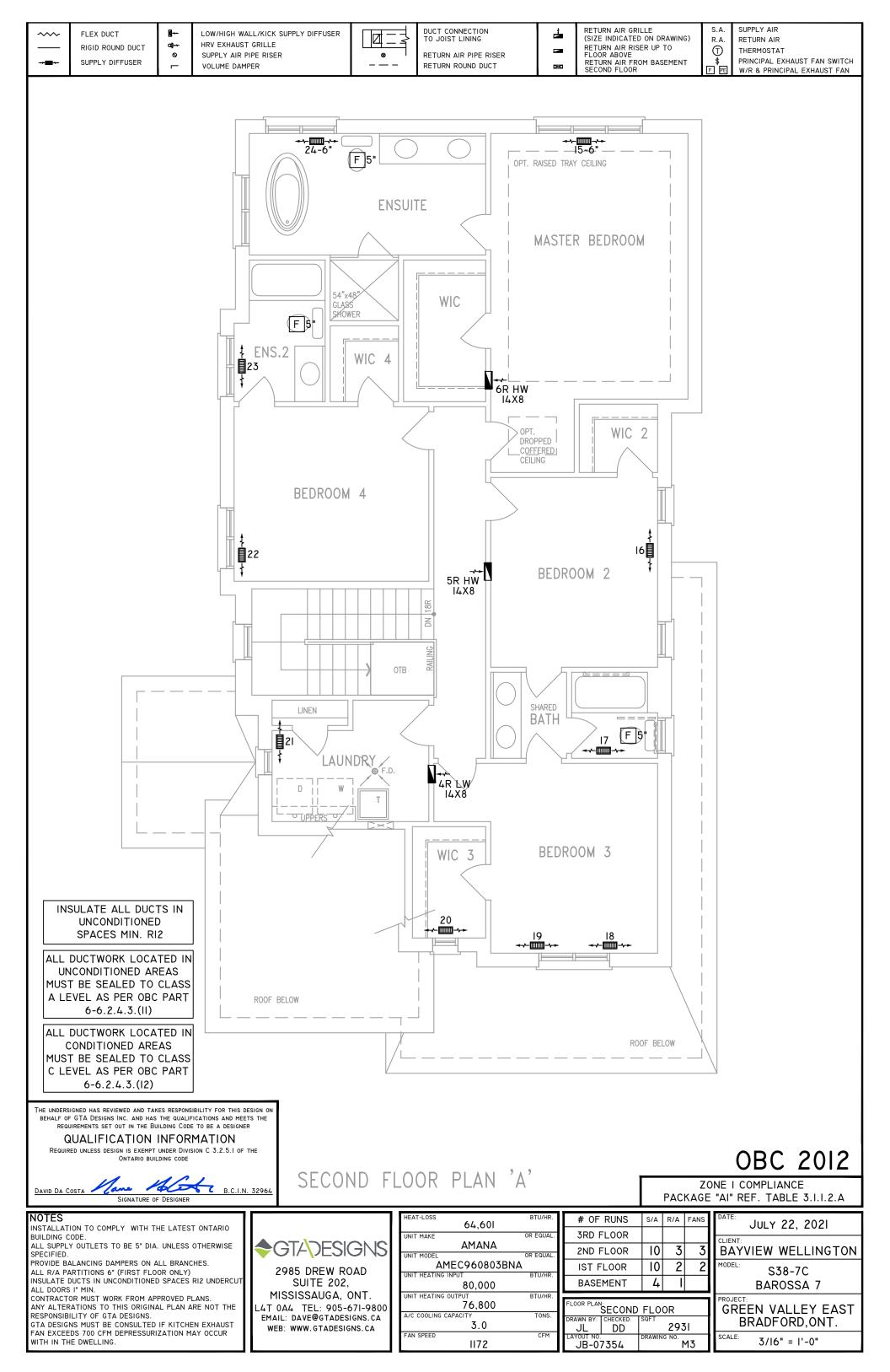
## **Residential Foundation Thermal Load Calculator**

