

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 Ridea	u 8		Lot:	
S42-8C Alt.	2nd FLR		Lot/con.	
Municipality Bradford	Postal code	Plan number/ other description		
B. Individual who reviews and takes responsibility for design	gn activities			
Name David DaCosta		Firm	gtaDesigns Inc.	
Street address 2985 Drew Roa				Lot/con.
Municipality Mississauga	Postal code L4T 0A4	Province Ontario	E-mail dave@gtadesi	gns.ca
Telephone number	Fax number		Cell number	
(905) 671-9800 C. Design activities undertaken by individual identified in S	•	') 494-9643	(416) 268-68	320
Design activities undertaken by individual identified in S	ection b. [bu	liding Code Table 3	5.5.2.1 OF DIVISION C	
☐ House ☑ HVAC – H	louse		■ Building Structural	
☐ Small Buildings ☐ Building Se	ervices		☐ Plumbing – House	
	Lighting and Pov	wer	☐ Plumbing – All Buildings	
☐ Complex Buildings ☐ Fire Protect			☐ On-site Sewage System	
Description of designer's work Mod	del Certification	1	Project #:	PJ-00204
Heating and Cooling Load Calculations Main		Builder	Layout #:	JB-04615
Heating and Cooling Load Calculations Main Air System Design Alternate		Project	Bayview Wellingto Green Valley East	
Residential mechanical ventilation Design Summary Area Sq ft:			Rideau 8	
Residential System Design per CAN/CSA-F280-12		Model	S42-8C Alt. 2nd FL	R
Residential New Construction - Forced Air		SB-12	Package A1	
D. Declaration of Designer				
David DaCosta	declare that (c	choose one as appro	priate):	
(print name)				
I review and take responsibility for				
3.2.4 Division C of the Building Cocclasses/categories.	de. i am qualilled	i, and the illin is registe	ered, in the appropriate	
Individual BCIN:				
Firm BCIN:			•	
, · · · ·			•	
Individual BCIN:	3296	64		
Basis for exemp	tion from registra	ation: [Division C 3.2.4.1. (4)	
☐ The design work is exempt from the	e registration and	d qualification requirem	ents of the Building Code.	
Basis for exemp	tion from registra	ation and qualification:		
I certify that:				
The information contained in this schedule is true to the best of n	ny knowledge.			
I have submitted this application with the knowledge and consent	t of the firm.			
April 4, 2018		Mare Ho		
Date		Signature of De	signer	

NOTE:

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

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



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

Page 2

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. Document	s for permit and/or construction are signed in red. JB-04615
Building	Location
Address (Model): S42-8C Alt. 2nd FLR	Site: Green Valley East
Model: Rideau 8	Lot:
City and Province: Bradford	Postal code:
Calculation:	s based on
Dimensional information based on:	VA3 Design Jan/2018
Attachment: Detached	Front facing: East/West Assumed? Yes
No. of Levels: 3 Ventilated? Included	Air tightness: 1961-Present (ACH=3.57) Assumed? Yes
Weather location: Bradford	Wind exposure: Sheltered
HRV? LifeBreath RNC155	Internal shading: Light-translucent Occupants: 6
Sensible Eff. at -25C 71% Apparent Effect. at -0C 84%	Units: Imperial Area Sq ft: 3454
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	nin 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 April 4, 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.

Κ

of the Building Code.

Project #

Page 3 PJ-00204

Rideau 8 System 1 Mane Alex **Green Valley East** S42-8C Alt. 2nd FLR David DaCosta JB-04615 Project: 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 18,384 btu/h **Equipment External Static Pressure** 0.5 "w.c. 3.0 Ton Make Amana Make Туре Amana Level 2 Net Load 21,267 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model AMEC960803BNA Model Cond.--3.0 Level 3 Net Load 21.455 btu/h Available Design Pressure 0.275 "w.c. Input Btu/h 80000 Input Btu/h Coil 3.0 76800 Level 4 Net Load 0 btu/h Return Branch Longest Effective Length 300 ft Output Btu/h Output Btu/h 0.50 " W C Min.Output Btu/h ΔWH 61.107 btu/h 0 138 "w c Total Heat Loss R/A Plenum Pressure E.s.p. Blower DATA: **Total Heat Gain** 35,110 btu/h S/A Plenum Pressure 0.14 "w.c. Water Temp deg. F. W2 67,217 Btuh. Heating Air Flow Proportioning Factor 0.0192 cfm/btuh AFUE Blower Speed Selected: Blower Type ECM Combo System HL + 10% 96% 40445 ft³ (Brushless DC OBC 12.3.1.5.(2)) **Building Volume Vb** Cooling Air Flow Proportioning Factor 0.0334 cfm/btuh Aux. Heat 1.342 Btuh. R/A Temp SB-12 Package Heating Check 1172 cfm 1172 cfm Ventilation Load 70 dea. F. Package A1 Cooling Check Ventilation PVC 95.4 cfm S/A Temp 131 deg. F. Supply Branch and Grill Sizing Diffuser loss 61 deg. F. 1172 cfm Cooling Air Flow Rate 1172 cfm 0.01 "w.c. Temp. Rise>>> Selected cfm> Level 1 Level 2 S/A Outlet No. 2 5 6 10 11 12 13 14 Room Use BASE BASE BASE BASE KIT KIT STUDY STUDY FOY I IV/DIN GRT GRT Btu/Outlet 4596 4596 4596 4596 2114 2114 3304 2573 2573 2407 1468 1468 1623 1623 **Heating Airflow Rate CFM** 88 88 88 88 41 41 63 49 49 46 28 28 31 31 12 12 12 12 71 71 82 60 60 59 59 48 48 Cooling Airflow Rate CFN 31 0.13 0.13 **Duct Design Pressure** 0.13 **Actual Duct Length** 33 37 29 50 36 37 53 54 59 41 38 35 47 53 **Equivalent Length** 110 110 140 100 70 70 70 70 70 70 70 70 70 70 120 150 110 130 110 130 90 100 120 70 70 70 70 Total Effective Length 143 147 169 150 70 70 70 70 70 70 70 70 116 157 203 164 189 151 168 125 147 173 70 70 70 70 70 70 Adjusted Pressure 0.09 0.09 0.08 0.09 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.11 0.08 0.06 0.08 0.07 0.09 0.08 0.10 0.09 0.08 0.19 0.19 0.19 0.19 **Duct Size Round** 6 5 5 5 **Outlet Size** 4x10 3x10 3x10 3x10 3x10 3x10 4x10 4x10 4x10 4x10 4x10 4x10 3x10 3x10 4x10 4x10 4x10 4x10 Trunk С D D Level 3 Level 4 S/A Outlet No. 15 16 17 20 21 22 23 24 26 27 28 18 19 25 Room Use MAST MAST FNS wc. WIC: RFD 2 RATH BFD 3 BFD 3 RFD 4 RFD 4 FNS 3 BFD 5 FNS 4 Btu/Outlet 1580 1580 1766 513 558 2293 1131 1949 1949 1818 1818 1151 2521 827 37 37 **Heating Airflow Rate CFM** 30 30 34 10 11 44 22 35 35 22 48 16 Cooling Airflow Rate CFM 46 46 43 69 10 41 57 5 41 57 27 71 16 **Duct Design Pressure** 0.13 **Actual Duct Length** 61 52 53 48 62 74 70 81 70 49 **Equivalent Length** 110 125 110 165 100 120 180 170 150 145 135 155 170 100 70 70 70 70 70 70 70 70 70 70 70 70 70 70 171 163 Total Effective Length 177 213 182 246 244 220 226 200 225 149 70 70 70 70 70 70 70 70 70 70 70 149 230 70 70 70 Adjusted Pressure 0.08 0.07 0.08 0.06 0.09 0.07 0.05 0.05 0.06 0.06 0.07 0.06 0.06 0.09 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** 5 3 6 5 5 5 3 Outlet Size 3x10 3x10 3x10 3x10 3x10 3x10 4x10 3x10 3x10 3x10 3x10 3x10 4x10 3x10 4x10 Trunk D G 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** Round Rect. Size Inlet Air Volume CFM 176 434 154 154 154 100 **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 1172 0.05 17.0 24x12 1173 0.05 17.0 26x10 22x12 Drop Α 50 0.05 0.06 10 22 49 56 83 z 1172 17.0 R 479 12 0 16v8 **Actual Duct Length** 26v10 22x12 12v10 **Equivalent Length** 150 125 200 155 155 165 50 50 50 50 50 Υ 254 0.05 10.0 12x8 10x10 c 233 0.07 9.0 8x8 10x7 50 **Total Effective Length** 160 147 250 204 211 248 50 50 50 50 Х D 191 0.06 8.5 8x8 694 Adjusted Pressure 0.07 0.08 0.05 0.06 0.06 0.05 0.24 0.24 0.24 0.24 0.24 w Ε 0.05 14.0 22x8 18x10 **Duct Size Round** 7.0 11.0 8.0 8.0 8.0 6.0 v 376 0.05 11.5 14x8 12x10 FLC G 134 0.06 7.5 8x8 Inlet Size Inlet Size 30 14 14 14 s

