

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				Lot:						
TH-6E Alt		_		Lot/con.						
Bradford	Postal code	Plan number description	r/ other							
B. Individual who reviews and takes responsibility for designment	n activities	T								
Name David DaCosta		Firm		gtaDesigns Inc.						
Street address 2985 Drew Roa	d, Suite 202			Unit no.	Lot/con.					
' '	Postal code	Province		E-mail dave@gtades	iano oo					
Mississauga Telephone number	L4T 0A4 Fax number	Ontar	10	Cell number	<u>igris.ca</u>					
(905) 671-9800		7) 494-9643		(416) 268-6	820					
C. Design activities undertaken by individual identified in S	ection B. [Bu	ilding Code	Table 3	3.5.2.1 of Division C]						
☐ House ☑ HVAC – H	ouse			☐ Building Structural						
☐ Small Buildings ☐ Building Se				☐ Plumbing – House						
☐ Large Buildings ☐ Detection,	Lighting and Po	wer		☐ Plumbing – All Buildings	5					
☐ Complex Buildings ☐ Fire Protect	tion			☐ On-site Sewage System	ns					
Description of designer's work Mod	del Certification	1		Project #:	PJ-00204					
				Layout #:	JB-04870					
Heating and Cooling Load Calculations Main Air System Design Alternate	х	Builder Project		Bayview Wellingto Green Valley Eas						
Residential mechanical ventilation Design Summary Area Sq ft:		•		Green valley Las						
Residential System Design per CAN/CSA-F280-12		Model		TH-6E Alt WOB						
Residential New Construction - Forced Air		SB-12		Package A1						
D. Declaration of Designer										
David DaCosta	declare that (d	choose one a	as appro	priate):						
David DaCosta declare that (choose one as appropriate): (print name) TOWN OF BRADFORD WEST GWILLIMBURY BUILDING DEPARTMENT affirm resisted and the firm										
I review and take responsibility for "other designer" under subsection Individual BCIN:	•	C, of the Buil								
Basis for exemp			· 	Division C 3.2.4.1. (4)						
·	· ·	ļ								
☐ The design work is exempt from the	e registration and	d qualification	requirem	ents of the Building Code.						
Basis for exemp	tion from registr	ation and qua	llification:							
I certify that:										
1. The information contained in this schedule is true to the best of my knowledge.										
I have submitted this application with the knowledge and consent	of the firm.									
June 14, 2018		Plane	16		,					
Date		Signa	ature 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.

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 Association of Architects. Schedule 1 is also not required to be completed by a holder of a license 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

Page 2

and may not be used by any other persons without authorization. Documen Building Address (Model): TH-6E Alt WOB Model: City and Province: Bradford	Location Site: Green Valley East Lot: Postal code: s based on VA3 DESIGN22/May/2018 Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
Address (Model): TH-6E Alt WOB Model: City and Province: Bradford Calculation Dimensional information based on: Attachment: Townhome No. of Levels: 3 Ventilated? Included Weather location: Bradford	Location Site: Green Valley East Lot: Postal code: s based on VA3 DESIGN22/May/2018 Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
Address (Model): TH-6E Alt WOB Model: City and Province: Bradford Calculation Dimensional information based on: Attachment: Townhome No. of Levels: 3 Ventilated? Included Weather location: Bradford	Site: Green Valley East Lot: Postal code: S based on VA3 DESIGN22/May/2018 Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
Model: City and Province: Bradford Calculation Dimensional information based on: Attachment: Townhome No. of Levels: 3 Ventilated? Included Weather location: Bradford	Lot: Postal code: S based on VA3 DESIGN22/May/2018 Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
City and Province: Bradford Calculation Dimensional information based on: Attachment: Townhome No. of Levels: 3 Ventilated? Included Weather location: Bradford	Postal code: S based on VA3 DESIGN22/May/2018 Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
Calculation Dimensional information based on: Attachment: Townhome No. of Levels: 3 Ventilated? Included Weather location: Bradford	S based on VA3 DESIGN22/May/2018 Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
Dimensional information based on: Attachment: Townhome No. of Levels: 3 Ventilated? Included Weather location: Bradford	VA3 DESIGN22/May/2018 Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
Attachment: Townhome No. of Levels: 3 Ventilated? Included Weather location: Bradford	Front facing: East/West Assumed? Yes Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
No. of Levels: 3 Ventilated? Included Weather location: Bradford	Air tightness: 1961-Present (ACH=3.57) Assumed? Yes Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
Weather location: Bradford	Wind exposure: Sheltered Internal shading: Light-translucent Occupants: 5
	Internal shading: Light-translucent Occupants: 5
HRV? LifeBreath RNC155	
	Unite Imporial Area Carte 4000
Sensible Eff. at -25C 71% Apparent Effect. at -0C 84%	Units: Imperial Area Sq ft: 1902
Sensible Eff. at -0C 75%	
Heating design conditions	Cooling design conditions
Outdoor temp -9.4 Indoor temp: 72 Mean soil tem 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: Existing Walls (When Applicable) R 12	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 3	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 3.5	5 Style C:
Style B: Existing Windows (When Applicable) R 1.9	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 Loss/G	ain Caculations based on CSA-F280-12 Effective R-Values
Notes: Residential New	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: (416) 268-6820
City: Mississauga	E-mail daye@gtadesigns.ca



Trunk

Air System Design

SB-12 Package A1

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.

