

### **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:	
FP Town 3 -	Newport		Lot/con.	
Municipality Clarington	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	d, Suite 202		Unit no.	Lot/con.
Municipality	Postal code	Province	E-mail	inna an
Mississauga Telephone number	L4T 0A4 Fax number	Ontario	dave@gtades Cell number	agns.ca
(905) 671-9800		7) 494-9643	(416) 268-6	6820
C. Design activities undertaken by individual identified in S	ection B. [Bu	ilding Code Table	3.5.2.1 of Division C]	
☐ House ☒ HVAC – H	louse		☐ Building Structural	
☐ Small Buildings ☐ Building Se			☐ Plumbing – House	
☐ Large Buildings ☐ Detection,	Lighting and Po	wer	☐ Plumbing – All Building	S
☐ Complex Buildings ☐ Fire Protect	ction		☐ On-site Sewage System	ns
Description of designer's work Mod	del Certification	1	Project #	PJ-00022
			Layout #	
Heating and Cooling Load Calculations Air System Design		Builder Project	Delpark/Highcastle H Northglen	omes
Residential mechanical ventilation Design Summary		•	Northgien	
Residential System Design per CAN/CSA-F280-12		Model	FP Town 3 - Newp	ort
Residential New Construction - Forced Air		SB-12	Package D	
D. Declaration of Designer				
David DaCosta	declare that (d	choose one as appro	opriate):	
(print name)				
I review and take responsibility for to 3.2.4 Division C of the Building Cocclasses/categories.				
Individual BCIN:				
Firm BCIN:				
FIIIII BOIN.			-	
	•	•		
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 an	d qualification requiren	nents of the Building Code.	
Basis for exemp	tion from registr	ation and qualification:		
I certify that:				
The information contained in this schedule is true to the best of n				
I have submitted this application with the knowledge and consent	of the firm.			
June 17, 2015		Mane 14	il in the second	•
Date		Signature of De	esigner	

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.



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 calcu	lation summary sheet CSA-F280-M12 Standard
These documents issued for the use of Delp	ark/Highcastle Homes Layout No.
and may not be used by any other persons without authorization. Docum	nents for permit and/or construction are signed in red.  JB-00697
Building	Location
Address (Model): FP Town 3 - Newport	Site: Northglen
Model:	Lot:
City and Province: Clarington	Postal code:
Calculatio	ns based on
Dimensional information based on:	assidy & Co. Dwgs Dated Apr/2013
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: <b>Durham</b>	Wind exposure: Shelterd
HRV?	Internal shading: Light-translucent Occupants: 4
Sensible Eff. at -25C <b>0</b> Apparent Effect. at -0C <b>0</b>	Units: Imperial Area Sq. ft 1194
Heating design conditions	Cooling design conditions
Outdoor temp -4.0 Indoor temp: 72 Mean soil tem 48	Outdoor temp 84 Indoor temp: 75 Latitude: 44
Above grade walls	Below grade walls
Style A: As per Selected OBC SB12 Package D R 24	Style A: As per Selected OBC SB12 Package D R 20
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 D	Style A: As per Selected OBC SB12 Package D R 50
Style B:	Style B: As per Selected OBC SB12 Package D R 31
Exposed floors	Style C:
Style A: As per Selected OBC SB12 Package D R 3	Doors
Style B:	Style A: As per Selected OBC SB12 Package D R 3.01
Windows	Style B:
Style A: As per Selected OBC SB12 Package D 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 D 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



Trunk

Builder: Delpark/Highcastle Homes

#### Air System Design

2015

SB-12 Package D June 17, 2015

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

I review and take responsibility for the design work and am qualified in the

appropriate category as an "other designer" under Division C subsection 3.2.5.