Q



Heatloss/Gain Calculations CSA-F280-12

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

Property		(, •																	e-mai	il dave	@gtad	designs.	ca										
The column			Builder:	Ва	yview Well	ington			Date:			April	l 4, 2018	3			ī				,	Weathe	er Data		Bradfe	ord	44	-9.4	86	22	48.2					_
Part	2012 OBC		Project:	G	reen Valley	East		M	Model:					FLR				Sy	stem	1		Heat L	Loss ^T	81.4	deg. F	ı	lt gain ^T	1	I1 deg.	F	GTA:	3454		Proj Layo	ect # out #	
Part		Level 1					BASE																													
Column C																																				
Property column	Kun																												3.7							
Part	_	Floor area				1409 A	rea		Ar	ea		Ar	ea			Area		Aı	ea		Α	rea			Area		Area			Area		,	Area		Area	
Part																																				
Control Cont	_	Exposed Floors				FI																														
Secondary Property						677																														
Exercise Section Sec		Components	R-Values			Lo			Lo	ss G	ain	Lo	oss G	ain	ا	Loss	Gain	Lo	oss C	ain	L	oss	Gain	اِ	Loss G	ain	Loss	Gain		Loss	Gain		Loss	Gain	Loss	Gain
Separal 1966						19																														
Study State Stat		South				-																														
Most																																				
Metaposed cealing Mat 2,242 2,58 6,582 2,59 1,						21	427	58																												
Especial Callings A 59.2 1.37 0.45						632		329																												
Proposed Calling No. 236 346																																				
Principal Conductive Name		xposed Ceilings B	22.86	3.56	1.66																															
Teach Controllary March Controllary March	Foundation Cond				0.17		7679																													
## Cases 1 1,000 0,005 0		Heat Loss		(/																																
Case 2	Air Leakage			1 0907	0.0354		9441																													
Head		Case 1		0.08	0.06																															
Metal Gain People	Ventilation		v				287	62																												
Control Horizon 1939			^	0.00			201	02																												
Level 1 HG Total 1,392				percent																																
Laure Laure Laure For Fo	Level 1 HL Total	18,384	1		per room		18384																													
Runt Lexposed wall A Runt Lexp	Level 1 HG Total	1,392	Tota	al HG per ro	oom x 1.3			1392				L			L						L			. L					_			1 L				
Runt Lexposed wall A Runt Lexp																																				
Runt. exposed valle B Fig. 100 100	Run		j			37 A				LAUN					18			_			30 A				Δ		Δ			Δ			Δ		Δ	
Floor area 322 Area 208 Area 177 Area 137 Area 340 Area 213 Area 340 Area 213 Area 340 Area		ft. exposed wall B				В			В			В						В			В						В			В					В	
Exposed Cellings A B B B B B B B B B B B B B B B B B B							roa			.03			.03			Aroa			.03			roa			Aroa				10.0				Aroa			
Exposed Floors Fire	E																																			
Gross Exp Wall A Corponents RV Malues Loss Gain Coss Gain Co	E																																			
Components R-Values Loss Gain Loss																-11			'			"			rii		FII			FII			rii		FII	
North Shaded 3.55 22.93 10.91 24 500 22.15 275 131 48 1101 1313 2 3.2 734 875 2.5 3.2 3.2 2.2 2.2 2.2 2.2 2.2 3.				1 000	Cain			Cain			ain			ain.			Cain			ain.			Cain		1000 (ain	Lann	Cain		Lann	Cain			Coin	Lanc	Coin
South 3.55 22.93 20.89 20.89 4.90 40.90 20.95 22.15 2.15 4.80 10.01 10.03 24 550 501 4.9 11.24 10.23 16 367 334												LC)55 6	alli	ľ	LUSS	Gain)55 (ain	Ė	.055	Gain	Í	LUSS C	airi	LUSS	Gain	T	LUSS	Gain	ı i	LUSS	Gain	LUSS	Gain
Existing Windows 1.99 40.90 22.15 2.03 40.10 88.23 2.75 2.03 40.10 88.23 2.75 2.05 40.00 20.35 2.75 2.75 2.75 2.05 2						44	1009	1204				-																								
Skylight 2.03 40.10 88.23		Existing Windows										48	1101	1003	24	550	501	49	1124	1023	16	367	334													
Net exposed walls A 17.03 4.78 0.85 0.85 0.85 1.29		Skylight								40=						40=																				
Net exposed valies 8,50 9,58 1.29	Ne					302	1443	195				304	1453	196				201	961	130	252	1205	163													
Exposed Ceilings B 22.86 3.56 1.66 Exposed Floors 29.80 2.73 0.17 0.01	Ne	et exposed walls B	8.50	9.58	1.29																															
Exposed Floors 29.80 2.73 0.17									17	23	11																									
Total Conductive Heat Loss		Exposed Floors	29.80	2.73	0.17																															
Air Leakage Heat Loss/Gain 0.3751 0.0354 1126 59 880 15 1371 89 641 23 782 41 865 49			On Grade	e() or Abo	х		3003			2346			3654			1709			2084			2305														
Case 1		Heat Gain																																		
Ventilation Case 2 14.07 11.88 Case 3 x 0.03 0.06 100 105 78 27 121 159 57 42 69 73 76 87	Air Leakage						1126	59		880	15		1371	89		641	23		782	41		865	49													
Heat Gain People 239 239 249 249 240	Ventilation	Case 2		14.07	11.88																															
Appliances Loads 1 = .25 percent 5.753 1.0 1438			х	0.03			100	105		78	27		121	159		57	42		69	73		76	87													
Level 2 HL Total 21,267 Total HL for per room 4229 3304 5146 2407 2935 3246			1 =.25	percent		1.0		1438	1.0		1438							1.0		1438	0.5		719													
				Total Lil for			4220			2204			5146			2407			2025			2246														
						L	4229	4242		3304	2468	L	3140	3588		2407	940		2933	3517	Į	3240	2895													

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:

Man Alex

David DaCosta

SB-12 Package
Package A1



Total Heat Loss

Total Heat Gain

61,107

35,110

btu/h

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

			_									_									iii dave	•	-			_									
		Builder:	Ва	yview Well	ington	_	Date:				4, 2018 leau 8	8			Г	_	4			Weath	er Data		Bradi	ord	4	4 -	9.4	86 22	. 4	48.2			Proje	ct#	Page 5 PJ-00204
2012 OBC		Project:	Gı	reen Valley	East	_	Model:		S		lt. 2nd	FLR				S	ystem	1		Heat	Loss ^T	81.4 d	eg. F		Ht gain	^T	11	deg. F	(GTA:	3454		Layo		JB-04615
	Level 3				M	ST		ENS			wc			WIC			BED 2			BATH			BED 3			BED 4			ENS 3			BED 5		EN:	S 4
	n ft. exposed wall A n ft. exposed wall B				30 A B		19	A B		6 A B			8 A B			21 /	A B		6	A B		32 A			26 A			10 A B			16 A			9 A B	
Kui	Ceiling height				9.0		8.0	_		8.0			8.0			8.0	ь		8.0	ь		9.0	•		9.0			8.0			10.0	•		8.0	
	Floor area				266 Area 266 A		135 135	Area		24 Ar 24 A	ea		100 Are	ea		298 A			108 108			195 A			206 A			96 Aı 96 A	ea		226 A 226 A			69 Area 69 A	
	Exposed Ceilings A Exposed Ceilings B				266 A B			В		24 A B			100 A B			E	В			В		В	3		206 A			96 A			226 A			В	
	Exposed Floors				Flr 270			Fir		Fli 48			Flr			43 F	Flr		108 48	Flr		178 F 288	lr .		12 F	lr		FI	r		F 160	Ir		Flr	
	Gross Exp Wall A Gross Exp Wall B				270		152			48			64			168			48			288			234			80			160			72	
	Components North Shaded	R-Values 3.55			Loss	Gain	_	Loss	Gain	Lo	ss G	Sain 87	Lo	ss G	Gain	27	Loss 619	Gain 295	8	Loss 183			oss (Gain	L	oss (Gain	Lo	oss (Gain	L	oss C	Gain	Loss	Gain
	East/West	3.55	22.93	27.35		757 90		619	739	°	103	01				21	019	293	°	103	01	38	871	1039	40	917	1094								
	South Existing Windows	3.55 1.99	22.93 40.90	20.89 22.15	14 3	21 29	2																		40	917	835	22	504	459	51	1169	1065	12 2	75 251
	Skylight	2.03		88.23																															
	Doors	4.00 17.03	20.35	2.75	223 10	14	4 125	507	04	40	404	20		200	41	444	674	04	40	404	00	250	4405	404	154	700	00	58	277	27	400	504	70		87 39
N	let exposed walls A let exposed walls B	8.50	4.78 9.58	0.65 1.29	223 10	14	125	597	81	40	191	26	64	306	41	141	6/4	91	40	191	26	250	1195	161	154	736	99	38	211	37	109	521	70	60 2	87 39
	Exposed Ceilings A	59.22	1.37	0.64	266	66 17	1 135	186	87	24	33	15	100	137	64	298	410	191	108	148	69	195	268	125	206	283	132	96	132	62	226	311	145	69	95 44
	Exposed Ceilings B Exposed Floors	22.86 29.80	3.56 2.73	1.66 0.17												43	117	7	108	295	18	178	486	30	12	33	2								
Foundation Cond						609		1402			408			443			1820			818			2821			2886			914			2001		_	57
Total Conductive	Heat Loss Heat Gain				23	151	0	1402	906		400	129		443	106			584		010	201		2021	1356			2163		914	559			1281		334
Air Leakage	Heat Loss/Gain		0.2264	0.0354		668 5	3	317	32		92	5		100	4		412	21		185	7		639	48		654	77		207	20		453	45	1-	49 12
Ventilation	Case 1		14.07	0.06 11.88																															
	Case 3 Heat Gain People	x	0.03	0.06 239	2	83 9 47		47	57		14	8		15	7	1	60	37 239		27	13	4	94	86 239		96	137 239		30	35		66	81 239	:	22 21
	Appliances Loads	1 =.25 p	percent	5753		47	•									0.5		719						239	- 1		239				- 1		239		
Level 3 HL Total	Duct and Pipe loss 21,455	Т.	otal HL for	10%	3.	61		1766			513			558			2293		1	100 1131		1	346 3899	159		3636			1151			2521		0	27
Level 3 HG Total			I HG per ro		3	277	В	1700	1294		513	184		336	151		2293	2080		1131	313		3099	2455		3636	3401		1131	798		2321	2140	0.	477
-																																			
Rur	Level 4 n ft. exposed wall A				Α			A		А			Α			,	A			A		А			А			А			А			Α	
	n ft. exposed wall B				В			В		В			В			E	В		i	В		В			В			В			В			В	
	Ceiling height Floor area				Area			Area		Ar	ea		Are	ea		,	Area			Area		A	rea		А	rea		Aı	ea		А	rea		Area	
	Exposed Ceilings A				Α			Α		Α			Α			-	A			A		A	ı		Α			Α			Α			Α	
E	Exposed Ceilings B Exposed Floors				B Flr			B Flr		B Fli			B Fir				B Flr			B Flr		B	l Ir		B F			B FI			B F			B Flr	
	Gross Exp Wall A																																		
	Gross Exp Wall B Components	R-Values	Loss	Gain	Loss	Gain		Loss	Gain	Lo	ss G	Sain	Los	ss G	ain	ı	Loss	Gain		Loss	Gain	L	oss (Gain	L	oss (Gain	Lo	ss (Gain	L	oss G	Gain	Loss	Gain
	North Shaded	3.55	22.93	10.91												ſ																			
	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																															
	let exposed walls A	17.03	4.78	0.65																															
	let exposed walls B Exposed Ceilings A	8.50 59.22	9.58 1.37	1.29 0.64																															
	Exposed Ceilings B	22.86	3.56	1.66																															
Foundation Cond	Exposed Floors ductive Heatloss	29.80	2.73	0.17																															
Total Conductive	Heat Loss																																		
Air Leakage	Heat Gain Heat Loss/Gain		0.0000	0.0354																															
	Case 1		0.00	0.06																															
Ventilation	Case 2	х	14.07 0.03	11.88 0.06																															
	Heat Gain People			239																															
	Appliances Loads Duct and Pipe loss	1 =.25 p	percent	5753 10%																															
Level 4 HL Total	0		otal HL for	per room																															
Level 4 HG Total	0	Tota	I HG per ro	om x 1.3			J			L						L			L			. L			L						L				
																																	c n		

