

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

Α.	Project Information					
Build	ng number, street name				Lot:	
		65-3 - W			Lot/con.	
	cipality	Brampton	Postal code	Plan number/ other description		
		d takes responsibility for desig	gn activities	I		
Nam		David DaCosta		Firm	gtaDesigns Inc.	
	t address	2985 Drew Roa	d, Suite 202		Unit no.	Lot/con.
Muni	cipality	Mississauga	Postal code L4T 0A4	Province Ontario	E-mail dave@gtades	signs.ca
Telep	hone number	<u> </u>	Fax number		Cell number	
C.	(905) 67	71-9800 en by individual identified in S		') 494-9643	(416) 268-6	6820
С.	Design activities undertak	en by marvidual identified in 5	ection b. [bu	illuling Code Table	5.5.2.1 OF DIVISION C	
	☐ House		louse		Building Structural	
	☐ Small Buildings	☐ Building Se	ervices		☐ Plumbing – House	
	☐ Large Buildings		Lighting and Po	wer	☐ Plumbing – All Building	
	☐ Complex Buildings	☐ Fire Protect			On-site Sewage System	
Des	cription of designer's work	(Mod	del Certification	1	Project #	
Hoat	ng and Cooling Load Calcula	ations		Builder	Layout #	
	ystem Design			Project	Riverwalk Phase	
Resi	dential mechanical ventilation	n Design Summary		Model		
	dential System Design per CA				65-3 - W.O.B.	
	dential New Construction - Fo Declaration of Designer	orced Air		SB-12	Package J	
		David DaCosta	declare that (c	choose one as appro	inriate):	
	·		deciare triat (c	moose one as appre	priate).	
		(print name)				
		I review and take responsibility for to 3.2.4 Division C of the Building Cocclasses/categories.				
		Individual BCIN:			•	
		Firm BCIN:			_	
	X	I review and take responsibility for "other designer" under subsection	•		. 0,	
		Individual BCIN:	3296	64		
		Basis for exemp	tion from registr	ation:	Division C 3.2.4.1. (4)	
		The design work is exempt from the	e registration and	d qualification requiren	nents of the Building Code.	
		Basis for exemp	tion from registr	ation and qualification:		
I cert	fy that:					
1.	The information contained in	this schedule is true to the best of n	ny knowledge.			
2.	I have submitted this applica	ation with the knowledge and consent	of the firm.	_		
	Janua	ary 22, 2016		Mane 14	Contract of the second	
		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.

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.



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Page 2

Heat loss and gain calcul	ation summary sheet CSA-F280-M12 Standard Form No. 1
These documents issued for the use of	ighcastle Homes Layout No.
and may not be used by any other persons without authorization. Docum	
Building	Location
Address (Model): 65-3 - W.O.B.	Site: Riverwalk Phase 2
Model:	Lot:
City and Province: Brampton	Postal code:
Calculation	ns based on
Dimensional information based on:	n/a
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: Brampton	Wind exposure: Shelterd
HRV? VanEE 40H+	Internal shading: Light-translucent Occupants: 5
Sensible Eff. at -25C 55% Apparent Effect. at -0C 72%	Units: Imperial Area Sq. ft 4013
Heating design conditions	Cooling design conditions
Outdoor temp -2.2 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 Selected OBC SB12 Package J R 22	Style A: As per Selected OBC SB12 Package J R 12
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 J	Style A: As per Selected OBC SB12 Package J R 50
Style B:	Style B: As per Selected OBC SB12 Package J R 31
Exposed floors	Style C:
Style A: As per Selected OBC SB12 Package J R 31	Doors
Style B:	Style A: As per Selected OBC SB12 Package J R 3.01
Windows	Style B:
Style A: As per Selected OBC SB12 Package J R 3.15	Style C:
Style B: Existing Windows (When Applicable) R 1.99	Skylights
Style C:	Style A: As per Selected OBC SB12 Package J R 2.03
Style D:	Style B:
Attached documents: As per Shedule 1	
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 dave@gtadesigns.ca



Highcastle Homes

2015

Z

Z

Z

Builder:

Trunk

Air System Design

SB-12 Package J January 22, 2016

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.

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PJ-00067

Page 3

of the Building Code. Project # System 1 Man Alex Riverwalk Phase 2 65-3 - W.O.B. Individual BCIN: 32964 David DaCosta Lavout # JB-01488 Project: Model: DESIGN LOAD SPECIFICATIONS AIR DISTRIBUTION & PRESSURE FURNACE/AIR HANDLER DATA: BOILER/WATER HEATER DATA: A/C UNIT DATA: Level 1 Net Load 28,244 btu/h **Equipment External Static Pressure** 0.5 "w.c. 3.5 Ton Make Amana Make Туре Amana Level 2 Net Load 26,567 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model GMEC961004CN Model Cond.--3.5 Level 3 Net Load 19.770 btu/h Available Design Pressure 0.275 "w.c. Input Btu/h 100000 Input Btu/h Coil -3.5 96000 Level 4 Net Load 0 btu/h Return Branch Longest Effective Length 300 ft Output Btu/h Output Btu/h " W C ΔWH 74 581 htu/h 0 138 "w c 0.50 Min.Output Btu/h Total Heat Loss R/A Plenum Pressure E.s.p. Blower DATA: **Total Heat Gain** 38,685 btu/h S/A Plenum Pressure 0.14 "w.c. Water Temp deg. F. W2 Total Heat Loss + 10% 82 039 Btub **Heating Air Flow Proportioning Factor** AFUE 96% Blower Speed Selected: Blower Type **ECM** 51540 ft³ 0.0331 cfm/btuh (Brushless DC OBC 12.3.1.5.(2)) **Building Volume Vb** Cooling Air Flow Proportioning Factor Aux. Heat Ventilation Load 2.574 Btuh. R/A Temp SB-12 Package Package J Heating Check 1653 cfm 1280 cfm 70 dea. F. Cooling Check Ventilation PVC 75 cfm S/A Temp 124 deg. F. Supply Branch and Grill Sizing Diffuser loss 0.01 "w.c. Temp. Rise>>> 1653 cfm Cooling Air Flow Rate 1280 cfm 54 deg. F. Selected cfm> Level 1 Outlets Level 2 Outlets S/A Outlet No. 21 22 23 24 25 26 27 11 12 13 14 15 16 17 18 19 20 BASE BASE BASE BASE LAUND DFN Room Use BASE BASE BASE FAM FAN KIT KIT DIN ΙIV I IV FOY Btu/Outlet 4035 4035 4035 4035 4035 4035 4035 3582 2987 1696 1696 2280 2280 2296 2942 2942 3867 **Heating Airflow Rate CFM** 89 89 89 89 89 89 89 79 66 38 38 51 51 65 65 86 25 25 25 25 25 25 25 94 87 50 50 72 86 86 61 Cooling Airflow Rate CFM 0.13 0.13 **Duct Design Pressure** 0.13 **Actual Duct Length** 50 54 35 20 34 26 31 54 59 58 68 37 31 27 37 44 **Equivalent Length** 110 100 140 120 90 120 120 90 90 140 180 120 130 100 110 140 100 90 110 90 90 Total Effective Length 160 154 175 140 124 146 151 90 90 90 90 90 90 194 239 178 198 137 141 148 127 127 154 90 90 90 90 90 Adjusted Pressure 0.08 0.08 0.07 0.09 0.10 0.09 0.09 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.07 0.05 0.07 0.07 0.09 0.09 0.09 0.10 0.10 0.08 0.14 0.14 0.14 0.14 **Duct Size Round** 6 **Outlet Size** 4x10 4x10 4x10 4x10 4x10 4x10 4x10 4x10 3x10 3x10 4x10 Trunk В F D В D С Level 3 Outlets **Level 4 Outlets** S/A Outlet No. 1 3 5 6 9 10 Room Use MAST MAST FNS FNS 2 RFD 2 BFD 3 BFD 3 WIC: S FNS RFD 4 Btu/Outlet 1795 1795 2323 764 2425 2647 2647 1597 1380 2399 Heating Airflow Rate CFM 40 40 51 17 59 59 35 31 53 54 41 41 39 42 45 45 15 12 Cooling Airflow Rate CFM 13 51 **Duct Design Pressure** 0.13 **Actual Duct Length** 81 97 67 20 31 57 61 63 69 69 Equivalent Length 200 180 120 160 120 130 140 150 150 170 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 281 187 Total Effective Length 277 180 151 187 201 213 219 239 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 Adjusted Pressure 0.05 0.05 0.07 0.07 0.09 0.07 0.06 0.06 0.06 0.05 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 **Duct Size Round** 5 5 5 **Outlet Size** 3x10 3x10 3x10 4x10 3x10 3x10 3x10 3x10 4x10 3x10 Trunk С D D D D В С С 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 100 140 100 120 433 230 230 150 150 **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 Drop 1653 0.05 19.5 24x14 1000 0.05 16.0 30x8 22x10 51 10 1070 0.05 R 652 0.05 48 16 38 26 18 14 z 16.5 14 0 22 y 8 **Actual Duct Length** 32v8 24 y 10 **Equivalent Length** 210 145 205 215 145 145 190 175 175 70 70 Υ 683 0.05 14.0 22x8 18x10 c 274 0.05 10.0 12x8 10x10 258 256 253 151 189 185 70 D 653 0.06 **Total Effective Length** 161 171 208 13.5 20x8 16x10 0.17 w Adjusted Pressure 0.05 0.07 0.05 0.05 0.07 0.08 0.06 0.06 0.06 0.17 Е 306 0.08 9.5 10x8 Duct Size Round 6.0 7.5 6.0 7.5 11.0 8.5 9.0 6.0 6.0 F Inlet Size FLC G FLC н Inlet Size 14 14 14 30 14 14 1

