

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:			
THWU-				Lot/con.			
Municipality Bradford	Postal code	Plan number/ oth description	her				
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 n	0.	Lot/con.		
. ,	Postal code	Province	E-mai				
Mississauga Telephone number	L4T 0A4 Fax number	Ontario	Collin	dave@gtadesi	gns.ca		
(905) 671-9800		') 494-9643	Cell II	(416) 268-6	820		
C. Design activities undertaken by individual identified in S	•	<u> </u>	able 3.5.2.1	· · · · · · · · · · · · · · · · · · ·			
☐ House ☒ HVAC – H	OUSA		<u> </u>	Building Structural			
☐ Small Buildings ☐ Building Se				Plumbing – House			
-	Lighting and Po	wer		Plumbing – All Buildings			
☐ Complex Buildings ☐ Fire Protect	0 0			On-site Sewage System			
Description of designer's work Mod	del Certification	1		Project #:	PJ-00204		
				Layout #:	JB-04878		
Heating and Cooling Load Calculations Main	Х	Builder		Bayview Wellingto			
Air System Design Alternate	4000	Project		Green Valley East	t		
Residential mechanical ventilation Design Summary Area Sq ft: Residential System Design per CAN/CSA-F280-12	1922	Model		THWU-15E			
Residential New Construction - Forced Air		SB-12		Package A1			
D. Declaration of Designer							
I David DaCosta	declare that (d	choose one as a	appropriate)):			
(print name)	•						
☐ I review and take responsibility for t	he design work	on behalf of a firm	n Medistere	KAPEN KPOVIVEST G	WILLIMBURY		
3.2.4 Division C of the Building Coc classes/categories.	de. I am qualified	d, and the firm is r	ragietared, in	EPPARPIOPEIQ1P	_		
Individual BCIN:			LANS EXA		OLIES		
,				TARIO BUILDING CODE APPLIES TE: 2018-12-07			
Firm BCIN:							
☑ I review and take responsibility for		am qualified in the		e category as an			
"other designer" under subsection	3.2.5 of Division	C, of the Building	g Code.				
Individual BCIN:	329	64					
Basis for exemp	tion from registr	ation:	Divisio	n C 3.2.4.1. (4)			
☐ The design work is exempt from the	e registration an	d qualification req	quirements of	f the Building Code.			
Basis for exemp	tion from registr	ation and qualifica	ation:				
Loortify that:							
I certify that: 1. The information contained in this schedule is true to the best of m	ny knowledge.						
I have submitted this application with the knowledge and consent	,						
		Mane .	1600	€-7			
June 21, 2018		- 2000					
Date		Signature	of Designer				

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d), of Division C, Article 3.2.5.1. of Division C and all other persons who are exempt from qualifications under Subsections 3.2.4. and 3.2.5.of Division C.

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 ficence
practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.





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Heat loss and gain calcul	ation summary sheet CSA-F280-M12 Standard Form No. 1
These documents issued for the use of	ayview Wellington Layout No.
and may not be used by any other persons without authorization. Documents	s for permit and/or construction are signed in red. JB-04878
Building I	Location
Address (Model): THWU-15E	Site: Green Valley East
Model:	Lot:
City and Province: Bradford	Postal code:
Calculations	s based on
Dimensional information based on:	VA3 DESIGN22/May/2018
Attachment: Townhome	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 -25C 71% Apparent Effect. at -0C 84%	Units: Imperial Area Sq ft: 1922
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 31	Doors
Style B:	Style A: As per Selected OBC SB12 Package A1 R 4.00
Windows	Style B:
Style A: As per Selected OBC SB12 Package A1 R 3.55	Style C:
Style B: Existing Windows (When Applicable) R 1.99	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/Ga	in Caculations based on CSA-F280-12 Effective R-Values
Notes: Residential New C	Construction - Forced Air
Calculations p	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 dave @gtadesigns.ca



Builder:

Trunk

Bayview Wellington

Date:

Air System Design

SB-12 Package A1 June 21, 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.