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:

Mane Maleta

David DaCosta

SB-12 Package Package A1



System Design Option
Exhaust only / forced air system

HRV WITH DUCTING / forced air system

Part 6 design

HRV simplified connection to forced air system

HRV full ducting/not coupled to forced air system

2

3 x

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-04615

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

Package:	Package A1			
Project:	Bradford	Model:	S42-8C Alt. 2nd FLR	
	RESIDENTIAL MECHANICAL			
	For systems serving one dwelling unit & co	nforming to the Ontario Building	Code, O.reg 332/12	
	Location of Installation	Total Ve	entilation Capacity 9.32.3.3(1)	
Lot #	Plan #	Total Ve	manon capacity cicilolo(1)	
Township		Bsmt & Master Bdrm Other Bedrooms	2 @ 21.2 cfm 4 @ 10.6 cfm	42.4 cfm 42.4 cfm
TOWNSHIP	Bradford	Bathrooms & Kitchen	6 @ 10.6 cfm	63.6 cfm
Roll #	Permit #	Other rooms	6 @ 10.6 cfm	63.6 cfm
Address			Total	212
Address				
		Principal	Ventilation Capacity 9.32.3.4(1)	
	Builder		4 0 040 /	04.0 (
Name	Bayview Wellington	Master bedroom Other bedrooms	1 @ 31.8 cfm 4 @ 15.9 cfm	31.8 cfm 63.6 cfm
Address	Baytion Womington	Caror boarcome	Total	95.4
0				
City		Princ	ipal Exhaust Fan Capacity	
Tel	Fax	Make		ation
	Installing Contractor	LifeBreath	RNC155 Bas	e
Name	mstaning Contractor	132 cfm	Sor	nes or Equiv.
		-		
Address		Make	eat Recovery Ventilator LifeBreath	
City		Model	RNC155	
- .	_	<u> </u>	132 cfm high	80 cfm low
Tel	Fax	Sensible efficiency @ Sensible efficiency @		<u>71%</u> 75%
			nce HRV/ERV to within 10 perce	
	Combustion Appliances 9.32.3.1(1)	Supple	mental Ventilation Capacity	
a) x b)	Direct vent (sealed combustion) only Positive venting induced draft (except fireplaces)	Total ventilation capac	itv :	212.0
c)	Natural draft, B-vent or induced draft fireplaces	Less principal exhaust	capacity	95.4
d)	Solid fuel (including fireplaces)	REQUIRED suppleme	ntal vent. Capacity	116.6 cfm
e)	No combustion Appliances			
		Sup	plemental Fans 9.32.3.5.	
	Heating System	Location	cfm Model	Sones
		Enc	50 XB50	0.3
Х	Forced air	Ens Both		
X	Non forced air	Bath	50 XB50	0.3
X				
X	Non forced air Electric space heat (if over 10% of heat load)	Bath	50 XB50	0.3
	Non forced air Electric space heat (if over 10% of heat load) House Type 9.32.3.1(2)	Bath Ens 3	50 XB50 50 XB50	0.3 0.3
	Non forced air Electric space heat (if over 10% of heat load)	Bath	50 XB50 50 XB50	0.3
	Non forced air Electric space heat (if over 10% of heat load) House Type 9.32.3.1(2) Type a) or b) appliances only, no solid fuel Type I except with solid fuel (including fireplace) Any type c) appliance	Bath Ens 3 all fans HVI listed	50 XB50 50 XB50 Make Broan or E	0.3 0.3 Equiv.
	Non forced air Electric space heat (if over 10% of heat load) House Type 9.32.3.1(2) Type a) or b) appliances only, no solid fuel Type I except with solid fuel (including fireplace) Any type c) appliance Type I or II either electric space heat	Bath Ens 3 all fans HVI listed I hereby certify that this	50 XB50 50 XB50 Make Broan or E Designer Certification s ventilation system has been des	0.3 0.3 Equiv.
	Non forced air Electric space heat (if over 10% of heat load) House Type 9.32.3.1(2) Type a) or b) appliances only, no solid fuel Type I except with solid fuel (including fireplace) Any type c) appliance	Bath Ens 3 all fans HVI listed I hereby certify that this	50 XB50 50 XB50 Make Broan or E	0.3 0.3 Equiv.

	Designer (Certification	
I hereby certify t	hat this ventilatio	n system has been	designed
in accordance w	rith the Ontario B	uildina Code.	J
Maria	D11D	-01-	
Name	David D	aCosta	
	11	166	
Signature	- Cane	a de la companya de l	
3			
HRAI#	5190	BCIN#	32964
1111/7/1#	3130	DOIN#	02004
Date	April 4	, 2018	
			<u> </u>

♦GTA\DESIGNS

Energy Efficiency Design Summary: Prescriptive Method

(Building Code Part 9, Residential)

Page 7

Project # PJ-00204 Layout # JB-04615

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 us	e by Princi	pal Authori	tv				
Application	n No:				,		tification Nur	mber			
Α.	Project Information										
Building no	umber, street name			Ridea	u 8			Unit nu	mber	Lot/Con	
			S42-	8C Alt.	2nd FLR	1					
Municipali	ty Bradford			Postal co	ode	Reg. Plan	number / oth	ner desc	ription		
	Bradiora										
В.	Prescriptive Compliance [indica	te the bu	ilding cod	e complia	ance packa	ige being e	mployed in	the hou	se design]		
	OD 40 December the control of			-	D1	A 4			T-1-1-	0.4.4.0	Δ.
	SB-12 Prescriptive (input design pa	ckage):			Pack	age A1			i abie	: <u>3.1.1.2.</u>	<u>A</u>
C.	Project Design Conditions										
	Climatic Zone (SB-1):		Heat. E	quip. E	fficiency			Sp	ace 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	% AFUE		Oil		Electric		Earth Energy
F	Ratio of Windows, Skylights & Glas	s (W, S	& G) to	Wall Are	ea			Othe	r Building Ch	aracteris	tics
Aroa o	f Walls = <u>385.64</u> m ² or <u>4151.0</u>	ft²				☐ Log/F	ost&Beam	[☐ ICF Above	Grade	☐ ICF Basement
Aleau	1 Walls = <u>303.04</u> III 01 <u>4131.0</u>	11.	W,S &	.G % =	<u>15%</u>	☐ Slab-	on-ground	ſ	☐ Walkout Ba	asement	
						☑ Air C	onditioning	[Combo Uni	it	
Area of \	W, S & G = 59.549 m ² or 641.0	ft²	Utilize V	Vindow	☐ Yes	☐ Air S	ourced Heat	t Pump	(ASHP)		
			Avera	aging	☑ No	☐ Grou	nd Source F	Heat Pu	mp (GSHP)		
D.	Building Specifications [provide	values a	and ratings	s of the e	nergy effici	ency comp	onents 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 sys	tems (3.1	.1.2(7) / 3.	1.1.3.(7))					
	Airtightness substitution(s)		Table 3.	1.1.4.B	Required:				Permitted	Substitution	1:
	Airtightness test required		Table 3.	1.1.4.C	Required:					Substitution	
(F	Refer to Design Guide Attached)				Required:				Permitted	Substitution	1:
	Building Component		mum RS Maximun				Build	ding C	omponent		Efficiency Ratings
Therma	l Insulation	Non	ninal	Effe	ective	Windov	rs & Dooi	rs Prov	ride U-Value ⁽¹⁾ ر	or ER rating	
Ceiling w	vith Attic Space	6	0			Windows	s/Sliding G	lass Do	oors		1.6
Ceiling w	vithout Attic Space	3	31			Skylights	1				2.8
Exposed	Floor	3	31			Mechar	icals				
Walls Ab	oove Grade	22					Equip.(AFL				96%
Baseme	nt Walls		20.0ci			HRV Effi	ciency (SR	E% at 0	O°C)		75%
Slab (all	>600mm below grade)	- 7	Х			DHW He	ater (EF)				0.80
	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	d Heating	Syster	n		
(1) U valu	ie to be provided in either W/(m²·K) or Bt	u/(h·ft·F) l	out not bo	th.							
E.	Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso	on(s) pro		mation her			that design mee	ets building	code]
Name					BCIN		Signature		, 1	.11	,
	David DaCosta				329	964			Mane	14C=	~{~~