Bayview Wellington June 14, 2018 Builder: Date: Page 3 of the Building Code. Project # PJ-00204 System 1 Mane Alex TH-6E Alt WOB David DaCosta JB-04870 Project: **Green Valley East** Model: Individual BCIN: Layout # A/C UNIT DATA: DESIGN LOAD SPECIFICATIONS AIR DISTRIBUTION & PRESSURE FURNACE/AIR HANDLER DATA: BOILER/WATER HEATER DATA: Level 1 Net Load 13,904 btu/h **Equipment External Static Pressure** 0.5 "w.c. Amana 2.0 Ton Make Туре Amana Level 2 Net Load 11,914 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model AMEC960603ANA Model Cond.--2.0 Level 3 Net Load 10.566 btu/h Available Design Pressure 0.275 "w.c. Input Btu/h 60000 Input Btu/h Coil -2.0 Return Branch Longest Effective Length Output Btu/h 57600 Level 4 Net Load 300 ft Output Btu/h 0 btu/h 36 384 http/h " W C Min.Output Btu/h ΔWH Total Heat Loss R/A Plenum Pressure 0 138 "w c 0.50 E.s.p. Blower DATA: **Total Heat Gain** 20,186 btu/h S/A Plenum Pressure 0.14 "w.c. Water Temp deg. F. W2 40,022 Btuh. Heating Air Flow Proportioning Factor 0.0255 cfm/btuh **AFUE** Blower Speed Selected: Blower Type ECM Combo System HL + 10% 96% (Brushless DC OBC 12.3.1.5.(2)) **Building Volume Vb** 21620 ft3 Cooling Air Flow Proportioning Factor 0.0460 cfm/btuh Aux. Heat 929 cfm Ventilation Load 1.118 Btuh. R/A Temp SB-12 Package Package A1 Heating Check Cooling Check 70 dea. F. 929 cfm Ventilation PVC 79.5 cfm S/A Temp 127 deg. F. Supply Branch and Grill Sizing Diffuser loss Temp. Rise>>> 57 deg. F. Cooling Air Flow Rate 0.01 "w.c. Selected cfm> 929 cfm 929 cfm Level 1 Level 2 S/A Outlet No. 2 16 4 5 Room Use BASE BASE BASE BASE KIT KIT FAM PWD FOY LAUN Btu/Outlet 3476 3476 3476 3476 1928 1928 3637 1231 650 2540 **Heating Airflow Rate CFM** 89 89 89 89 49 49 93 31 17 65 Cooling Airflow Rate CFM 44 44 44 44 92 92 99 54 15 39 0.13 **Duct Design Pressure** 0.13 **Actual Duct Length** 59 46 10 74 68 74 57 24 2 12 **Equivalent Length** 140 100 120 110 70 70 70 70 70 70 70 70 70 70 100 120 90 120 130 100 70 70 70 70 70 70 70 70 Total Effective Length 199 146 130 184 70 70 70 70 70 70 70 70 70 168 194 147 144 132 112 70 70 70 70 70 70 70 70 70 Adjusted Pressure 0.07 0.09 0.10 0.07 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.08 0.07 0.09 0.09 0.10 0.12 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 **Duct Size Round** 6 6 **Outlet Size** 4x10 4x10 4x10 4x10 4x10 4x10 4x10 3x10 3x10 4x10 3x10 4x10 4x10 4x10 4x10 4x10 4x10 4x10 Trunk В Level 3 Level 4 S/A Outlet No. 10 12 15 11 13 14 Room Use MAST FNS RFD 4 BFD 3 RFD 2 RATH Btu/Outlet 2003 1948 1249 2642 2579 146 **Heating Airflow Rate CFM** 51 50 32 67 Cooling Airflow Rate CFM 54 46 98 82 78 3 **Duct Design Pressure** 0.13 **Actual Duct Length** 64 89 76 22 36 35 **Equivalent Length** 130 150 170 100 130 110 70 Total Effective Length 194 239 246 122 145 70 70 70 70 70 70 70 70 70 70 70 70 166 70 70 70 70 70 Adjusted Pressure 0.07 0.05 0.05 0.11 0.08 0.09 0.19 **Duct Size Round** 6 6 Outlet Size 4x10 4x10 3x10 4x10 4x10 3x10 4x10 Trunk R R Return Branch And Grill Sizing Grill Pressure Loss 0.02 "w.c **Return Trunk Duct Sizing** Supply Trunk Duct Sizing R/A Inlet No. 1R 2R 3R 4R 5R 6R 7R 8R 9R 10R 11R Trunk CFM Press. Round Rect. Size Trunk CFM Press. Round Rect. Size Inlet Air Volume CFM 178 436 105 105 105 **Duct Design Pressure** 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 929 0.05 15.5 24x10 929 0.05 15.5 18x12 Drop Α 22 929 0.05 0.05 12 33 63 70 z 15.5 R 11.5 **Actual Duct Length** 18y12 14x8 12x10 **Equivalent Length** 115 140 130 195 160 50 50 50 50 50 50 Υ 646 0.05 14.0 22x8 18x10 C 50 50 **Total Effective Length** 127 162 163 258 230 50 50 50 50 Х 0.07 w Adjusted Pressure 0.09 0.07 0.05 0.05 0.24 0.24 0.24 0.24 0.24 0.24 Е **Duct Size Round** 7.0 11.0 6.0 6.0 6.0 v Inlet Size FLC 8 SITE COPY Inlet Size 30 14 s R

