

#### **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 Sonoma 5 Corner Lo								
SD25	5-5C		Lot/con.					
Municipality Bradford	Postal code	Plan number/ other description						
B. Individual who reviews and takes responsibility for des	ign activities	I						
Name David DaCosta		Firm	gtaDesigns Inc.					
Street address 2985 Drew Ro	ad, Suite 202		Unit no.	Lot/con.				
Municipality	Postal code	Province	E-mail					
Mississauga	L4T 0A4	Ontario	dave@gtades	igns.ca				
Telephone number (905) 671-9800	Fax number (64	7) 494-9643	Cell number (416) 268-6	820				
C. Design activities undertaken by individual identified in	<u> </u>	<u>'</u>	· · · · · · · · · · · · · · · · · · ·					
D. Haves	I I a compa		D. D. Heller v. Oters at small					
☐ House ☑ HVAC – ☐ Small Buildings ☐ Building \$			<ul><li>□ Building Structural</li><li>□ Plumbing – House</li></ul>					
	, Lighting and Po	NA/Or	☐ Plumbing – All Building:	9				
☐ Complex Buildings ☐ Fire Prote	WC!	<ul> <li>On-site Sewage System</li> </ul>						
·	odel Certification	n	Project #:					
Secondary of acciding to work			Layout #:					
Heating and Cooling Load Calculations Main	n X	Builder	Bayview Wellingto					
Air System Design Alternate	е	Project	Green Valley Eas	t				
Residential mechanical ventilation Design Summary Area Sq ft	t: 2320	Model	Sonoma 5 Corne	r				
Residential System Design per CAN/CSA-F280-12 Residential New Construction - Forced Air		SB-12	SD25-5C Package A1					
D. Declaration of Designer		3B-12	rackage A1					
l David DaCosta	declare that (	choose one as appro	opriate):					
(print name)	(		F.1.2.1.2).					
(print name)								
☐ I review and take responsibility for	r the design work	on behalf of a firm red	stered under subsection					
3.2.4 Division C of the Building Co	ode. I am qualifie	d, and the firm Is Pegist	ℯℯ <sub>℞℞ℎ</sub> ℴℴℴℴ	WILLIMBURY				
classes/categories.			NG DEPARTMENT EXAMINED					
Individual BCIN	N:	_	NO BUILDING CODE APP	PLIES				
Firm BCIN:		DATE:	2018-10-23					
☑ I review and take responsibility fo "other designer" under subsection								
Individual BCIN	N:	64						
Basis for exem	ption from regist	ration:	Division C 3.2.4.1. (4)					
☐ The design work is exempt from the	he registration an	d qualification requiren	nents of the Building Code.					
Basis for exem	ption from regist	ration and qualification:						
I certify that:								
The information contained in this schedule is true to the best of	my knowledge.							
2. I have submitted this application with the knowledge and conser	nt of the firm.							
February 15, 2018		Mare 14	26					
Date		Signature of De	signer	•				

NOTE:

Page 1

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.

Schedule 1 does not require to be completed a holder of a license, temporay license, or a certificate of authorization, issed 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 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 Fax: 647-494-9643 e-mail dave@gtadesigns.ca

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	Heat loss and gain calcu	ation summary sheet sta	CSA-F280-M12 andard Form No. 1
These documents is	ssued for the use of	ayview Wellington	Layout No.
and may not be use	d by any other persons without authorization. Document	s for permit and/or construction are signed in red.	JB-04401
	Building	Location	
Address (Model):	SD25-5C	Site: Green Valley East	
Model:	Sonoma 5 Corner	Lot:	
City and Province:	Bradford	Postal code:	
	Calculation	s based on	
Dimensional inform	ation based on:	VA3 Design Sept/2016	
Attachment:	Semi	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?	LifeBreath RNC155	Internal shading: Light-translucent Occupants:	5
Sensible Eff. at -250	C 71% Apparent Effect. at -0C 84%	Units: Imperial Area Sq ft:	2320
Sensible Eff. at -0C	75%		
	Heating design conditions	Cooling design conditions	3
Outdoor temp -9	.4 Indoor temp: 72 Mean soil tem; 48	Outdoor temp 86 Indoor temp: 75 Latitude	e: <b>44</b>
	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: Ex	isting Walls (When Applicable) R 12	Style B:	
Style C:		Style C:	
Style D:		Style D:	
	Floors on soil	Ceilings	
Style A: As pe	r Selected OBC SB12 Package A1	Style A: As per Selected OBC SB12 Packa	ge A1 R 60
Style B:		Style B: As per Selected OBC SB12 Packa	ge A1 R 31
	Exposed floors	Style C:	
Style A: As pe	r Selected OBC SB12 Package A1 R 31	Doors	
Style B:		Style A: As per Selected OBC SB12 Packa	ge A1 R 4.00
	Windows	Style B:	
Style A: As pe	r Selected OBC SB12 Package A1 R 3.55	Style C:	
Style B: Exis	ting Windows (When Applicable) R 1.99	Skylights	
Style C:		Style A: As per Selected OBC SB12 Packa	ge A1 R 2.03
Style D:		Style B:	
Attached document	s: As per Shedule 1 Heat Loss/Ga	nin Caculations based on CSA-F280-12 Effective	e R-Values
Notes:	Residential New C	Construction - Forced Air	
	Calculations	performed by	
Name:	David DaCosta	Postal code: 0A4 0A4	DV
Company:	gtaDesigns Inc.	Telephone: (905) 671-9800	JP T
Address:	2985 Drew Road, Suite 202	Fax: (416) 268-6820	
City:	Mississauga	E-mail dave@gtadesigns.ca	



Builder: Bayview Wellington

Trunk

#### Air System Design

Date:

SB-12 Package A1 February 15, 2018

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

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

Page 3 P.I-00204

Project: Green V	alley Ea	st		Model:		So	onoma 5 SD25		r			Sy	stem '	1		of the Bu Individua		ode. 32964	M	ane 1	4 <i>6</i> =4		David Da	Costa		ject # out #		·00204 ·04401
DESIGN LOAD SPECIFICATION	S			AIR DIST	RIBUTION	N & PRES	SURE				[	FURNACE	/AIR HAI	NDLER D	ATA:			BOILER/V	VATER H	EATER [	DATA:			1	VC UNIT I	DATA:		
Level 1 Net Load Level 2 Net Load Level 3 Net Load Level 4 Net Load	13,314 16,225 13,881 0	btu/h		Equipmei Additiona Available Return Bi	al Equipm Design P	ent Press Pressure	sure Drop		0.5 ' 0.225 ' 0.275 ' 300 f	w.c.	1	Make Model Input Btu/ Output Bt	'h	Ama AMEC96-0 600 576	0603BNA 00			Make Model Input Btu Output Bt			7	Туре		C	Amana Cond		2.5 T 2.5 2.5	Fon .
Total Heat Loss	43,420	btu/h		R/A Plenu	ım Press	ure			0.138 '	w.c.		E.s.p.		0.5	0	" W.C.		Min.Outp	ut Btu/h			AWH						
Total Heat Gain	27,996			S/A Plenu	ım Pressi	ure			0.14 '	w.c.	,	Water Ten	np			deg. F.					187		ower DATA	<b>A</b> :				
Combo System HL + 10% Building Volume Vb Ventilation Load Ventilation PVC	47,762 27153 1,118 79.5	ft³ Btuh.		Heating A		Proportion	-	er O		fm/btuh deg. F.		AFUE Aux. Heat SB-12 Pac	kage	969 Packag				Blower S		ected: 1170	Cfm	2			Blower Ty (Brushle Cooling Cl	ss DC OI	CM 3C 12.3.1 963 c	
Supply Branch and Grill Sizing	79.5	Cilli		Diffuser l	oss _	0.01		•	110 (	deg. F.	-	Temp. Ris	se>>> <u></u>	46	deg. F.			Selected	cfm>	1170	cfm		C	Cooling A	ir Flow Ra	ate _	963	ofm
							Leve	el 1													Leve	el 2						
S/A Outlet No.	1	2	3	4											5		7	8	9	10	11	12	13	14				
Room Use	BASE	BASE	BASE	BASE											KIT		LIV/DIN	LIV/DIN	LIV/DIN	FOY	FAM	FAM	MUD	PWD				
Btu/Outlet	3328	3328	3328	3328											1622		2065	2065	2065	2194	2491	2491	840	392				
Heating Airflow Rate CFM	90	90	90	90											44		56	56	56	59	67	67	23	11				
Cooling Airflow Rate CFM	9	9	9	9											97		80	80	80	39	69	69	4	2				
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	32	19	44	42											37		40	42	28	38	49	45	36	40				
Equivalent Length	130	80	90	150	70	70	70	70	70	70	70	70	70	70	100	70	110	120	70	100	120	120	140	140	70	70	70	70
Total Effective Length	162	99	134	192	70	70	70	70	70	70	70	70	70	70	137	70	150	162	98	138	169	165	176	180	70	70	70	70
Adjusted Pressure	0.08	0.13	0.10	0.07	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.19	0.09	0.08	0.13	0.09	0.08	0.08	0.07	0.07	0.19	0.19	0.19	0.19
Duct Size Round	6	6	6	6											6		6	6	6	5	6	6	4	3				
Outlet Size	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	4x10	4x10	3x10	3x10	4x10	4x10	4x10	4x10
Trunk	С	В	D	Е											С		С	С	В	D	E	E	D	D				
							Leve	el 3													Leve	el 4						
S/A Outlet No.	15	16	17	18	19	20	21	22	23																			
Room Use	MAST	ENS	BED 4	VAN	BATH	BED 3	BED 3	BED 2	LAUN																			
Btu/Outlet	1771	2199	1760	1351	919	1822	1822	2031	206																			
Heating Airflow Rate CFM	48	59	47	36	25	49	49	55	6																			
Cooling Airflow Rate CFM	70	53	49	29	16	53	53	56	24																			
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	51	63	42	50	56	66	66	51	40																			
Equivalent Length	100	150	110	120	165	150	110	180	150	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Total Effective Length	151	213	152	170	221	216	176	231	190	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Adjusted Pressure	0.09	0.06	0.09	0.08	0.06	0.06	0.07	0.06	0.07	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Duct Size Round	6	6	5	4	4	5	5	6	4	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.13	0.13	0.15	0.10	0.15	0.15	0.15	0.15	0.13	0.15	0.15	0.15
Outlet Size	4x10	4x10	3x10	3x10	3x10	3x10	3x10	4x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10
Trunk	C	C	В	D	E	E	E	E	D	4210	4410	47.10	4210	4210	47.10	47.10	4410	4210	4210	47.10	47.10	47.10	4210	4210	77.10	4210	47.10	47.10
· · · · · · · · · · · · · · · · · · ·																												
Return Branch And Grill Sizing			Grill Pres	sure Los	s	0.02	"w.c					<u> </u>	Return Tr	unk Duct	Sizing						Supply Tr	unk Duc	t Sizing					
R/A Inlet No.	1R	2R	3R	4R	5R	6R	7R	8R	9R	10R	11R	1	Γrunk	(	CFM	Press.	Round	Rect.	Size		Trunk		CFM F	Press. F	Round	Rect. S	Size	
Inlet Air Volume CFM	182	499	105	87	87	105	105																					
Duct Design Pressure	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12		Orop		1170	0.04	18.0	24x12			Α		1171	0.06	16.5	32x8	24x10	
Actual Duct Length	7	17	47	40	48	57	38					Z	<u> </u>		1170	0.04	18.0	30x10	24x12		В		545	0.06	12.5	18x8	14x10	
Equivalent Length	110	205	155	150	230	230	180	50	50	50	50	١	1		287	0.05	10.0	12x8	10x10		С		352	0.06	10.5	12x8	10x10	
Total Effective Length	117	222	202	190	278	287	218	50	50	50	50	>	(								D		626	0.06	13.0	18x8	14x10	
Adjusted Pressure	0.10	0.05	0.06	0.06	0.04	0.04	0.05	0.24	0.24	0.24	0.24	v	N								E		402	0.06	11.0	14x8	10x10	
Duct Size Round	8.0	12.5	7.0	6.0	6.0	6.0	6.0					١	,								F							
Inlet Size	FLC	8	8	8	8	8	8					Ü	J								G		_		_	_		
" "	x	x	x	x	x	x	x	x	x	x	x	1									T						7)	
Inlet Size	9x6	30	14	14	14	14	14																					V
	340	55	1-7	7	1-7	1-7	7						-															