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

Page 8 Project # PJ-00204 Layout # JB-04615

Package: Package A1 System 1 System: Project: **Bradford** Model: S42-8C Alt. 2nd FLR Air Leakage Calculations **Building Air Leakage Heat Loss Building Air Leakage Heat Gain** HG^T В LRairh Vb **HLleak** В LRairh Vb HG Leak 0.018 0.319 40445 81.4 18882 0.018 0.079 40445 11 632 Levels Air Leakage Heat Loss/Gain Multiplier Table (Section 11) 1 2 3 4 Building Level Level Conductive Air Leakage Heat Loss Level (LF) (LF) (LF) (LF) Factor (LF) **Heat Loss** Multiplier 1.0907 1.0 0.6 0.5 0.4 Level 1 0.5 8656 Level 2 15102 0.3751 0.3 0.3 0.4 0.3 18882 0.2264 Level 3 16679 0.2 0 0.0000 Level 4 0 0.1 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 632 0.0354 3 **BUILDING CONDUCTIVE HEAT GAIN** 17876 **Ventilation Calculations Ventilation Heat Loss Ventilation Heat Gain** /ent /ent Ventilation Heat Loss Ventilation Heat Gain PVC (1-E) HRV **HLbvent** PVC HG^T **HGbvent** 1342 1.08 1133 95.4 81.4 0.16 1.1 95.4 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 LVL Cond. HL Level LF HLbvent Multiplier **HGbvent** 1133 0.06 Level 1 8656 Building 17876 0.5 0.08 Level 2 0.3 15102 0.03 1342 16679 Level 3 0.2 0.02 Level 4 0 0 0.00 Case 2 Case 2 **Ventilation Heat Loss (Direct Ducted Systems) Ventilation Heat Gain (Direct Ducted Systems)** Case 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** 1342 0.03 1133 0.06 1133 Foundation Conductive Heatloss Level 1 2250 Watts 7679 Btu/h

David DaCosta

Envelope Air Leakage Calculator

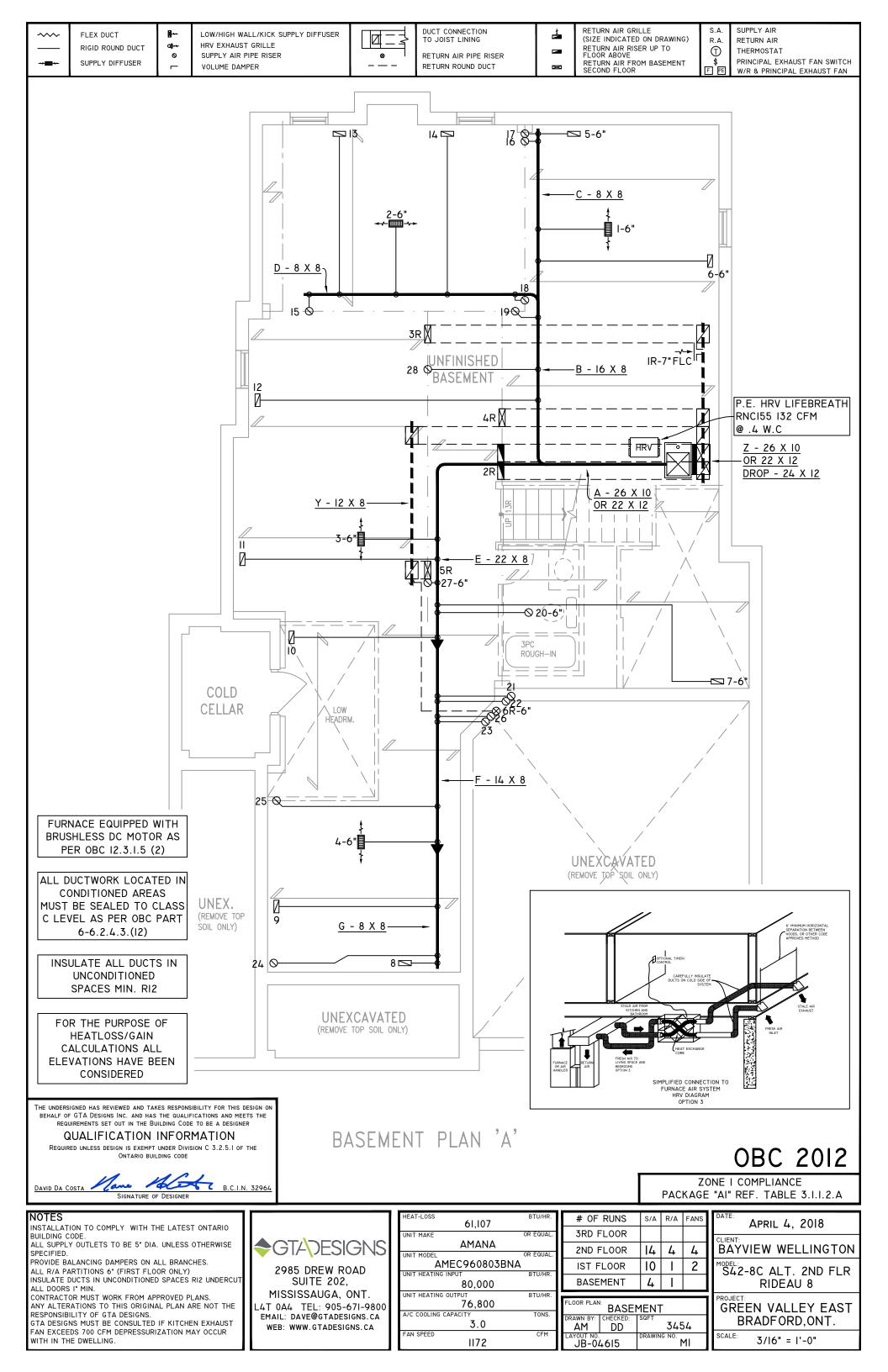
Supplemental tool for CAN/CSA-F280

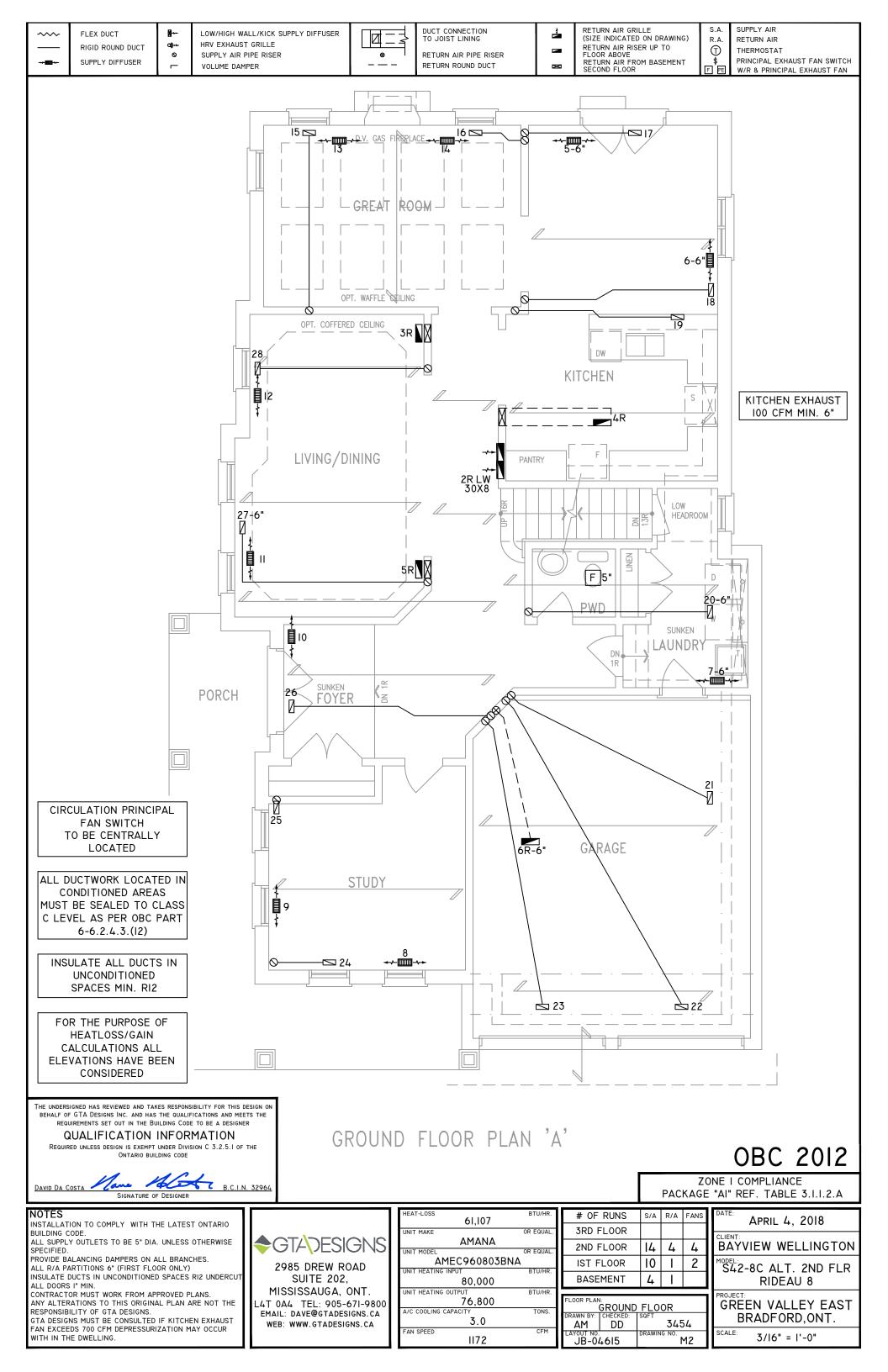
Weather Station	Description
Province:	Ontario
Region:	Bradford ▼
Weather Station Location:	Open flat terrain, grass
Anemometer height (m):	10
Local Shie	lding
Building Site:	Suburban, forest
Walls:	Heavy ▼
Flue:	Heavy ▼
Highest Ceiling Height (m):	6.61
Building Confi	guration
Type:	Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m ³):	1145.40
Air Leakage/Ve	entilation
Air Tightness Type:	Present (1961-) (ACH=3.57)
Custom BDT Data:	ELA @ 10 Pa. 322.44 cm ²
	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply: Total Exhaust:
	47.7 47.7
Flue #:	#1 #2 #3 #4
Diameter (mm):	0 0 0 0
Heating Air Leakage Rate (ACH/H):	0.319
Cooling Air Leakage Rate (ACH/H):	0.079