Page 3 PJ-00204

of the Building Code. Project # System 1 Mane Alex THWU-15E JB-04878 Project: **Green Valley East** Model: Individual BCIN: David DaCosta Layout # DESIGN LOAD SPECIFICATIONS AIR DISTRIBUTION & PRESSURE FURNACE/AIR HANDLER DATA: BOILER/WATER HEATER DATA: A/C UNIT DATA: Level 1 Net Load 10,856 btu/h **Equipment External Static Pressure** 0.5 "w.c. 2.0 Ton Make Туре Amana AMEC960403ANA Level 2 Net Load 12,066 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model Model Cond.--2.0 Level 3 Net Load 10.393 btu/h Available Design Pressure 0.275 "w.c. Input Btu/h 40000 Input Btu/h Coil -2.0 Return Branch Longest Effective Length 38400 Level 4 Net Load 300 ft Output Btu/h Output Btu/h 0 btu/h 33 315 htu/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** 18,151 btu/h S/A Plenum Pressure 0.14 "w.c. Water Temp deg. F. W2 36,646 Btuh. Heating Air Flow Proportioning Factor 0.0232 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** 21801 ft3 Cooling Air Flow Proportioning Factor 0.0425 cfm/btuh Aux. Heat Ventilation Load 1.118 Btuh. R/A Temp SB-12 Package Package A1 Heating Check Cooling Check 70 dea. F. 772 cfm 772 cfm Ventilation PVC 79.5 cfm S/A Temp 116 deg. F. Supply Branch and Grill Sizing Diffuser loss Temp. Rise>>> Cooling Air Flow Rate 772 cfm 0.01 "w.c. 46 deg. F. Selected cfm> 772 cfm Level 1 Level 2 S/A Outlet No. 2 4 5 Room Use BASE BASE BASE KIT KIT FAM LAUN **PWD** FOY Btu/Outlet 3619 3619 3619 1722 1722 3718 609 474 3822 **Heating Airflow Rate CFM** 84 84 84 40 40 86 14 11 89 Cooling Airflow Rate CFM 14 14 97 97 114 47 54 14 3 **Duct Design Pressure** 0.13 **Actual Duct Length** 30 15 21 37 42 27 20 41 **Equivalent Length** 100 100 90 70 70 70 70 70 70 70 70 70 70 70 70 90 90 130 100 110 70 70 70 70 70 70 70 70 Total Effective Length 130 111 70 70 70 70 70 70 70 70 70 70 107 132 117 133 120 151 70 70 70 70 70 70 70 115 70 70 Adjusted Pressure 0.10 0.11 0.12 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.12 0.10 0.11 0.10 0.11 0.09 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 **Duct Size Round** 6 6 3 **Outlet Size** 4x10 4x10 4x10 4x10 4x10 4x10 3x10 4x10 3x10 4x10 4x10 4x10 4x10 4x10 4x10 4x10 Trunk В С Level 3 Level 4 S/A Outlet No. 10 12 15 11 13 14 Room Use MAST FNS RFD 4 BFD 3 BFD 2 RATH Btu/Outlet 2008 1511 1246 3077 2404 147 **Heating Airflow Rate CFM** 47 35 29 71 56 3 Cooling Airflow Rate CFM 43 86 33 81 71 3 **Duct Design Pressure** 0.13 **Actual Duct Length** 45 58 46 51 39 **Equivalent Length** 100 120 100 120 130 140 70 145 171 70 70 70 70 70 Total Effective Length 178 146 154 70 70 70 70 70 70 70 70 70 70 70 70 169 70 70 70 70 70 Adjusted Pressure 0.09 0.07 0.09 0.08 0.08 0.08 0.19 **Duct Size Round** 6 6 Outlet Size 4x10 3x10 4x10 3x10 3x10 4x10 Trunk C C 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 126 316 105 105 120 **Duct Design Pressure** 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 772 0.06 14.0 444 0.07 11.0 14x8 10x10 Drop 24x10 562 199 0.07 85 30 39 28 z 0.06 12.5 RYS 107 **Actual Duct Length** 7 6 18_Y8 14x10 **Equivalent Length** 155 175 155 150 135 50 50 50 50 50 50 Υ c 328 0.08 10.0 12x8 10x10 50 50 **Total Effective Length** 162 181 194 189 163 50 50 50 50 Х D w Adjusted Pressure 0.07 0.06 0.06 0.06 0.07 0.24 0.24 0.24 0.24 0.24 0.24 **Duct Size Round** 6.0 10.0 6.0 6.0 7.0 v Inlet Size FLC 8 SITE COPY x Inlet Size 30 14 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:	Bay	view Welli	ington			Date:			June	21, 201	8						Wea	ther Data	Bra	adford	44	-9.4	86 22	48.2				Page 4
2012 OBC		Project:	Gre	en Valley	East			/lodel: _			THV	WU-15E					Systen	n 1	Hea	at Loss ^T	81.4 deg. F		Ht gain ^T	11	deg. F	GTA:	1922		Project # Layout #	PJ-00204 JB-04878
	Level 1					BASE																								
	ft. exposed wall A				114 /				A		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				3.5 /			3.5			3.5 A			3.5 AG		3.	5 AG		3.5 AG		3.5 AG		3.5 AG		3.5 AG		3.5 AG		3.5 A	
_	Floor area				769				Area			rea		Area	3		Area		Area		Area		Area		Area		Are	a		rea
	xposed Ceilings A xposed Ceilings B					A B			A B		A B			A B			A B		A B		A B		A B		A B		A B		A B	
E:	Exposed Floors					Б Flr			B Flr		FI			Flr			Fir		Flr		Fir		Fir		Fir		B Flr		F	
	Gross Exp Wall A				399							•		- "									- "		- "		- "			•
	Gross Exp Wall B				000																									
	Components	R-Values L	.oss G	ain	ı	Loss	Gain		Loss G	ain	Lo	oss G	ain	Loss	s Gain		Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Los	s Gain	L	oss Gain
	North Shaded	3.55	22.93	10.91																										
	East/West	3.55	22.93	27.35	13	298	356																							
	South	3.55	22.93	20.89	6	138	125																							
	WOB Windows	3.15	25.84	28.32																										
	Skylight	2.03	40.10	88.23																										
	Doors	4.00	20.35 3.85	2.75																										
	et exposed walls A et exposed walls B	21.13 14.49	5.62	0.52 0.76	380		198																							
	xposed Ceilings A	59.22	1.37	0.64																										
	xposed Ceilings B		3.56	1.66																										
	Exposed Floors	29.80	2.73	0.17																										
Foundation Cond	uctive Heatloss					4970																								
Total Conductive	Heat Loss					5405																								
	Heat Gain						679																							
Air Leakage	Heat Loss/Gain		0.9567	0.0414		5171	28																							
W 41 41	Case 1		0.10	0.11																										
Ventilation	Case 2		14.07	11.88																										
	Case 3 Heat Gain People	х	0.05	0.11 239		279	78																							
	Appliances Loads	1 =.25 pe	rcont	3156																										
	Ouct and Pipe loss	1 =.25 pc	ei Ceiil	10%																										
Level 1 HL Total	10,856	Tot	tal HL for p			10856																								
Level 1 HG Total			HG per roo				1020																							
	Level 2					KIT			FAM			LAUN		PI	WD		FOY													
Run	ft. exposed wall A				30 /			39			9 A			7 A		2	B A		Α		Α		Α		Α		Α		А	
	ft. exposed wall B							-			В			В		_	В		В		В		В		В		В		В	
	Ceiling height				10.0			10.0			10.0			10.0		13.0	0		10.0		10.0		10.0		10.0		10.0		10.0	
	Floor area				217	Area		376	Area		75 Ar	rea		32 Area	a	6	B Area		Area		Area		Area		Area		Are	a	Α	rea
	xposed Ceilings A					Α					Α			Α			Α		Α		Α		Α		Α		Α		Α	
E:	xposed Ceilings B					В			В		В			В			В		В		В		В		В		В		В	
	Exposed Floors					Fir			Flr		FI.	r		Flr			Flr		Flr		Flr		Flr		Fir		Fir		F	r
	Gross Exp Wall A Gross Exp Wall B				300			390			90			70		36	4													
	Components	P-Value I	oss G	ain		Loss	Gain		Loss G	ain	1.0	oss G	ain	Los	s Gain		Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Los	ss Gain		oss Gain
	North Shaded	3.55	22.93	10.91	ŕ	LUSS	Gain	1 1	LUSS C	Palli		J35 G	Palli	LUS	5 Gaiii		LUSS	Gaiii	LU33	Gaiii	LUSS	Gain	LUSS	Gaiii	1033	Gain	T	S Gaiii	T Ĕ	JSS Gaill
	East/West	3.55	22.93	27.35	55	1261	1504									1:	3 298	356												
	South	3.55	22.93	20.89				42	963	877							9 206	188												
	Existing Windows	1.99	40.90	22.15																										
	Skylight	2.03	40.10	88.23																										
	Doors	4.00	20.35	2.75												3		99												
	et exposed walls A	17.03	4.78		245	1171	158	348	1663	225	90	430	58	70 :	335	45 30	1463	198												
	et exposed walls B	8.50	9.58	1.29																										
	xposed Ceilings A xposed Ceilings B	59.22 22.86	1.37 3.56	0.64 1.66																										
L	Exposed Floors	29.80	2.73	0.17																										
Foundation Cond	uctive Heatloss			х																										
Total Conductive	Heat Loss					2432			2626			430			335		2700													
	Heat Gain						1663			1102			58			45		840												
Air Leakage	Heat Loss/Gain		0.3640	0.0414		885	69		956	46		157	2		122	2	983	35												
	Case 1		0.04	0.11																										
Ventilation	Case 2		14.07	11.88																										
	Case 3	х	0.05	0.11		126	191		136	127		22	7		17	5	139	97												
	Heat Gain People	1 - 05:	roont	239	2.0		4570	4.0		700	1.0		700																	
	Appliances Loads Ouct and Pipe loss	1 =.25 pe	ercent	3156 10%	2.0		1578	1.0		789	1.0		789																	
Level 2 HL Total	12,066	Tot	tal HL for p			3443			3718			609			474		3822									_				
Level 2 HG Total	9,677		HG per roo			5 773	4551		0.10	2682		555	1113			68	3022	1263												
			. ,						1		<u>. </u>				'							1						-		
																													CD 12 D	