Q



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:	Вау	view Well	lington	1	_	Date:			June	e 14, 201	18							Wea	ther Data	Br	adford	44	-9.4	86 22	48.2					age 4
2012 OBC		Project:	Gre	en Valley	East		N	lodel: _			TH-6	E Alt W	ОВ				5	System	1	Hea	at Loss ^T	81.4 deg. F		Ht gain ^T	11	l deg. F	GTA:	1902		Project # Layout #		00204 04870
	Level 1					BASE	<u> </u>																									
	ft. exposed wall A				90				Α		Α			Α				Α		Α		Α		Α		Α		Α.			Α	
Run	ft. exposed wall B				21				3		В			В	•			В		В		В		В		В		Е	-		В	
	Ceiling height				5.5			5.5			5.5 A			5.5 A			5.5			5.5 AG		5.5 AG		5.5 AG		5.5 AG		5.5 A		5.5	AG	
_	Floor area				729				Area		-	rea		-	rea			Area		Area		Area		Area		Area		-	Area		Area	
	xposed Ceilings A					A			Α		A			A				A		A		A		A		A			Α		A	
E	xposed Ceilings B					B Flr			3 Flr		B F			В	s Ir			B Fir		B Flr		B Flr		B Flr		B Flr		E	3 Flr		B Fir	
	Exposed Floors Gross Exp Wall A				495	rii			-11		г			-				FII		FII		FII		FII		FII			-11		FII	
	Gross Exp Wall B				179																											
	Components	R-Values I	Loss G	Gain		Loss	Gain		oss C	ain	L	oss (Gain	L	.oss	Gain		Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	L	oss G	ain	Loss G	ain
	North Shaded		22.93	10.91	ĺ			ĺ			Ē			Ē			ſ					T [1] [1		T Ē				
	East/West	3.55	22.93	27.35																												
	South	3.55	22.93	20.89	6	138	125																									
	WOB Windows	3.55	22.93	27.35	53	1215	1450																									
	Skylight	2.03	40.10	88.23																												
	Doors	4.00	20.35	2.75		427																										
	et exposed walls A		3.85	0.52	468		244																									
	et exposed walls B		3.85	0.52	126	483	65																									
	xposed Ceilings A		1.37	0.64																												
Ex	xposed Ceilings B		3.56	1.66																												
5 1 ti 0 1	Exposed Floors		2.73	0.17		5004																										
	uctive Heatloss Heat Loss	On Grade	() or Abo			5801 8065																										
Total Conductive	Heat Gain					8003	1942																									
Air Leakage	Heat Loss/Gain		0.6775	0.0366		5464																										
All Leakage	Case 1		0.0773	0.10		3404	/ '																									
Ventilation	Case 2		14.07	11.88																												
	Case 3	х	0.05	0.10		374	186																									
	Heat Gain People			239																												
	Appliances Loads	1 =.25 p	ercent	3080	1.0		770																									
	Ouct and Pipe loss			10%																												
Level 1 HL Total	13,904		tal HL for p			13904																										
Level 1 HG Total	3,860	Total	HG per roo	om x 1.3	L		3860	L						L			Į					1 L				1 L		_l				
-																																
	Level 2					KIT			FAM			LAUN			PWD			FOY														
Run	ft. exposed wall A				35			36			10 A			6 A			23			Α		Α		Α		Α		4			Α	
	ft. exposed wall B					В		- 50			. В			B				В		В		B		B		В		E			В	
	Ceiling height				10.0	_		10.0	•		11.0			10.0			11.0	_		10.0		10.0		10.0		10.0		10.0		10.0		
	Floor area				235	Area		375	Area		65 A	rea		30 A	rea		61	Area		Area		Area		Area		Area			Area		Area	
E:	xposed Ceilings A					Α					Α			Α				Α		Α		Α		Α		Α		Α.	A		Α	
	xposed Ceilings B					В			3		В	3		В	3			В		В		В		В		В		Е	3		В	
	Exposed Floors					Flr		1	-Ir		F	lr .			lr .			Flr		Flr		Flr		Flr		Fir		F	-Ir		Flr	
	Gross Exp Wall A				350			360			110			60			253															
	Gross Exp Wall B																															
	Components			Sain	ا	Loss	Gain		oss C	ain	L	oss (Sain	L	.oss	Gain		Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	_, <u>,</u> L	oss C	ain	Loss G	ain
	North Shaded	3.55	22.93	10.91																												
	East/West	3.55	22.93	27.35	55	1261	1504										14	321	383													
	South	3.55	22.93	20.89				44	1009	919				9	206	188																
	Existing Windows	1.99	40.90	22.15 88.23																												
	Skylight Doors	2.03 4.00	40.10 20.35	2.75							21	427	58				19	387	52													
No	et exposed walls A		4.78	0.65	295	1410	191	316	1510	204	89	425	57	51	244	33	220		142													
	et exposed walls B	8.50	9.58	1.29		1410	131	310	1310	204	09	423	3,	31	244	33	220	1032	142													
	xposed Ceilings A		1.37	0.64																												
	xposed Ceilings B		3.56	1.66																												
	Exposed Floors		2.73	0.17																												
Foundation Condu	uctive Heatloss		() or Abo	х																												
Total Conductive	Heat Loss					2671			2519			853			450			1759														
	Heat Gain						1695			1123			115			221			577													
Air Leakage	Heat Loss/Gain		0.3973	0.0366		1061	62		1001	41		339	4		179	8		699	21													
.,	Case 1		0.04	0.10																												
Ventilation	Case 2		14.07	11.88																												_
	Case 3	х	0.05	0.10		124	163		117	108		40	11		21	21		82	55													
	Heat Gain People	4 05		239	4.5		4455	0.5		205	4.0		776																			
	Appliances Loads		ercent	3080 10%	1.5		1155	0.5		385	1.0		770																			
Level 2 HL Total	Ouct and Pipe loss 11,914		otal HL for p			3856			3637			1231			650			2540					1									
Level 2 HG Total	8,497		HG per roo			3030	3997		3031	2154		1231	1171		030	325		2340	850													
Level 2 110 Total	0,701	i Jiai	pc. 100	J A 1.3	L		5551	L	l .	2107			1171	L		525	ı		000		1		-1		-1		1					
																															Dackago	

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

Total Heat Loss 36,384 btu/h Total Heat Gain 20,186 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