of the Building Code. Man Alex Project # Lavout #

PJ-00022 JB-00697

Page 3

System 1 Northglen FP Town 3 - Newport Individual BCIN: 32964 David DaCosta Project: Model: FURNACE/AIR HANDLER DATA: DESIGN LOAD SPECIFICATIONS AIR DISTRIBUTION & PRESSURE BOILER/WATER HEATER DATA: A/C UNIT DATA: Level 1 Net Load 8,840 btu/h **Equipment External Static Pressure** 0.5 "w.c. 1.5 Ton Make Amana Make Туре Amana Level 2 Net Load 8,355 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model GMEC960302BNA Model Cond.--1.5 Level 3 Net Load 5.585 btu/h Available Design Pressure 0.275 "w.c. Input Btu/h 30000 Input Btu/h Coil -1.5 28800 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 22 780 htu/h 0 138 "w c Total Heat Loss R/A Plenum Pressure E.s.p. Blower DATA: **Total Heat Gain** 13,156 btu/h S/A Plenum Pressure 0.14 "w.c. Water Temp deg. F. T2 Total Heat Loss + 10% 25 058 Btub. **Heating Air Flow Proportioning Factor** 0.0273 cfm/btub AFUF 96% Blower Speed Selected: **Blower Type ECM** 15240 ft<sup>3</sup> Cooling Air Flow Proportioning Factor 0.0472 cfm/btuh **Building Volume Vb** Aux. Heat (Brushless DC OBC 12.3.1.5.(2)) Ventilation Load 5.521 Btuh. R/A Temp SB-12 Package Package D Heating Check 621 cfm 621 cfm 70 dea. F. Cooling Check Ventilation PVC 60 cfm S/A Temp 113 deg. F. Supply Branch and Grill Sizing Diffuser loss Temp. Rise>>> 43 deg. F. Cooling Air Flow Rate 621 cfm 0.01 "w.c. Selected cfm> 621 cfm Level 1 Outlets Level 2 Outlets S/A Outlet No. 9 12 13 14 10 11 CAV BASE BASE BASE KIT GRT Room Use GRT FOY PWD Btu/Outlet 3044 1932 1932 1932 2318 1623 1623 2286 507 Heating Airflow Rate CFM 83 53 53 53 63 44 44 62 14 Cooling Airflow Rate CFM 3 21 21 21 113 80 80 51 13 0.13 0.13 **Duct Design Pressure** 0.13 **Actual Duct Length** 55 22 20 31 25 15 33 42 **Equivalent Length** 120 100 130 90 90 90 100 90 110 130 100 90 90 90 90 Total Effective Length 175 122 150 121 90 90 90 90 90 90 90 90 90 90 105 115 125 163 142 90 90 90 90 90 90 90 90 90 Adjusted Pressure 0.07 0.11 0.09 0.11 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.12 0.11 0.10 0.08 0.09 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 **Duct Size Round** 6 **Outlet Size** 4x10 3x10 3x10 4x10 4x10 4x10 4x10 4x10 4x10 4x10 4x10 3x10 3x10 4x10 4x10 3x10 4x10 Trunk D С D В Level 3 Outlets Level 4 Outlets S/A Outlet No. 1 2 3 5 Room Use MAST BATH BFD 2 BFD 3 FNS Btu/Outlet 1759 115 1611 1438 662 Heating Airflow Rate CFM 48 44 39 18 3 80 65 Cooling Airflow Rate CFM 3 58 12 **Duct Design Pressure** 0.13 **Actual Duct Length** 44 38 49 50 43 **Equivalent Length** 140 120 130 110 150 90 179 Total Effective Length 184 158 160 193 90 Adjusted Pressure 0.07 0.08 0.07 0.08 0.07 0.14 **Duct Size Round** 6 **Outlet Size** 4x10 3x10 4x10 3x10 3x10 4x10 Trunk С С D 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 145 100 225 40 111 **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 621 0.04 14.0 24x10 620 0.07 12.5 18x8 14x10 47 621 R 141 0.10 41 34 37 z 0.04 14 0 22v8 7.0 RYR 8v7 **Actual Duct Length** 18 10 **Equivalent Length** 140 210 265 245 130 70 70 70 70 70 70 Υ 510 0.04 13.0 18x8 14x10 c 416 0.07 11.0 14x8 10x10 181 257 299 282 137 70 70 70 70 70 D 242 0.07 **Total Effective Length** 70 8x8 10x7 0.17 0.17 0.17 w Adjusted Pressure 0.06 0.05 0.04 0.04 0.09 0.17 0.17 0.17 Duct Size Round 8.0 7.0 10.0 5.0 6.0 F Inlet Size G FLC FLC н Inlet Size 14 14 30 s 1

Q



Total Heat Loss

Total Heat Gain

22,780 btu/h

13,156 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

None Alete

David DaCosta

Package D

	Builder:	Delpark/Highcas	tle Homes		Date:		Ju	ne 17, 201	15					Weat	her Data	Durha	m 44	1 -4	1.0 84 2	0 48.2	2			Pa
2012 OBC	Project:	Northgle	en	Mo	odel:		FP To	wn 3 - Nev	wport		_	Syster	n 1	Heat	Loss ^T	76 deg. F	Ht gain	^T	9.2 deg. F	GT	A: 1194		Project # Layout #	PJ-00 JB-00
Level 1 Run ft. exposed wall A Run ft. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A			CAN 27 A B 1.0 AG 170 Area A B 170 Fir 27		73 A B 2.0 A0 572 Ar A B FI	G rea		A B AG Area A B Fir		A B AG Area A B Fir		A B AG Area A B Fir		A B AG Area A B Fir		A B AG Area A B Fir	A B A A B Fi	G rea	A B A A B F	G rea		A B AG Area A B		A B AG Area A B B
Gross Exp Wall B   Components	3.15 3.15 3.15 1.99 2.03 3.01 13.79 8.50 50.00 22.86 22.05 Slab On (	24.13 10.74 24.13 27.18 24.13 20.71 38.19 21.24 37.44 87.34 25.25 3.06 5.51 0.67 8.94 1.08 1.52 0.72 3.32 1.58 3.45 0.15 3rade (x)  0.2842 0.0039 0.50 0.10 82.08 9.94 0.33 0.10	27 170 58 112 171 48 84	6 25 4 0 43 6 0 8 4	137	3039 3256 2 925 1615	82 24 91 97 1 31	Loss	Sain	Loss	Gain	Loss	Gain	Loss	Gain	Loss G	ain L	oss G	ain L	Oss Gai	n	Loss	Gain	Loss Ga
Level 2 Run ft. exposed wall A Run ft. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A	•		20 A B 10.0 230 Area A B Fir		23 A B 10.0 140 Ar 140 A B Fli 230	rea	10.0 125	B Area A B Fir		PWI 5 A B 10.0 35 Area A B Fir	<b>.</b>	A B Area A B Fir		A B Area A B Fir		A B Area A B FIr	A B A B Fi	rea	A B A A B F	rea		A B Area A B Fir		A B Area A B B
Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Net exposed walls A Net exposed walls B Exposed Ceilings A Exposed Ceilings B Exposed Floors Foundation Conductive Heatloss	R-Values 3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86	24.13 10.74 24.13 27.18 24.13 20.71 38.19 21.24 37.44 87.34 25.25 3.06 5.02 0.61 8.94 1.08 1.52 0.72 3.32 1.58 3.45 0.15	165 82	Gain 4 951 9 100	27 24 179 140	899 1 213 1		241 379 1030	272 46 125	Loss 6 145 44 227	1 27	Loss	Gain	Loss	Gain	Loss G	ain L	oss G	iain L	oss Gai	n	Loss	Gain	Loss Ga
Total Conductive	X	0.1404 0.0039 0.24 0.10 82.08 9.94 0.33 0.10 239 percent 2730		1051 5 4	1.5		41 6 50 24 0.5	1650 232 404	442 2 46	366 51 90	190 1 1													