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Total Heat Loss

Total Heat Gain

74,581 btu/h

38,685 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

	Builder:	Highcast	nomes			Date:		Janic	ıary 22, 2	016				_	Weathe	er Data	Bram	pton	44	-2.2 8	6 20	48.2				
012 OBC	Project:	Riverwal	Phase 2		М	odel:		65-	-3 - W.O.I	3.			System	1	Heat I	oss ^T 74.	2 deg. F	Ht ga	ain ^T	11 d	eg. F	GTA:	: 4013		Project a	
Level	1			BASE																						
Run ft. exposed wall	A		205 /	Α		Α			Α		Α		Α		Α		Α		Α		Α		,	Α		Α
Run ft. exposed wall				В		В			В		В		В		В		В		В		В			В		В
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Floor are			1845 /			Are			Area		Area		Area		Area		Area		Area		Area			Area		Area
Exposed Ceilings			1045 /			A	·u		A		A		A		A		A		A		A			A		A
				н В		В			В		В		В		В		В		В		В			B B		В
Exposed Ceilings																										
Exposed Floor				Flr		Flr			Fir		Flr		Flr		Fir		Fir		Flr		Flr		,	Flr		Fir
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Gross Exp Wall																										
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East/We		23.56 27		2497	2941																					
Sout		23.56 21		283	255																					
Existing Window	s 1.99	37.29 22																								
Skyligi	ht 2.03	36.55 88	23																							
Door	's 3.01	24.65 3	5 40	986	146																					
Net exposed walls	A 8.50	8.73	249		322																					
Net exposed walls		8.73 1.	29																							
Exposed Ceilings	A 50.00	1.48 0	6																							
Exposed Ceilings		3.25 1																								
Exposed Floor	s 22.05	3.37 0																								
Indation Conductive Heatloss	Slab On O			13063																						
Hoat Los		Jiuue (A)	-	16899																						
Conductive Heat Ga				10033	3699																					
		0.0004 0.04		40700																						
Leakage Heat Loss/Ga		0.6381 0.04		10783	175																					
Case		0.05 0																								
ntilation Case		22.44 11																								
Case		0.03 0		562	169																					
Heat Gain Peop			19																							
Appliances Load	ls 1 =.25 p	ercent 70	9																							
	ls 1 =.25 p		9																							
Appliances Load Duct and Pipe los el 1 HL Total 28,244 el 1 HG Total 5,256	ss 1 = .25 p	ercent 70	% m .3	28244	5256																					
Appliances Loac	1 = .25 pc ss Tota	ercent 70	32 A	LAUND A		29 A	DEN	31	FAM A	3	KIT		DIN 21 A	3	LIV 33 A	2	FOY		A		Α			A		A
Appliances Load	1 = .25 pc ss Tota	ercent 70	% m .3	LAUND A			DEN			3				3		2			A B		A B			A B		A B
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Appliances Loac Duct and Pipe Ios I 1 HL Total 28,244 I 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Ceiling heigi	1 = .25 ps s Tota Tota 2 A B B ht	ercent 70	32 A	LAUND A B		29 A B 11.0		11.0	A B	11	8 A B .0		21 A B 1.0	14	33 A B 4.0	15.	D A B		В				E	В		В
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Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed mali Ceiling heli Floor are Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall	Z A A B B S A A B B	70 dal HL for per room x	32 / 11.0 160 / 352	LAUNE A B Area A B Fir)	29 A B 11.0 204 Are A B Fir 319	a	11.0 365 341	A B Area A B Fir	11 40 41	8 A B 0 Area A B Fir		21 A B 1.0 328 Area A B FIr	14 24 24	33 A B 4.0 40 Area 40 A B Fir 62	15. 10 10 30	D A B D B Area B A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Load Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall Component	1 = 25 ps s s s s s s s s s s s s s s s s s s	ercent 70 11 tal HL for per 1 HG per room x	32 / Mm. 3.3 32 / Mm. 3.5 2 Mm. 3.	LAUNE A B Area A B Fir		29 A B 11.0 204 Are A B Fir	a	11.0 365 341	A B Area A B Fir	11 40	8 A B 0 Area A B Fir		21 A B 1.0 328 Area A B FIr	14 24 24	33 A B 4.0 40 Area 40 A B Fir 62	15. 10 10	D A B D B Area B A B Fir	Gain	B Area A B Flr	Gain	B Area A B	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Load Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall Component North Shade	1 = .25 s s s s s s s s s s s s s s s s s s s	Loss Gain 23.56 11	32 / 8 11.0 160 / 8 52 L	LAUNE A B Area A B Fir)	29 A B 11.0 204 Are A B Fir 319	as Gain	11.0 365 341	A B Area A B Fir	11 40 41 Gain	8 A B 0 Area A B Fir 8	Gain	21 A B 1.0 328 Area A B FIr	14 24 24 46 ain	33 A B 4.0 40 Area 40 A B Fir 62	15. 10 10 30 Gain	D A B D B Area B A B Fir D		B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Ceiling heig Floor are Exposed Ceilings Exposed Ceilings Exposed Ceilings Component North Shade EastWei	1 = .25 ps s s T T Tota 2 A B B B B B B B B B B B B B B B B B B	Loss Gain 23.56 21.	32 / E 11.0 160 / / 352	LAUNE A B Area A B Fir)	29 A B 11.0 204 Are A B Fir 319	a	11.0 365 341	A B Area A B Fir	11 40 41 Gain	8 A B 0 Area A B Fir	Gain	21 A B 1.0 328 Area A B Fir Loss G	14 24 24 46 ain	33 A B 4.0 40 Area 40 A B Fir 62	15. 10 10 30	D A B D B Area B A B Fir D	Gain 943	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Load Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Component North Shade EastWee	2 A B B B S A A B B R-Values dd 3.15 th 3.15 th 3.15 th 3.15	Loss Gain 23.56 11 23.56 21 23.56 21	32 / E 11.0 160 / / 5 5 18	LAUNE A B Area A B Fir)	29 A B 11.0 204 Are A B Fir 319	as Gain	11.0 365 341	A B Area A B Fir	11 40 41 Gain	8 A B 0 Area A B Fir 8	Gain	21 A B 1.0 328 Area A B FIr	14 24 24 46 ain	33 A B 4.0 40 Area 40 A B Fir 62	15. 10 10 30 Gain	D A B D B Area B A B Fir D		B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
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Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Floor are Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Component North Shade EastWe Soul	2 A A B B B B B B B B B B B B B B B B B	Loss Gain 23.56 21 23.56 21 37.29 22 36.55 88	32 / 11.0 160 / 155 88 155 133	LAUNE A B Area A B B Fir	Gain	29 A B 11.0 204 Are A B Fir 319	as Gain	11.0 365 341	A B Area A B Fir	11 40 41 Gain	8 A B 0 Area A B Fir 8	Gain	21 A B 1.0 328 Area A B Fir Loss G	14 24 24 46 ain	33 A B 4.0 40 Area 40 A B Fir 62	15. 10 10 30 Gain	D A B D D B Area B A B B Fir D Loss	943	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Load Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Component North Shade EastWee Soul Existing Window Skyligi Door	2 A B B B S R-Values dd 3.15; th 3.15; th 3.15; s 1.99; th 2.03; s 3.01;	Loss Gain 23.56 21 37.29 22 36.55 88	32 / Mm	LAUND A B Area A B Fir Loss	Gain	29 A B 11.0 204 Are A B Fir 319 Los	ss <u>Gain</u>	11.0 365 341 32 40	A B Area A B B Fir Loss 942	111 4(41 3ain	88 A B B 00 NO Area A B Fir 8 Loss 155 1531	Gain 1804	21 A B 1.0 328 Area A B Fir Loss G 27 636	14 24 24 46 ain	33 A B 4.0 440 Area 440 A B Fir 62 Loss	15. 10 10 30 Gain 2386 3	D A B B D D B Area B A B Fir D Loss 4 801	943	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Ceilings Component North Shade East/Wei Soul Existing Window Skyligi Doon Net exposed walls	1 = .25 s s s T. Tota 2 A B B B R-Values d 3.15 st 3.15 st 3.15 st 1.99 nt 2.03 s 1.91 ht 2.03 s 3.01 A 14.49	Loss Gain 23.56 11 23.56 27 23.56 27 3.7.29 22 36.55 88 24.65 3 5.12 0	32 / 8 11.0 160 / 8 155 13 15 15 15 15 15 15 15 16 16 310	LAUNE A B Area A B B Fir	Gain	29 A B 11.0 204 Are A B Fir 319 Los	ss <u>Gain</u>	11.0 365 341	A B Area A B Fir	11 40 41 Gain	88 A B B 00 NO Area A B Fir 8 Loss 155 1531	Gain 1804	21 A B 1.0 328 Area A B Fir Loss G	14 24 24 46 ain	33 A B 4.0 40 Area 40 A B Fir 62	15. 