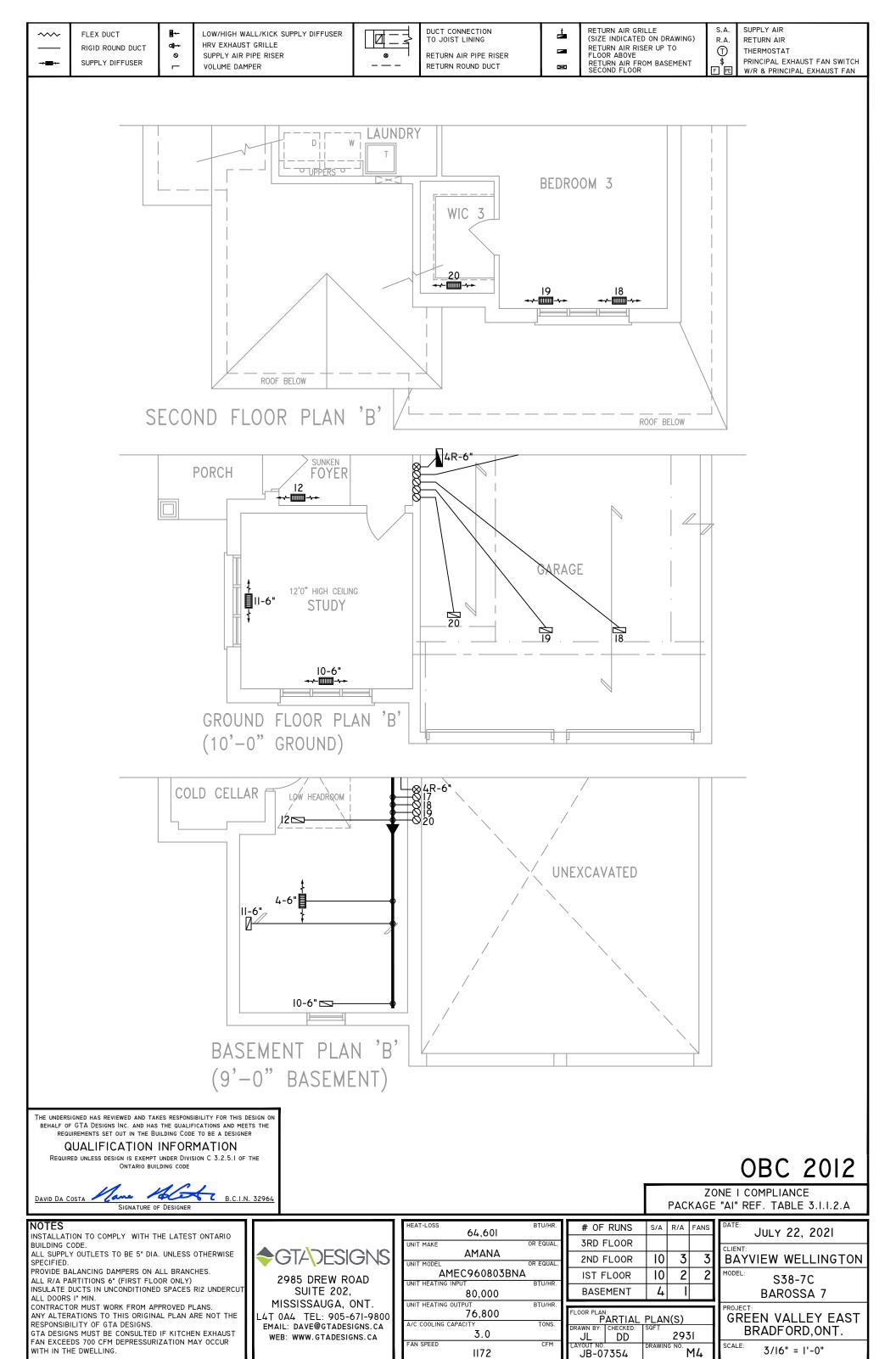
Supplemental tool for CAN/CSA-F280

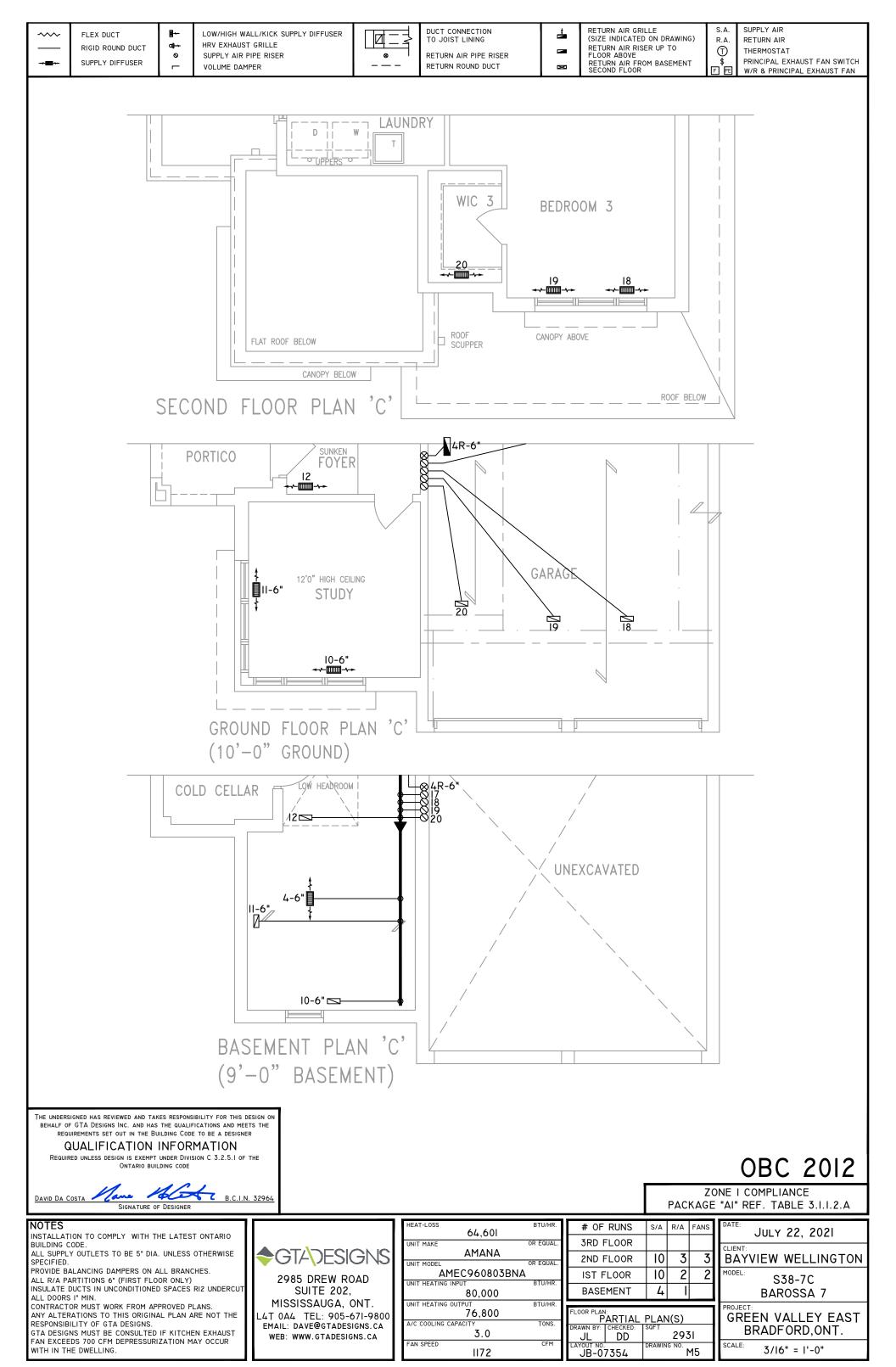
Weat	her Sta	tion Description
Province:		Ontario
Region:		Bradford ▼
	Site D	escription
Soil Conductivity:		High conductivity: moist soil ▼
Water Table:		Normal (7-10 m, 23-33 Ft) ▼
Fou	ındatio	n Dimensions
Floor Length (m):	22.83	
Floor Width (m):	5.06	
Exposed Perimeter (m):	55.78	
Wall Height (m):	3.05	<u>annun</u>
Depth Below Grade (m):	1.22	Insulation Configuration
Window Area (m²):	3.25	
Door Area (m²):	1.95	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	ation Loads
Heating Load (Watts):		2641











