

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					
Build	ing number, street name				Lot:	
		FP Town 5 -			Lot/con.	
	cipality	Clarington		Plan number/ other description		
		takes responsibility for desig				
Nam		David DaCosta		Firm	gtaDesigns Inc.	
	et address	2985 Drew Roa	d, Suite 202		Unit no.	Lot/con.
Muni	cipality	Mississauga	Postal code L4T 0A4	Province Ontario	E-mail dave@gtades	igns.ca
Tele	phone number		Fax number		Cell number	-
C.	(905) 671-	9800 า by individual identified in S		') 494-9643 ilding Code Table '	(416) 268-6	6820
O .	Design activities undertaker	i by iliaividual idelitilled ili 3	ection b. [bu	ilding Code Table	3.3.2.1 Of Division Cj	
	☐ House				Building Structural	
	☐ Small Buildings	☐ Building Se	ervices		☐ Plumbing – House	
	☐ Large Buildings		Lighting and Pov	wer	☐ Plumbing – All Building	
	☐ Complex Buildings	☐ Fire Protect			☐ On-site Sewage System	
Des	cription of designer's work	Mod	del Certification	1	Project #	
Hoot	ing and Cooling Load Calculation	one		Builder	Layout # Delpark/Highcastle H	
	lystem Design	ons		Project	Northglen	omes
	dential mechanical ventilation D	Design Summary		Model	J	
	dential System Design per CAN				FP Town 5 - Windh	am
	dential New Construction - Ford	ced Air		SB-12	Package D	
υ.	Declaration of Designer	David Da Oaata	-ll tht /-			
	·	David DaCosta	declare that (c	choose one as appro	priate):	
		(print name)				
	3	review and take responsibility for t 3.2.4 Division C of the Building Coc classes/categories.				
		Individual BCIN:			_	
		Firm BCIN:			_	
		I review and take responsibility for other designer" under subsection	•		. 0,	
		Individual BCIN:	3296	64		
		Basis for exemp	tion from registra	ation:	Division C 3.2.4.1. (4)	
	п т	The design work is exempt from the	e registration and	d qualification requiren	nents of the Building Code.	
		Basis for exemp	tion from registra	ation and qualification:		
I cert	ify that:					
1.	•	nis schedule is true to the best of m	ny knowledge.			
2.	I have submitted this application	on with the knowledge and consent	of the firm.			
	June 1	7, 2015		Mane A	Contraction of the contraction o	
	Da	ate		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 calcul	ation summary sheet CSA-F280-M12 Standard
	rk/Highcastle Homes Form No. 1
and may not be used by any other persons without authorization. Docum	
	Location
Address (Model): FP Town 5 - Windham	Site: Northglen
Model:	Lot:
City and Province: Clarington	Postal code:
	ns based on
	assidy & Co. Dwgs Dated Apr/2013
Attachment: Townhome	Front facing: East/West Assumed? Yes
	<u> </u>
	` ,
Weather location: Durham HRV?	Wind exposure: Shelterd
Sensible Eff. at -25C 0 Apparent Effect. at -0C 0	Internal shading: Light-translucent Occupants: 4 Units: Imperial Area Sq. ft 1528
	· · ·
Heating design conditions Outdoor temp -4.0 Indoor temp: 72 Mean soil tem; 48	Cooling design conditions Outdoor temp 84 Indoor temp: 75 Latitude: 44
	, , , ,
Above grade walls Style A: As per Selected OBC SB12 Package D R 24	Below grade walls Style A: As per Selected OBC SB12 Package D R 20
·	Style A: As per Selected OBC SB12 Package D R 20 Style B:
Style B: Existing Walls (When Applicable) R 12 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 31	Doors
Style B:	Style A: As per Selected OBC SB12 Package D R 3.01
Windows	Style B:
As you Colored ODO CD40	Style C:
Frieding Mindows (Mindows Applicable)	Skylights
Cityle B.	Style A: As per Selected OBC SB12 Package D R 2.03
Style C: Style D:	Style B:
Attached documents: As per Shedule 1	- 2
<u> </u>	Construction - Forced Air
	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
	uu. v Ogluudoligiiolou



Builder: Delpark/Highcastle Homes

Air System Design

SB-12 Package D 2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643 e-mail dave@gtadesigns.ca

June 17, 2015 2015

System 1

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.