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



Total Heat Loss

Total Heat Gain

22,780

13,156

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

						Dotos		Jun	ne 17, 201	5												Pa
		Builder:	Delpark/Higho	stle Homes		Date:		-	10 17, 201			0		Weather Data	Durham	44	-4.0 84	4 20	48.2		Project #	PJ-00
012 OBC		Project:	North	len	_	Model:		FP Tow	vn 3 - New	vport		System	1	Heat Loss ^	76 deg. F	Ht gain ^T	9.2 d	eg. F	GTA:	1194	Layout #	JB-00
	Level 3				AST	В	ATH		BED 2		BED 3	ENS										
	nft. exposed wall A			14 A		Α		12		12 A		8 A		Α	Α	Α		Α		Α		Α.
Run	ft. exposed wall B			В		В			В	В		В		В	В	В		В		В		В
	Ceiling height			8.0		8.0		8.0		8.0		8.0										
	Floor area			207 Are	1	50 Are	a	158		134 A		50 Area		Area	Area	Area		Area		Area		Area
	Exposed Ceilings A			207 A		50 A		158		134 A		50 A		Α	Α	Α		Α		Α		Α.
E	Exposed Ceilings B			В		В			В	В		В		В	В	В		В		В		В
	Exposed Floors			Fir		Flr			Fir	F	Ir	Flr		Flr	Flr	Flr		Flr		Flr		Fir
	Gross Exp Wall A			112				96		96		64										
	Gross Exp Wall B			-																		
	Components	R-Values L		Los	s Gain	Los	s Gain		Loss G	Sain L	oss Gain	Loss (	Bain	Loss Gain	Loss Gain	Loss	Gain	Loss	Gain	Loss	Gain	oss G
	North Shaded	3.15	24.13 10.7																			
	East/West	3.15	24.13 27.1		483 544			18	434	489 18	434 489	4 97	109									
	South	3.15	24.13 20.7																			
	Existing Windows	1.99 2.03	38.19 21.2 37.44 87.3																			
	Skylight Doors																					
NI.		3.01 15.13	25.25 3.0 5.02 0.6		462 50	,		70	202	47 78	202 47	60 301	26									
	et exposed walls A et exposed walls B	8.50	8.94 1.0		462 50			78	392	47 78	392 47	60 301	36									
	Exposed Ceilings A	50.00	1.52 0.7		315 150	50	76	36 158	240	114 134	204 97	50 76	36									
	Exposed Ceilings A	22.86	3.32 1.5		313 130	, 30	10	30 138	240	114 134	204 97	30 76	30									
E	Exposed Floors	22.86	3.45 0.1																			
Indation Cand	ductive Heatloss	22.00	3.43 0.	1																		
	Heat Loss				259		76		1066		1030	474										
I Conductive	Heat Gain				749			36	1000	651	634		181									
Leakage	Heat Loss/Gain		0.1446 0.003	2	182		11	0	154	3	149 2	69	101									
Leakage	Case 1	x	0.1446 0.003		318 78		19	4	269	68	260 66		19									
entilation	Case 2	^	82.08 9.9		310 70	,	13	7	209	00	200 00	120	13									
	Case 3		0.33 0.1																			
				al 2		) I		4		220 1	220											
	Heat Gain People	1 = 25 pc	23		478	3		1		239 1	239											
	Appliances Loads	1 =.25 pe	23 rcent 273	0	478	1	9	4 1	122		239											
	Appliances Loads Duct and Pipe loss		23 rcent 273 10	0 6		1	9	4 1	122	96												
vel 3 HL Total vel 3 HG Total	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4	Tot	23 rcent 273	0 6 1 3	759 170	1	115	4 1 57	122 1611	96	1438 1224	662	261									
rel 3 HL Total rel 3 HG Total Run Run	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 Ift. exposed wall A Ift. exposed wall B Celling height Floor area Exposed Cellings A	Tot	23 rcent 273 10 al HL for per roo	A B Are A	759 170	A B Are A	115	15	A B Area A	96 1373 A B	1438 1224	A B Area A	261	A B Area A	A B Area A	A B Area A		A B Area A		A B Area A		A B Area
el 3 HL Total el 3 HG Total Run Run	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 nft. exposed wall A nft. exposed wall B Celling height Floor area Exposed Ceilings A Exposed Ceilings B	Tot	23 rcent 273 10 al HL for per roo	A B Area A B	759 170	A B Are A B	115	15	A B Area A B	96 1373 A B	1438 1224	A B Area A B	261	B Area A B	B Area A B	B Area A B		B Area A B		B Area A B		B Area A B
el 3 HL Total el 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors	Tot	23 rcent 273 10 al HL for per roo	A B Are A	759 170	A B Are A	115	15	A B Area A	96 1373 A B	1438 1224	A B Area A	261	B Area A	B Area A	B Area A		B Area A		B Area A		B Area A
el 3 HL Total I 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 Ift. exposed wall A Ift. exposed wall B Celling height Floor area Exposed Cellings A Exposed Cellings A Exposed Floors Gross Exp Wall A	Tot	23 rcent 273 10 al HL for per roo	A B Area A B	759 170	A B Are A B	115	15	A B Area A B	96 1373 A B	1438 1224	A B Area A B	261	B Area A B	B Area A B	B Area A B		B Area A B		B Area A B		B Area A B
el 3 HL Total el 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4  1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Floors Gross Exp Wall B	Total	rcent 2: rcent 27: 10 al HL for per roo IG per room x 1	A B Area A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
el 3 HL Total el 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components	Total Total	rcent 2: rcent 27: 10 al HL for per roo HG per room x 1	A A B Are A A B Fir	170	A B Are A B	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir	261	B Area A B	B Area A B	B Area A B	Gain	B Area A B	Gain	B Area A B		B Area A B Fir
el 3 HL Total I 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A for exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded	Tofal Total R-Values L 3.15	2:   2:	A B Are A B B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HL Total I 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A If. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Floors Gross Exp Wall B Components North Shaded East/West	Total  Total  R-Values L 3.15 3.15	2:   2:	0 6 1 1 3 3 A B Are A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
el 3 HL Total el 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South	R-Values L 3.15 3.15 3.15	2:	A B Are A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HG Total I 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1ft. exposed wall A for exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows	Total  Total  R-Values L 3.15 3.15 3.15 1.99	2:   2:	A B Are A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
il 3 HL Total il 3 HG Total Run Run E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A If. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight	R-Values L 3.15 3.15 3.15 1.99 2.03	23: rcent 27: 10 al HL for per room x 1  poss Gain 24.13 10.7 24.13 27.7 24.13 20.3 38.19 21.3 37.44 87.3	A B Area A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
el 3 HL Total el 3 HG Total Run Run E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors	R-Values L 3.15 3.15 3.15 1.99 2.03	2:   2:	A B Are A B B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HL Total I 3 HG Total Run Run E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 Aft. exposed wall A Aft. 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 let exposed walls A	R-Values L 3.15 3.15 3.15 3.15 3.15 3.15 3.15	Des Gain 27: 24.13 24.13 24.13 25.25 33.49 25.25 3.02 25.25 3.02 25.25 3.02 25.25 3.02 25.25 3.02 37.44	A B Are A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HL Total I 3 HG Total Run Run E E E E E E E E E E E E E E E E E E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors	R-Values L 3.15 3.15 3.15 1.99 2.03	2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2	A B Are A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