10 10 30 Gain	D A B B D D B Area B A B Fir D Loss 4 801	943	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Floor are Exposed Ceilings Exposed Floor Gross Exp Wall Componen North Shade EastWe Sou Existing Window Skyligi Door Net exposed walls	2 A A B B B B 5.50	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 21 37.29 22 36.55 88 24.65 3 5.12 0 8.73 1	32 / 6 11.0 / 6 352 L 11.1 5 5 88 5 5 3 3 42 6 6 9 9	LAUND A B Area A B Fir Loss	Gain	29 A B 11.0 204 Are A B Fir 319 Los	ss <u>Gain</u>	11.0 365 341 32 40	A B Area A B B Fir Loss 942	111 4(41 3ain	88 A B B 00 NO Area A B Fir 8 Loss 155 1531	Gain 1804	21 A B 1.0 328 Area A B Fir Loss G 27 636	144 24 24 46 46 575 575 155 37	33 A B 4.0 40 Area 40 A B Fir 62 Loss 40 A 1925	15.10 10 10 30 Gain 2386 3	D A B B B B B B B B B B B B B B B B B B	943 95 182	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Load Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Component North Shade EastWee Soul Existing Window Skyligi Door Net exposed walls Net exposed walls Exposed deilings	2 A B B S R-Values d 3.15 th 3	Loss Gain 23.56 11 23.56 21 37.29 22 36.55 88 5.12 0 8.73 1 1.48 0	32 / 6 11.0 160 / 7 155 155 42 166 310 196 166	LAUND A B Area A B Fir Loss	Gain	29 A B 11.0 204 Are A B Fir 319 Los	ss <u>Gain</u>	11.0 365 341 32 40	A B Area A B B Fir Loss 942	111 4(41 3ain	88 A B B 00 NO Area A B Fir 8 Loss 155 1531	Gain 1804	21 A B 1.0 328 Area A B Fir Loss G 27 636	144 24 24 46 46 575 575 155 37	33 A B 4.0 440 Area 440 A B Fir 62 Loss	15. 10 10 30 Gain 2386 3	D A B B B B B B B B B B B B B B B B B B	943	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Gelling helig Floor are Exposed Cellings Exposed Cellings Exposed Floor Gross Exp Wall Componen North Shade EastWer Soul Existing Window Skylig Door Net exposed walls Net exposed walls Resposed Cellings	2 A B B R-Values is R. 1 = .25 pt	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 27 37.29 22 36.55 88 24.65 3 5.12 3 5.12 3 5.14 3 5.15 3	32 / 6 11.0 160 / / / 352 L 111 155 88 155 42 69 166 166	LAUND A B Area A B Fir Loss	Gain	29 A B 11.0 204 Are A B Fir 319 Los	ss <u>Gain</u>	11.0 365 341 32 40	A B Area A B B Fir Loss 942	111 4(41 3ain	88 A B B 00 NO Area A B Fir 8 Loss 155 1531	Gain 1804	21 A B 1.0 328 Area A B Fir Loss G 27 636	144 24 24 46 46 575 575 155 37	33 A B 4.0 40 Area 40 A B Fir 62 Loss 40 A 1925	15.10 10 10 30 Gain 2386 3	D A B B B B B B B B B B B B B B B B B B	943 95 182	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Floor are Exposed Ceilings	2 A B B S A B B S S A B B S S A B B S S A B B S S A B B S S A B B S S A B B S S A B B B S S A B B B B	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 21 37.29 22 36.55 88 24.65 3 5.12 0 3.25 1 1.48 0 3.25 1	32 / 6 11.0 160 / / / 352 L 111 155 88 155 42 69 166 166	LAUND A B Area A B Fir Loss	Gain	29 A B 11.0 204 Are A B Fir 319 Los	ss <u>Gain</u>	11.0 365 341 32 40	A B Area A B B Fir Loss 942	111 4(41 3ain	88 A B B 00 NO Area A B Fir 8 Loss 155 1531	Gain 1804	21 A B 1.0 328 Area A B Fir Loss G 27 636	144 24 24 46 46 575 575 155 37	33 A B 4.0 40 Area 40 A B Fir 62 Loss 40 A 1925	15.10 10 10 30 Gain 2386 3	D A B B B B B B B B B B B B B B B B B B	943 95 182	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Gross Exp Wall Component North Shade EastWe: Sout Existing Window Skyligi Door Net exposed walls Net exposed walls Net exposed walls Exposed Ceilings	2 A B B B R-Values d 3.15 is 1.92 is 1	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 21 37.29 22 36.55 88 24.65 3 5.12 0 3.25 1 1.48 0 3.25 1	32 / 6 11.0 160 / / / 352 L 111 155 88 155 42 69 166 166	LAUNE A B B AA A B B Fir Loss	Gain	29 A B 11.0 204 Are A B Fir 319 Los 30	ss Gain 707 8:	11.0 365 341 32 40	A B Area A B Fir Loss 942	111 4(41 3ain	88 A B 0 0 100 Area A B Fir 8 Loss 153 1808	Gain 1804	21 A B B 1.0 328 Area A B Fir 231 Loss G 227 636 2204 1045	144 24 24 46 46 575 575 155 37	33 A B B 1.0 40 Area 40 A B Fir 62 Loss 2026 76 1925 40 356	15.10 10 10 30 Gain 2386 3	0 A B 0 0 0 8 Area 8 A B Fir 0 0 Loss 4 801 1229 8 160	943 95 182	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Sain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Gellings Exposed Cellings Exposed Floor Gross Exp Wall Component North Shade EastWes Soul Existing Window Skylig Door Net exposed walls Net exposed Walls Net exposed Walls Exposed Cellings Exposed Gellings Exposed Gellings Exposed Gellings Exposed Gellings Exposed Gellings Exposed Gellings Exposed Floor Net exposed walls Exposed Gellings Exposed Floor Idation Conductive Heatloss Conductive Loss Conductive HeatLoss Conductive HeatLoss Conductive Conduct	2 A B B T- Tota 2 A B B T- Tota B R-Values G G G G G G G G G G G G G G G G G G G	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 21 37.29 22 36.55 88 24.65 3 5.12 0 3.25 1 1.48 0 3.25 1	32 / 6 11.0 160 / / / 352 L 111 155 88 155 42 69 166 166	LAUND A B Area A B Fir Loss	Gain 153 235	29 A B 11.0 204 Are A B Fir 319 Los 30	ss Gain 707 8:	11.0 365 341 32 40	A B Area A B B Fir Loss 942	111 40 41 33ain 1110 6	88 A B B 00 NO Area A B Fir 8 Loss 155 1531	Gain 1804 268	21 A B 1.0 328 Area A B Fir Loss G 27 636	144 24 24 46 ain 575 155 37	33 A B 4.0 40 Area 40 A B Fir 62 Loss 40 A 1925	1510 10 30 Gain 2386 3 2285 24 182 10	D A B B B B B B B B B B B B B B B B B B	943 95 182 82	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Ceiling heiging Floor are Exposed Ceilings Exposed Ceilings Exposed Floor Gross Exp Wall Component North Shade EastWes Skylight Door Net exposed walls Run ft. exposed Walls Gross Exp Wall Component North Shade EastWes Skylight Door Net exposed Walls Net exposed Walls Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Floor dation Conductive HeatLoss Conductive Heat Loss	2 A B B T T T T T T T T T T T T T T T T T	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 27 17.29 22 36.55 88 24.65 3 5.12 0 3.25 1 1.48 0 3.25 1 3.37 0 3rade (x) x	32 / 6 11.0 / / 155 / 352 11.1 155 /	LAUNE A B B Area A B B Filr Loss	Gain 153 235	29 A B 11.0 204 Are A B Fir 319 Los 30 289	ss Gain 707 8: 4480 2:	11.0 365 341 32 40 19 301	A B Area A B Fir Loss 942	111 4(41 41) 41 33ain 1110 6	88 A B 0 0 Area A B Fir 8 Loss 153 1808	Gain 1804 268	21 A B 1.0 328 Area A B Fir 231 Loss G 224 1045	144 24 24 46 ain	33 A B B 1.0 40 Area 40 A B Fir 62 Loss 2026 76 1925 40 356 4307	1510 10 10 30 Gain 2386 3 2285 24 182 10	0 A B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	943 95 182 82	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Ceiling heigi Floor are Exposed Ceilings Exposed Ceilings Exposed Ceilings Exposed Geilings Exposed Floor Gross Exp Wall Component North Shade EastWe Soul Existing Window Skyligi Doon Net exposed walls Net exposed walls Net exposed walls Exposed Ceilings Exposed Floor Heat Los Conductive Heat Los Heat Los	1 = .25 1 = .25 1 2 2 2 3 3 3 1 3 3 3 1 3 3	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 