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under Man 16Cot 2

David DaCosta

SB-12 Package Package A1



33,315

18,151

btu/h

Total Heat Loss

Total Heat Gain

Heatloss/Gain Calculations CSA-F280-12

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	Builder:	Bayview Wellin	ngton	Date:		Jur	ne 21, 2018				We	eather Data	Bradford	44	-9.4 86 22	48.2			Page 5
2012 OBC	Project:	Green Valley E	ast	Model:		TI	HWU-15E			System 1	н	eat Loss ^T	81.4 deg. F	Ht gain ^T	11 deg. F	GTA:	1922	Project # Layout #	PJ-00204 JB-04878
Level	3		MAST		ENS		BED 4	BED 3		BED 2	B	ATH							
Run ft. exposed wall Run ft. exposed wall			17 A B	20	В	13	A B	32 A R		16 A B	A B		A B	A B	A B		A B	A B	
Ceiling heig			8.0	8.0		8.0	ь	10.0		3.0	8.0		8.0	8.0	8.0		8.0	8.0	•
Floor ar			317 Area		Area	114	Area	152 Area		97 Area	63 Area		Area	Area	0.0 Area		Area		rea
Exposed Ceilings			317 A	105		114		152 A		97 A	63 A	•	A	A	A		A	Ā	
Exposed Ceilings			В		В		В	В		В	В		В	В	В		В	В	
Exposed Floor			Flr		Flr		Fir	31 Flr	1	39 Flr	9 Flr		Flr	Flr	Fir		Fir	F	
Gross Exp Wall			136	160)	104		320	1	28									
Gross Exp Wall																			
		oss Gain	Loss G	ain	Loss G	Gain Gain	Loss Gai	n Loss	Gain	Loss Gain	Los	s Gain	Loss Gain	Loss	Gain Loss	Gain	Loss G	ain L	oss Gain
North Shad		22.93 10.91 22.93 27.35	24 550	050 40		250		28 642			02								
East/We		22.93 27.35 22.93 20.89	24 550	656 13	298	356 16	367	28 642 334	766	22 504 6	02								
Existing Window		40.90 22.15				10	307	334											
Skylig		40.10 88.23																	
Dog		20.35 2.75																	
Net exposed walls	A 17.03	4.78 0.65	112 535	72 147	703	95 88	421	57 292 1396	189 1	06 507	68								
Net exposed walls	B 8.50	9.58 1.29																	
Exposed Ceilings			317 436	203 105	144	67 114	157	73 152 209	98 1	97 271 1	26 63	87 40							
Exposed Ceilings		3.56 1.66						24		20	00 0	05							
Exposed Floor Foundation Conductive Heatloss	rs 29.80	2.73 0.17						31 85	5 1	39 380	23 9	25 2							
Heat La	: 6		1521		1145		944	2331		1662		111							
Total Conductive Heat Ga				932		518		464	1057		20	42							
Air Leakage Heat Loss/Ga	in	0.2681 0.0414	408	39	307	21	253	19 625	44	446	34	30 2							
Case		0.03 0.11																	
Ventilation Case		14.07 11.88																	
Case		0.05 0.11	79	107 478	59	60	49	53 120 239 1	121 239		94 39	6 5							
Heat Gain Peop Appliances Loa			2	4/8		1		239 1	239	1 2	39								
Duct and Pipe Io		10%								1 211 1	06								
Level 3 HL Total 10,393		al HL for per room	2008		1511		1246	3077		2404		147							
Level 3 HG Total 7,454	Total	HG per room x 1.3		2023		779		800	1900	16	81	63		1					
l aval																			
Level																			
Run ft. exposed wall	A		Α		A		A	A		A	A		A	A	A		A	A	
Run ft. exposed wall Run ft. exposed wall	A B		A B		A B		A B	A B		A B	А В		A B	A B	A B		A B	A B	
Run ft. exposed wall Run ft. exposed wall Ceiling heig	A B ht		В		В		В	В		В	В		В	В	В		В	В	1
Run ft. exposed wal Run ft. exposed wall Ceiling heig Floor ar	A B ht		B Area		B Area		B Area	B Area		B Area	B Area	a	B Area	B Area	B Area	ı	B Area	B	ırea
Run ft. exposed wall Run ft. exposed wall Ceiling Floor ar Exposed Ceilings	A B ht ea A		B Area A		B Area A		B Area A	B Area A		B Area A	B Area A	3	B Area A	B Area A	B Area A	ı	B Area A	B A A	s urea
Run ft. exposed wal Run ft. exposed wall Ceiling heig Floor ar	A B ht ea A B		B Area		B Area		B Area	B Area		B Area	B Area	a	B Area	B Area	B Area	ı	B Area	B	urea L
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Floo Gross Exp Wall	A B ht ea A B es A		B Area A B		B Area A B		B Area A B	B Area A B		B Area A B	B Area A B	a	B Area A B	B Area A B	B Area A B	1	B Area A B	B A A B	urea L
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall	A B ht ea A B rs A B		B Area A B Fir		B Area A B Fir		B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall	A B ht a A B s s R -Values L		B Area A B Fir	ain	B Area A B Fir		B Area A B	B Area A B Fir	Gain	B Area A B	B Area A B Fir		B Area A B	B Area A B	B Area A B		B Area A B Fir	B A A B F	urea L
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad	A B ht ht ha A B S S B S S R R Values L d 3.55	22.93 10.91	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Celling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad EastWe	A B ht sa A B B S S A B B S S A S B S S S S S S S	22.93 10.91 22.93 27.35	B Area A B Fir	iain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad East/Wei	A B B A B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad East/We Sou	A B H A B B R-Values L B R-Valu	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Gross Exp Wall Service of Componer North Shad East/We Sou Existing Windon Skylig	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75	B Area A B Fir	iain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall Gomponer North Shad East/We Sou Existing Windo	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65	B Area A B Fir	iain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Calling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad East/We Soo Existing Windou Skylig Doo Net exposed walls Net exposed walls	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Gross Exp Wall Server was a componer North Shad East/We Sou Existing Windon Skylig Doo Net exposed walls Net exposed Ceilings	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64	B Area A B Fir	rain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Celling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad East/We Sot Existing Windoo Skylig Doc Net exposed walls Net exposed walls Exposed Ceilings Exposed Ceilings	