3 HG Total 3 HG Total Run Run No.	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 In ft. exposed wall A In ft. exposed wall B Ceilling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls B	R-Values L 3.15 3.15 3.15 3.15 3.01 1.99 2.03 3.01 15.13	25: Creent 27: Creent	A B Are A B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HL Total 3 HG Total Run Run No.	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Skylight Doors Exposed walls B Exposed Walls B Exposed Walls B Exposed Walls B Exposed Ceilings B Exposed Floors	R-Values L 3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00	2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2	A B Are A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HL Total 3 HG Total Run Run No.	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A If. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls B et exposed walls A et exposed walls A et exposed walls B Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B	R-Values L 3.15 3.15 3.15 3.15 3.15 3.9 2.03 3.01 15.13 8.50 50.00	25: Creent 27: Creent	A B Are A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HG Total I 3 HG Total Run Run I Michael Run	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A If. 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 Let exposed walls B Exposed Ceilings A Exposed Ceilings B Exposed Floors Let exposed walls B Exposed Floors Let exposed wall B Exposed Floors Let exposed wa	R-Values L 3.15 3.15 3.15 3.15 3.15 3.9 2.03 3.01 15.13 8.50 50.00	25: Creent 27: Creent	A B Are A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HL Total I 3 HG Total Run Run Ni	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors tet exposed walls A et exposed Walls A Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors fuctive Heatloss Heat Loss Heat Loss	R-Values L 3.15 3.15 3.15 3.15 3.15 3.9 2.03 3.01 15.13 8.50 50.00	2: rcent 27: al HL for per room x 1  Doss Gain 24.13 10.0 24.13 20.7 38.19 21.1 37.44 87.3 5.02 0.6 8.94 11.52 0.3 3.32 1.6 3.345 0.7	A B Area A B B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I J HL Total I J HG Total Run Run Ni	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 Aft. exposed wall A oft. 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 let exposed walls A et exposed walls A et exposed walls A et exposed ceilings B Exposed Floors Let exposed Heat Loss	R-Values L 3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	25.25 9.4 1.5 1.52 0.3 3.32 1.5 3.45 0.7 0.0000 0.000	A B Are A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I I I I I I I I I I I I I I I I I I I	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A If. exposed wall B Ceiling height Floor area Exposed Ceilings A Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls B Exposed Floors det exposed walls B Exposed Floors stylight Existing Windows Skylight Doors et exposed walls B Exposed Ceilings A Exposed Ceilings B Exposed Floors ductive Heatloss Heat Loss Heat Gain Heat Loss/Gain	R-Values L 3.15 3.15 3.15 3.15 3.15 3.9 2.03 3.01 15.13 8.50 50.00	25: Ceent 27: Ce	A B Are A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I I I I I I I I I I I I I I I I I I I	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1ft. exposed wall A 1ft. exposed wall B Ceiling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls B Exposed Ceilings A at exposed Walls A Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors Juctive Heatloss Heat Loss/Gain Heat Loss/Gain Heat Loss/Gain Losse 2	R-Values L 3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2	A B Are A B B Fir	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I 3 HL Total I 3 HG Total I 3 HG Total Run Run Run I S HG Total Run Run C E E	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 Aft. exposed wall A Aft. 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 Let exposed Walls B Exposed Ceilings A Exposed Ceilings A Exposed Ceilings B Exposed Floors Suturion B Exposed Floors Let exposed walls A Let exposed walls A Exposed Ceilings A Exposed Ceilings B Exposed Floors Let exposed Hors Let Loss Heat Loss Heat Loss Heat Loss Heat Loss Heat Loss Loss (Zase 1 Case 2 Case 2	R-Values L 3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	25.25 0.6 0.7 0.000 0.000 0.00 0.00 0.03 0.03 0.0	A B Are A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
I I I I I I I I I I I I I I I I I I I	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A If. 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 ceilings A et exposed ceilings B Exposed Floors Journal of the service of the ser	R-Values L 3.15 3.15 3.15 3.15 3.01 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	2: rcent 27: 10 al HL for per roo HG per room x 1  24:13 24:13 24:13 24:13 24:13 25:25 3.8:19 24:13 25:25 3.9:10 0.000	A B Are A A B Fir B B B Fir B B B B B B B B B B B B B B B B B B B	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
al 3 HL Total al 3 HG Total al 3 HG Total  Run Run  Run  Ni	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1f. exposed wall A f. 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 let exposed walls A et exposed Walls B Exposed Floors Suppliances Walls A et exposed walls A et exposed walls A et exposed Heat Loss/Gain Heat Loss/Gain Heat Loss/Gain Heat Case 2 Case 3 Heat Gain People	R-Values L 3.15 3.15 3.15 3.15 3.01 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	2:   2:   2:   2:   2:   2:   2:   2:	A A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
el 3 HL Total el 3 HG Total el 3 HG Total Run Run Run No E E undation Cond el Conductive ir Leakage entilation	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 If. exposed wall A If. exposed wall A If. exposed wall B Celling height Floor area Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors et exposed walls A et exposed walls A et exposed walls B Exposed Floors success Exposed Floors Success Exposed Floors Success Heat Gain Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads Duct and Pipe loss	R-Values L 3.15 3.15 3.15 3.15 3.15 2.03 3.01 15.13 8.50 50.00 22.86 22.05	Des Gain 27: 10 al HL for per room x 1  Des Gain 24.13 24.13 24.13 27: 24.13 27: 24.13 29: 37.44 87: 35.92 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	A B Are A B Fir Los 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir
al 3 HL Total al 3 HG Total al 3 HG Total  Run Run  Run  Ni	Appliances Loads Duct and Pipe loss 5,585 4,616  Level 4 1 ft. exposed wall A 1 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 B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Lexic exposed walls B Exposed Ceilings B Exposed Floors Juctive Heatloss Heat Loss Heat Gain Heat Loss/Gain Heat Loss/Gain Heat Loss Case 1 Case 2 Case 3 Heat Gain Pipelods Uct and Pipe loss Uct and Pipe loss Uct and Pipe loss	R-Values L 3.15 3.15 3.15 3.15 3.01 15.13 8.50 50.00 22.86 22.05	2:   2:   2:   2:   2:   2:   2:   2:	A B Area A B Fir Los	170	A B Are A B Fir	20	15	A B Area A B B Fir	96 1373 A B A A A B F	1438 1224	A B Area A B Fir		B Area A B Fir	B Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	Gain	B Area A B Fir		B Area A B Fir