22 36.55 88 24.65 88 24.65 11 3.37 0 3.25 1 3.37 0 3.326 0.044	32 / 6 11.0 160 / 7 155 13 142 166 161 13 10 161 161 161 161 161 161 161 161 161	LAUNE A B B AA A B B Fir Loss	Gain 153 235	29 A B 11.0 204 Are A B Fir 319 Los 30 289	ss Gain 707 8: 4480 2:	11.0 365 341 32 40	A B Area A B Fir Loss 942	111 40 41 33ain 1110 6	88 A B 0 0 100 Area A B Fir 8 Loss 153 1808	Gain 1804 268	21 A B B 1.0 328 Area A B Fir 231 Loss G 227 636 2204 1045	144 24 24 46 ain 575 155 37	33 A B B 1.0 40 Area 40 A B Fir 62 Loss 2026 76 1925 40 356	1510 10 30 Gain 2386 3 2285 24 182 10	0 A B 0 0 0 8 Area 8 A B Fir 0 0 Loss 4 801 1229 8 160	943 95 182 82	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Floor are Exposed Ceilings Exposed Floor Exposed Ceilings Exposed Floor Exposed Ceilings Exposed Floor Exposed	2 A B B T C C C C C C C C C C C C C C C C C	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 21 37.59 21 36.55 88 24.65 3 24.65 3 3.70 0 6rade (x) x	32 / 6 11.0 160 / 7 352 L 11.1 15.5 8.8 15.5 5.3 3.1 16.6 3.10 16.6 3.13 16.6 16.6 13.3 16.6 16.6 13.3 16.6 16.6	LAUNE A B B Area A B B Filr Loss	Gain 153 235	29 A B 11.0 204 Are A B Fir 319 Los 30 289	ss Gain 707 8: 4480 2:	11.0 365 341 32 40 19 301	A B Area A B Fir Loss 942	111 4(41 41) 41 33ain 1110 6	88 A B 0 0 Area A B Fir 8 Loss 153 1808	Gain 1804 268	21 A B 1.0 328 Area A B Fir 231 Loss G 224 1045	144 24 24 46 ain	33 A B B 1.0 40 Area 40 A B Fir 62 Loss 2026 76 1925 40 356 4307	1510 10 10 30 Gain 2386 3 2285 24 182 10	0 A B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	943 95 182 82	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level	2 A B B S A A B B S A A B B S A A B B S A A B B B S A A B B B B	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 27 11.48 0 3.25 1 1.48 0 3.27 0 3.37 0 3.37 0 3.37 0 3.37 0 3.37 0 3.37 0	32 / 6 11.0 / / 160 / / 155 13 10 166 16 16 16 16 16 16 16 16 16 16 16 16	LAUNDA A B B Area A B B Fir Loss 1035 1587 2623 872	153 235 389 18	29 A B 11.0 204 Are A B Fir 319 Los 30 289	es Gain 707 8: 4480 2 2187 10:	11.0 365 341 32 40 19 301	A B Area A B Fir Loss (1942)	111 40 41 41 41 41 41 41 41 41 41 41 41 41 41	88 A B 0 0 Area A B Fir 8 Loss 153 1808 3339 11111	268 2072 98	21 A B B 1.0 328 Area A B Fir 231 Loss G 224 1045 1681 559	144 24 24 46 48 31 155 37 24 729 35	33 A B 8 4.0 40 Area 40 A B Fir 62 Loss 76 1925 40 356 4307 1433	15. 10 10 10 30 Gain 2386 3 2285 24 182 10 2854 135	00 A B 00 O	943 95 182 82 1303 62	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Sain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level	1 = .25 T Tota	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 27 23.56 31 24.65 3 3.7.29 22 36.55 88 24.65 3 3.7.3 1 1.43 1 0.325 1 3.37 0 0 3.26 0.04 0.03 0 0.03 0	32 / 6 11.0 160 / 7 155 13 10 199 16 16 16 13 10 19 16 16 16 16 16 16 16 16 16 16 16 16 16	LAUNE A B B Area A B B Filr Loss	153 235 389 18	29 A B 11.0 204 Are A B Fir 319 Los 30 289	2187 109	11.0 365 341 32 40 19 301	A B Area A B Fir Loss 942	111 4(41 41) 41 33ain 1110 6	88 A B 0 0 Area A B Fir 8 Loss 153 1808	Gain 1804 268	21 A B 1.0 328 Area A B Fir 231 Loss G 224 1045	144 24 24 46 ain	33 A B B 1.0 40 Area 40 A B Fir 62 Loss 2026 76 1925 40 356 4307	1510 10 10 30 Gain 2386 3 2285 24 182 10	0 A B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	943 95 182 82	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level Run ft. exposed wall Run ft. exposed wall Run ft. exposed wall Floor are Exposed Ceilings Soul Existing Window Skyligh Door Net exposed walls Exposed Ceilings Exposed	1 = .25 1 = .25 1	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 21 33.59 28 34.65 3 4.65 3 5.73 1 1.48 0 3.37 0 6rade (x) x 0.3326 0.04 0.234 11 0.03 0.0	32 / 6 11.0 160 / 7 155 183 155 183 155 183 155 183 155 183 155 183 155 155 183 155 155 183 155 155 155 155 155 155 155 155 155 15	LAUNDA A B B Area A B B Fir Loss 1035 1587 2623 872	Gain 153 235 389 18	29 A B 11.0 204 Area A B Fir 319 200 289 1	38 Gain 707 8: 480 2: 2187 727	11.0 365 341 32 40 19 301	A B B Area A B B Fir Loss 942 942 942 942 8484 826 83	111 46 41 33ain 229 35 1338 63 61	88 A B 0 0 0 Area A B Fir 8 8 Loss 1531 1808 3339 11111 1111	Gain 1804 268 2072 98	21 A B 1.0 328 Area A B Fir 231 Loss G 27 636 204 1045 559	144 24 24 44 44 44 44 44 44 44 44 44 44 4	33 A B 8	1510 10 30 Gain 2386 3 285 24 182 10 2854 135	00 A B 00 O	943 95 182 82 1303 62	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 1 HL Total 28,244 1 HG Total 5,256 Level	1 = .25	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 21 3.7.29 22 36.55 88 24.65 88 24.65 10 3.25 1 3.37 0 3.25 1 3.37 0 3.32 0 3.32 0 4.38 0 4.38 0 4.38 0 5.10 0 6.30 0 6	32 / 6 11.0 160 / 7 155 13 142 155 15 15 15 15 15 15 15 15 15 15 15 15	LAUNDA A B B Area A B B Fir Loss 1035 1587 2623 872	153 235 389 18	29 A B 11.0 204 Are A B Fir 319 Los 30 289	38 Gain 707 8: 480 2: 2187 727	11.0 365 341 32 40 19 301	A B B Area A B B Fir Loss 942 942 942 942 8484 826 83	111 40 41 41 41 41 41 41 41 41 41 41 41 41 41	88 A B 0 0 0 Area A B Fir 8 8 Loss 1531 1808 3339 11111 1111	Gain 1804 268 2072 98	21 A B B 1.0 328 Area A B Fir 231 Loss G 224 1045 1681 559	144 24 24 44 44 44 44 44 44 44 44 44 44 4	33 A B B 4.0 440 Area 440 A B Fir 62 Loss 2026 44307 1433	15. 10 10 10 30 Gain 2386 3 2285 24 182 10 2854 135	00 A B 00 O	943 95 182 82 1303 62	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac	1 = .25	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 24.65 3 3.25 1 1.48 0.03 2 2 3 3.37 0 3 3.26 0.04 0.03 0 0.	32 / 8 11.0 160 / 7 155 181 15	LAUNCE A B B Area A B B Flir 1035 1587 2623 872	Gain 153 235 389 18	29 A B 11.0 204 Are A B Fir 319 289 1 289	38 Gain 707 8: 1480 2 1187 10: 727 : 73 .	11.0 365 341 32 40 19 301	A B B Area A A B B Fir 1541 2484 826 83	111 46 41 33ain 229 35 1338 63 61	88 A B B 0 0 Area A B Fir 8 Loss 1531 1808 3339 11111 1110 0	Gain 1804 268 2072 98	21 A B 1.0 328 Area A B Fir 231 Loss G 27 636 27 636 1681 559 56 0.5	144 24 24 44 44 44 44 44 44 44 44 44 44 4	33 A B 1.0 40 Area 40 A B Fir 62 Loss 2026 76 1925 440 356 4307 1433 143	1510 10 30 Gain 2386 3 285 24 182 10 2854 135	00 A B 00 B Area A A B Fir D Loss 4 801 1229 B 160 2831 942	943 95 182 82 1303 62	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir
Appliances Loac Duct and Pipe los 11 HL Total 28,244 11 HG Total 5,256 Level	1 = .25	Loss Gain 23.56 11 23.56 27 23.56 27 23.56 27 23.56 21 3.7.29 22 36.55 88 24.65 88 24.65 10 3.25 1 3.37 0 3.25 1 3.37 0 3.32 0 3.32 0 4.38 0 4.38 0 4.38 0 5.10 0 6.30 0 6	32 / 8 11.0 160 / 7 155 181 15	LAUNDA A B B Area A B B Fir Loss 1035 1587 2623 872	Gain 153 235 389 18	29 A B 11.0 204 Are A B Fir 319 289 1 289	38 Gain 707 8: 480 2: 2187 727	11.0 365 341 32 40 19 301	A B B Area A B B Fir Loss 942 942 942 942 8484 826 83	111 46 41 33ain 229 35 1338 63 61	88 A B 0 0 0 Area A B Fir 8 8 Loss 1531 1808 3339 11111 1111	Gain 1804 268 2072 98	21 A B 1.0 328 Area A B Fir 231 Loss G 27 636 204 1045 559	144 24 24 44 44 44 44 44 44 44 44 44 44 4	33 A B 8	1510 10 30 Gain 2386 3 285 24 182 10 2854 135	00 A B 00 O	943 95 182 82 1303 62	B Area A B Fir	Gain	B Area A B Fir	Gain	E E F	B Area A B Fir	Gain	B Area A B Fir