		Dudlaten	D				D-4			44 0	040								D	_	D			4 00	20	40.0				D 5
		Builder:	Ба	yview Welli	ington	-	Date: _			une 14, 2					6	-t	4		eather Da		Bradford	44	-9.		22	48.2		Proje	ect#	Page 5 PJ-00204
2012 OBC		Project:	Gr	een Valley	East	N	lodel:		TI	I-6E Alt V	VOB				Эу	stem	•	н	leat Loss	^T 81.4 de	eg. F	Ht gain ^		11 deg	. F	GTA:	1902	Layo	out #	JB-04870
	Level 3				MAS	г		ENS		BED 4	1		BED 3			BED 2			ATH											
	n ft. exposed wall A n ft. exposed wall B				15 A B		22 A		1:	B A		27 A B			18 A B			A B		A B		A B			A B		A B		A B	
	Ceiling height				8.0		8.0		8.0)		10.0			8.0			8.0		8.0		8.0		8.	.0		8.0		8.0	
	Floor area Exposed Ceilings A				311 Area 311 A		113 A		11: 11:	2 Area		122 Are	ea		212 Ar 212 A			60 Are 60 A	а		rea	Are A	а		Area A		Area		Area A	ı
	Exposed Ceilings B				В		В	3		В		В			В			В		A B		В			В		A B		В	
	Exposed Floors				Flr		F	lr .		Flr		9 Flr			144 Fli	r		10 Flr		FI	lr	Flr			Flr		Flr		Flr	
	Gross Exp Wall A Gross Exp Wall B				120		176		10-	•		270			144															
	Components				Loss	Gain	L	oss C	Gain	Loss	Gain	Lo	ss G	ain	Lo	ss G	ain	Los	s Gain	ı Le	oss Gain	Los	s Ga	iin	Loss	Gain	Loss	Gain	Loss	Gain
	North Shaded East/West	3.55 3.55	22.93 22.93	10.91 27.35	28 642	766	13	298	356			28	642	766	22	504	602													
	South	3.55	22.93	20.89			13	298	272 1	367	334																			
	Existing Windows Skylight	1.99 2.03	40.90 40.10	22.15 88.23																										
	Doors	4.00	20.35	2.75																										
N	let exposed walls A let exposed walls B	17.03 8.50	4.78 9.58	0.65	92 440	59	150	717	97 8	421	57	242	1157	156	122	583	79													
E	Exposed Ceilings A	59.22	1.37	1.29 0.64	311 427	200	113	155	73 11:	154	72	122	168	78	212	291	136	60	82	39										
	Exposed Ceilings B	22.86	3.56	1.66									05		444	202		40	0.7											
Foundation Cond	Exposed Floors ductive Heatloss	29.80	2.73	0.17								9	25	2	144	393	24	10	27	2										
Total Conductive	Heat Loss				1509			1468		941			1991			1772			110											
Air Leakage	Heat Gain Heat Loss/Gain		0.2805	0.0366	423	1025		412	797 29	264	463 17		558	1002 37		497	841 31		31	40										
	Case 1		0.03	0.10																										
Ventilation	Case 2 Case 3	x	14.07 0.05	11.88 0.10	70	98		68	76	44	44		92	96		82	81		5	4										
	Heat Gain People			239	2	478		00	,,	1	239	1	32	239	1	02	239		3	4										
	Appliances Loads Duct and Pipe loss	1 =.25 p	percent	3080 10%												227	108													
Level 3 HL Total	10,566	To	otal HL for		2003	3		1948		1249		:	2642			2579	100		146											
Level 3 HG Total	7,829	Tota	I HG per ro	oom x 1.3		2130			1173		992			1786			1689			59		1 L					1 L			
	Level 4																													
Rur	n ft. exposed wall A				Α		A			Α		Α			Α			Α		А		Α			Α		Α		Α	
Rur	n ft. exposed wall B Ceiling height				В		В	3		В		В			В			В		В		В			В		В		В	
	Floor area				Area		A	rea		Area		Are	ea		Ar	ea		Are	a	A	rea	Are	a		Area		Area		Area	ı
	Exposed Ceilings A				A		A			A		A			A			A		A		A			A		A B		A	
E	Exposed Ceilings B Exposed Floors				B Flr		B F			B Flr		B Fir			B Fli			B Flr		B FI		B Fir			B Flr		B Flr		B Flr	
	Gross Exp Wall A																													
	Gross Exp Wall B Components	R-Values	Loss	Gain	Loss	Gain	L	oss C	Gain	Loss	Gain	Lo	ss G	ain	Lo	ss G	ain	Los	s Gain	n Le	oss Gain	Los	s Ga	iin	Loss	Gain	Loss	Gain	Loss	s Gain
	North Shaded	3.55	22.93	10.91																										
	East/West South	3.55 3.55	22.93 22.93	27.35 20.89																										
	Existing Windows	1.99	40.90	22.15																										
	Skylight Doors	2.03 4.00	40.10 20.35	88.23 2.75																										
N	let exposed walls A	17.03	4.78	0.65																										
	let exposed walls B	8.50	9.58	1.29																										
	Exposed Ceilings A Exposed Ceilings B	59.22 22.86	1.37 3.56	0.64 1.66																										
	Exposed Floors	29.80	2.73	0.17																										
Foundation Cond Total Conductive	ductive Heatloss Heat Loss																													
	Heat Gain																													
Air Leakage	Heat Loss/Gain Case 1		0.0000	0.0366 0.10																										
Ventilation	Case 2		14.07	11.88																										
	Case 3 Heat Gain People	X	0.05	0.10 239																										
	Appliances Loads	1 =.25 p	percent	3080																										
Level 4 HL Total	Duct and Pipe loss	T	otal HL for	10%																										
Level 4 HG Total		Tota	I HG per ro	om x 1.3																						1				
									_					_			_							-			-			

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

36,384 Total Heat Loss btu/h Total Heat Gain 20,186 btu/h Division C subsection 3.2.5. of the Building Code. Individual BCIN:



David DaCosta

SB-12 Package Package A1



1 2

3 Χ

4

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-04870

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 Mare Aleta David DaCosta

Package:	Package A1											
Project:	Bradford	Model:	TH-6E Alt V	VOB								
	RESIDENTIAL MECHANICAL	VENTILATION DESI	GN SUMMARY									
	For systems serving one dwelling unit & cor											
1 - 1 11	Location of Installation	Total Ver	ntilation Capacity 9.32	.3.3(1)								
Lot #	Plan #	Bsmt & Master Bdrm	2 @ 21.2	cfm 42.4 cfm								
Township	Bradford	Other Bedrooms Bathrooms & Kitchen	3 @ 10.6 4 @ 10.6									
Roll #	Permit #	Other rooms		cfm 31.8 cfm 148.4								
Address			Total	<u></u>								
		Principal Ventilation Capacity 9.32.3.4(1)										
Nierra	Builder	Mantaghadasan	4 8 04 0	.(04.0(
Name	Bayview Wellington	Master bedroom Other bedrooms	1 @ 31.8 3 @ 15.9									
Address	za, non managen		Total	79.5								
City		Private		-16								
Tel	Fax	Make	pal Exhaust Fan Capa Model	Location								
101	Tux	LifeBreath	RNC155	Base								
	Installing Contractor	Lilebreath	KINC155	base								
Name	motaming contracts.	132 cfm		Sones or Equiv.								
Address		He	at Recovery Ventilator									
		Make	LifeBreath									
City		Model	RNC155 32 cfm high	80 cfm low								
Tel	Fax	Sensible efficiency @ -2		71%								
		Sensible efficiency @ 0		<u>75%</u>								
			nce HRV/ERV to within									
a) x	Combustion Appliances 9.32.3.1(1) Direct vent (sealed combustion) only	Suppler	nental Ventilation Cap	acity								
b)	Positive venting induced draft (except fireplaces)	Total ventilation capacit	V	148.4								
c)	Natural draft, B-vent or induced draft fireplaces	Less principal exhaust o	capacity	79.5								
d)	Solid fuel (including fireplaces)	REQUIRED supplemen	tal vent. Capacity	68.9 cfm								
e)	No combustion Appliances											
		Supr	olemental Fans 9.32.3.	5.								
	Heating System	Location	cfm Model	Sones								
х	Forced air	Ens	50 XB50	0.3								
	Non forced air	Bath	50 XB50	0.3								
	Electric space heat (if over 10% of heat load)											
	Havea Type 0 22 2 4 (2)											
l x	House Type 9.32.3.1(2) Type a) or b) appliances only, no solid fuel	all fans HVI listed	Make Broan	or Equiv.								
	Type I except with solid fuel (including fireplace)	a	a.to broan	o. =q								
III	Any type c) appliance	D	esigner Certification									
IV	Type I or II either electric space heat	I hereby certify that this	ventilation system has	peen designed								
Other	Type I II or IV no forced air	in accordance with the 0	Ontario Building Code									

Any type c) appliance Type I or II either electric space heat Type I, II or IV no forced air	Designer Certification I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.
System Design Option	Name David DaCosta
Exhaust only / forced air system HRV WITH DUCTING / forced air system	Signature Mana Ablance
HRV simplified connection to forced air system HRV full ducting/not coupled to forced air system	HRAI# 5190 BQN # 32964
Part 6 design	Date June 14,2018

♦GTA\DESIGNS

Energy Efficiency Design Summary: Prescriptive Method

(Building Code Part 9, Residential)

Page 7

Project # PJ-00204 Layout # JB-04870

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 Principal Authority											
Application No:				Model/Ce	rtification Nu	mber						
A. Project Information												
Building number, street name						Unit numb	er	Lot/Con				
		TH	I-6E Alt WOB									
Municipality Bradford			Postal code	Reg. Plan	number / otl	her descrip	tion					
B. Prescriptive Compliance [indica	te the bu	ilding cod	e compliance pack	age being	employed in	the house	design]					
SB-12 Prescriptive (input design pa	ckage):		Pac	kage A1			Table:	3.1.1.2	<u>A</u>			
C. Project Design Conditions												
Climatic Zone (SB-1):		Heat. E	quip. Efficiency			Spac	e Heating F	uel Sourc	ce			
✓ Zone 1 (< 5000 degree days)			2% AFUE	7	Gas		Propane	П	Solid Fuel			
Zone 2 (≥ 5000 degree days)		_ □ ≥8	4% < 92% AFUE		Oil		Electric		Earth Energy			
Ratio of Windows, Skylights & Glas	s (W. S				<u> </u>		Building Cha		••			
	-			☐ Log/l	Post&Beam		ICF Above		☐ ICF Basement			
Area of Walls = 324.22 m ² or 3489.9	ft²	W,S &	G % = 9%		-on-ground	7	Walkout Ba	sement				
		,	<u></u>		Conditioning		Combo Unit	:				
Area of W, S & G = <u>27.963</u> m ² or <u>301.0</u>	ft²	Utilize V	Vindow ☐ Yes	☐ Air S	Sourced Hea	t Pump (A	SHP)					
		Avera			und Source I							
D. Building Specifications [provide	values a	nd ratings		ı								
Energy Efficiency Substitutions												
☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))												
☐ Combined space heating and domestic	water he	ating syst	ems (3.1.1.2(7) / 3	.1.1.3.(7))								
☐ Airtightness substitution(s)		Table 3.1	.1.4.B Required	d: Permitted Substitution:								
Airtightness test required			Required	:		Permitted Substitution:						
(Refer to Design Guide Attached)	ш	Table 3.1	.1.4.C Required	Permitted Substitution:								
5 " " 6	Mini	mum RS	I/R-Values or		Building Component Efficiency Bo							
Building Component	N	/laximun	n U-Value¹		Building Component Efficiency Ratings							
Thermal Insulation	Non	ninal	Effective	Windo	ws & Doo	rs Provide	e U-Value ⁽¹⁾ o	r ER rating				
Ceiling with Attic Space	6	0		Window	s/Sliding G	lass Doo	rs		1.6			
Ceiling without Attic Space	3	1		Skylight	s				2.8			
Exposed Floor	3	1		Mecha	nicals							
Walls Above Grade	22			Heating	Equip.(AFL	JE)			96%			
Basement Walls		20.0ci		HRV Eff	ficiency (SF	RE% at 0°C)		75%			
Slab (all >600mm below grade)	2	x		DHW H	eater (EF)				0.80			
Slab (edge only ≤600mm below grade)	1	0		DWHR	(CSA B55.1	(min. 42%	efficiency))		#Showers 2			
Slab (all ≤600mm below grade, or heated)	1	0		Combin	ed Heating	System						
(1) U value to be provided in either W/(m²·K) or Bt	(1) U value to be provided in either W/(m²·K) or Btu/(h·ft·F) but not both.											
E. Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso	on(s) providing info	rmation he	rein to subst	antiate tha	t design meet	s building	code]			
Name			BCIN		Signature							
David DaCosta			32	964			Mane	14C=				
Form authorized by OHBA. OBOA. LMCBO. Revised December 1, 20	16		1									