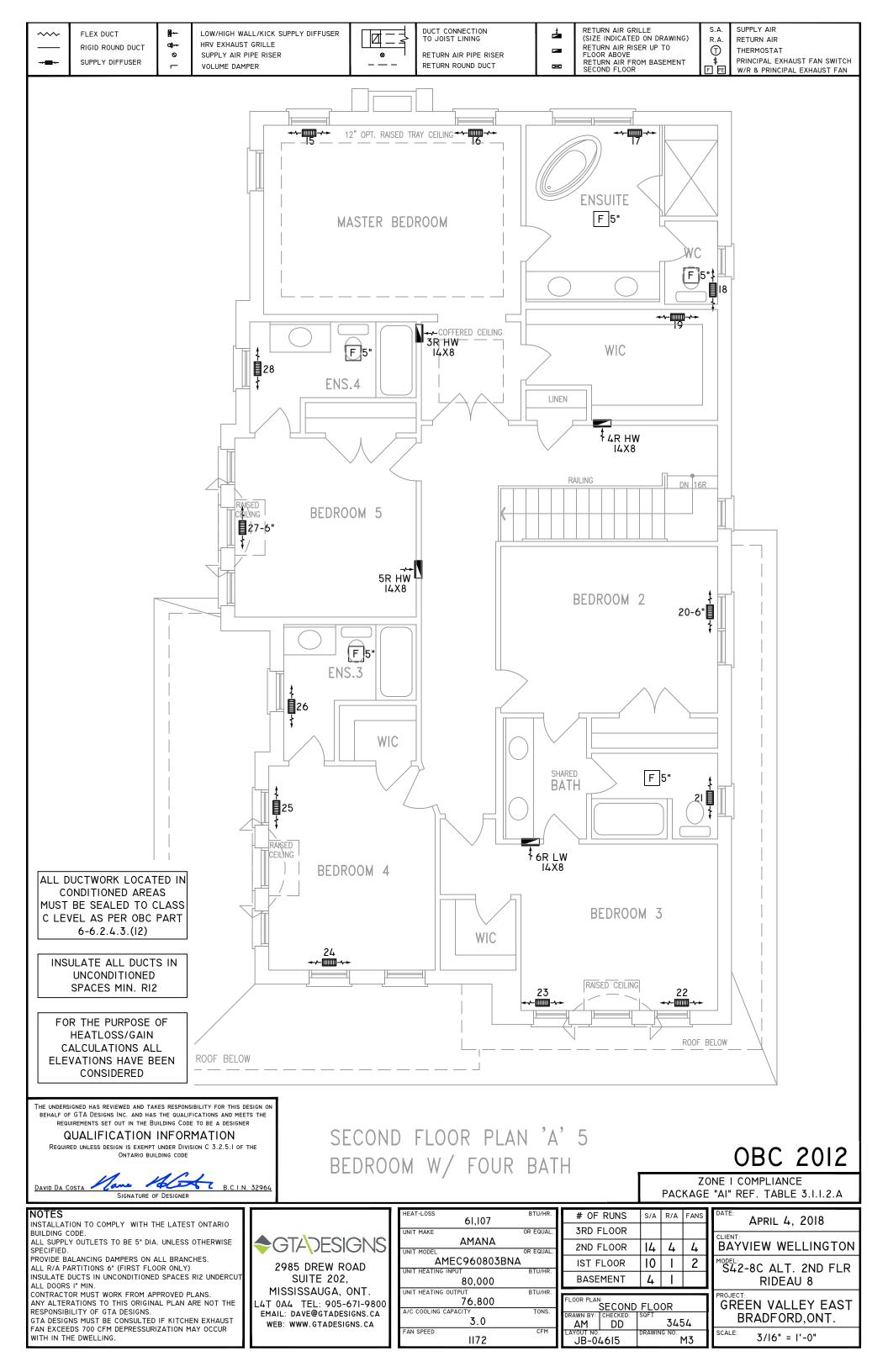
Residential Foundation Thermal Load Calculator