 $\label{eq:Division C} \textbf{Division C subsection 3.2.5. of the Building Code. Individual BCIN:}$

Mana Alexa

David DaCosta

Package J



Total Heat Loss

Total Heat Gain

74,581

38,685

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

		Builder:	Lighagatla	Hamas		Doto		lon		116				Month	er Data	Bram	.ton	44	2.2 86	20	40.2			Doc
		Builder:	Highcastle		_	Date: _			uary 22, 20			System	1			Bram					48.2		Projec	Paç t # PJ-000
2012 OBC	1	Project:	Riverwalk	Phase 2		Model: _		65	5-3 - W.O.E	l	_	System	•	Heat	Loss ^T	74.2 deg. F	Ht	gain ^T	11 deg	j. F	GTA:	4013	Layou	t # JB-014
	Level 3 ft. exposed wall A ft. exposed wall B Ceiling height			MA 34 A B 8.0	ST	27 A B 8.0	3	8.0		29 A B 8.0	:D 2	BED 3 29 A B 8.0		WIC 12 A B 8.0		S.ENS 13 A B 8.0		BED 4 27 A B 8.0		A B		А В		A B
E	Floor area exposed Ceilings A exposed Ceilings B Exposed Floors			549 Area 549 A B Fir			A	145	B Flr	224 Area 224 A B Fir	ı	355 Area 355 A B 355 Fir		108 Area 108 A B 108 Fir		110 Area 110 A B 40 Fir	2	216 Area 216 A B Fir		Area A B Fir		Area A B Fir		Area A B Fir
	Gross Exp Wall A Gross Exp Wall B		1= .	272		216	_	. 48		232		232		96		104		216						
	North Shaded	R-Values Lo	23.56 11.3				oss Ga		Loss C	Sain Loss	S Gain		Gain		Gain	6 141	68		Gain	Loss	Gain	Loss	Gain	Loss Gai
	East/West South Existing Windows Skylight	3.15 3.15 1.99 2.03	23.56 27.7 23.56 21.2 37.29 22.1 36.55 88.2	5	12 721	20	471	555	141	128 16 3	340	38 895	1054	4 94	111			20 471	555					
	Doors et exposed walls A et exposed walls B	3.01 14.49 8.50	24.65 3.6 5.12 0.7 8.73 1.2	246 12	60 187	196	1004	149 42	215	32 216 11	106 164	194 993	147	92 471	70	98 502	74 1	196 1004	149					
E	xposed Ceilings A xposed Ceilings B	50.00 22.86	1.48 0.7 3.25 1.6	5 549 8 5	15 417	178	264	135 145	215	110 224 3	332 170			108 160		110 163	84 2	216 321	164					
Foundation Cond	Exposed Floors luctive Heatloss Heat Loss	22.05	3.37 0.2	26	87		1739		572	15	315	355 1195 3610	80	108 363		40 135 941	9	1795						
Total Conductive Air Leakage	Heat Gain Heat Loss/Gain		0.3027 0.047	1 8	1325 13 63			839 40	173	270	675 550 32		1552 74	330	287	285	235 11	543	868 41					
Ventilation	Case 1 Case 2 Case 3	x	0.02 0.0 22.44 11.8 0.03 0.0	3	89 61		58	38	19	12	60 31	120	71	36	13	31	11	60	40					
	Heat Gain People Appliances Loads	1 =.25 pe	23 rcent 702	2	478					1	239	1	239					1	239					
	Duct and Pipe loss			<u> </u>									179	1 142	29	1 123	23							
Level 3 HL Total Level 3 HG Total	19,770 10,453		al HL for per roon	n 35	90 2505		2323	1192	764	383	125 1269	1 470 5293	2749	1597		1 123 1380	364	2399	1544					
evel 3 HL Total evel 3 HG Total Run Run	19,770 10,453 Level 4 ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A xposed Ceilings B		al HL for per roor	A B Area A B		A B A A B	A :	2015	A B Area A B	A B Area A B	1269	A B Area A B		A B Area A B		A B Area A B		A B Area A B	1544	A B Area A B		A B Area A B		A B Area A B
evel 3 HL Total evel 3 HG Total Run Run E E	19,770 10,453 Level 4 ft. exposed wall A ft. exposed wall B Ceilling height Floor area exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components	Total I	al HL for per room X 1.	A B Area A B Fir	2505	A B A A B F	A :	2015	A B Area A B Fir	A B Area	1269	A B Area A B Fir		A B Area A		A B Area A B Fir		A B Area A B Fir	1544 Gain	B Area A	Gain	B Area A	Gain	B Area A
evel 3 HL Total evel 3 HG Total Run Run E	19,770 10,453 Level 4 ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Ceilings A exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors	R-Values L. 3.15 3.15 3.15 1.99 2.03 3.01	oss Gain 23.56 11.3 23.56 27.7 23.56 27.7 23.56 27.7 36.55 88.2 34.65 88.2	A B Area A B Fir	2505	A B A A B F	A : 3 Area A : 3	2015	A B Area A B Fir	A B Area A B Fir	1269	A B Area A B Fir	2749	A B Area A B Fir	446	A B Area A B Fir	364	A B Area A B Fir		B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir
evel 3 HL Total evel 3 HG Total Run Run E E	19,770 10,453 Level 4, ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Ceilings A exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls A exposed Ceilings A	R-Values L 3.15 3.15 3.15 3.15 2.03	oss Gain 23.56 11.3 23.56 27.7 23.56 21.2 36.55 88.2	A B Area A B Fir Loss	2505	A B A A B F	A : 3 Area A : 3	2015	A B Area A B Fir	A B Area A B Fir	1269	A B Area A B Fir	2749	A B Area A B Fir	446	A B Area A B Fir	364	A B Area A B Fir		B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir
evel 3 HL Total evel 3 HG Total Run Run E E E Foundation Cond	19,770 10,453 Level 4 ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings B Exposed Floors Gross Exp Wall B Gomponents North Shaded East/West South Existing Windows Skylight Doors et exposed walls A at exposed walls A exposed Ceilings A Exposed Ceilings B Exposed Floors et exposed walls B Exposed Floors et exposed floors et exposed walls B Exposed Floors uctive Heatloss Heat Loss	R-Values L. 3.15 3.15 3.15 3.15 1.99 2.03 3.01 14.49 8.50 50.00 22.86	oss Gain 23.56 11.3 23.56 27.7 23.56 21.2 36.55 88.2 24.65 3.6 5.12 0.7 8.73 1.2 1.48 0.7	A B Area A B Fir Loss	2505	A B A A B F	A : 3 Area A : 3	2015	A B Area A B Fir	A B Area A B Fir	1269	A B Area A B Fir	2749	A B Area A B Fir	446	A B Area A B Fir	364	A B Area A B Fir		B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir
evel 3 HL Total evel 3 HG Total Run Run E E E Foundation Cond	19,770 10,453 Level 4 ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A exposed Ceilings A exposed Floors functive Heatloss Heat Loss Heat Cain Heat Loss/Gain Case 2	R-Values L. 3.15 3.15 3.15 3.15 1.99 2.03 3.01 14.49 8.50 50.00 22.86 22.05	oss Gain 23.56 11.3 23.56 27.7 23.56 27.7 36.55 88.2 24.65 3.37 0.2 8.73 1.2 8.73 1.2 9.73 1.2 9.74 1.8 9.75 9.75 9.75 9.75 9.75 9.75 9.75 9.75	A B Area A B Fir Loss 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2505	A B A A B F	A : 3 Area A : 3	2015	A B Area A B Fir	A B Area A B Fir	1269	A B Area A B Fir	2749	A B Area A B Fir	446	A B Area A B Fir	364	A B Area A B Fir		B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir
evel 3 HL Total evel 3 HG Total Run Run Ne E E Foundation Cond otal Conductive Air Leakage Ventilation	19,770 10,453 Level 4 ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed Ceilings A et exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors functive Heatloss Heat Loss Heat Gain Heat Loss/Gain	R-Values L. 3.15 3.15 3.15 3.15 3.15 1.99 2.03 3.01 14.49 8.50 50.00 22.86 22.05	bss Gain 23.56 11.3 23.56 27.7 23.56 21.2 36.55 88.2 24.65 3.6 5.12 0.7 8.73 1.2 1.48 0.7 3.37 0.2 0.000 0.047 0.00 0.00 22.44 11.8 0.03 0.03	A B Area A B Fir Loss	2505	A B A A B F	A : 3 Area A : 3	2015	A B Area A B Fir	A B Area A B Fir	1269	A B Area A B Fir	2749	A B Area A B Fir	446	A B Area A B Fir	364	A B Area A B Fir		B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir

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

Mana Matte

David DaCosta

Package J



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-00067 JB-01488

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 J	II DCIN. 32904	David DaCosta
Project:	Brampton	Model:	65-3 - W.O.B.
	RESIDENTIAL MECHANICAL V For systems serving one dwelling unit & confo		
	Location of Installation	Total Ven	tilation Capacity 9.32.3.3(1)
Lot #	Plan #	Bsmt & Master Bdrm	2 @ 20 cfm 40 cfm
Township	Brampton	Other Bedrooms Bathrooms & Kitchen	3 @ 10 cfm 30 cfm 5 @ 10 cfm 50 cfm
Roll #	Permit #	Other rooms	5 @ 10 cfm <u>50</u> cfm Total 170
Address			
	Builder	Principal Ve	entilation Capacity 9.32.3.4(1)
Name	Highcastle Homes	Master bedroom Other bedrooms	1 @ 30 cfm 30 cfm 3 @ 15 cfm 45 cfm
Address			Total
City		Princin	al Exhaust Fan Capacity
Tel	Fax	Make	Model Location
	Installian Contractor	VanEE	40H+ Base
Name	Installing Contractor	80 cfm	Sones
Address			t Recovery Ventilator
City		Make Model	VanEE 40H+ 80 cfm high 40 cfm low
Tel	Fax	Sensible efficiency @ -2 Sensible efficiency @ 0	25 deg C <u>55%</u>
	Combustion Appliances 9.32.3.1(1)	Supplem	ental Ventilation Capacity
a) x b) x c) d) e)	Direct vent (sealed combustion) only Positive venting induced draft (except fireplaces) Natural draft, B-vent or induced draft fireplaces Solid fuel (including fireplaces) No combustion Appliances	Total ventilation capacit Less principal exhaust on REQUIRED supplement	capacity75.0_
		Supp	lemental Fans 9.32.3.5.
X	Heating System Forced air Non forced air Electric space heat (if over 10% of heat load)	Location S.Ens Pwd.	cfm Model Sones 50 770 2.5 50 770 2.5
l x	House Type 9.32.3.1(2) Type a) or b) appliances only, no solid fuel Type I except with solid fuel (including fireplace)	all fans HVI listed	Make Broan or Equiv.
I	1 yes 1 shoops with some real (including incpides)		aciemas Castification

House Type 9.32.3.1(2)								
Х	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							
	Type I, II or IV no forced air							
	X							

	System Design Option									
1		Exhaust only / forced air system								
2		HRV WITH DUCTING / forced air system								
3	Х	HRV simplified connection to forced air system								
4		HRV full ducting/not coupled to forced air system								
		Part 6 design								
		•								

, ,		ertification n system has bee uilding Code.	n designed
Name Signature	David Da	aCosta	7
HRAI#	5190	BCIN#	32964
Date	January 2	2, 2016	

gtaDesigns

Energy Efficiency Design Summary

(Part 9 Residential)