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





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

Page PJ-00204

Project # Layout # JB-04870

Package: Package A1 System 1 System: Project: **Bradford** Model: **TH-6E Alt WOB** Air Leakage Calculations **Building Air Leakage Heat Loss Building Air Leakage Heat Gain** В LRairh Vb **HLleak** В LRairh Vb HG^T **HG** Leak 0.018 0.345 21620 81.4 10929 0.018 0.084 21620 11 360 Levels Air Leakage Heat Loss/Gain Multiplier Table (Section 11) 1 2 3 4 Building Level Level Conductive Air Leakage Heat Loss (LF) (LF) (LF) (LF) Level Factor (LF) Air **Heat Loss** Multiplier 1.0 0.6 0.5 0.4 Level 1 0.5 8065 0.6775 Level 2 8253 0.3973 0.3 0.3 0.4 0.3 10929 0.2805 Level 3 7792 0.2 0 0.0000 Level 4 0 0.1 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 360 0.0366 3 **BUILDING CONDUCTIVE HEAT GAIN** 9841 **Ventilation Calculations Ventilation Heat Loss** Ventilation Heat Gain /ent Vent Ventilation Heat Loss **Ventilation Heat Gain** PVC (1-E) HRV **HLbvent** PVC HG^T **HGbvent** 1118 944 1.08 79.5 81.4 0.16 1.1 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 Level LF HLbvent LVL Cond. HL Multiplier **HGbvent** 944 0.10 8065 Building 9841 Level 1 0.5 0.07 Level 2 0.3 8253 0.04 1118 7792 Level 3 0.2 0.03 Level 4 0 0 0.00 Case 2 Case 2 **Ventilation Heat Loss (Direct Ducted Systems) Ventilation Heat Gain (Direct Ducted Systems)** Case Case Multiplier Multiplier HL^T (1-E) HRV HG^T С 14.07 11.88 1.08 1.08 Case 3 Case 3 Ventilation Heat Loss (Forced Air Systems) Ventilation Heat Gain (Forced Air Systems) **HLbvent** Multiplier Vent Heat Gain Multiplier **HGbvent** HG*1.3 **Total Ventilation Load** 1118 0.05 944 0.10 944 Foundation Conductive Heatloss Level 1 1700 Watts 5801 Btu/h

Watts

Btu/h

Foundation Conductive Heatloss Level 2

Envelope Air Leakage Calculator

Supplemental tool for CAN/CSA-F280

Weather Station	Description
Province:	Ontario <a> <a> <a> <a> <a> <a> <a> <a> <a> <a>
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):	7.16
Building Confi	guration
Туре:	Semi-Detached
Number of Stories:	Two
Foundation:	Shallow
House Volume (m³):	612.26
Air Leakage/Ve	entilation
Air Tightness Type:	Present (1961-) (ACH=3.57)
	ELA @ 10 Pa. 322,44 cm ²
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):	0.345
Cooling Air Leakage Rate (ACH/H):	0.084



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):	17.06											
Floor Width (m):	3.97											
Exposed Perimeter (m):	27.43											
Wall Height (m):	2.59											
Depth Below Grade (m):	0.91	Insulation Configuration										
Window Area (m²):	0.56											
Door Area (m²):	1.95											
	Radi	iant Slab										
Heated Fraction of the Slab:	0											
Fluid Temperature (°C):	33											
	Desig	n Months										
Heating Month	1											
	Founda	ation Loads										
Heating Load (Watts):												