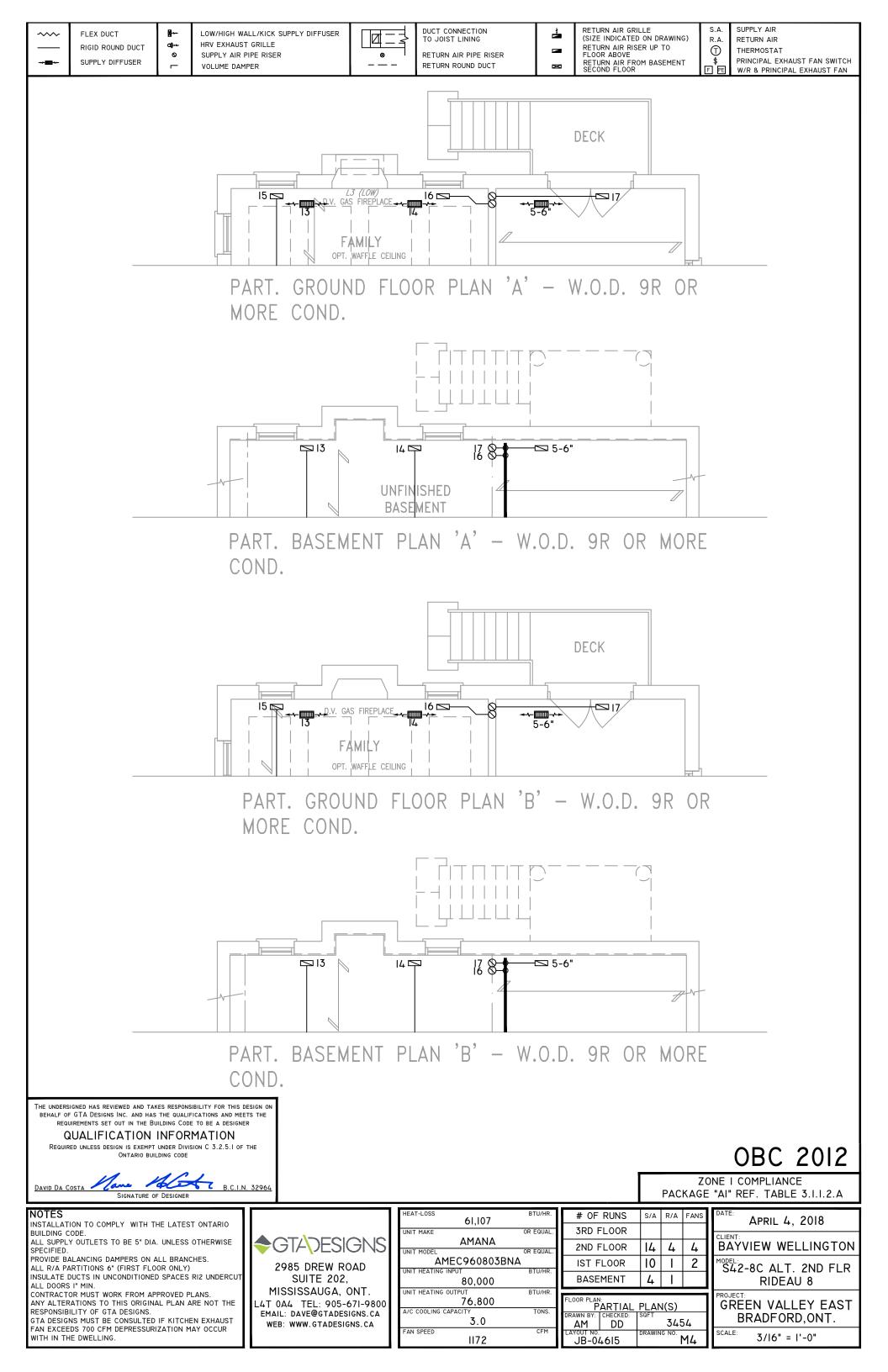
Supplemental tool for CAN/CSA-F280

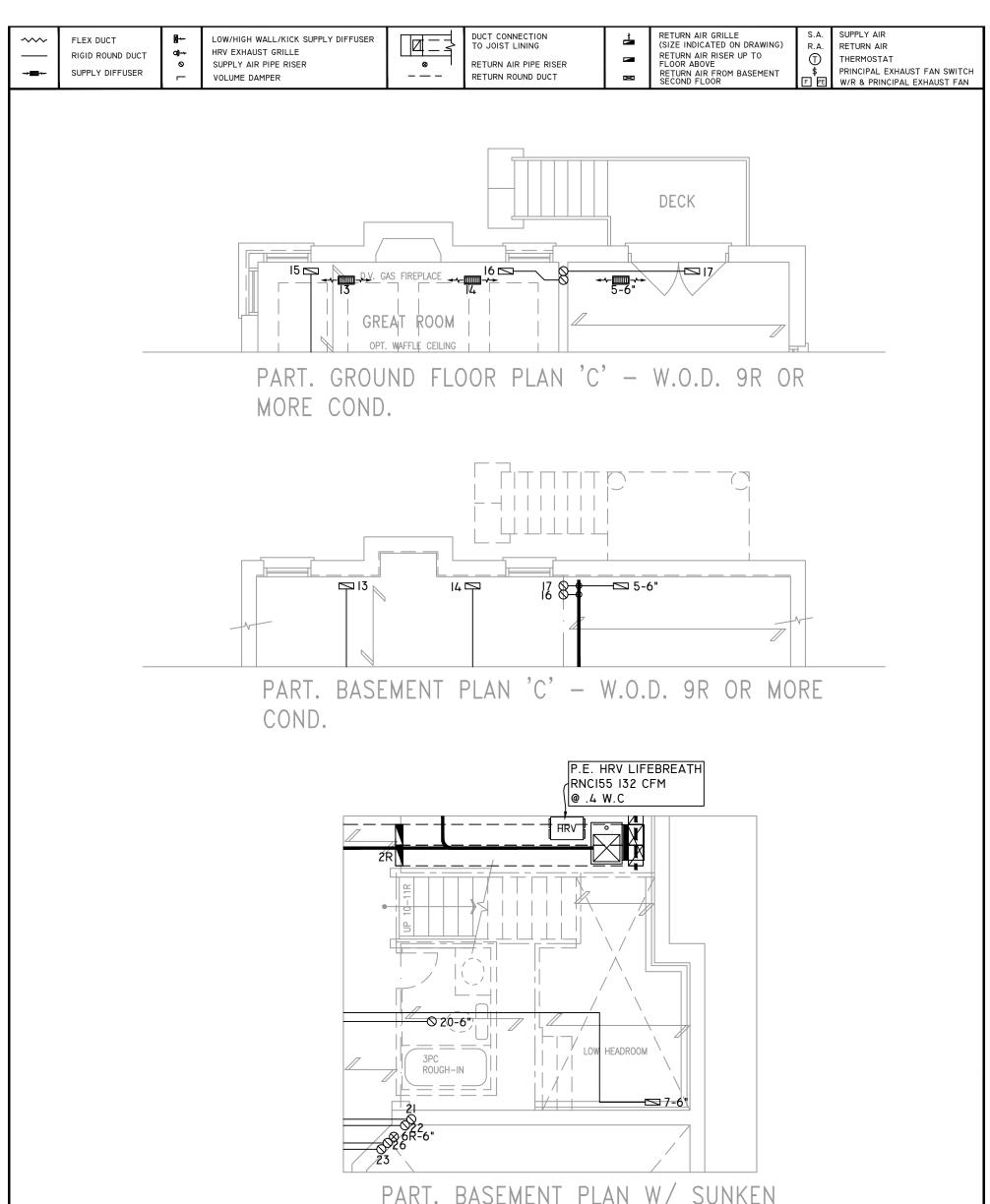
Weat	her Sta	tion Description
Province:		Ontario
Region:		Bradford ▼
	Site D	escription
Soil Conductivity:		High conductivity: moist soil ▼
Water Table:		Normal (7-10 m, 23-33 Ft) ▼
Fou	ındatio	n Dimensions
Floor Length (m):	21.92	
Floor Width (m):	5.97	
Exposed Perimeter (m):	55.78	
Wall Height (m):	2.74	
Depth Below Grade (m):	1.62	Insulation Configuration
Window Area (m²):	2.23	
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):		2250











PART. BASEMENT PLAN W/ SUNKEN LAUNDRY (-2R to -3R COND.)

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 B.C.I.N. 32964

SIGNATURE OF DESIGNER

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

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.



2985 DREW ROAD SUITE 202,

MISSISSAUGA, ONT. L4T 0A4 TEL: 905-671-9800 email: dave@gtadesigns.ca web: www.gtadesigns.ca

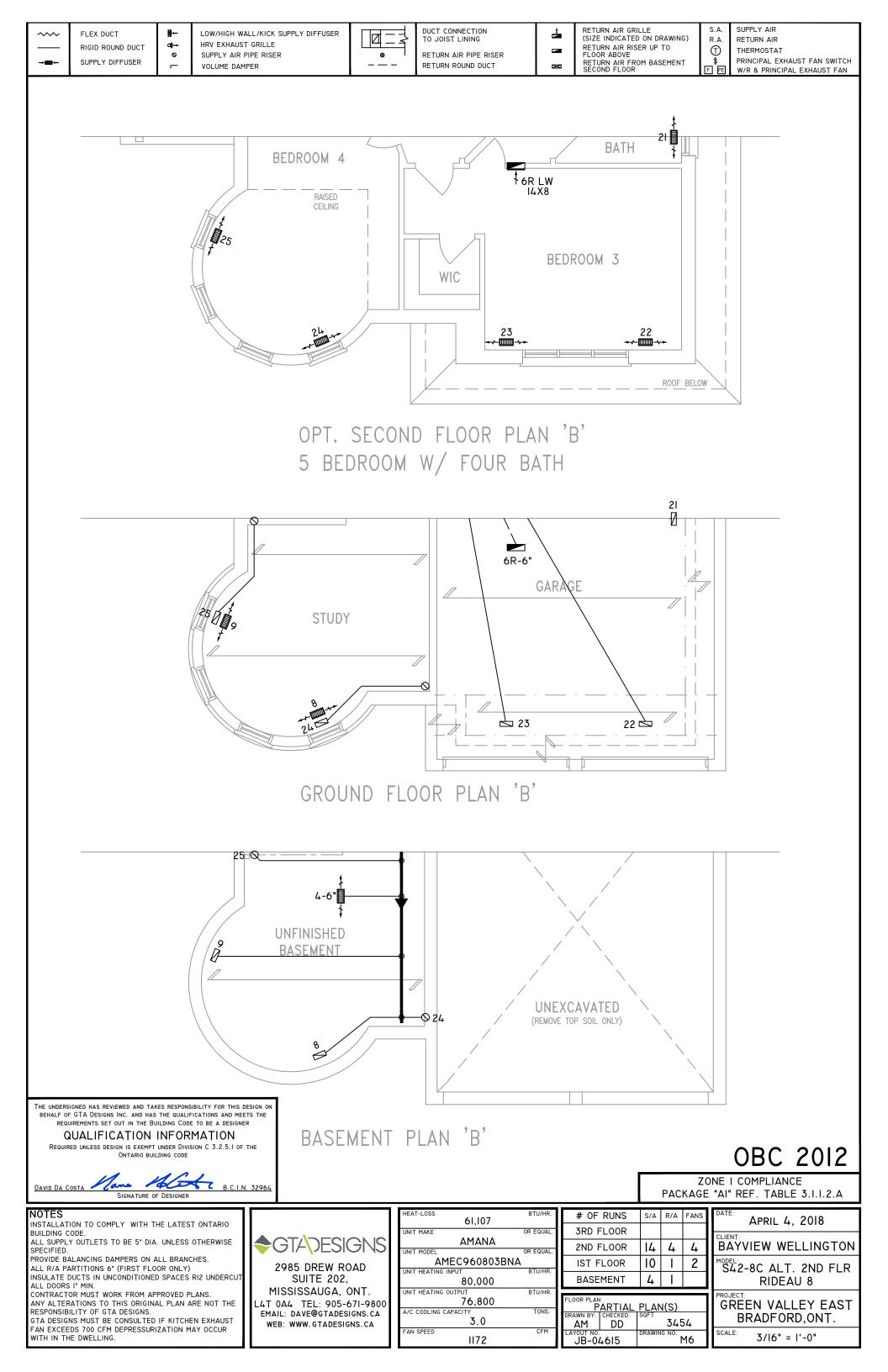
BTU/HR.	# OF	RUNS
OR EQUAL.	3RD F	FLOOF
OR FOLIAL	2ND F	LOOF
Α	IST F	LOOR
BTU/HR.	BASE	MENT
BTU/HR.	EL COD DI AL	
TONS	P	ARTI
·	DRAWN BY:	CHECKE
CFM		
	OR EQUAL. OR EQUAL. A BTU/HR.	OR EQUAL. OR EQUAL. A BTU/HR. BTU/HR. BTU/HR. TONS. FLOOR PLAN FLOOR PLAN AM