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

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643

e-mail dave@gtadesigns.ca

		Builder:	Bayvie	w Wellin	gton		Date:		Fe	bruary 15, 2	2018					Weath	er Data	Bradford	44	-9.4	86 22	48.2	2				Page 4
2012 OBC		Project:	Green	Valley E	=aet		Model:		So	noma 5 Co SD25-5C	rner			System 1	l	Heat I	Loss ^T 81	14 dea F	Ht gain ^1	. 11	deg. F	GTA	A: 2320	0	Proje	ect # out #	PJ-00204 JB-04401
2012 050		r roject.	Green	Valley L	_ası	_	wouei.			0020-00				•		i icat i	2033 1 01	1.4 ucg. 1	rit gain	•	ucg. i		. 2020		Luy	Jul #	05-04401
	Level 1					SE																					
	nft. exposed wall A				126 A			Α		Α		Α		Α		Α		Α	Α		Α			Α		Α	
Run	ft. exposed wall B				В			В		В		В		В		В		В	В		В			В		В	
	Ceiling height				3.7 AG		3.7		3.	.7 AG		3.7 AG		3.7 AG	;	3.7 AG	3	3.7 AG	3.7 AG		3.7 AG		3.7	7 AG		3.7 AG	
	Floor area				963 Area			Area		Area		Area		Area		Area		Area	Are	а	Are	ea		Area		Area	
	Exposed Ceilings A				Α			Α		Α		Α		Α		Α		Α	Α		Α			Α		Α	
E	Exposed Ceilings B				В			В		В		В		В		В		В	В		В			В		В	
	Exposed Floors				Flr			Fir		Flr		Flr		Fir		Flr		Flr	Flr		Fir	•		Flr		Flr	
	Gross Exp Wall A				469																						
	Gross Exp Wall B																										
	Components				Loss	Gain		Loss G	ain	Loss	Gain	Loss	Gain	Loss Ga	ain	Loss	Gain	Loss Gain	Los	s Gain	Lo	ss Gair	n	Loss	Gain	Los	Gain
	North Shaded			10.91																							
	East/West	3.55		27.35		98 35																					
	South	3.55		20.89	6 1	38 12	5																				
	WOB Windows	3.15		28.32																							
	Skylight	2.03		88.23			_																				
	Doors	4.00	20.35			27 5	-																				
	et exposed walls A		3.85		429	22	3																				
	et exposed walls B		5.62	0.76																							
	xposed Ceilings A		1.37	0.64																							
E	xposed Ceilings B	22.86	3.56	1.66																							
	Exposed Floors		2.73	0.17																							
Foundation Cond	ductive Heatloss	On Grade (	) or Abo		56																						
Total Conductive	Heat Loss				65	44																					
Ala I aalaana	Heat Gain				-	76																					
Air Leakage	Heat Loss/Gain			.0289	65	18 2	2																				
Ventilation	Case 1		0.09	0.06																							
veniliation	Case 2	x		11.88			•																				
	Case 3	Х	0.04	0.06	- 4	252 4	8																				
	Heat Gain People	4 05		239 3854																							
	Appliances Loads Duct and Pipe loss	1 =.25 pe	ercent	10%																							
Level 1 HL Total		To	tal III far nar		133	4.4																					
Level 1 HG Total	13,314 1,082		tal HL for per HG per room		130	108	2																				
Level I II o Total																											
Level 1 110 Total	•			-																							
LEVEL I HO TOLAI																											
LEVEL I THO TOTAL					к			LIV/DIN		FOY		FAM		MUD		PWD											
	Level 2					п		LIV/DIN A		FOY 6 A		FAM 42 A		MUD 5 A		PWD 5 A		A	A		A			Α		Α	
Run	Level 2				10 A B		46		1	FOY 6 A B		FAM 42 A B		MUD 5 A B		PWD 5 A B		A B	A B		A B			A B		A B	
Run	Level 2  of t. exposed wall A  of t. exposed wall B				10 A B		46	A B		6 A B		42 A B	1	5 A B		5 A B	10	В	В		В		10.0	В		В	
Run	Level 2  of t. exposed wall A  of t. exposed wall B  Ceiling height			1	10 A B 10.0	п	46 10.0	A B	11.	6 A B .0	1	42 A B 10.0		5 A B 2.0	1:	5 A B 2.0	10	B 0.0	B 10.0	a	B 10.0	ea	10.0	В 0		B 10.0	
Run Run	Level 2 oft. exposed wall A oft. exposed wall B Ceiling height Floor area			1	10 A B 10.0 269 Area	п	46 10.0 322	A B Area	11.	6 A B .0 3 Area	1	42 A B 10.0 171 Area		5 A B 2.0 66 Area	1:	5 A B 2.0 34 Area	10	B 0.0 Area	B 10.0 Are	a	10.0 Are	ea	10.0	B 0 Area		B 10.0 Area	
Run Run E	Level 2  oft. exposed wall A  oft. exposed wall B  Ceiling height  Floor area  Exposed Ceilings A			1	10 A B 10.0	п	46 10.0 322 4	A B Area	11.	6 A B .0	1	42 A B 10.0		5 A B 2.0	1:	5 A B 2.0	10	B 0.0	B 10.0 Are A	a	B 10.0	ea	10.0	В 0		B 10.0 Area A	
Run Run E	Level 2  If t. exposed wall A  If t. exposed wall B  Ceiling height Floor area  Exposed Ceilings A  Exposed Ceilings B			1	10 A B 10.0 269 Area A	п	46 10.0 322 4	A B Area A	11.	6 A B .0 3 Area A	1	42 A B 10.0 171 Area A		5 A B 2.0 66 Area A	1:	5 A B 2.0 34 Area A	10	B D.0 Area A	B 10.0 Are	a	10.0 Are A		10.0	B 0 Area A		B 10.0 Area	
Run Run E E	Level 2 Ift. exposed wall A Celling height Floor area Exposed Cellings A Exposed Floors			1	10 A B 10.0 269 Area A B	п	46 10.0 322 4	A B Area A B Fir	11.	6 A B .0 3 Area A B Fir	1	42 A B 10.0 171 Area A B		5 A B 2.0 66 Area A B	1:	5 A B 2.0 34 Area A B	10	B D.0 Area A B	B 10.0 Are A B	a	B 10.0 Are A B		10.0	B 0 Area A B		B 10.0 Area A B	
Run Run E E	Level 2  If t. exposed wall A  If t. exposed wall B  Ceiling height Floor area  Exposed Ceilings A  Exposed Ceilings B			1	10 A B 10.0 269 Area A B Fir	п	46 10.0 322 4	A B Area A B Fir	11. 9	6 A B .0 3 Area A B Fir	1	42 A B 10.0 171 Area A B FIr		5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Flr	10	B D.0 Area A B	B 10.0 Are A B	a	B 10.0 Are A B		10.0	B 0 Area A B		B 10.0 Area A B	
Run Run E E	Level 2 Ift. exposed wall A Ceiling height Floor area Exposed Ceilings A Exposed Floors Gross Exp Wall A Gross Exp Wall B			1	10 A B 10.0 269 Area A B Fir	π	46 10.0 322 4	A B Area A B Fir	11. 9	6 A B 0 03 Area A B Fir	1	42 A B 10.0 171 Area A B Fir		5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Fir		B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A		.oss Gair	1	10 A B 10.0 269 Area A B Fir	π	46 10.0 322 4	A B Area A B Fir	11. 9	6 A B 0 03 Area A B Fir	1	42 A B 10.0 171 Area A B Fir		5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Fir	10 Gain	B 0.0 Area A B Fir	B 10.0 Are A B		B 10.0 Are A B	,		B 0 Area A B	Gain	B 10.0 Area A B	
Run Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components	R-Values L	. <u>oss</u> Gair 22.93	1	10 A B 10.0 269 Area A B Fir 100	π	46 10.0 322 4 460	A B Area A B Fir	11. 9 17 ain	6 A B 0 03 Area A B Fir	1 1 2 Gain	42 A B 10.0 171 Area A B Fir		5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Fir		B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South	R-Values L	.oss Gair 22.93 22.93	1 10.91 27.35	10 A B 10.0 269 Area A B Fir 100	IT Gain	46 10.0 322 4 460	A B Area A B Fir Loss G 963	11. 9 17 ain	6 A B .0 3 Area A B Fir	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420	Gain	5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Fir		B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South	R-Values L 3.55 3.55	oss Gair 22.93 22.93 22.93	10.91	10 A B 10.0 269 Area A B Fir 100	IT Gain	46 10.0 322 4 460	A B Area A B Fir Loss G 963	11. 9 17 sain	6 A B .0 3 Area A B Fir	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss	Gain 1286	5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Fir		B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run E E	Level 2  Ift. exposed wall A  Ift. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West	R-Values L 3.55 3.55 3.55	.oss Gair 22.93 22.93 22.93 40.90	1 10.91 27.35 20.89	10 A B 10.0 269 Area A B Fir 100	IT Gain	46 10.0 322 4 460	A B Area A B Fir Loss G 963	11. 9 17 sain	6 A B .0 3 Area A B Fir	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss	Gain 1286	5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Fir		B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows	R-Values I 3.55 3.55 3.55 1.99	.oss Gair 22.93 22.93 22.93 40.90	1 10.91 27.35 20.89 22.15	10 A B 10.0 269 Area A B Fir 100	IT Gain	46 10.0 322 4 460	A B Area A B Fir Loss G 963	11. 9 17 sain	66 A B B .0 0 133 Area A B Fir 66 Loss 6 124 550	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss	Gain 1286 898	5 A B 2.0 66 Area A B Fir	1:	5 A B 2.0 34 Area A B Fir		B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Celling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight	R-Values I 3.55 3.55 3.55 1.99 2.03	.0ss Gair 22.93 22.93 22.93 40.90 40.10	1 10.91 27.35 20.89 22.15 88.23	10 A B 10.0 269 Area A B Fir 100 Loss 39 8	IT Gain	46 10.0 322 4 460 7 42 86	A B Area A B Fir Loss G 963 1972	11. 