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

Page 7 Project # PJ-00067

e-mail dave@gtadesigns.ca This form is used to	o summarize th	ne energy	efficiency	design of t	he project. Information	on on completing this	form is on	the reverse
			For	use by Prir	ncipal Authority			
Application No:					Model/Certification Num	nber		
A. Bosis of Information								
A. Project Information Building number, street name	<u>n</u>					Unit number	Lot/Con	
bullaring humber, street hame	65-3 -					Onit number	Loveon	
unicipality Brampton Pos				•	Reg. Plan number / other	er description		
Brampto	Brampton							
B. Compliance Option	n		•					
☑ SB-12 Prescriptive	-			Table:		DEFGHI		Package J
☐ SB-12 Performand		1.2.]			energy performance	e calculations using	an appro	ved software
☐ Energy Star®* [SE	3-12 - 2.1.3.]				BOP form			
☐ EnerGuide 80® *				* House	must be evaluated b	by NRCan advisor	and meet	a rating of 80
C. Project Design Co					1			
Climatic Zone (SB	•		ing Equip		_	Space Heating F		
✓ Zone 1 (< 5000 degree			≥ 90% AF		☑ Gas	☐ Propane	_	Solid Fuel
☐ Zone 2 (≥ 5000 degree			≥ 78% < 9	0% AFUE	□ Oil	☐ Electric		Earth Energy
Windows	+Skylights+Gl	ass Door	S			Other Building (Conditions	
Gross Wall Area =	395 m²	%	Windows+	<u>13%</u>	☐ ICF Basement	☐ Log/Post&Beam		
Gross Window+ Area =	50 m²				☐ ICF Above Grade	☐ Slab-on-gr		
		ovide valu			ergy efficiency compon		ch <i>Energy</i> S	
Building Con	nponent		RSI/R	values		ng Component		Efficiency Ratings
Thermal Insulation			ı		Windows & Doors		1	
Ceiling with Attic Space			<u> </u>	50	Windows/Sliding G	lass Doors		1.8
Ceiling without Attic Space				31	Skylights			2.8
Exposed Floor Walls Above Grade				31	Mechanicals	. 2	1	94%
Basement Walls				22	Space Heating Eq HRV Efficiency (%			
Slab (all >600mm below gra	do)			12	DHW Heater (EF))		60%
· · · · · · · · · · · · · · · · · · ·				X	NOTES			0.67
Slab (edge only ≤600mm be			1	0		1. Provide U-Value	in W/m2.K,	or ER rating
Slab (all ≤600mm below gra			1	10	2. Provide AFUE or inc			
	Design Verif	ication [d	complete ap	plicable sec	ctions if SB-12 Performa	ance, Energy Star or E	EnerGuide80	options used]
SB-12 Performance:						.		
The annual energy consumption	_				is	Gj (1 Gj =1000Mj)	
The annual energy consumption		_		Gj				
The software used to simulate The building is being designed		••		-	or hour @50Pa		-	
Energy Star: BOP form attach Energy Star and EnerGuide80		wiii be iab	eieu on co	предоп в	у.			
					Evaluator/Advisor/Rater	Licence #:		
Evaluator/Advisor/Rater Name:								
Evaluator/Advisor/Rater Name:								
Evaluator/Advisor/Rater Name:								
	ames of designe	ers who are	responsible	e for the bui	lding code design and	whose plans accompa	ny the permi	t application]
	ames of designe	ers who are	responsible	e for the bui	lding code design and v			t application]



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Page 8 PJ-00067 Project #

JB-01488 Layout #

Pac	kage: ject:	Package J Brampton		rstem: //lodel:		Syste 65-3 - V		Layout #	JB-01400
		A	ir Leakage (Calculation	S				
	Buildir B LRair	g Air Leakage Heat Los	S HLleak	Build	ding Air Leaka	ge Heat Ga	in HG^T	HG Leak	
	0.018 0.313		21566	0.0		51540	11	924	_
						Lev	rels		
	Air Leakage	Heat Loss/Gain Multiplie	r Table (Section 11)		1	2	3	4	
	Level Level Buildir Factor (LF) Air	g Level Conductive Heat Loss	Air Leakage He Multiplie		(LF)	(LF)	(LF)	(LF)	
	1 0.5	16899	0.6381		1.0	0.6	0.5	0.4	
	2 0.3 3 0.2 21560	19451 14248	0.3326 0.3027			0.4	0.3 0.2	0.3 0.2	
	4 0	0	0.0000				0.2	0.1	-
							5		
	HG LEAK	924	Air Leakage He			Levels this			
	BUILDING CONDUCTIVE		0.0474			3	3		
		\	/entilation C	alculations					
	Ve	ntilation Heat Loss			Ventila	ation Heat G	ain		
ij	Vont	lation Heat Loss			Ventilation I	Hoot Goin		1	Vent
Vent			.bvent	0 0					\ \ \
	C PVC HL^1 1.08 75 74.2	1. –/	1683	C PV		HGb 89		1	
		Case 1		_		Case 1			_
	Ventilation He	at Loss (Exhaust only Syster	ns)	Ve	entilation Heat G		Only Syste	ms)	_
		, ., ., ., .,	,			(, -,	,	_
_	Case	1 - Exhaust Only		Case 1 -	Exhaust Only	Multi	plier		←
ase	Level LF HLbve		Multiplier	HGbver				-	Case
)as	1 0.5	16899	0.05	Building		0.0	05		ä
0	2 0.3 3 0.2 1683	19451	0.03						
	3 0.2	14248 0	0.02 0.00						
		C 2				C 2			
	Ventilation He	Case 2 at Loss (Direct Ducted Syste	ms)	Ve	ntilation Heat G	Case 2 ain (Direct D	ucted Syste	ms)	_
3 2									2
ase		Multiplier	Ţ			Multi	plier		Case
Cs	C HL^T (1-E) H 1.08 74.2 0.28	22.44		1.08	HG^T 11	11.	.88		Ö
		Case 3				Case 3			
3	Ventilation H	eat Loss (Forced Air System	s)	\	/entilation Heat	Gain (Forced	Air System	ıs)	3
		Lbvent Mu	Itiplier			Vent He	at Gain	Multiplier	
Case	Total Ventilation Load		0.03	HGbver 891	nt HG*1.3	vent He		0.05	Case
	Foundation Con-	ductive Heatloss Lev	vol 1	3828	Watts	420	063	Rtu/h	
	Foundation Con	auctive neatioss Lev	CI I	38∠8	vvatts	130	ກບວ	Btu/h	