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

Mana Matte

David DaCosta

Package D



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-00022 JB-00697

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 D			
Project:	Clarington	Model:	FP Town 3 - No	ewport
	RESIDENTIAL MECHANICAL	VENTIL ATION DESI	GN SUMMARY	
	For systems serving one dwelling unit & cont			
	The systems of the grant of the			
	Location of Installation	Total Ver	ntilation Capacity 9.32.	3.3(1)
Lot #	Plan #		- 0	
Township		Bsmt & Master Bdrm Other Bedrooms		ofm 40 cfm
Township	Clarington	Bathrooms & Kitchen		ofm 40 cfm
Roll #	Permit #	Other rooms		rfm 10 cfm
			Total	110
Address				
		Principal \	/entilation Capacity 9.3	2 2 4/1\
	Builder	Frincipal v	entilation Capacity 5.5	2.3.4(1)
Name	Builder	Master bedroom	1 @ 30 c	fm 30 cfm
	Delpark/Highcastle Homes	Other bedrooms	2 @ 15 c	rfm 30 cfm
Address			Total	<u>60</u>
0:1				
City		Princi	ipal Exhaust Fan Capac	sitv.
Tel	Fax	Make	Model	Location
	,	1		
		Broan	684N	Ensuite
N	Installing Contractor			0.5.0
Name		90 cfm		2.5 Sones
Address		He	eat Recovery Ventilator	
		Make	arrivers, remains.	
City		Model		
T-1	Face	On a little of the little of t	cfm high	0 cfm low
Tel	Fax	Sensible efficiency @ - Sensible efficiency @ -		<u> </u>
		Concide differency (C.)	o dog o	<u> </u>
	Combustion Appliances 9.32.3.1(1)	Suppler	mental Ventilation Capa	acity
a)	Direct vent (sealed combustion) only			
b) x	Positive venting induced draft (except fireplaces)  Natural draft, B-vent or induced draft fireplaces	Total ventilation capac Less principal exhaust	,	110.0 60.0
c)	Solid fuel (including fireplaces)	REQUIRED suppleme		50.0 cfm
e)	No combustion Appliances	1	mai romi oapaon,	
'	''			
		• •	plemental Fans 9.32.3.5	
	Heating System	Location	cfm Model	Sones
Х	Forced air Non forced air	Pwd.	50 770	
	Electric space heat (if over 10% of heat load)			
	House Type 9.32.3.1(2)			<u> </u>
l x	Type a) or b) appliances only, no solid fuel	all fans HVI listed	Make Broan	or Equiv.
	Type I except with solid fuel (including fireplace) Any type c) appliance		Designer Certification	
iv H	Type I or II either electric space heat		s ventilation system has	been designed

IV	Type I or II either electric space heat Type I, II or IV no forced air	I hereby certify t in accordance w		n system has beer uilding Code.	n designed
	System Design Option	Name	David Da	aCosta	
1 x 2	Exhaust only / forced air system HRV WITH DUCTING / forced air system	Signature	Mare	146	7
3 4	HRV simplified connection to forced air system HRV full ducting/not coupled to forced air system Part 6 design	HRAI #	5190	BCIN#	32964
<u> </u>	. a	Date	June 17	, 2015	