9 17 17 1149 1796	66 A B B .00 133 Area A B Fir 66 Loss 624 550 214 427	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss	Gain 1286 898	5 A B B 2.0 666 Area A B Filr 60 Loss Ga	1: ain	5 A B 2.0 34 Area A B Fir	Gain	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03	0.0SS Gair 22.93 22.93 40.90 40.10 20.35	10.91 27.35 20.89 22.15 88.23 2.75	10 A B 10.0 269 Area A B Fir 100 Loss 39 8	: Gain	46 10.0 322 4 460 7 42 86	A B Area A B Fir Loss G 963 1972	11. s	66 A B B .00 133 Area A B Fir 66 Loss 624 550 214 427	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss 47 1078 43 986	Gain 1286 898	5 A B B 2.0 66 Area A B Fir 60 Loss Ga	1: ain	5 A B 2.0 34 Area A B Fir 60 Loss	Gain	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A 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	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22	0.0SS Gair 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64	10 A B 10.0 269 Area A B Fir 100 Loss 39 8	: Gain	46 10.0 322 4 460 7 42 86	A B Area A B Fir Loss G 963 1972	11. s	66 A B B .00 133 Area A B Fir 66 Loss 624 550 214 427	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss 47 1078 43 986	Gain 1286 898	5 A B B 2.0 66 Area A B Fir 60 Loss Ga	1: ain	5 A B 2.0 34 Area A B Fir 60 Loss	Gain	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E	Level 2  Ift. exposed wall A  Ift. exposed wall B  Ceiling height Floor area  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 Ceilings B  Exposed Ceilings B  Exposed Ceilings B  Exposed Ceilings B	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86	05S Gair 22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37	10.91 27.35 20.89 22.15 0.65 1.29 0.64 1.66	10 A B 10.0 269 Area A B Fir 100 Loss 39 8	: Gain	46 10.0 322 4 460 7 42 86	A B Area A B FIr Loss G 963 1972	11. s	66 A B B .00 133 Area A B Fir 66 Loss 624 550 214 427	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss 47 1078 43 986	Gain 1286 898	5 A B B 2.0 66 Area A B Fir 60 Loss Ga	1: ain	5 A B 2.0 34 Area A B Fir 60 Loss	Gain	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Floors Gross Exp Wall A 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 exposed Ceilings A Exposed Ceilings A Exposed Floors	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.26 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64	10 A B 10.0 269 Area A B Fir 100 Loss 39 8	: Gain	46 10.0 322 4 460 7 42 86	A B Area A B FIr Loss G 963 1972	11. s	66 A B B .00 133 Area A B Fir 66 Loss 624 550 214 427	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B 10.0 171 Area A B Fir 420 Loss 47 1078 43 986	Gain 1286 898	5 A B B 2.0 66 Area A B Fir 60 Loss Ga	1: ain	5 A B 2.0 34 Area A B Fir 60 Loss	Gain	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E	Level 2  Ift. exposed wall A  Ift. exposed wall B  Ceiling height Floor area  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 Ceilings B  Exposed Ceilings B  Exposed Ceilings B  Exposed Ceilings B	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.26 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 27.35 20.89 22.15 0.65 1.29 0.64 1.66	10 A B 10.0 269 Area A B Fir 100 Loss 61 2	Gain 106	46 10.0 322 4 460 7 42 86	A B Area A B B Fir Loss G 963 1972 1587 5	11. s	6 A B B 0.0 13 Area A B Fir 16 Loss 14 550 11 626	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B B 10.0 B 10.0 C A B Fir 420 Loss Loss 986 330 1577	Gain 1286 898	5 A B B 2.0 66 Area A B Fir 60 Loss Ga 21 427 39 186	1: ain	5 A B B 22.0 34 Area A B Fir 60 Loss	Gain	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E Nice Ne E E Foundation Cond	Level 2 Ift. exposed wall A Ift. exposed wall B Celling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls B Exposed Ceilings A Exposed Ceilings A Exposed Ceilings A Exposed Floors ductive Heatloss Heat Loss	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.26 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 10.91 27.35 20.89 22.15 88.23 2.75 0.64 1.29 0.64 0.17	10 A B 10.0 269 Area A B Fir 100 Loss 61 2	Gain 106	46 10.0 3222 4 460 7 42 86	A B Area A B Fir Loss G 963 1972 5 4527	11. s	66 A B B .00 133 Area A B Fir 66 Loss 624 550 214 427	Gain 656 58 85 3	42 A B 10.0 171 Area A B Fir 420 Loss 47 1078 43 986	Gain 1286 898 213	5 A B B 2.0 66 Area A B Fir 60 Loss Ga	1: ain 58 25	5 A B 2.0 34 Area A B Fir 60 Loss	Gain 39	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run  E E  No. No. E E Foundation Cond Total Conductive	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Existing Windows Skylight Exposed walls A et exposed walls A Exposed Ceilings B Exposed Ceilings A Exposed Ceilings A Exposed Ceilings A Exposed Ceilings B Exposed Floors Suctive Heatloss	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.26 29.80	22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo	10.91 27.35 20.89 22.15 88.23 0.65 1.29 0.64 0.17 x	10 A B 10.0 269 Area A B Fir 100 Loss 61 2	Gain 106	46 10.0 3222 4 460 7 42 86	A B Area A B B Fir Loss G 963 1972 1587 5	11. s	6 A B 0.0 13 Area A B Fir 16 14 550 14 550 11 626 11 626 11 626 11 604	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	42 A B B 10.0 1711 Area A B Fir 420 Loss 1330 1577	Gain 1286 898	5 A B B 2.0 66 Area A B Fir 60 Loss Ga 21 427 39 186	1: ain	5 A B B 22.0 34 Area A B Fir 60 Loss	Gain	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E Nice Ne E E Foundation Cond	Level 2 Ift. exposed wall A Ift. exposed wall B Celling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls B Exposed Ceilings A Exposed Ceilings A Exposed Ceilings A Exposed Floors ductive Heatloss Heat Loss	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.26 29.80	0.0SS Gair 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo	10.91 10.91 27.35 20.89 22.15 88.23 2.75 0.64 1.29 0.64 0.17	10 A B 10.0 269 Area A B Fir 100  Loss 39 E 61 2	Gain 106	46 10.0 3222 4 460 7 7 42 86	A B Area A B Fir Loss G 963 1972 5 4527	11. s	6 A B B 0.0 13 Area A B Fir 16 Loss 14 550 11 626	Gain 656 58 85 3	42 A B B 10.0 B 10.0 C A B Fir 420 Loss Loss 986 330 1577	Gain 1286 898 213	5 A B B 2.0 66 Area A B Fir 60 Loss Ga 21 427 39 186	1: ain 58 25	5 A B B 22.0 34 Area A B Fir 60 Loss	Gain 39	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E E Foundation Cond Total Conductive Air Leakage	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls B Exposed Ceilings A Exposed Ceilings A Exposed Ceilings B Exposed Floors Juctive Heat Loss Heat Gain Heat Loss/Gain	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.26 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 0.17 x	10 A B 10.0 269 Area A B Fir 100  Loss 39 E 61 2	Gain 106	46 10.0 3222 4 460 7 7 42 86	A B Area A B B Fir Loss G 963 1972 1587 5	11. s 17. s	6 A B 0.0 13 Area A B Fir 16 14 550 14 550 11 626 11 626 11 626 11 604	Gain 656 58 85 3	42 A B B 10.0 1711 Area A B Fir 420 Loss 1330 1577	Gain 1286 898 213	5 A B B 2.0 66 Area A B Fir 60 Loss Ga 21 427 39 186	1: ain 58 25	5 A B B 2.0 34 Area A B Fir 60 Loss	Gain 39	B 0.0 Area A B Fir	B 10.0 Are A B Fir		B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run  E E  No. No. E E Foundation Cond Total Conductive	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls A Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors ductive Heatloss Heat Loss Heat Gain Heat Loss/Gain Lase 2	R-Values L 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.26 29.80	22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo	10.91 27.35 20.89 2.75 1.29 0.64 0.17 x	10 A B 10.0 269 Area A B Fir 100  Loss 39 E 61 2	Gain 106	46 10.0 3222 4 460 7 7 42 86	A B Area A B BFIr Loss G 963 1972 1587 5 4527 1493	11. s 17. s	6 A B 0.0 13 Area A B Fir 16 14 550 14 550 11 626 11 626 11 626 11 604	Gain 656 58 85 3	42 A B B 10.0 1711 Area A B Fir 420 Loss 147 1078 43 986 3330 1577	2397 69	5 A B B 2.0 66 Area A B Fir 60  Loss Ga 21 427 39 186	1: ain 58 25	5 A B B 2.0 34 Area A B Fir 60 Loss	Gain 39	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Art A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E E Foundation Cond Total Conductive Air Leakage	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings A Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed Walls A Exposed Ceilings B Exposed Ceilings B Exposed Ceilings A Exposed Floors Letting Windows Exposed Floors Heat Loss 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 22.26 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo	10.91 27.35 20.89 22.15 88.23 0.65 1.29 0.64 1.66 0.17 x	10 A B 10.0 269 Area A B Fir 100 Loss 61 2	Gain 106	46 10.0 3222 4 460 460 9 3322 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	A B Area A B B Fir Loss G 963 1972 1587 5	11. s 17. s	6 A B 0.0 13 Area A B Fir 16 14 550 14 550 11 626 11 626 11 626 11 604	Gain 656 58 85 3	42 A B B 10.0 1711 Area A B Fir 420 Loss 1330 1577	2397 69	5 A B B 2.0 66 Area A B Fir 60 Loss Ga 21 427 39 186	1: ain 58 25	5 A B B 2.0 34 Area A B Fir 60 Loss	Gain 39	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Art A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run E E E Foundation Cond Total Conductive Air Leakage Ventilation	Level 2 Ift. exposed wall A off. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls B Exposed Ceilings A at exposed Ceilings A Exposed Ceilings B Exposed Ceilings B Exposed Floors Juctive Heatloss Heat Loss Heat Gain Heat LossGain Case 1 Case 2 Case 3 Heat Gain People	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 On Grade	22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo  0.3298 0 0.03 14.07 0.04	10.91 27.35 20.89 22.15 0.65 0.65 0.64 0.17 x	10 A B 10.0 269 Area A B Fir 100 Loss 61 2	Gain 106 199 106 110 110 110 110 110 110 110 110 110	460 10.0 3222 4 460 866 2 2 0 0 0 0	A B Area A B B Fir Loss G 963 1972  1587 5 4527 1493	111. 17 17 17 17 17 17 17 17 17 17 17 17 17	6 A B 0.0 133 Area A B Fir 16 14 550 14 550 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 16 16 16 16 16 16 16 16 16 16 16	Gain  656  58  85  799  23	42 A B B 10.0 171 Area A B Fir 420 Loss 330 1577 3641 1201 140	Gain  1286 898  213  2397 69  151	5 A B B 2.0 66 Area A B Fir 60  Loss Ga 21 427 39 186	12 ain 58 25 83 2	5 A B B 2.0 34 Area A B Fir 60 Loss 287 95	Gain 39	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Art A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run  Run  Ne E E Foundation Cond Total Conductive Air Leakage Ventilation	Level 2 Ift. exposed wall A Ift. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skylight Doors et exposed walls B Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors ductive Heat Loss Heat Loss Heat Loss Heat Loss Heat Gain Case 2 Case 3 Heat Gain People Heapliances Loads	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 On Grade	22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo  0.3298 0 0.03 14.07 0.04	10.91 127.35 22.89 22.15 0.65 1.66 1.66 1.69 0.017 x	10 A B 10.0 269 Area A B Fir 100 Loss 61 2	Gain 106 106 110 110 110 110 110 110 110 110	460 10.0 3222 4 460 866 2 2 0 0 0 0	A B Area A B B Fir Loss G 963 1972  1587 5 4527 1493	111. 9 17 ain 1149 1796 214 13 3 3162 91	6 A B 0.0 133 Area A B Fir 16 14 550 14 550 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 16 16 16 16 16 16 16 16 16 16 16	Gain  656  58  85  799  23	42 A B B 10.0 1711 Area A B Fir 420 Loss 147 1078 43 986 3330 1577	2397 69	5 A B B 2.0 66 Area A B Fir 60  Loss Ga 21 427 39 186	12 ain 58 25 83 2	5 A B B 2.0 34 Area A B Fir 60 Loss 287 95	Gain 39	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Are A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run  E E  Note Note Note Total Conductive Air Leakage Ventilation	Level 2 Ift. exposed wall A Ift. exposed wall B Celling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls B Exposed Ceilings A et exposed walls B Exposed Floors suctive Heatloss Heat Loss/Gain Case 1 Case 2 Age A Grass A Heat Gain People Appliances Loads Lour and Pipe loss	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 o On Grade (	0.05S Gair 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo 0.03 14.07 0.04	110.91 127.35 20.89 222.15 88.23 2.75 1.29 0.64 1.66 0.17 x 0.0289 0.06 11.88 0.06 11.88	10 A B B Fir 1000 Loss:	Gain  106  1094  106  110  110  110  110  110  110  11	460 10.0 3222 4 460 866 2 2 0 0 0 0	A B Area A B B Fir Loss G 963 1972  1587 5 4527 1493	111. 17 17 17 17 17 17 17 17 17 17 17 17 17	6 A B B B B B B B B B B B B B B B B B B	Gain  656  58  85  799  23	42 A B B 10.0 171 Area A B Fir 420 Loss 330 1577 3641 1201 140	Gain  1286 898  213  2397 69  151	5 A B B 2.0 66 Area A B Fir 60  Loss Ga 21 427 39 186	12 ain 58 25 83 2	5 A B B 2.0 34 Area A B Fir 60 Loss 287 95 11	39 39 1	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Art A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run  E E  Note Note Note Note Note Note Note Not	Level 2 Ift. exposed wall A Ift. exposed wall A Ceiling height Floor area Exposed Ceilings A 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 Exposed Ceilings A Exposed Ceilings A Exposed Ceilings A Exposed Ceilings B Exposed Floors Juctive Heatloss Heat Loss Heat Gain Heat Loss/Gain Heat Loss/Gain Heat Loss/Gain Heat Roin Floors Locase 1 Case 2 Case 3 Heat Gain People Appliances Loads Duct and Pipe loss 16,225	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 o On Grade	22.93 22.93 40.90 40.10 20.35 4.73 3.56 2.73 3.0 or Abo  0.3298 0.3298 0.03 14.07 0.04  ercent	10.91 27.35 20.89 22.15 0.65 0.65 1.29 0.64 11.88 0.06 11.88 0.06 11.88 0.06 11.88	10 A B B Fir 1000 Loss:	Gain 106 106 110 110 110 110 110 110 110 110	460 10.0 322 4 460 7 7 42 86 9 332 4	A B Area A B BFIr Loss G 963 1972 1587 5 4527 1493 174	111. 5 17 17 1149 2 1796 214 13 3 3162 91 199 1927	6 A B 0.0 133 Area A B Fir 16 14 550 14 550 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 626 16 16 16 16 16 16 16 16 16 16 16 16 16	58 85 3799 23 50	42 A B B 10.0 171 Area A B Fir 420 Loss 330 1577 3641 1201 140	Gain  1286 898  213  2397 69  151 482	5 A B B 2.0 66 Area A B Fir 60  Loss Ga 21 427 39 186	58 25 83 2 5 5	5 A B B 2.0 34 Area A B Fir 60 Loss 287 95	39 39 1	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Art A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run  E E  Note Note Note Total Conductive Air Leakage Ventilation	Level 2 Ift. exposed wall A Ift. exposed wall B Celling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls B Exposed Ceilings A et exposed walls B Exposed Floors suctive Heatloss Heat Loss/Gain Case 1 Case 2 Age A Grass A Heat Gain People Appliances Loads Lour and Pipe loss	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 o On Grade	0.05S Gair 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 ) or Abo 0.03 14.07 0.04	10.91 27.35 20.89 22.15 0.65 0.65 1.29 0.64 11.88 0.06 11.88 0.06 11.88 0.06 11.88	10 A B B Fir 1000 Loss:	Gain  106  1094  106  110  110  110  110  110  110  11	460 10.0 322 4 460 7 7 42 86 9 332 4	A B Area A B BFIr Loss G 963 1972 1587 5 4527 1493 174	111. 17 17 17 17 17 17 17 17 17 17 17 17 17	6 A B B B B B B B B B B B B B B B B B B	Gain  656  58  85  799  23	42 A B B 10.0 B 10.1 Area A B Fir 420 Loss 986 330 1577 3641 1201 140 0.5	Gain  1286 898  213  2397 69  151	5 A B B 2.0 66 Area A B Fir 60 Loss G2 21 427 339 186 614 202 24	12 ain 58 25 83 2	5 A B B 2.0 34 Area A B Fir 60 Loss 287 95 11	39 39 1	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Art A B Fir	,		B 0 Area A B Fir		B 10.0 Area A B Fir	
Run Run  E E  Note Note Note Note Note Note Note Not	Level 2 Ift. exposed wall A Ift. exposed wall A Ceiling height Floor area Exposed Ceilings A 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 Exposed Ceilings A Exposed Ceilings A Exposed Ceilings A Exposed Ceilings B Exposed Floors Juctive Heatloss Heat Loss Heat Gain Heat Loss/Gain Heat Loss/Gain Heat Loss/Gain Heat Roin Floors Locase 1 Case 2 Case 3 Heat Gain People Appliances Loads Duct and Pipe loss 16,225	R-Values I 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 o On Grade	22.93 22.93 40.90 40.10 20.35 4.73 3.56 2.73 3.0 or Abo  0.3298 0.3298 0.03 14.07 0.04  ercent	10.91 27.35 20.89 22.15 0.65 0.65 1.29 0.64 11.88 0.06 11.88 0.06 11.88 0.06 11.88	10 A B B Fir 1000 Loss:	Gain 106 106 110 110 110 110 110 110 110 110	460 10.0 322 4 460 7 7 42 86 9 332 4	A B Area A B BFIr Loss G 963 1972 1587 5 4527 1493 174	111. 5 17 17 1149 2 1796 214 13 3 3162 91 199 1927	6 A B B B B B B B B B B B B B B B B B B	58 85 3799 23 50	42 A B B 10.0 B 10.1 Area A B Fir 420 Loss 986 330 1577 3641 1201 140 0.5	Gain  1286 898  213  2397 69  151 482	5 A B B 2.0 66 Area A B Fir 60 Loss G2 21 427 339 186 614 202 24	58 25 83 2 5 5	5 A B B 2.0 34 Area A B Fir 60 Loss 287 95 11	39 39 1	B 0.0 Area A B Fir	B 10.0 Are A B Fir	s Gain	B 10.0 Art A B Fir	,		B 0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain

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

43,420 btu/h Total Heat Loss Total Heat Gain 27,996 btu/h

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

Man 16Cot 2

David DaCosta

SB-12 Package Package A1



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

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643

e-mail dave@gtadesigns.ca

2012 OBC		Builder:	Вау	view Welli	ington	_	Date:		F	ebruary 1	5, 2018			_				Weathe	er Data	Br	adford	44	-9.	4 86	22	48.2				Page 5
2012 UBC		Project:	Gre	een Valley	East	_	Model:		S	onoma 5 SD25					Systen	1 1		Heat L	.oss ^T 8	1.4 deg. F		Ht gain ^T		11 deg. F		GTA:	2320		ect # out #	PJ-00204 JB-04401
	Level 3				MA	ST		ENS		ВЕ	0 4		VAN		ВАТН		ı	BED 3		BED	2	LA	UN							
	ft. exposed wall A				12 A		22			16 A		10 A			9 A		28 /			10 A		A			A		A		A	
Run fi	ft. exposed wall B				B 8.0		8.0	В		B 8.0		10.0			B 10.0		10.0	В		B 3.0		B 8.0		8.0	В		B 8.0		B 8.0	
	Ceiling height Floor area				8.0 301 Area			Area		8.0 157 Area		10.0 115 A			10.0 50 Area		10.0 156 A	A		48 Area		83 Area			Area		8.0 Area		8.0 Are	
Ε.	xposed Ceilings A				301 Area 301 A		107			157 Area 157 A		115 A			50 Area 50 A		156 #			48 Area 48 A		83 Area			Area A		Area A		Are A	a
	xposed Ceilings B				В В			В	'	В		В			В		130 A			40 A		В			В		В		В	
	Exposed Floors				Flr			Flr		Flr		FI			Fir			Fir	1	48 Flr		17 Flr			Flr		Flr		Fir	
	Gross Exp Wall A				96		176		1	128		100	-		90		280			80										
	Gross Exp Wall B																													
	Components	R-Values	Loss (	Bain	Loss	Gain	_	Loss	Gain	Loss	Gain	Lo	oss Ga	in	Loss	Gain	L	Loss	Gain	Loss	Gain	Loss	Ga	iin	Loss	Gain	Loss	Gain	Los	ss Gain
	North Shaded	3.55	22.93	10.91																										
	East/West	3.55	22.93	27.35	28 64	12 766			356								36	825		25 57	3 684									
<u> </u>	South	3.55	22.93	20.89			27	619	564	30 6	38 627	7 23	527	480	12 275	251	35	803	731											
F	Existing Windows	1.99	40.90	22.15																										
<u> </u>	Skylight	2.03	40.10	88.23																										
N-	Doors	4.00	20.35	2.75			400	650	-00	00 4			200		70 070		200	000	405		2 20									
	et exposed walls A et exposed walls B	17.03 8.50	4.78 9.58	0.65 1.29	68 32	25 44	136	650	88	98 4	63	3 77	368	50	78 373	50	209	999	135	55 26	3 36									
	xposed Ceilings A	59.22	1.37	0.64	301 4°	14 193	107	147	69 1	157 2	16 101	115	158	74	50 69	32	156	214	100 1	48 20	3 95	83 1	14	53						
	xposed Ceilings B	22.86	3.56	1.66	301 4	190	. 107	14/	03	2			138		30 09	32	130	214	130 1	.5 20	35	00 1		55						
	Exposed Floors	29.80	2.73	0.17															1	48 40	4 25	17	46	3						
Foundation Condu		_0.00	2	J																-										
Total Conductive	Heat Loss				138	31		1714		13	72		1053		717			2841		144	4	1	61							
	Heat Gain					1003	3		1076		791	ı		604		333			1951		839			56						
Air Leakage	Heat Loss/Gain		0.2440	0.0289	33	37 29	)	418	31	3	35 23	3	257	17	175	10		693	56	35	2 24		39	2						
l	Case 1		0.02	0.06																										
Ventilation	Case 2		14.07	11.88																										
L	Case 3	х	0.04	0.06		63		66	68		53 50		41	38	28	21		109	123	5			6	4						
	Heat Gain People	4 05		239	2	478	3			1	239	,					1		239	1	239			100						
	Appliances Loads	1 =.25 p	ercent	3854																4 40	400	0.5		482						
Level 3 HL Total	Ouct and Pipe loss 13,881	Tr	tal HL for p	10%	177	71		2199		17	50		1351		919			3644		1 18		2	06							
Level 3 HG Total	11,763		HG per ro			204		2133	1527	- "	1433		1001	857	313	473		3044	3080	200	1642		00	706						
	,																									-				
	Level 4																													
	ft. exposed wall A				A B			A B		A B		A B			A B		. A	A		A B		A B			A B		A B		A B	
Run fi	ft. exposed wall B				В			В		В		В			В		-	В		В		В			В		В		В	
	Ceiling height Floor area				Area			Area		Area		Λ.	rea		Area		,	Area		Area		Area			Area		Area		Are	
Fv	xposed Ceilings A				A			A		A		A			A			A A		A		A			A		A		A	za .
	xposed Ceilings B				В			В		В		В			В		É			В		В			В		В		В	
	Exposed Floors				Fir			Flr		Fir		FI			Fir			Fir		Fir		Fir			Flr		Flr		Fir	
	Gross Exp Wall A												-				-													
	Gross Exp Wall B																													
	Components	R-Values	Loss (	Bain	Loss	Gain		Loss	Gain	Loss	Gain	Lo	oss Ga	iin	Loss	Gain	L	Loss	Gain	Loss	Gain	Loss	Ga	iin	Loss	Gain	Loss	Gain	Los	ss Gain
	North Shaded	3.55	22.93	10.91													ΙΓ													
	East/West	3.55	22.93	27.35																										
	South	3.55	22.93	20.89																										
F	Existing Windows	1.99	40.90	22.15																										
	Skylight	2.03	40.10	88.23																										
Mar	Doors	4.00	20.35	2.75																										
	et exposed walls A et exposed walls B	17.03 8.50	4.78 9.58	0.65 1.29																										
	xposed Ceilings A	59.22	1.37	0.64																										
	xposed Ceilings A	22.86	3.56	1.66																										
	Exposed Floors	29.80	2.73	0.17																										
Foundation Condu	Heat Loss																													
Total Conductive	Heat Gain		0.0000	0.0289																										
	Heat Gain Heat Loss/Gain		0.0000																											
Total Conductive -	Heat Loss/Gain Case 1		0.00	0.06									1		1	ı	1			1	1	1								
Total Conductive	Heat Loss/Gain Case 1 Case 2		0.00 14.07	0.06 11.88																										
Total Conductive – Air Leakage  Ventilation	Heat Loss/Gain Case 1 Case 2 Case 3	x	0.00	0.06 11.88 0.06																										
Total Conductive  Air Leakage  Ventilation	Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People		0.00 14.07 0.04	0.06 11.88 0.06 239																	C		Ė	E					1	
Total Conductive Air Leakage  Ventilation	Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads	x 1 =.25 p	0.00 14.07 0.04	0.06 11.88 0.06 239 3854																	S		r	F						
Total Conductive - Air Leakage  Ventilation	Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads Ouct and Pipe loss	1 =.25 p	0.00 14.07 0.04 ercent	0.06 11.88 0.06 239 3854 10%																	S		ľ	E		C	O	P		
Total Conductive Air Leakage  Ventilation	Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads	1 =.25 p	0.00 14.07 0.04	0.06 11.88 0.06 239 3854 10% per room																	S		ľ	E		C	O	P		