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Gross Exp Wall Componer North Shad East/We Sou Existing Windon Skylgig Doo Net exposed walls Net exposed Ceilings	A B B A A B B R-Values L A B B S R-Values L A B B S R-Values L A B B S R-Values L A B B B R-Value B A B B R-Value B A B B R-Value B A B R-Value B A B R-Value B A B R-Value B B R-Valu	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64	B Area A B Fir	iain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Celling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad East/We Sot Existing Windoo Skylig Doc Net exposed walls Net exposed walls Exposed Ceilings Exposed Floo Foundation Conductive Heat loss Total Conductive Heat Lo	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed walk	A B B H A A B B R-Values L A A A B B R-Values L A A A B B R-Values L A A A A A A A A A A A A A A A A A A	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17	B Area A B Fir	rain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad East/We Sot Existing Windoo Skylig Doo Net exposed walls Net exposed walls Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floo Foundation Conductive Heat Loss Total Conductive Heat Ge Air Leakage Heat Loss/Ge	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Celling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad East/We So Existing Windon Skylig Doc Net exposed walls Resposed Ceilings Exposed Floo Foundation Conductive Heattoss Total Conductive Heat Loss/Ge Air Leakage Heat Loss/Ge Air Leakage Heat Loss/Ge Cass	A B B H H H H H H H H H H H H H H H H H	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Componer North Shad Esstive Sot Existing Windov Skylig Doo Net exposed walls Net exposed walls Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Total Conductive Heat Los Air Leakage Heat Loss/Ge Ventilation Cass	A B B H A A B B R-Values L C A A B R-Values L C A A B R-Values L C	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 1.29 1.37 0.64 3.56 1.66 2.73 0.17	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	s urea u s ir
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall Gross Exp Wall Gross Exp Wall Existing Windo Existing Windo Net exposed walls Net exposed walls Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floor Foundation Conductive Heat Los Total Conductive Air Leakage Heat Loss/Ge Acase Ventilation Case	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17 0.0000 0.0414 0.00 0.11 14.07 11.88 0.05 0.11	B Area A B Fir	rain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed walk	A B B H H H H H H H H H H H H H H H H H	22.93 10.91 22.93 27.35 22.93 27.35 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17 0.0000 0.0414 0.00 0.11 14.07 11.88 0.05 0.11	B Area A B Fir	iain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Celling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Gross Exp Wall Gross Exp Wall Selection Existing Windo Existing Windo Net exposed walls Net exposed walls Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Ceilings Fixed Company Exposed Floo Foundation Conductive Heat Loss/Ge Air Leakage Heat Loss/Ge Ventilation Case Uncertainty Heat Gase Loss Case Heat Gain Peop Appliances Loa Duct and Pipe lo	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17 0.0000 0.0414 0.00 0.11 14.07 11.88 0.05 0.11 239 rcent 3156	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Calling help Floor ar Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall Gross Exp Wall Componer North Shad EastWe Sou Existing Window Skylig Doc Net exposed walls Run Exposed Ceilings Exposed Floor Exposed Floor Exposed Floor Foundation Conductive Heatloss Total Conductive Heat Cass Heat Gain Peop Cass Cass Heat Gain Peop Appliances Loa Duct and Pipe lo Level 4 HL Total O	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 1.37 0.64 3.56 1.66 2.73 0.17 0.0000 0.0414 4.07 11.88 0.05 0.11 14.07 11.88 0.05 0.11 14.07 3156 10% creent 3156 10% al HL for per room	B Area A B Fir	ain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Celling heig Floor ar Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floo Gross Exp Wall Gross Exp Wall Gross Exp Wall Self Componer North Shad East/We Sot Existing Windo Skylig Doc Net exposed walls Net exposed walls Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Ceilings Fixed Componer Total Conductive Heat Los Total Conductive Heat Loss/Ge Air Leakage Heat Loss/Ge Case Ventilation Case Heat Gain Peop Appliances Loa Duct and Pipe lo	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17 0.0000 0.0414 0.00 0.11 14.07 11.88 0.05 0.11 239 rcent 3156	B Area A B Fir	rain	B Area A B Fir		B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	surea L S
Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Calling help Floor ar Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall Gross Exp Wall Componer North Shad EastWe Sou Existing Window Skylig Doc Net exposed walls Run Exposed Ceilings Exposed Floor Exposed Floor Exposed Floor Foundation Conductive Heatloss Total Conductive Heat Cass Heat Gain Peop Cass Cass Heat Gain Peop Appliances Loa Duct and Pipe lo Level 4 HL Total O	A B B B B B B B B B B B B B B B B B B B	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 1.37 0.64 3.56 1.66 2.73 0.17 0.0000 0.0414 4.07 11.88 0.05 0.11 14.07 11.88 0.05 0.11 14.07 3156 10% creent 3156 10% al HL for per room	B Area A B Fir		Area A B Fir	Bain	B Area A B B Flir Loss Gai	B Area A B Fir		Area A B Fir Loss Gain	Area A B Fir	s Gain	B Area A B Fir Loss Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B A A B F	oss Gain