# 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-00022

e-mail dave@gt	-									Layout #	JB-00697
This	form is used	to summarize th	e energy			he project. Information	on on con	npleting this	form is o	n the reverse	
Application No:				1 01	400 by 1 111	Model/Certification Num	nber				
A. Proje	ct Information	on .									
Building number, st		· · ·					Unit numb	per	Lot/Con		
				FP Tow	n 3 - New	port					
Municipality	Claringto	on		Postal code	e	Reg. Plan number / other	er descript	ion			
B. Comp	oliance Optic	on		ı		l .					
		e [SB-12 - 2.1.	1.]		Table:	Package: A B C	DEI	- G H I .	JKLM	Packag	ge D
□ SB-12	2 Performand	e* [SB-12 - 2.	1.2.]		* Attach	energy performance	e calcula	tions using	an appro	oved software	,
☐ Energ	gy Star®* [SE	3-12 - 2.1.3.]			* Attach I	BOP form					
☐ Ener	Guide 80® *				* House i	must be evaluated b	by NRCa	an advisor	and meet	a rating of 80	)
C. Proje	ct Design Co	onditions									
	atic Zone (SB	•		ing Equip			Space	Heating F			
	l (< 5000 degre		<b>✓</b>	≥ 90% AF		☑ Gas		Propane		Solid Fuel	
☐ Zone 2	2 (≥ 5000 degree	e days)		≥ 78% < 9	00% AFUE	☐ Oil		Electric		Earth Energy	
	Windows	+Skylights+Gla	ss Door	6			Othe	r Building (	Condition	S	
Gross Wall Area	1 =	116 m²	%	Windows+	14%	☐ ICF Basement		Walkout B	asement	☐ Log/Post&E	3eam
Gross Window+		16 m²				☐ ICF Above Grade					
			ovide value			ergy efficiency compon-			ch <i>Energy</i>		
	Building Con	nponent		RSI / R	values		ng Com	ponent		Efficiency	Ratings
Thermal Insul				1		Windows & Doors				1	
Ceiling with Att	•				50	Windows/Sliding G	ass Do	ors		1.8	
Ceiling without	Attic Space				31	Skylights				2.8	)
Exposed Floor Walls Above G	rodo				31	Mechanicals	. 2			0.40	,
Basement Wal					24	Space Heating Equation HRV Efficiency (%)				94%	
Slab (all >600n		ide)			20	DHW Heater (EF)	,			0%	
,					X	NOTES				0.67	<i>'</i>
Slab (edge only	•				10	1. Provide U-Value in \	W/m2.K, o	or ER rating			
Slab (all ≤600n					10	2. Provide AFUE or inc					
		Design Verifi	cation [c	omplete ap	plicable sec	tions if SB-12 Performa	nce, Ene	rgy Star or E	nerGuide8	0 options used]	
SB-12 Performa				0D 40 D		•-	0: /4	O: 4000M	`		
		_			-	is	GJ (1 ·	GJ =1000IVIJ	)		
The annual ener The software use	•		_		-						
The building is b					-	er hour @50Pa			-		
Energy Star: BC											
Energy Star and			WIII DC IAD	cica on co	inpiction b	у.					
Evaluator/Advisor/F	Rater Name:					Evaluator/Advisor/Rater	Licence #	:			
	Designers [r	names of designe	rs who are	responsible	e for the bui	lding code design and v	whose pla	ns accompa	ny the perm	nit application]	
Architectural						Mechanical		,,	1	10,	
						David DaCo	sta	16	ane	46 <del>4</del>	



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

Page 8 PJ-00022 Project #

JB-00697 Layout #

Pack Proje		System: System 1 Model: FP Town 3 - Newport
	Air Leakage	e Calculations
	Building Air Leakage Heat Loss           B         LRairh         Vb         HL^T         HLleak           0.018         0.135         15240         76         2823	Building Air Leakage Heat Gain     B
		Levels
	Air Leakage Heat Loss/Gain Multiplier Table (Section 1	
	Factor (LF)   Air   Heat Loss   Multip   1   0.5   4966   0.28	(LF) (LF) (LF) (LF)   (LF)
	2     0.3       3     0.2       4     0         2823     6031       3905     0.14       0     0.00	446 0.2 0.2
	HG LEAK 22 0.00	
	BUILDING CONDUCTIVE HEAT GAIN 5716 0.00	
	Ventilation Heat Loss	Calculations  Ventilation Heat Gain
Vent	Ventilation Heat Loss	Ventilation Heat Gain  C PVC HG^T HGbvent  1.1 60 9.2 596
	Case 1	Case 1
	Ventilation Heat Loss (Exhaust only Systems)	Ventilation Heat Gain (Exhaust Only Systems)
Case 1	Case 1 - Exhaust Only           Level         LF         HLbvent         LVL Cond. HL         Multiplier           1         0.5         4966         0.50           2         0.3         6031         0.24           3         0.2         3905         0.25           4         0         0         0.00	Case 1 - Exhaust Only Multiplier  HGbvent 596 Building 5716  O.10
	Case 2	Case 2
2	Ventilation Heat Loss (Direct Ducted Systems)	Ventilation Heat Gain (Direct Ducted Systems)
Case	C         HL^T         (1-E) HRV         82.08           1.08         76         1.00	Multiplier
	Case 3	Case 3
3	Ventilation Heat Loss (Forced Air Systems)	Ventilation Heat Gain (Forced Air Systems)
Case	Total Ventilation Load 4925 0.33	HGbvent HG*1.3 596 0.10
	Foundation Conductive Heatloss Level 1	1220 Watts 4163 Btu/h