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

43,420 Total Heat Loss btu/h Total Heat Gain 27,996 btu/h Division C subsection 3.2.5. of the Building Code. Individual BCIN:

Mane Maleta

David DaCosta

SB-12 Package Package A1



2

3 x

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

Project # Layout # Page 6 PJ-00204 JB-04401

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

David DaCosta

Package:	Package A1		0005.50	
Project:	Bradford	Model:	SD25-50	;
	RESIDENTIAL MECHANICAL	. VENTILATION DES	IGN SUMMARY	
	For systems serving one dwelling unit & c	onforming to the Ontario Building	g Code, O.reg 332/12	
	Location of Installation	Total V	entilation Capacity 9.32.	3 3(1)
Lot #	Plan #	Total V	entilation capacity 9.32.	5.5(1)
		Bsmt & Master Bdrm	2 @ 21.2 0	
Township	Bradford	Other Bedrooms	3 @ 10.6 (	
Roll #	Permit #	Bathrooms & Kitchen Other rooms	4 @ 10.6 c 5 @ 10.6 c	ofm 42.4 cfm ofm 53 cfm
11011 11	1 Onnie n	Guier reeme	Total	169.6
Address		1		
		Principal	Ventilation Capacity 9.3	2.3.4(1)
Name	Builder	Master bedroom	1 @ 31.8 0	ofm 31.8 cfm
Ivanie	Bayview Wellington	Other bedrooms	3 @ 15.9	
Address		1	Total	79.5
City		Dela	-'! F!! F O	***
Tel	Fax	Make	cipal Exhaust Fan Capac Model	Location
	Tux	Wake	Wodel	Location
		LifeBreath	RNC155	Base
<b>.</b>	Installing Contractor	400 (		
Name		132 cfm		Sones or Equiv.
Address		н	eat Recovery Ventilator	
		Make	LifeBreath	
City		Model	RNC155	00 - ( )
Tel	Fax	Sensible efficiency @	132 cfm high -25 deg C	80 cfm low 71%
101	Tux	Sensible efficiency @		75%
			ance HRV/ERV to within 1	0 percent of PVC
	Combustion Appliances 9.32.3.1(1)	Supple	emental Ventilation Capa	acity
a) x	Direct vent (sealed combustion) only	Tatal wastilation asset	-14	400.0
b)	Positive venting induced draft (except fireplaces)  Natural draft, B-vent or induced draft fireplaces	Total ventilation capad Less principal exhaus		169.6 79.5
d)	Solid fuel (including fireplaces)	REQUIRED suppleme	, ,	90.1 cfm
e)	No combustion Appliances			
, <u> </u>				
			pplemental Fans 9.32.3.5	
	Heating System	Location	cfm Model	Sones
Х	Forced air Non forced air	Ens Bath	50 XB50 50 XB50	0.3 0.3
	Electric space heat (if over 10% of heat load)	Balli	20 VP20	0.3
	Electric space float (ii over 10% of float load)			
		- 1		
	House Type 9.32.3.1(2)	1 ", , , , , , ,		
I X	Type a) or b) appliances only, no solid fuel Type I except with solid fuel (including fireplace)	all fans HVI listed	Make Broan	or Equiv.
	Any type c) appliance		Designer Certification	
IV —	Type I or II either electric space heat		s ventilation system has b	een designed
Other	Type I, II or IV no forced air		e Ontario Building Code.	

Any type c) appliance		Designer C	Certification	
Type I or II either electric space heat	I hereby certify the	hat this ventilation	n system has been	designed
Type I, II or IV no forced air	in accordance w	rith the Ontario Bu	uilding Code.	
· ·			_	
System Design Option	Name	David Da	aCosta -	
Exhaust only / forced air system				
HRV WITH DUCTING / forced air system	Signature		4	
HRV simplified connection to forced air system				
HRV full ducting/not coupled to forced air system	HRAI#	5190	BCIN #	32964
Part 6 design				
•	Date	February <sup>2</sup>	15, 2018	

## ♦GTA\DESIGNS

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

(Building Code Part 9, Residential)

Page 7

Project # PJ-00204 Layout # JB-04401

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	e by Princip	oal Authori	ty					
Application	n No:						tification Nur	mber				
Α.	Project Information											
Building nu	umber, street name		Son	oma 5	Corner			Unit n	umbe	er	Lot/Con	
				SD25-	5C							
Municipalit	y Bradford			Postal co	de	Reg. Plan	number / oth	her des	cripti	ion		
	2.44.0.4											
B.	Prescriptive Compliance [indica	te the bu	ilding cod	e complia	ance packa	ge being e	employed in	the ho	use	design]		
	SB-12 Prescriptive (input design pa	ckage):			<u>Pack</u>	age A1				Table:	3.1.1.2./	<u>A</u>
C.	Project Design Conditions											
	Climatic Zone (SB-1):		Heat. E	quip. Ef	fficiency			SI	pace	Heating Fu	uel Sourc	e
<b>✓</b>	Zone 1 (< 5000 degree days)					<b>V</b>	Gas			Propane		Solid Fuel
					% AFUE		Earth Energy					
F	Ratio of Windows, Skylights & Glass (W, S & G) to Wall A				a			Oth	er B	Building Cha	aracterist	ics
Aron of	f Walls = 329.71 m <sup>2</sup> or 3549.0	ft²				☐ Log/F	ost&Beam			ICF Above C	Grade	☐ ICF Basement
Alea U	VValis = <u>329.71</u> III 01 <u>3343.0</u>	11.	W,S &	G % =	<u>15%</u>	☐ Slab-	on-ground		П	Walkout Bas	sement	
						☑ Air C	onditioning		П	Combo Unit		
Area of \	$V, S \& G = 49.144 \text{ m}^2 \text{ or } 529.0$	ft² Utilize Window ☐ Yes Averaging ☑ No				☐ Air S	ourced Heat	t Pum	o (AS	SHP)		
	Averaging					☐ Grou	nd Source F	Heat P	ump	(GSHP)		
D.	<b>Building Specifications</b> [provide	values a	nd ratings	of the er	nergy effici	ency comp	onents prop	posed]				
	<b>Energy Efficiency Substitutions</b>											
	ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))											
	Combined space heating and domestic	water he	eating syst	ems (3.1	.1.2(7) / 3.	1.1.3.(7))						
	Airtightness substitution(s)		Table 3.1	I.1.4.B	Required:					Permitted S	ubstitution	:
	Airtightness test required		Table 3.1	114C	Required:					Permitted S	ubstitution	:
(F	Refer to Design Guide Attached)				Required:					Permitted S	ubstitution	:
	Building Component		mum RS Maximun				Build	ding (	Com	ponent		Efficiency Ratings
Therma	l Insulation	Non	ninal	Effe	ective	Windov	vs & Dooi	<b>rs</b> Pro	vide	U-Value <sup>(1)</sup> or	ER rating	
Ceiling w	rith Attic Space	6	0			Window	s/Sliding G	lass D	oor	S		1.6
Ceiling w	rithout Attic Space	3	1			Skylights	3					2.8
Exposed	Floor	3	1			Mechar	nicals					
Walls Ab	ove Grade	22				Heating	Equip.(AFL	JE)				96%
Basemer	nt Walls		20.0ci			HRV Eff	ciency (SR	RE% at	0°C	)		75%
Slab (all	>600mm below grade)	3	x			DHW He	eater (EF)					0.80
Slab (ed	ge only ≤600mm below grade)	1	0		DWHR (CSA B55.1 (min. 42% efficiency))					#Showers 2		
Slab (all	≤600mm below grade, or heated)	1	0			Combine	ed Heating	Syste	m			
(1) U valu	e to be provided in either W/(m²·K) or Bt	u/(h·ft·F) b	out not bot	h.						<u> </u>		
E.	Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso	on(s) prov	iding infor	mation her	ein to substa	antiate	that	t design meets	s building o	code]
Name					BCIN		Signature				, ,	,
	David DaCosta				329			ļ	Mane .	14C=	₹ 7	

Form authorized by OHBA, OBOA, LMCBO. Revised December 1, 2016.