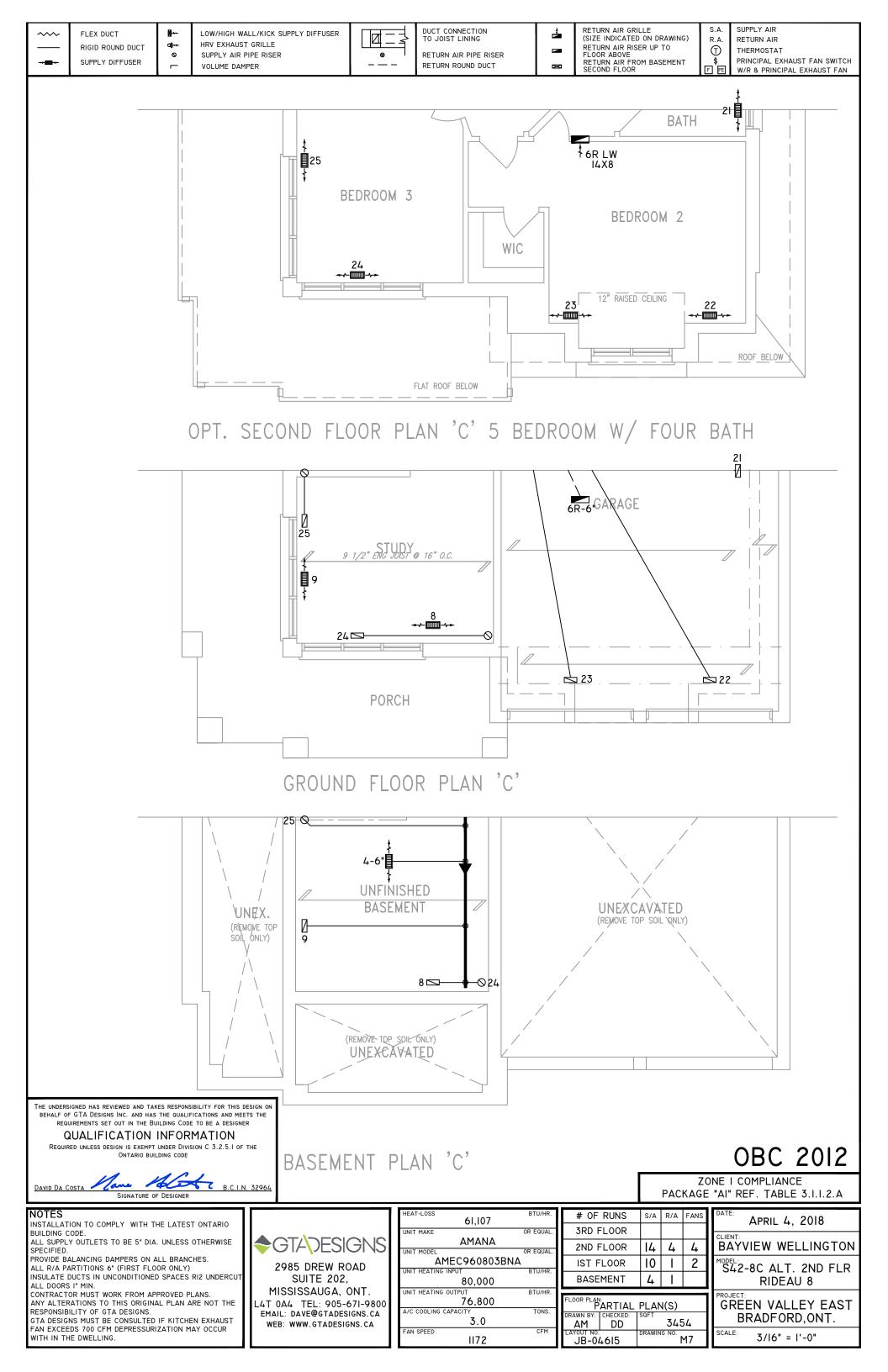
-										
L	# OF	RUNS	S/A	R/A	FANS					
ı	3RD F	FLOOR								
	2ND F	FLOOR	14	4	4					
	IST F	LOOR	10		2					
	BASE	MENT	4	4 1						
ı	FLOOR PLAN P DRAWN BY: AM	ARTIAL	PLAN SQFT	√(S) 345	54					
	JB-04		DRAWIN		4 5					

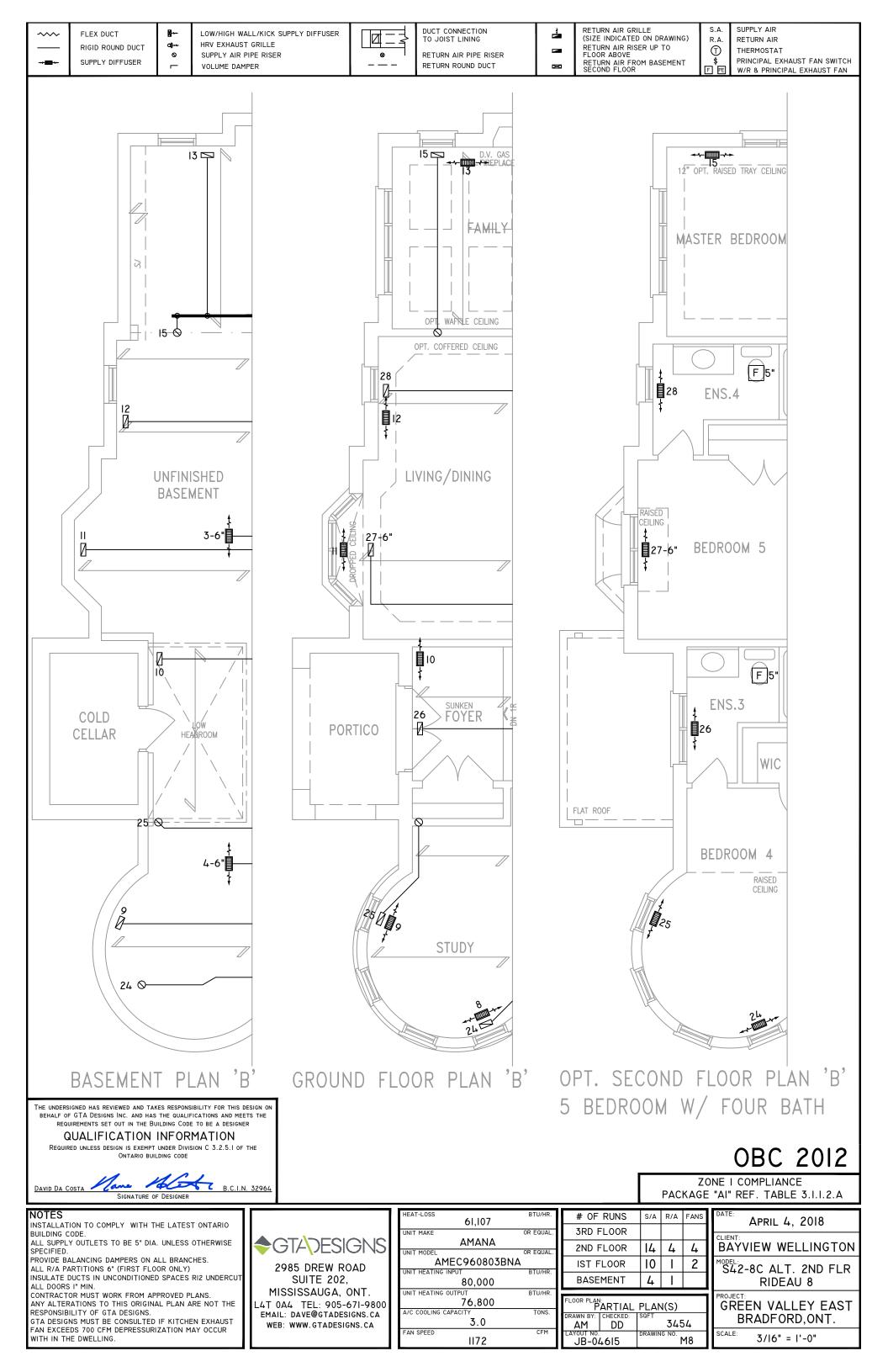
APRIL 4, ZUIS
ELIENT: BAYVIEW WELLINGTON
S42-8C ALT. 2ND FLR RIDEAU 8

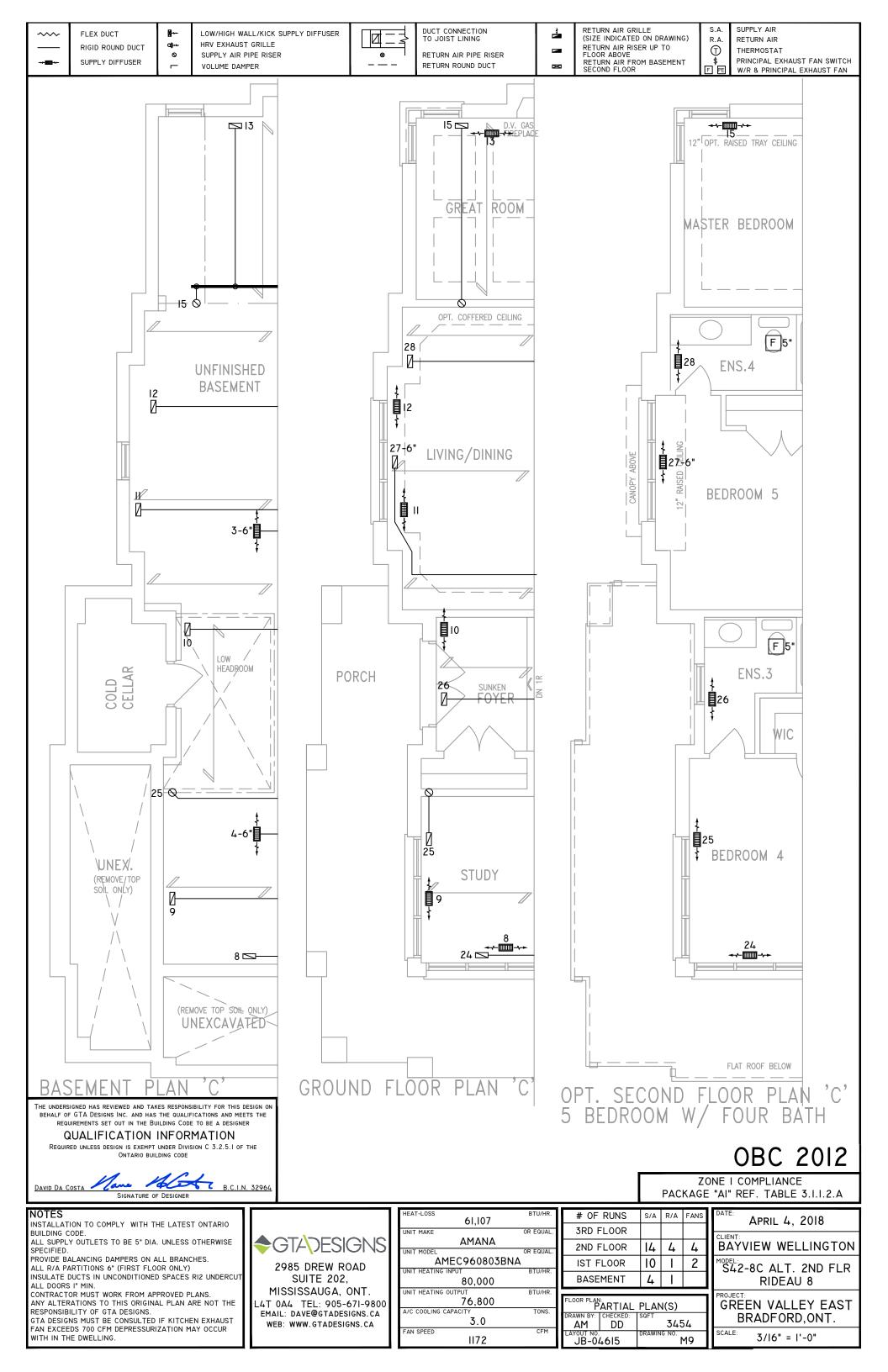
GREEN VALLEY EAST BRADFORD,ONT.