# **Envelope Air Leakage Calculator**

Supplemental tool for CAN/CSA-F280

Weather Sta	tion Description		
Province:	Ontario	•	
Region:	Durham	•	
Weather Station Location:	Open flat terrain, grass	T	
Anemometer height (m):	10		
Local	Shielding		
Building Site:	Suburban, forest	~	
Walls:	Heavy	•	
Flue:	Heavy	•	
Highest Ceiling Height (m):			5.79
Building C	Configuration	6.4	
Type:	Semi-Detached		
Number of Stories:	Two	¥	
Foundation:	Full	T	
House Volume (m³):	566.3	4:	31.60
Air Leakag	e/Ventilation		
Air Tightness Type:	Present (1961-) (ACH=3.57)	¥	
Custom DDT Data	ELA @ 10 Pa. 185,83	cm²	
Custom BDT Data:	3.57 ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply: Total Exhaust	t:	
	0 30		
Flu	ie Size		
Flue #:	#1 #2 #3	#	‡ <b>4</b>
Diameter (mm):	0 0 0		0
Envelope Ai	ir Leakage Rate		
Heating Air Leakage Rate (ACH/H	): 0.135		
Cooling Air Leakage Rate (ACH/H)	0.009		

# **Residential Foundation Thermal Load Calculator**

Supplemental tool for CAN/CSA-F280

Weat	her Sta	tion Description
Province:	Ontario	▼
Region:	Durham	▼
	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):	15.26	
Floor Width (m):	3.48	
Exposed Perimeter (m):	30.48	
Wall Height (m):	2.74	
Depth Below Grade (m):	2.13	Insulation Configuration
Window Area (m²):	0.84	
Door Area (m²):	0.00	
	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):		1220

RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE SUPPLY AIR **DUCT CONNECTION** LOW/HIGH WALL/KICK SUPPLY DIFFUSER FLEX DUCT R.A. HRV EXHAUST GRILL RIDIT ROUND DUCT 1 THERMOSTAT RETURN AIR PIPE RISER 0 SUPPLY AIR PIPE RISER 8 RETURN AIR FROM BASEMENT SECOND FLOOR PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER VOLUME DAMPER RETURN ROUND DUCT W/R & PRINCIPAL EXHAUST FAN 12 <u>6"</u>[]8 <u>B - 8 X 8</u> -A - 18 X 8 unfinished basement Z - 22 X 8 DROP 24 X 10 C - 14 X 8 6" → > H FLC 5R 1R∭ 55

3R

17

 $\mathsf{L}$ 

11 🗆 40

dn 13R

F 14

IROUG

6"

6" 03

<u>D - 8 X 8 -</u>

UNEXCAVATED

HEAT-LOSS

INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. R12

ALL DUCTWORK MUST BE SEALED TO CLASS A LEVEL AS PER OBC PART 6-6.2.4.3. (11)

CIRCULATION PRINCIPAL **FAN SWITCH** TO BE CENTRALLY LOCATED

FURNACE EQUIPPED WITH BRUSHLESS DC MOTOR AS PER OBC 12.3.1.5 (2)

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

Jane 166 B.C.I.N. 32964

**OBC 2012** 

**ZONE 1 COMPLIANCE** PACKAGE "D" REF. TABLE 2.1.1.2.A

#### **NOTES**

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE

ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)
INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.
HEATING CONTRACTOR MUST WORK FROM APPROVED

ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSABILITY OF GTA DESIGNS.

GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHUAST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING



2985 DREW ROAD SUITE 202,

MISSISSAUGA, ONT. L4T 0A4 TEL: 416-268-6820 email: dave@gtadesigns.ca web: www.gtadesigns.ca

22,780	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
GMEC960302BNA	
UNIT HEATING INPUT	BTU/HR.
30,000	
UNIT HEATING OUTPUT	BTU/HR.
28,800	
A/C COOLING CAPACITY	TONS.
1.5	
FAN SPEED	CFM
621	

BTU/HR.

Y - 18 X 8

UNEXCAVATED

**Q**2

# OF RUNS	S/A	R/A	FANS	l
3RD FLOOR				l
2ND FLOOR	5	2	2	
1ST FLOOR	6	2	2	
BASEMENT	3	1		
				:
ELOOR PLAN:				ı

FLOOR PLAN:			
	BASE	MENT	
DRAWN BY:	CHECKED:	SQFT	
RB	DD	1194	
LAYOUT NO		DRAWING NO.	
.IR-00697		l M1 <b>i</b>	

JUNE 17, 2015
DELPARK HIGHCASTLE
MODEL:
FP TOWN 3 - NEWPORT

PROJECT: NORTHGLEN BOWMANVILLE, ONT. 3/16" = 1"-0"

RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE SUPPLY AIR DUCT CONNECTION FLEX DUCT LOW/HIGH WALL/KICK SUPPLY DIFFUSER TO JOIST LINING R.A. RETURN AIR HRV EXHAUST GRILL RIDIT ROUND DUCT @ ⊘ 1 THERMOSTAT RETURN AIR PIPE RISER SUPPLY AIR PIPE RISER 8 RETURN AIR FROM BASEMENT SECOND FLOOR PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER VOLUME DAMPER RETURN ROUND DUCT W/R & PRINCIPAL EXHAUST FAN 4" X 10" 6"Ø great 8 4" X 10" 6"Ø ₩ 5 1 🖘 6 4" X 10" 6"Ø DW kitchen **∑**1R DN 3R FLR - □ 2 30X6 FLC4R GARAGE foyer

> INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. R12

> ALL DUCTWORK MUST BE SEALED TO CLASS A LEVEL AS PER OBC PART 6-6.2.4.3. (11)

CIRCULATION PRINCIPAL **FAN SWITCH** TO BE CENTRALLY LOCATED

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

B.C.I.N. 32964
Signature of Designer

**OBC 2012** 

**ZONE 1 COMPLIANCE** PACKAGE "D" REF. TABLE 2.1.1.2.A

### **NOTES**

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE

SPECIFIED ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY) INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.