Envelope Air Leakage Calculator

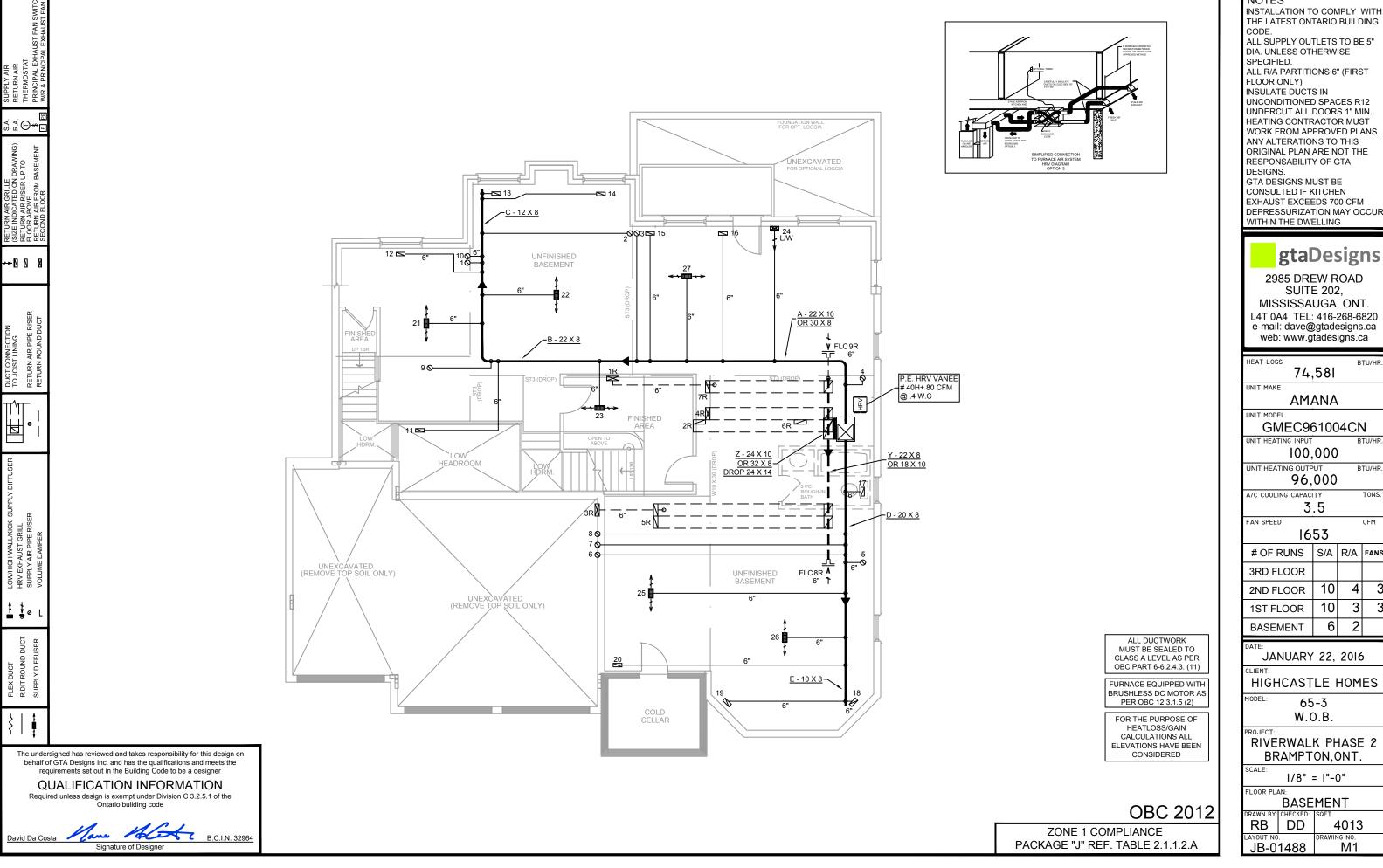
Supplemental tool for CAN/CSA-F280

Weather Stati	on Description	
Province:	Ontario	•
Region:	Brampton	▼
Weather Station Location:	Open flat terrain, grass	₹
Anemometer height (m):	10	
Local SI	nielding	
Building Site:	Suburban, forest	▼
Walls:	Heavy	▼
Flue:	Heavy	▼
Highest Ceiling Height (m):		6.40
Building Co	nfiguration	6.4
Type:	Detached	-
Number of Stories:	Two	•
Foundation:	Shallow	
House Volume (m³):	566.3	1459.61
Air Leakage,	/Ventilation	
Air Tightness Type:	Present (1961-) (ACH=3.57)	_
Custom DDT Data	ELA @ 10 Pa. 135,8	3 cm ²
Custom BDT Data:	3.57 ACH @ 50	
Mechanical Ventilation (L/s):	Total Supply: Total Exha	ust:
	37.5	
Flue	Size	
Flue #:	#1 #2 #3	#4
Diameter (mm):	0 0 0	0
Envelope Air	Leakage Rate	
Heating Air Leakage Rate (ACH/H):	0.313	
Cooling Air Leakage Rate (ACH/H):	0.091	

Residential Foundation Thermal Load Calculator

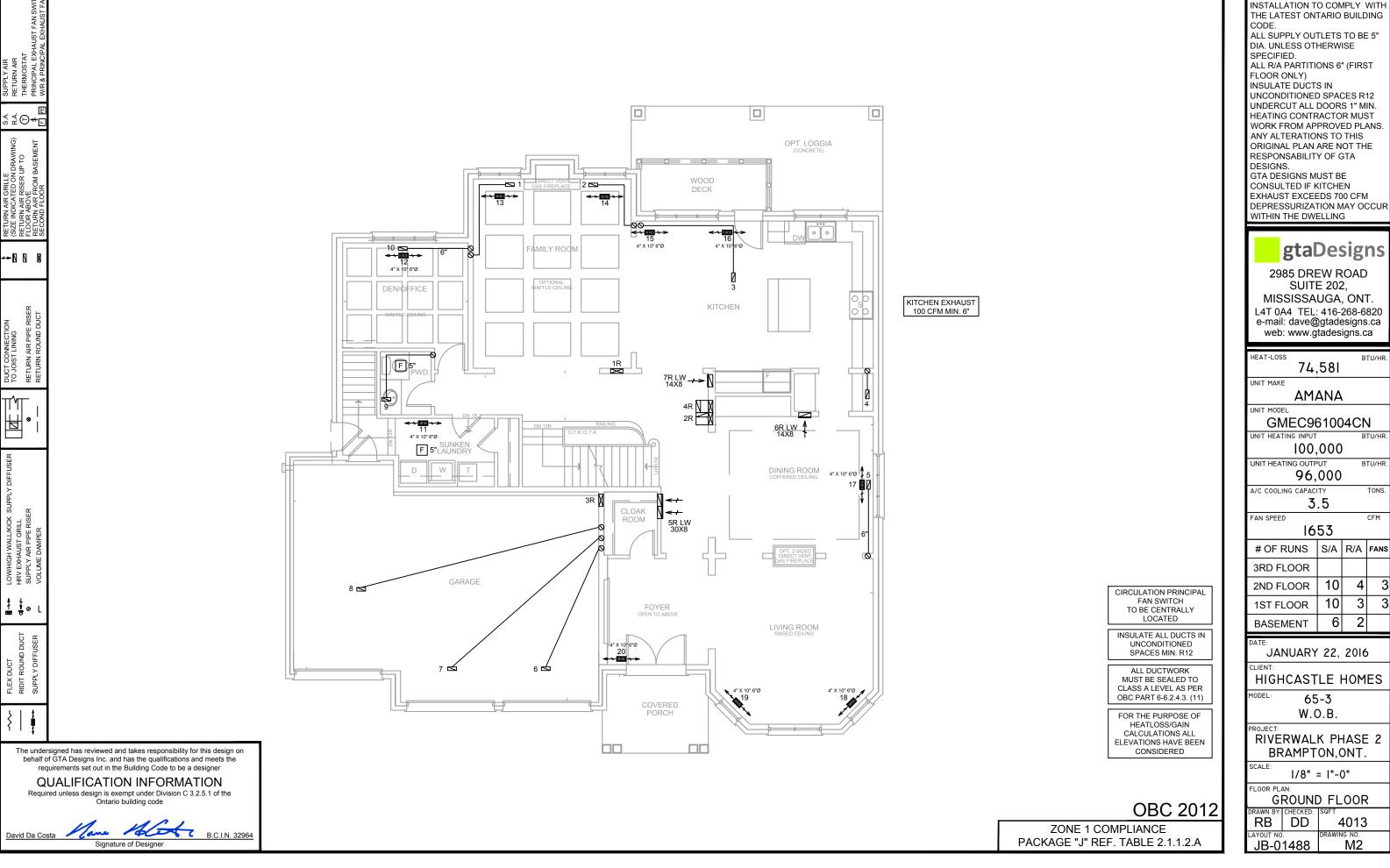
Supplemental tool for CAN/CSA-F280

Weat	her Sta	tion Description
Province:	Ontario	▼
Region:	Brampton	▼
	Site D	escription
Soil Conductivity:	High cond	luctivity: moist soil
Water Table:	Normal (7	7-10 m, 23-33 Ft)
For	undatio	n Dimensions
Floor Length (m):	24.14	
Floor Width (m):	7.10	
Exposed Perimeter (m):	62.48	
Wall Height (m):	2.74	
Depth Below Grade (m):	1.52	Insulation Configuration
Window Area (m²):	11.24	
Door Area (m²):	3.72	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	23	
	Desig	n Months
Heating Month	1	
	Founda	ntion Loads
Heating Load (Watts):		3828



NOTES

#OF RUNS | S/A | R/A | FANS



NOTES

ALL SUPPLY OUTLETS TO BE 5"

UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN. HEATING CONTRACTOR MUST WORK FROM APPROVED PLANS ORIGINAL PLAN ARE NOT THE

EXHAUST EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR

gtaDesigns

L4T 0A4 TEL: 416-268-6820 e-mail: dave@gtadesigns.ca web: www.gtadesigns.ca

RIVERWALK PHASE 2