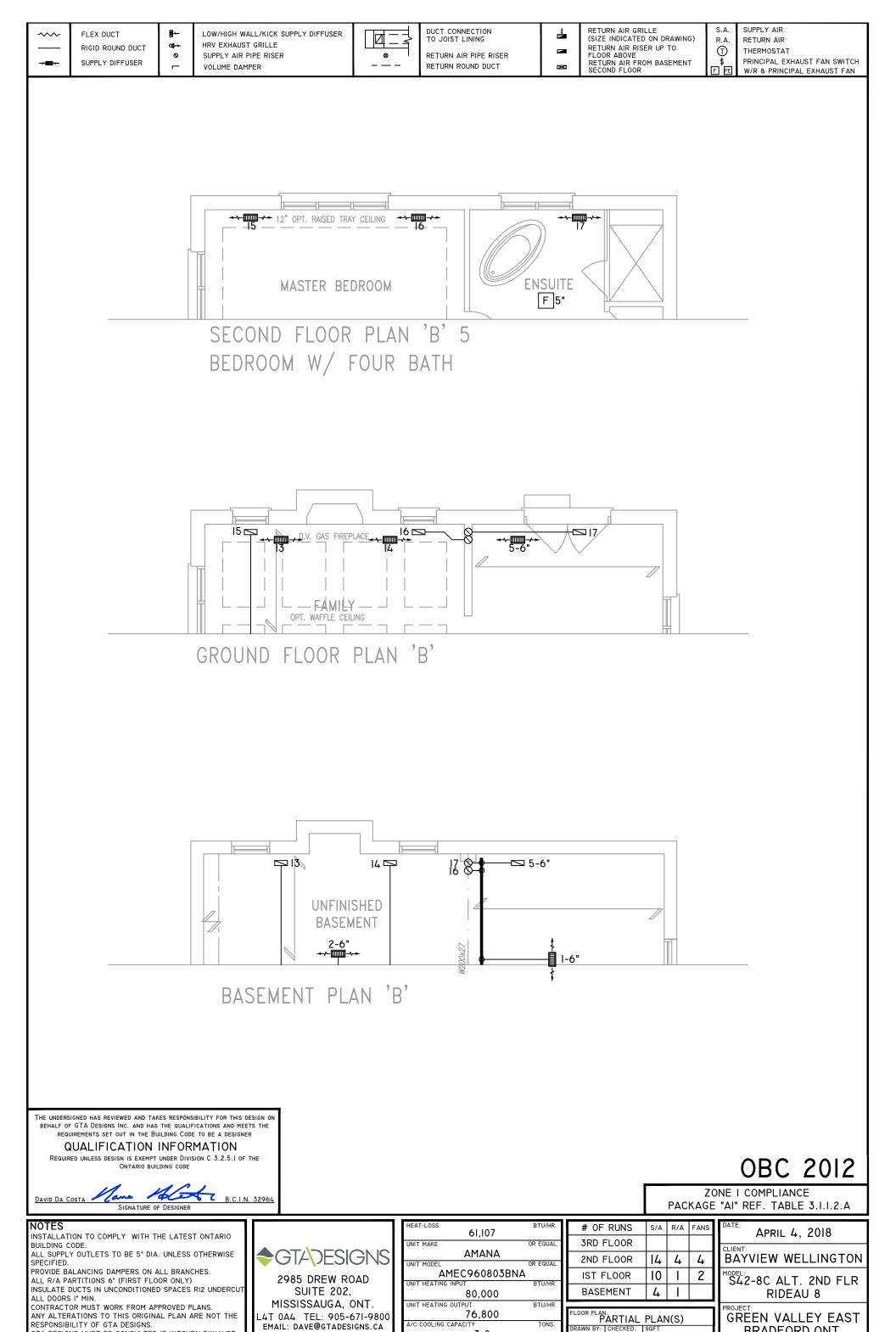
SCALE: 3/16" = 1'-0"











3.0

1172

WEB: WWW.GTADESIGNS.CA

RESPONSIBILITY OF GTA DESIGNS.

WITH IN THE DWELLING.

GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR

GREEN VALLEY EAST

BRADFORD, ONT.

3/16" = 1'-0"

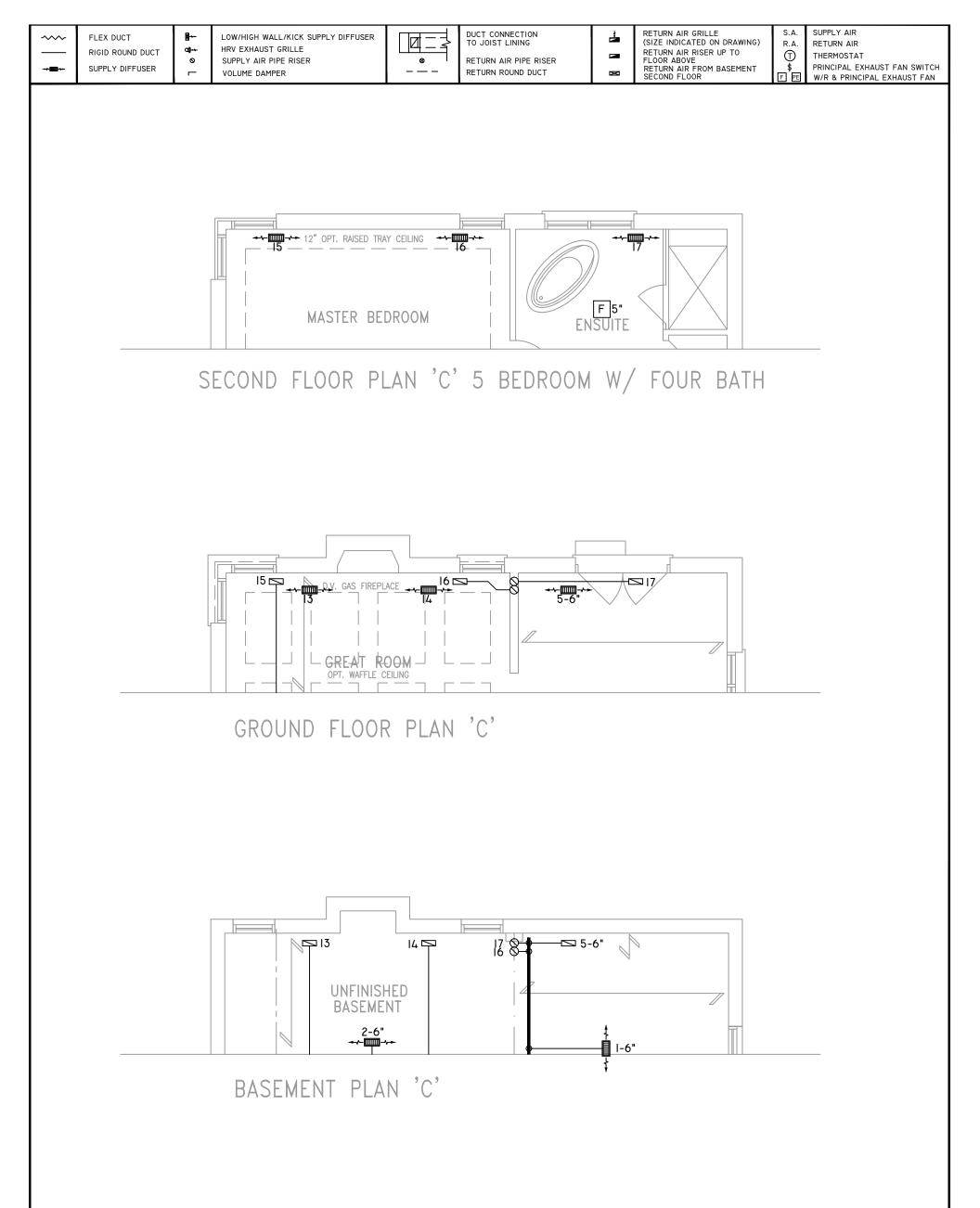
3454

MI0

DD

AΜ

JB-04615



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

Many Many

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

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.

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.
61,107	
,	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960803BNA	
UNIT HEATING INPUT	BTU/HR.
80,000	
UNIT HEATING OUTPUT	BTU/HR.
76,800	
A/C COOLING CAPACITY	TONS.
3.0	
FAN SPEED	CFM
1172	

# OF	RUNS	S/A	R/A	FANS	
3RD F	FLOOR				
2ND F	FLOOR	14	4	4	
IST F	LOOR	10	ı	2	
BASE	MENT	4	1		
FLOOR PLAN: PARTIAL PLAN(S)					
DRAWN BY:	CHECKED: DD	3454			

MII

YOUT NO. JB-04615

DATE:	APRIL 4, 2018
BAY	VIEW WELLINGTON
S42	2-8C ALT. 2ND FLR RIDEAU 8
ROJEC	[:

GREEN VALLEY EAST BRADFORD,ONT.