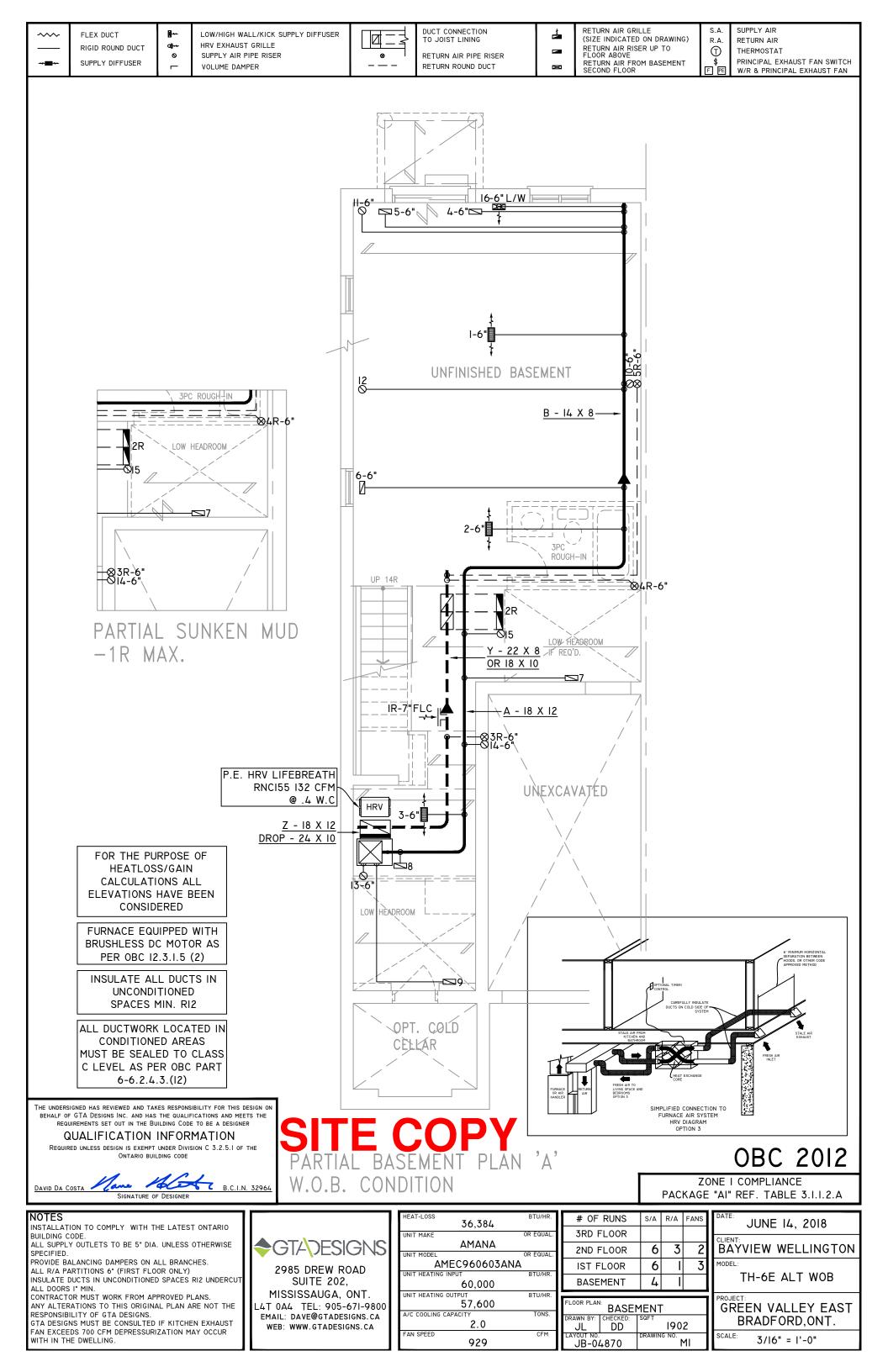


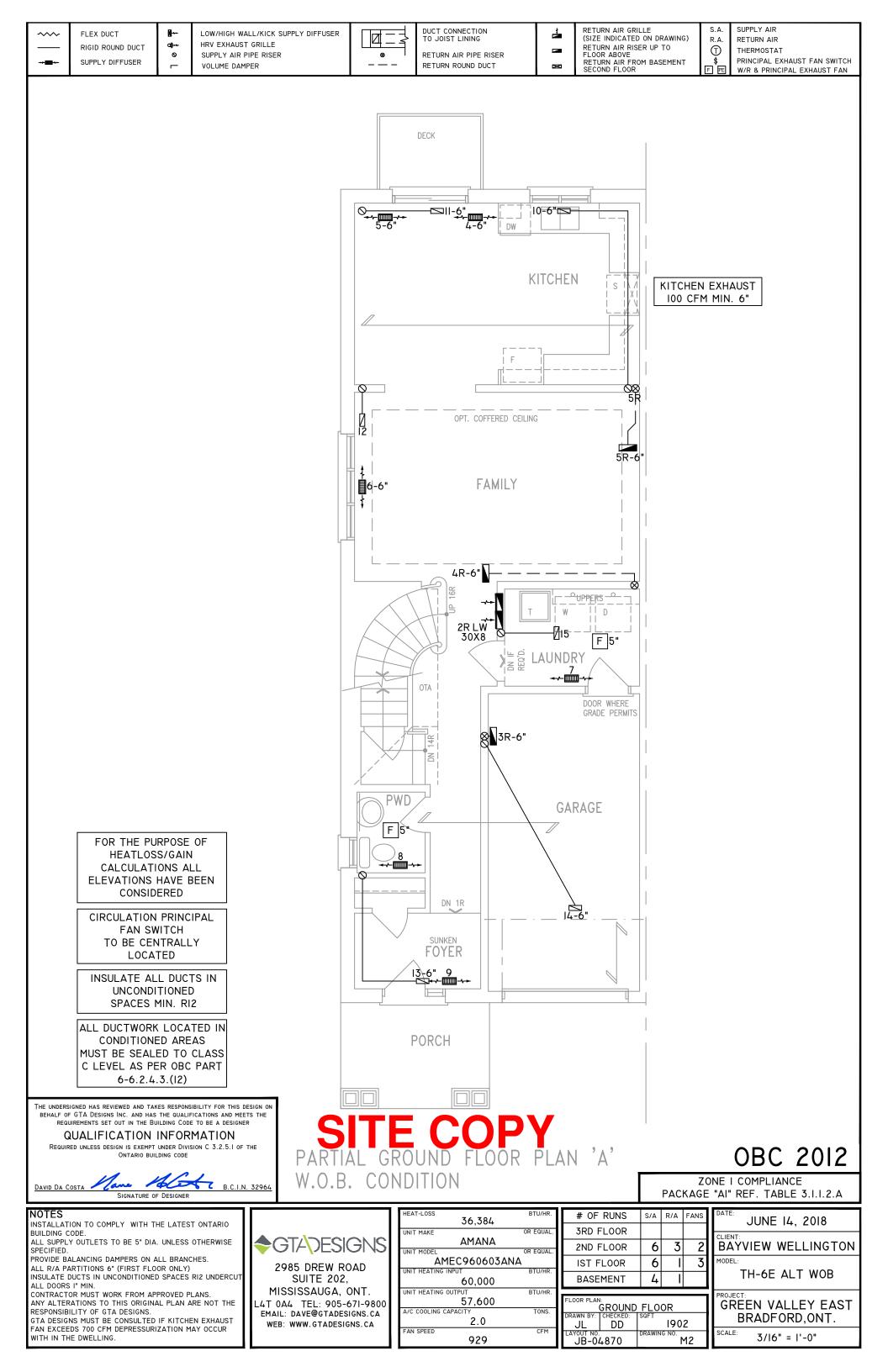
Residential Slab on Grade Thermal Load Calculator