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

Mane Maleta

David DaCosta

Package A1



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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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: Project:	Package A1 Bradford	Model:	THWU-15E	
-	RESIDENTIAL MECHANICAL For systems serving one dwelling unit & co			
	Location of Installation	Total V	entilation Capacity 9.32.3.3	(1)
Lot #	Plan #	Bsmt & Master Bdrm	2 @ 21.2 cfm	
Township	Bradford	Other Bedrooms Bathrooms & Kitchen	3 @ 10.6 cfm 4 @ 10.6 cfm	
Roll #	Permit #	Other rooms	3 @ 10.6 cfm Total	31.8 cfm 148.4
Address				
		Principal	Ventilation Capacity 9.32.3	.4(1)
	Builder		_	
Name	Bayview Wellington	Master bedroom Other bedrooms	1 @ 31.8 cfm 3 @ 15.9 cfm	47.7 cfm
Address			Total	79.5
City		Princ	cinal Exhaust Fan Canacity	
Tel	Fax	Make	cipal Exhaust Fan Capacity Model	Location
		LifeBreath	RNC155	Base
	Installing Contractor			
Name		132 cfm		Sones or Equiv.
Address		Н	leat Recovery Ventilator	
		Make	LifeBreath	
City		Model	RNC155 132 cfm high	80 cfm low
Tel	Fax	Sensible efficiency @		71%
		Sensible efficiency @	0 deg C	<u>75%</u>
			ance HRV/ERV to within 10 p	
a) x	Combustion Appliances 9.32.3.1(1) Direct vent (sealed combustion) only	Suppl	emental Ventilation Capacit	ty
b) X	Positive venting induced draft (except fireplaces)	Total ventilation capac	citv	148.4
c)	Natural draft, B-vent or induced draft fireplaces	Less principal exhaus	•	79.5
d)	Solid fuel (including fireplaces)	REQUIRED suppleme	ental vent. Capacity	68.9 cfm
e)	No combustion Appliances			
		Su	pplemental 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)			
	House Type 9.32.3.1(2)			
l x	Type a) or b) appliances only, no solid fuel	all fans HVI listed	Make Broan	or Equiv.
II .	Type I except with solid fuel (including fireplace)			•
III	Any type c) appliance		Designer Certification	
IV Other	Type I or II either electric space heat Type I, II or IV no forced air		is ventilation system has beer e Ontario Building Code.	n designed
	Type 1, II of IV 110 forced all	in accordance with the	Contains building Code.	

System Design Option Name David DaCosta Exhaust only / forced air system 1 2 HRV WITH DUCTING / forced air system Signature 3 Х HRV simplified connection to forced air system 4 HRV full ducting/not coupled to forced air system HRAI# Part 6 design Date



Energy Efficiency Design Summary: Prescriptive Method

(Building Code Part 9, Residential)