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Page 8
Project # PJ-00204
Layout # JB-04401

Pacl	ckage: Package A1  pject: Bradford						System: System 1 Model: SD25-5C					Layout #	36-04401			
					Air	Leakag	je Ca	alculatio	ons							
		Bu	uilding A	ir Leakage	Heat Loss					Building	Air Leakag	e Heat Gai	n			
			LRairh	Vb	HL^T	HLleak			В	LRairh	Vb	HG^T	HG Leak			
		0.018	0.328	27153	81.4	13036			0.018	0.081	27153	11	433			
											Lev	/els				
		Air Leakag	ge Heat I	Loss/Gain	Multiplier T	able (Section	n 11)			1	2	3	4			
	Level	Level Bu	uilding Air	Level Co Heat		Air Leal	cage He			(LF)	(LF)	(LF)	(LF)			
	Level 1	0.5	All		44		0.9960			1.0	0.6	0.5	0.4			
	Level 2	0.3	13036		859		0.3298				0.4	0.3	0.3			
	Level 3	0.2			683 0		0.2440		_			0.2	0.2 0.1			
	LCVCI 4			<u>'</u>	<u> </u>				]		l					
		HG LEA	V		433	Air Leal	kage He	at Gain	<u> </u>		Levels thi					
	BUILD	ING CONDUCTI		T GAIN	15000		0.0289					3				
					Ve	entilatio	n Ca	lculatio	ns							
			Ventilati	on Heat Los	s			Ventilation Heat Gain								
Vent		Ve	ntilation	Heat Loss				Ventilation Heat Gain								
Λ	С			(1-E) HRV		ovent		C PVC HG^T HGbvent								
	1.08	79.5	81.4	0.16		118		1.1	79.5	11		44	1			
			Case	e 1							Case 1					
		Ventilation	Heat Los	s (Exhaust o	nly Systems)			Case 1  Ventilation Heat Gain (Exhaust Only Systems)								
	-												<del></del>	_		
7				haust Only				Cas	se 1 - Exh	aust Only	Multi	iplier		<u></u>		
Case	Level	LF H 0.5	lLbvent		ond. HL	Multiplier			Gbvent uilding	944 15000	0.	06		Case		
ပိ	Level 1 Level 2	0.3	4440		859	0.09		В	illaing	15000	ļ		1	ပြို		
	Level 3	0.2	1118		683	0.02										
	Level 4	0			0	0.00										
			Case	e <b>2</b>							Case 2					
2		Ventilation	Heat Loss	(Direct Duc	ted Systems)				Ventil	ation Heat G	ain (Direct D	ucted Syste	ms)	2		
				NA. sla	inlier						Multi	inlior	T			
Case	C HL^T (1-E) HRV 44.07								С	HG^T		•	1	Case		
O	1.08 81.4 0.16 14.07								1.08	11	11	.88	<u> </u>	O		
			Case	e 3							Case 3					
	Ventilation Heat Loss (Forced Air Systems)							Ventilation Heat Gain (Forced Air Systems)								
e 3																
Case	HLbvent Multiplier							H	Gbvent	HG*1.3		at Gain	Multiplier	Case		
Ö	Total Vent	tilation Load	11	18	0.	.04			944	1	94	44	0.06	$ \ddot{o} $		
											_					

Foundation Conductive Heatloss Level 1	1665	Watts	5681	Btu/h	
Foundation Conductive Heatloss Level 2		Watte		Rtu/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):	6.62
Building Config	guration
Туре:	Semi-Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m³):	768.97
Air Leakage/Ve	entilation
Air Tightness Type:	Present (1961-) (ACH=3.57)
	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):	0.328
Cooling Air Leakage Rate (ACH/H):	0.081