HEATING CONTRACTOR MUST WORK FROM APPROVED PLANS.

ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSABILITY OF GTA DESIGNS.
GTA DESIGNS MUST BE CONSULTED IF KITCHEN

EXHUAST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING

# gtaDesigns

2985 DREW ROAD SUITE 202,

MISSISSAUGA, ONT. L4T 0A4 TEL: 416-268-6820 email: dave@gtadesigns.ca web: www.gtadesigns.ca

ZZ,10U	_
, ,	Ι-
UNIT MAKE OR EQUAL.	1
AMANA	$\vdash$
UNIT MODEL OR EQUAL.	
GMEC960302BNA	
UNIT HEATING INPUT BTU/HR.	$\vdash$
30,000	
UNIT HEATING OUTPUT BTU/HR.	
28,800	FLO
A/C COOLING CAPACITY TONS.	DRA
1.5	DIVA
FAN SPEED CFM	LAY
621	Ι,

COVERED

PORCH

HEAT-LOSS

BTU/HR.	# OF RUNS	S/A	R/A	FANS
OR EQUAL.	3RD FLOOR			
OR EQUAL.	2ND FLOOR	5	2	2
B.T. 141.B	1ST FLOOR	6	2	2
BTU/HR.	BASEMENT	3	1	
BTU/HR.	-			

9 CAV

OOR PLAN	N:	
(	ROUND	FLOOR
RAWN BY:	CHECKED:	SQFT
RB	DD	1194
YOUT NO		DRAWING NO.
.IR-00697		l M2 I

JUNE 17, 2015 DELPARK HIGHCASTLE FP TOWN 3 - NEWPORT

PROJECT: NORTHGLEN BOWMANVILLE, ONT. 3/16" = 1"-0"

FLEX DUCT RIDIT ROUND DUCT SUPPLY DIFFUSER

LOW/HIGH WALL/KICK SUPPLY DIFFUSER HRV EXHAUST GRILL **a**l<del><</del> + 0 SUPPLY AIR PIPE RISER VOLUME DAMPER

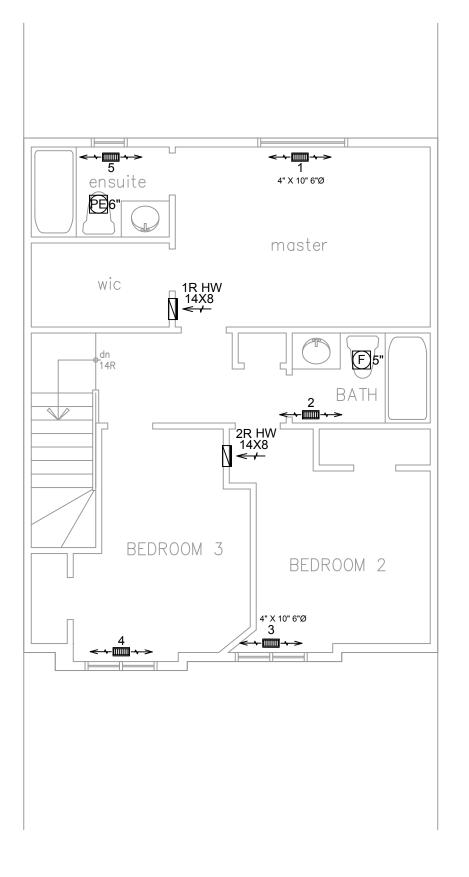


DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT

RETURN AIR GRILLE  $\stackrel{\downarrow}{=}$ (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE 

R.A. ①

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



INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. R12

ALL DUCTWORK MUST BE SEALED TO CLASS A LEVEL AS PER OBC PART 6-6.2.4.3. (11)

CIRCULATION PRINCIPAL **FAN SWITCH** TO BE CENTRALLY LOCATED

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

B.C.I.N. 32964
Signature of Designer

**OBC 2012** 

**ZONE 1 COMPLIANCE** PACKAGE "D" REF. TABLE 2.1.1.2.A

### **NOTES**

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.
ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE

ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)
INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN. HEATING CONTRACTOR MUST WORK FROM APPROVED

ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSABILITY OF GTA DESIGNS.

GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHUAST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING

# gtaDesigns

2985 DREW ROAD SUITE 202,

MISSISSAUGA, ONT. L4T 0A4 TEL: 416-268-6820 email: dave@gtadesigns.ca web: www.gtadesigns.ca

UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
GMEC960302BNA	-
UNIT HEATING INPUT	BTU/HR.
30,000	
UNIT HEATING OUTPUT	BTU/HR.
28,800	
A/C COOLING CAPACITY	TONS.
1.5	
FAN SPEED	CFM
621	

22,780

HEAT-LOSS

BTU/HR.

RΒ

DD JB-00697

# OF RUNS	S/A	R/A	FANS	DATE:
3RD FLOOR				CLIEN
2ND FLOOR	5	2	2	DE
1ST FLOOR	6	2	2	MODEI
BASEMENT	3	1		FP
				PROJE
SECOND FLOOR			I KOOL	

1194

M3

l	JUNE 17, 2015
l	DELPARK HIGHCASTLE
1	MODEL:
	FP TOWN 3 - NEWPORT
1	PROJECT:

NORTHGLEN BOWMANVILLE, ONT. 3/16" = 1"-0"