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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 Princip	oal Author	rity						
Application No:					Model/Certification Number							
A. Project Information												
Building number, street name							Unit numb	er	Lot/Con			
			THWU-1	15E								
Municipality Bradford			Postal cod	de	Reg. Plan number / other description							
B. Prescriptive Compliance [indica	ate the bu	ilding cod	e complia	nce packa	ge being	employed in	the house	design]				
SB-12 Prescriptive (input design pa	ickage):			<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	ficiency			Spac	e Heating F	uel Sourc	e		
✓ Zone 1 (< 5000 degree days)		√ ≥ 92	2% AFUE		V	Gas		Propane		Solid Fuel		
☐ Zone 2 (≥ 5000 degree days)		□ ≥8	34% < 92%	6 AFUE		Oil		Electric		Earth Energy		
Ratio of Windows, Skylights & Glas	s (W, S	& G) to \	Wall Area	а			Other I	Building Ch	aracteris	tics		
Area of Walls = <u>302.53</u> m ² or <u>3256.4</u>	ft²				☐ Log/l	Post&Beam		ICF Above	Grade	☐ ICF Basement		
Area of Walls = <u>302:35</u> III- 01 <u>3230.4</u>	11-	W,S &	G % =	<u>7%</u>	☐ Slab	on-ground	П	Walkout Ba	sement			
					☑ Air C	Conditioning		Combo Unit	t			
Area of W, S & G = <u>22.389</u> m ² or <u>241.0</u>	ft²	Utilize V	Vindow	☐ Yes	☐ Air S	Sourced Hea	t Pump (A	SHP)				
		Avera	aging	☑ No	☐ Grou	und Source I	Heat Pump	(GSHP)				
D. Building Specifications [provide	e values a	nd ratings	of the en	ergy effici	ency com	ponents prop	posed]					
Energy Efficiency Substitutions												
☐ 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	l.1.4.B	Required:	d: Permitted Substitution:							
Airtightness test required		Table 3.1	114C	Required:				Permitted S	Substitution	1:		
(Refer to Design Guide Attached)		1 4510 0.1		Required:				Permitted S	Substitution	1:		
Building Component			il/R-Valu n U-Valu			Buile	Efficiency Ratings					
Thermal Insulation	Non	ninal	Effe	ctive	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 (SR	E% at 0°C	C)		75%		
Slab (all >600mm below grade)	1	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	u/(h·ft·F) b	out not bot	.h.		. —							
E. Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso	on(s) provi	iding infor	mation he	rein to subst	antiate tha	at design mee	ts building	code]		
Name				BCIN		Signature				2		
David DaCosta				329	964			Mane	14C=	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
Form authorized by OHRA OROA LMCRO Revised December 1, 20								· 				





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Page PJ-00204 Project #

Layout # JB-04878

e-mail dave@gtadesigns.ca Package: Package A1 System 1 System: Project: **Bradford** Model: THWU-15E 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 0.324 21801 81.4 10343 0.018 0.079 21801 11 341 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 0.9567 1.0 0.6 0.5 0.4 Level 1 0.5 5405 Level 2 0.3640 8523 0.3 0.3 0.4 0.3 10343 Level 3 7715 0.2681 0.2 0 0.0000 Level 4 0 0.1 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 341 0.0414 3 **BUILDING CONDUCTIVE HEAT GAIN** 8220 **Ventilation Calculations Ventilation Heat Loss** Ventilation Heat Gain Vent Vent Ventilation Heat Loss **Ventilation Heat Gain** PVC (1-E) HRV **HLbvent** PVC HG^T **HGbvent** 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 0.11 Building 8220 5405 Level 1 0.5 0.10 Level 2 0.3 8523 0.04 1118 7715 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) ase **HLbvent** Multiplier Vent Heat Gain Multiplier **HGbvent** HG*1.3 **Total Ventilation Load** 1118 0.05 944 0.11 944 Foundation Conductive Heatloss Level 1 Watts 1457 4970 Btu/h

Envelope Air Leakage Calculator

Supplemental tool for CAN/CSA-F280

Weather Station	Description
Province:	Ontario T
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):	6.55
Building Config	guration
Туре:	Semi-Detached
Number of Stories:	Two
Foundation:	Shallow
House Volume (m³):	617.39
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):	0.324
Cooling Air Leakage Rate (ACH/H):	0.079