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)									
Floor Dimensions											
Length (m):	5.79										
Width (m):	0.61	- 									
Exposed Perimeter (m):	6.40	Insulation Configuration									
	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):		95									







DUCT CONNECTION TO JOIST LINING RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) SUPPLY AIR LOW/HIGH WALL/KICK SUPPLY DIFFUSER 占 FLEX DUCT RETURN AIR R.A. HRV EXHAUST GRILLE **a**]⊶ ⊘ RETURN AIR RISER UP TO FLOOR ABOVE RIGID ROUND DUCT 1 THERMOSTAT SUPPLY AIR PIPE RISER RETURN AIR PIPE RISER 8 RETURN AIR FROM BASEMENT SECOND FLOOR PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER **VOLUME DAMPER** RETURN ROUND DUCT OVAL TUB ENS. MASTER SHOWER **BEDROOM 1**2 5R HW 14X8 ‡ BEDROOM 4 WIC LINEN 4R HW 14X8 ₿ BATH (F |5)† OTB

FOR THE PURPOSE OF HEATLOSS/GAIN CALCULATIONS ALL **ELEVATIONS HAVE BEEN** CONSIDERED

INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. RI2

ALL DUCTWORK LOCATED IN CONDITIONED AREAS MUST BE SEALED TO CLASS C LEVEL AS PER OBC PART 6-6.2.4.3.(12)

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

SIGNATURE OF DESIGNER

B.C.I.N. 32964

SITE COP'SECOND FLOOR PLAN

ROOF BELOW

OBC 2012

ZONE I COMPLIANCE PACKAGE "AI" REF. TABLE 3.1.1.2.A

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	BTU/HR.
36,384	
,	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960603AN	Α
UNIT HEATING INPUT	BTU/HR.
60,000	
UNIT HEATING OUTPUT	BTU/HR.
57,600	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
929	

M3R L₩

14X8

BEDROOM 2

16R

BEDROOM 3

				_						
# OF RUNS	S/A	R/A	FANS	Γ						
3RD FLOOR				ŀ						
2ND FLOOR	6	3	2	ı						
IST FLOOR	6	I	3	ľ						
BASEMENT	4	-								
				ı						
SECOND FLOOR										

DD

JB-04870

1902

DRAWING NO. M3

DATE:	JUNE 14, 2018
CLIENT:	VIEW WELLINGTON
MODEL:	
	TH-6E ALT WOB
PROJEC	T:

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

FLEX DUCT
RIGID ROUND DUCT
SUPPLY DIFFUSER

LOW/HIGH WALL/KICK SUPPLY DIFFUSER

HRV EXHAUST GRILLE
SUPPLY AIR PIPE RISER
VOLUME DAMPER

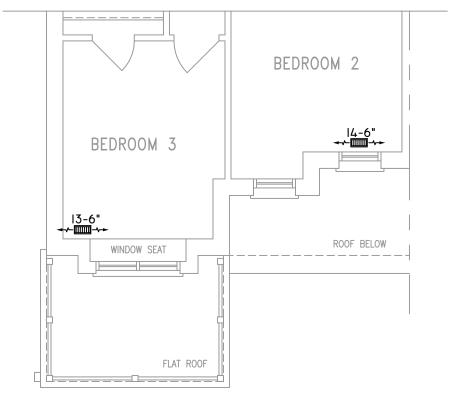


DUCT CONNECTION
TO JOIST LINING

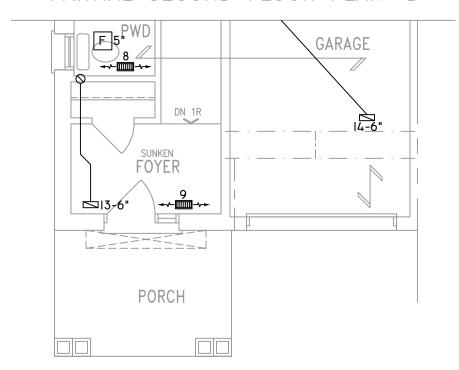
RETURN AIR PIPE RISER
RETURN ROUND DUCT

RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE RETURN AIR FROM BASEMENT SECOND FLOOR S.A. S. R.A. I

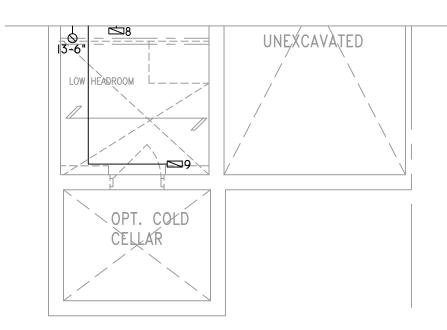
SUPPLY AIR
RETURN AIR
THERMOSTAT
PRINCIPAL EXHAUST FAN SWITCH
W/R & PRINCIPAL EXHAUST FAN



PARTIAL SECOND FLOOR PLAN 'B'



PARTIAL GROUND FLOOR PLAN 'B'



PARTIAL BASEMENT PLAN 'B'

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

DAVID DA COSTA Mare 18.C.I.N. 32964

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

SPECIFIED.

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.

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

36,384	5 (0 / 1 1 1 1
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960603ANA	
UNIT HEATING INPUT	BTU/HR.
60,000	
UNIT HEATING OUTPUT	BTU/HR.
57,600	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
929	

# OF RUNS	S/A	R/A	FANS	
3RD FLOOR				
2ND FLOOR	6	3	2	
IST FLOOR	6		3	
BASEMENT	4			l
FLOOR PLAN:				i
PARTIAL PLAN(S)				Ш

DD

JB-04870

JL

1902

M4

JUNE 14, 2018
CLIENT: BAYVIEW WELLINGTON
MODEL:
TH-6E ALT WOB

GREEN VALLEY EAST BRADFORD,ONT.