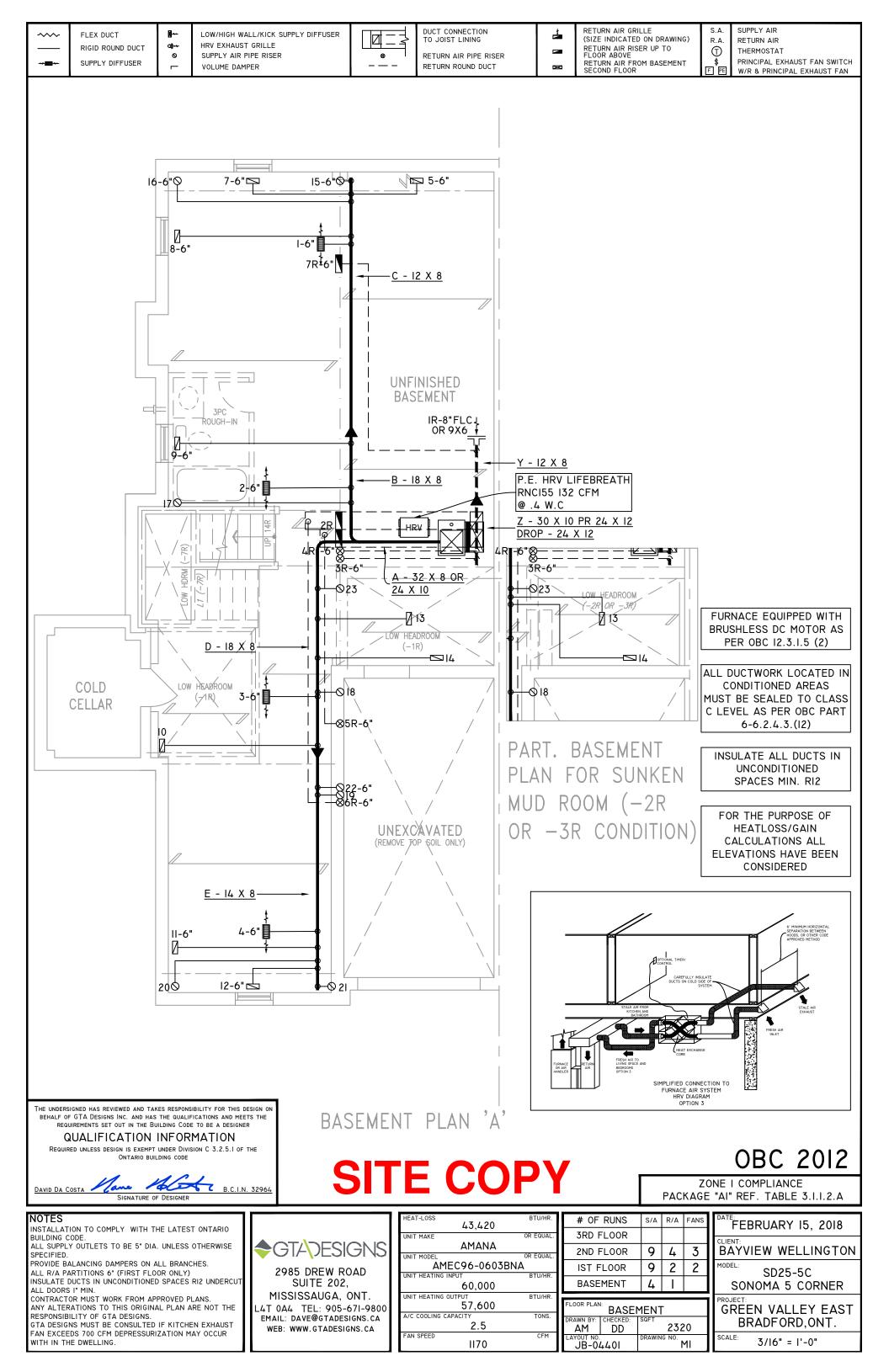


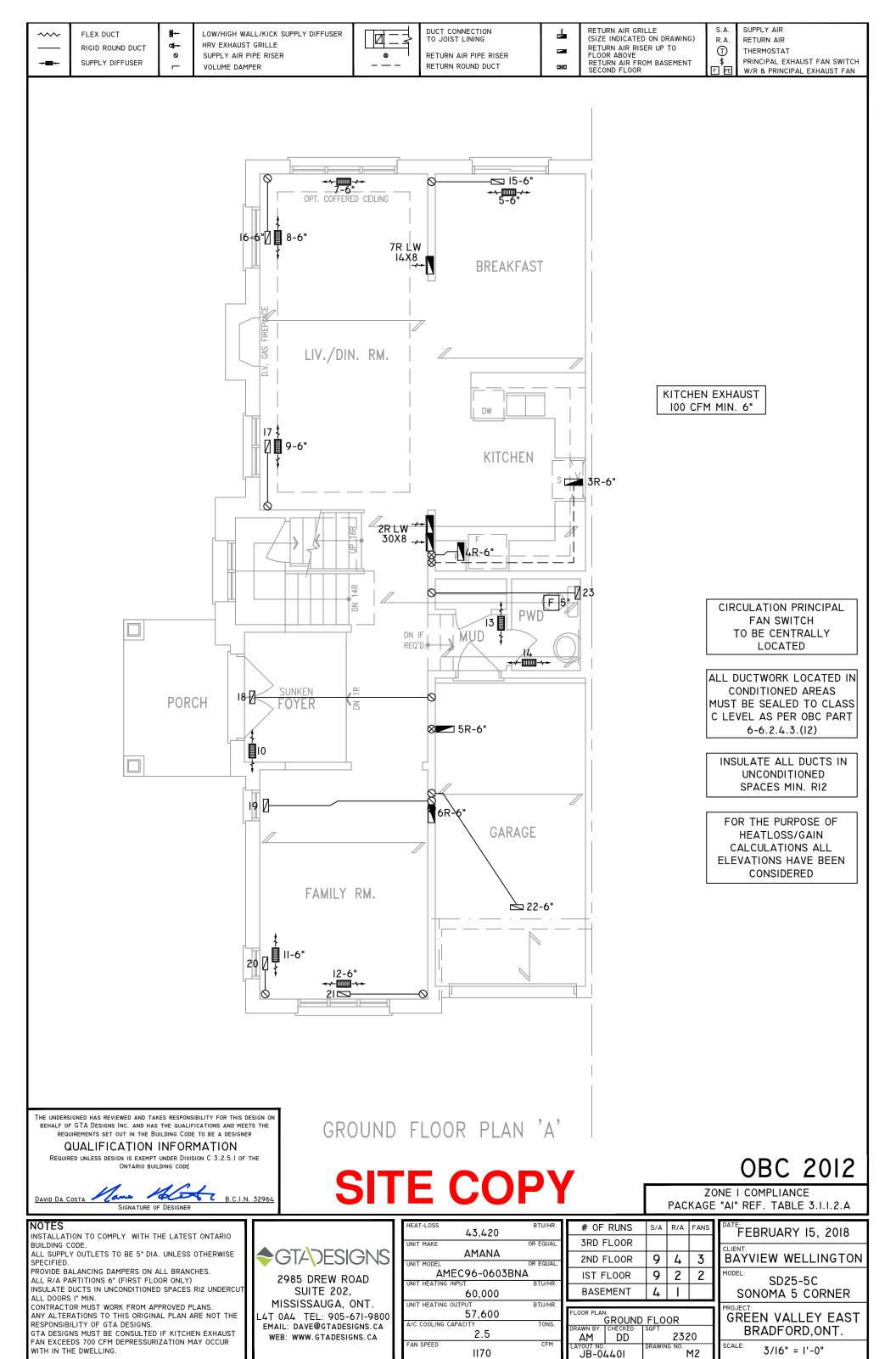
### **Residential Foundation Thermal Load Calculator**

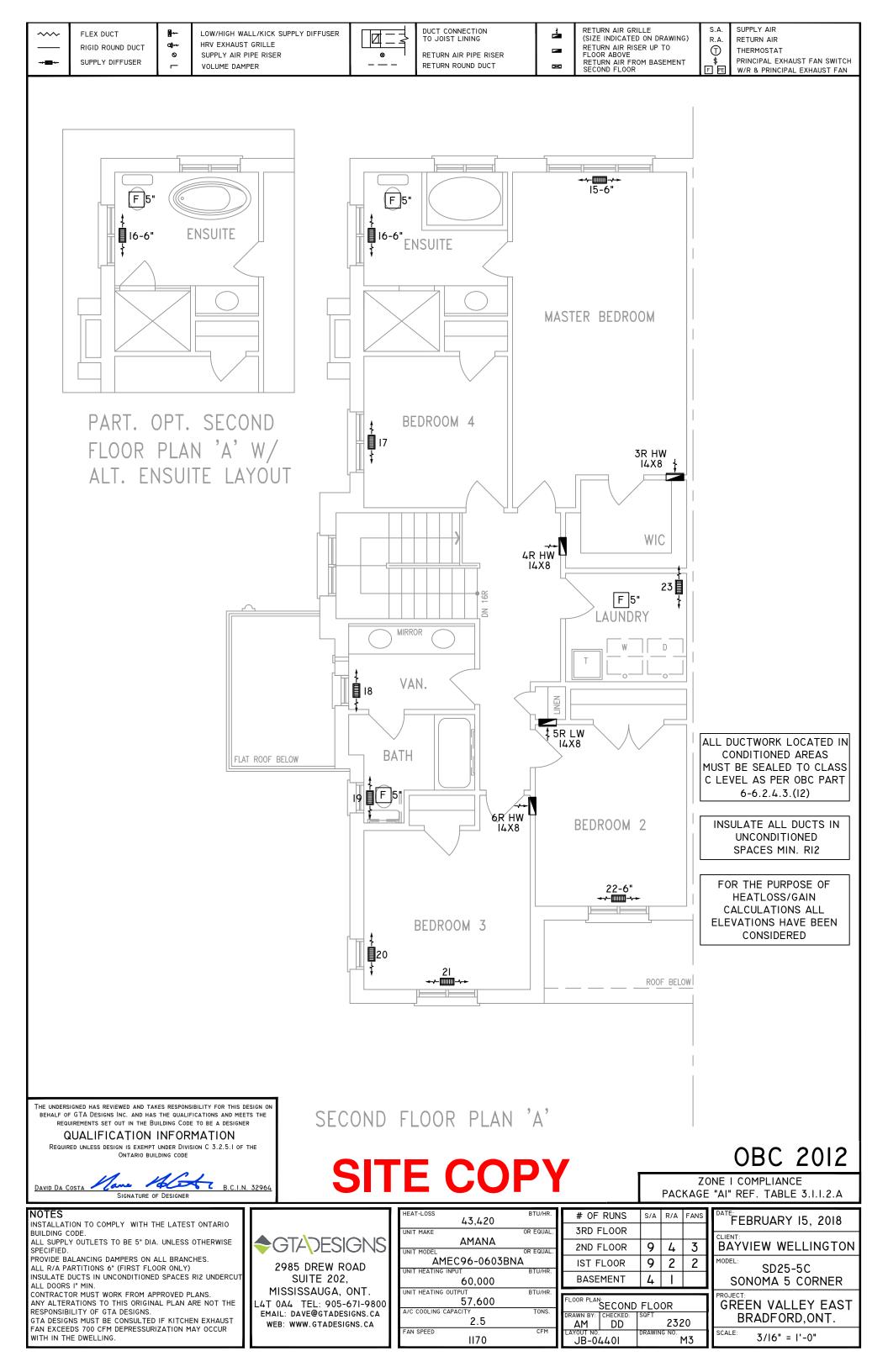
Supplemental tool for CAN/CSA-F280

Weather Station 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	on Dimensions							
Floor Length (m):	19.49								
Floor Width (m):	4.59								
Exposed Perimeter (m):	38.40								
Wall Height (m):	2.74								
Depth Below Grade (m):	1.61	Insulation Configuration							
Window Area (m²):	1.77								
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):		1665							

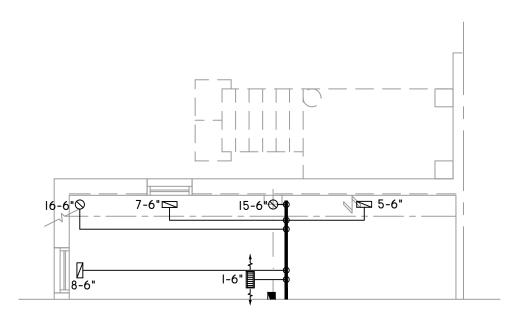




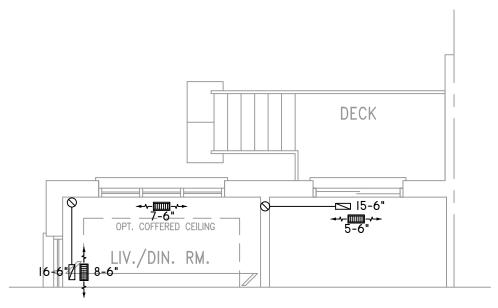




RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) SUPPLY AIR DUCT CONNECTION LOW/HIGH WALL/KICK SUPPLY DIFFUSER FLEX DUCT 占 TO JOIST LINING R.A. RETURN AIR HRV EXHAUST GRILLE **a**|⊶ RETURN AIR RISER UP TO FLOOR ABOVE RIGID ROUND DUCT ➀ THERMOSTAT SUPPLY AIR PIPE RISER RETURN AIR PIPE RISER 8 RETURN AIR FROM BASEMENT SECOND FLOOR PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER RETURN ROUND DUCT VOLUME DAMPER



PARTIAL BASEMENT FLOOR PLAN 8R W.O.D. CONDITION



PARTIAL GROUND FLOOR PLAN 8R W.O.D. CONDITION

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 FOODE TO BE A DESIGNER QUALIFICATION INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE



# SITE COPY

OBC 2012

ZONE I COMPLIANCE PACKAGE "AI" REF. TABLE 3.I.I.2.A

#### NOTES

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 RI2 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-LUSS	BIU/HK.
43,420	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC96-0603BN	
UNIT HEATING INPUT	BTU/HR.
60,000	
UNIT HEATING OUTPUT	BTU/HR.
57,600	
A/C COOLING CAPACITY	TONS.
2.5	
FAN SPEED	CFM
1170	

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	9	4	3
IST FLOOR	9	2	2
BASEMENT	4	_	
FLOOR PLAN: PARTIAL PLAN(S)			

AΜ

JB-04401

DD

2320

M4

FEBRUARY 15, 2018			
CLIENT: BAYVIEW WELLINGTON			
SD25-5C SONOMA 5 CORNER			
PROJECT:			

GREEN VALLEY EAST
BRADFORD,ONT.

SCALE: 3/16" = 1'-0"