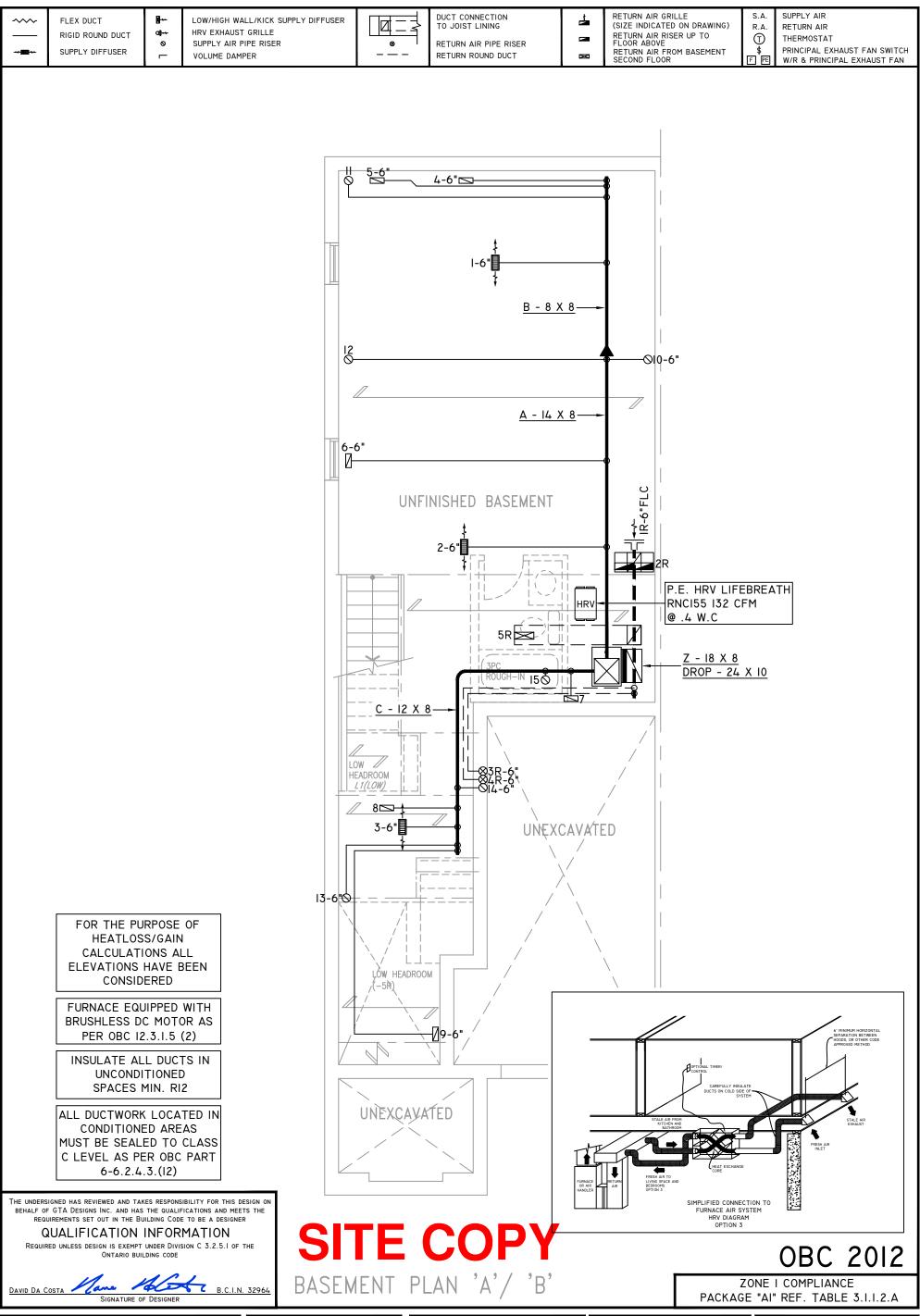
SITE COPY

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weat	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) ▼							
Foi	undatio	on Dimensions							
Floor Length (m):	18.17								
Floor Width (m):	3.93								
Exposed Perimeter (m):	34.75								
Wall Height (m):	2.59								
Depth Below Grade (m):	1.52	Insulation Configuration							
Window Area (m²):	1.77								
Door Area (m²):	0.00								
	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):		1457							





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. 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.

GTADESIGNS

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HEAT-LOSS	BTU/HR.
33,315	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960403AN	IA
UNIT HEATING INPUT	BTU/HR.
40,000	
UNIT HEATING OUTPUT	BTU/HR.
38,400	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
772	

# OF RUNS	S/A	R/A	FANS	D
3RD FLOOR				
2ND FLOOR	6	3	2	
IST FLOOR	6	I	3	٢
BASEMENT	3	-		
FLOOR PLAN:				Р

		TILIN I	DASL
PROJ GF		BASE	FLOOR PLAN
	1922	CHECKED: DD	DRAWN BY:
SCAL	DRAWING NO.	/. Ω 7 Ω	LAYOUT NO.

JUNE 19, 2018 BAYVIEW WELLINGTON MODEL: THWU-I5E

REEN 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

al→



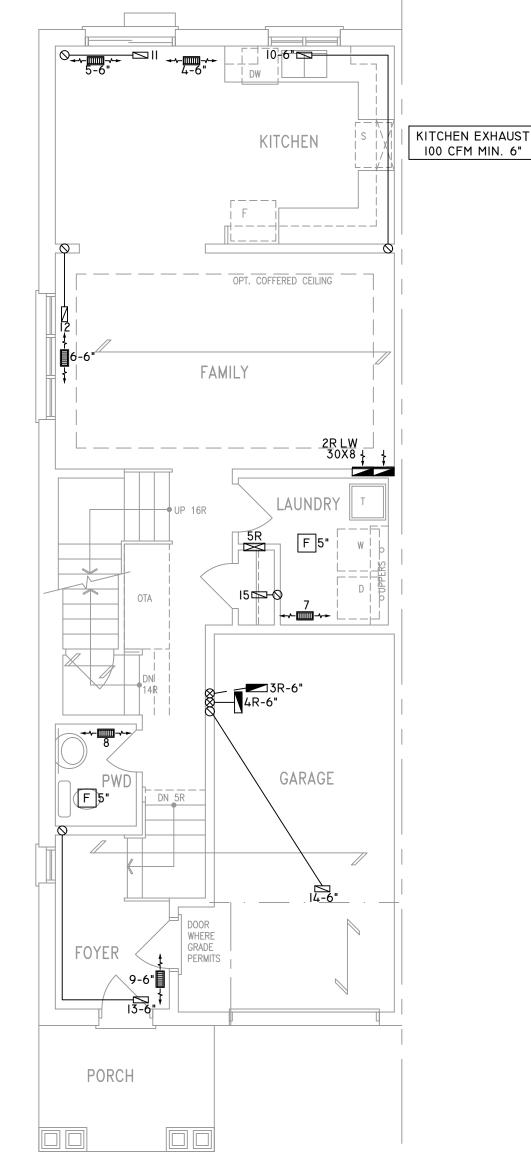
DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT

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

R.A 1

SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH



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

CIRCULATION PRINCIPAL FAN SWITCH TO BE CENTRALLY LOCATED

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.I of the ONTARIO BUILDING CODE

B.C.I.N. 32964

SITE COPY

GROUND FLOOR PLAN 'A'/ 'B'

OBC 2012

ZONE I COMPLIANCE PACKAGE "AI" REF. TABLE 3.1.1.2.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 RIZ UNDERCUT ALL DOORS I* MIN.