FLEX DUCT LOW/HIGH WALL/KICK SUPPLY DIFFUSER HRV EXHAUST GRILLE **a]**→ 0 RIGID ROUND DUCT SUPPLY AIR PIPE RISER SUPPLY DIFFUSER VOLUME DAMPER

8

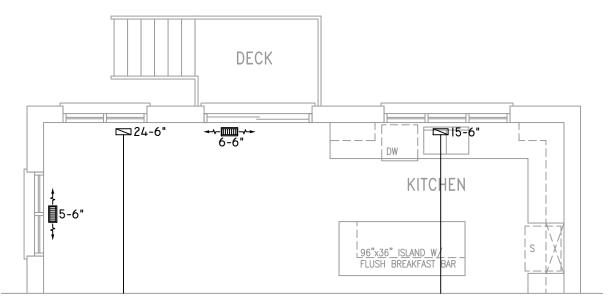
DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT

4

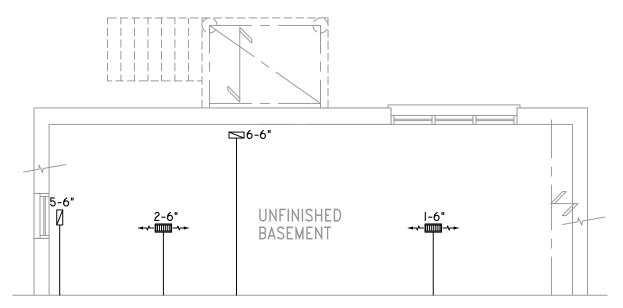
RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE RETURN AIR FROM BASEMENT SECOND FLOOR

R.A. 1

SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN



GROUND FLOOR PLAN 'A' - W.O.D. CONDITION ELEV. 'B' & 'C' SIMILAR



BASEMENT PLAN 'A' - W.O.D. CONDITION ELEV. 'B' & 'C' SIMILAR

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

QUALIFICATION INFORMATION Required unless design is exempt under Division C 3.2.5.1 of the

ONTARIO BUILDING CODE

Ane 1866 B.C.I.N. 32964

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE

PROVIDE BALANCING DAMPERS ON ALL BRANCHES. ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY) INSULATE DUCTS IN UNCONDITIONED SPACES RIZ UNDERCUT ALL DOORS I" MIN.

CONTRACTOR MUST WORK FROM APPROVED PLANS.
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE

RESPONSIBILITY OF GTA DESIGNS. GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.



2985 DREW ROAD SUITE 202, MISSISSAUGA, ONT. L4T 0A4 TEL: 905-671-9800 EMAIL: DAVE@GTADESIGNS.CA WEB: WWW.GTADESIGNS.CA

HEAT-LOSS 64,601	BTU/HR.
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960803B	NA
UNIT HEATING INPUT	BTU/HR.
80,000	
UNIT HEATING OUTPUT	BTU/HR.
76,800	
A/C COOLING CAPACITY	TONS.
3.0	
FAN SPEED	CFM
1172	

		PAC	KAGE	"AI" REF. TABLE 3.I.I.2.A
# OF RUNS	S/A	R/A	FANS	DATE: JULY 22, 2021
3RD FLOOR				CLIENT:
2ND FLOOR	10	3	3	BAYVIEW WELLINGTO
IST FLOOR	10	2	2	MODEL: S38-7C
BASEMENT	4			BAROSSA 7
FLOOR PLAN:				PROJECT:

LOOR PLAN	l:	
		PLAN(S)
RAWN BY:	CHECKED:	SQFT
JL	DD	2931
AYOUT NO.		DRAWING NO.
JB-0	7354	M6

JULY 22, 2021 CLIENT **BAYVIEW WELLINGTON** MODEL: S38-7C BAROSSA 7

OBC 2012

ZONE I COMPLIANCE

GREEN VALLEY EAST BRADFORD, ONT. 3/16" = 1'-0"