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33,315	5 (0/11111
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960403ANA	
UNIT HEATING INPUT	BTU/HR.
40,000	
UNIT HEATING OUTPUT	BTU/HR.
38,400	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
772	

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	6	3	2
IST FLOOR	6	I	3
BASEMENT	3		
FLOOR PLAN: GROUND FLOOR			
DRAWN BY: CHECKED: DD	SQFT 1922		

JB-04878

M2

DRAWING NO

DATE:
JUNE 19, 2018
CLIENT:
DAVVIEW WELLINGTON
BAYVIEW WELLINGTON
MODEL:
THWU-I5E
TIIVO IOL
PROJECT:
CDEEN VALLEY EACT

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 **a**]⊶ ⊘ SUPPLY AIR PIPE RISER **VOLUME DAMPER**



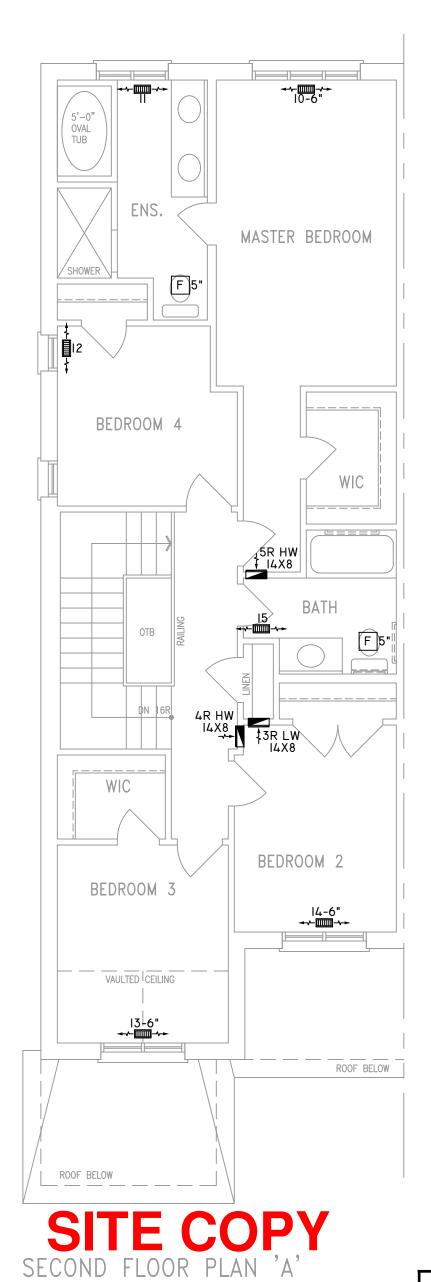
DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT

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

R.A 1

SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH



OBC 2012

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

REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER QUALIFICATION INFORMATION Required unless design is exempt under Division C 3.2.5.I of the

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE

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)

ONTARIO BUILDING CODE

SIGNATURE OF DESIGNER

B.C.I.N. 32964

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO

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HEAT-LOSS	BTU/HR.
33,315	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960403ANA	-
UNIT HEATING INPUT	BTU/HR.
40,000	
UNIT HEATING OUTPUT	BTU/HR.
38,400	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
772	

# OF RUNS	S/A	R/A	FANS	0
3RD FLOOR				
2ND FLOOR	6	3	2	
IST FLOOR	6	I	3	^
BASEMENT	3	-		
FLOOR PLAN: SECOND FLOOR			F	

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JB-04878

1922

M3

DATE.	JUNE 19, 2018
CLIENT: BAY	VIEW WELLINGTON
MODEL:	
	THWU-I5E
PROJECT	T: EN 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

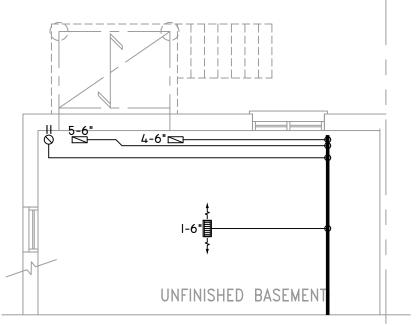


DUCT CONNECTION
TO JOIST LINING

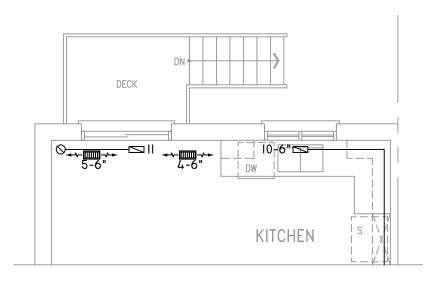
RETURN AIR PIPE RISER
RETURN ROUND DUCT

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

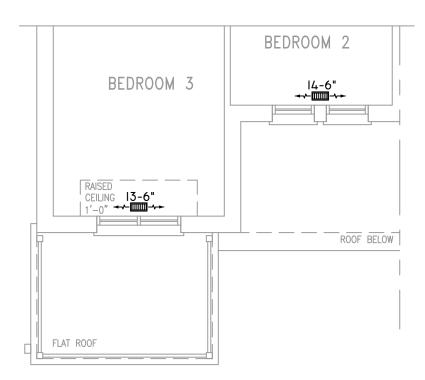
SUPPLY AIR
RETURN AIR
THERMOSTAT
PRINCIPAL EXHAUST FAN SWITCH
W/R & PRINCIPAL EXHAUST FAN



PARTIAL BASEMENT PLAN W.O.D. CONDITION (9R OR GREATER)



PARTIAL GROUND FLOOR PLAN W.O.D. CONDITION (9R OR GREATER)



PARTIAL SECOND FLOOR 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 Marie B.C.I.N. 32964

SITE COPY

OBC 2012

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

NOTES

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FAN SPEED	CFM
772	

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	6	3	2
IST FLOOR	6	I	3
BASEMENT	3	-	
FLOOR PLAN:			
PARTIAL	PLAN	1(S)	

DD

JB-04878

1922

M4

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l	JUNE 19, 2018
l	CLIENT: BAYVIEW WELLINGTON
	THWU-15E
	GREEN VALLEY EAST BRADFORD,ONT.

3/16" = 1'-0"