Project #

Page 3 PJ-00022 IR-00701

Project: N	Northglen			Model:		FP T	own 5 -	Windha	am			Sy	/stem	1		of the Bui Individual		32964	Ma	u 16	€.		David Da	Costa		ject # /out #		-00022 -00701
DESIGN LOAD SPECIFICAT	TIONS			AIR DISTI	RIBUTION	& PRES	SURE					URNACE	AIR HA	NDLER D	ATA:			BOILER/M	/ATER H	EATER D	ATA:			A	VC UNIT	DATA:		
																	Į.											
Level 1 Net Load	8,919	btu/h		Equipmen	nt Externa	I Static P	ressure		0.5 "	w.c.		Make		Ama	ına			Make			т	уре		4	Amana		1.5	Γon
Level 2 Net Load	7,349	btu/h		Additiona	I Equipme	ent Press	ure Drop		0.225 "	w.c.		Model		GMEC960	302BNA			Model						c	ond		1.5	
Level 3 Net Load	6,151			Available					0.275 "			nput Btu/		3000				Input Btu/						c	oil		1.5	
Level 4 Net Load		btu/h		Return Br			ctive Len	gth	300 f			Output Bt	u/h	288				Output Bt										
Total Heat Loss	22,420			R/A Plenu					0.138 "			E.s.p.		0.5	0	" W.C.		Min.Outpu	ıt Btu/h			WH						
Total Heat Gain	12,599			S/A Plenu					0.14 "			Nater Ter	np			deg. F.							wer DATA					
Total Heat Loss + 10%	24,662			Heating A			-			fm/btuh		AFUE		96%	%			Blower Sp	eed Sele	cted:	T2			Е	Blower Ty		ECM	
Building Volume Vb	17300			Cooling A	ir Flow P	•	-			fm/btuh	-	Aux. Heat													•		BC 12.3.1	,
Ventilation Load	5,521						R/A Temp			leg. F.		SB-12 Pac	ckage	Packa	ge D			Heating C	heck _	<u>621</u> c	fm			C	Cooling C	heck _	621	cfm
Ventilation PVC		cfm		5			S/A Temp		113 c	leg. F.																		
Supply Branch and Grill Siz	zing			Diffuser le	oss _	0.01	w.c.					Temp. Ris	se>>>	43 0	deg. F.			Selected of	:tm>	621 c	tm		,	Cooling A	Ir Flow R	ate _	621	etm
							Level 1 0	Outlets													Level 2 C	Outlets						
S/A Outlet No.	8	13	14	15											7	9	10	11	12									
Room Use	CAV		BASE												KIT	FOY	PWD		GRT									
Btu/Outlet	3452		1822	1822											2545	2338	556	382	1527									
Heating Airflow Rate CFM	96	50	50	50											71	65	15	11	42									
Cooling Airflow Rate CFM	3	6	6	6											75	78	14	90	89									
Duct Design Pressure	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Actual Duct Length	41	21	16	16											34	26	16	7	21									
Equivalent Length	140	120	90	140	90	90	90	90	90	90	90	90	90	90	120	100	130	150	100	90	90	90	90	90	90	90	90	90
Total Effective Length	181	141	106	156	90	90	90	90	90	90	90	90	90	90	154	126	146	157	121	90	90	90	90	90	90	90	90	90
Adjusted Pressure	0.07	0.09	0.12	0.08	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.08	0.10	0.09	0.08	0.11	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Duct Size Round	6	5	5	5											6	6	3	6	6									
Outlet Size	4x10	3x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10
Trunk	С	В	Α	С											В	С	С	С	В									
							Level 3 (Outlets													Level 4 C	Outlets						
S/A Outlet No.	2	3	4	5	6																							
Room Use	MAST	ENS	BATH	BED 2	BED 3																							
Btu/Outlet	2093	742	171	1642	1503																							
Heating Airflow Rate CFM	58	21	5	45	42																							
Cooling Airflow Rate CFM	96	23	4	69	63																							
Duct Design Pressure	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Actual Duct Length	45	53	41	37	44																							
Equivalent Length	110		160		110	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Total Effective Length	155		201	167	154	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Adjusted Pressure	0.08	0.07	0.06	0.08	0.08	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	0.14	0.14	0.14	0.14	0.14
Duct Size Round	6	4	2	6	5																							
Outlet Size	4x10		3x10		3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10
Trunk	В	Α	Α	С	С																							
Return Branch And Grill Siz	rina		Crill Brog	ssure Loss		0.02 "							Doturn T	runk Duct	Cizina						Supply Tri	unk Duct	Cizina					
Return Branch And Grill Siz	zing 1R		Grill Pres	ssure Loss	5 5R	0.02 6R	w.c 7R	8R	9R	10R	11R	-	return i Trunk			Press. F	Round	Rect.	Size	_	runk			Press. R	Round	Rect.	Size	
Inlet Air Volume CFM	100		270		111	OI.	710	OIX	310	IOIX	1110		iiuiik	,	J1 IVI	11033.	\ounu	Nect.	5126		Tulik	`	J. 141 1	1633.	Count	Nect.	0126	
Duct Design Pressure	0.12		0.12		0.12	0.12	0.12	0.12	0.12	0.12	0.12		Orop		621	0.06	13.0	24x10		,			297	0.06	10.0	12x8	10x10	
Actual Duct Length	20		5		5	0.12	0.12	0.12	0.12	0.12	0.12	2	-		621	0.06	13.0	18x8	14x10	É	-		221	0.08	8.5	8x8	107	
Equivalent Length	180		145		130	70	70	70	70	70	70	١			140	0.06	7.5	8x8	87				324	0.07	10.0	12x8	10x10	
Total Effective Length	200		150		135	70	70	70	70	70	70)			140	0.00	1.5	0.00	01		-		324	0.07	10.0	12.00	10410	
Adjusted Pressure	0.06	0.06	0.08	0.06	0.09	0.17	0.17	0.17	0.17	0.17	0.17		N															
Duct Size Round	6.0		9.0		6.0	0.17	0.17	0.17	0.17	0.17	0.17	,									-							
Inlet Size	8.0	8.0	9.0	FLC	FLC							,	-															
miet Size	o X	o X	o X	FLC	FLC	x	v	v	x	v	v	1																
Inlet Size	14		30	*	*	^	^	^	^	*																		
lot OILC	14	14	30									F									ı							
Trunk	z	Υ	z	Υ	z																(



Total Heat Loss

Total Heat Gain

22,420 btu/h

12,599 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:	Delpark/Highcas	tle Homes	_	Date:		June 17, 20	115			Weati	her Data	Durham	44	-4.0 84	20 48.2			Page 4
2012 OBC	Project:	Northgle	en	м	odel:	F	P Town 5 - Wi	ndham		System 1	Heat	t Loss ^T	76 deg. F	Ht gain ^T	9.2 deg. F	GTA:	1528	Project # Layout #	PJ-00022 JB-00701
Run ft. exposed wall A Run ft. exposed wall B Ceiling height Floor area			CA' 28 A B 1.0 AG 170 Area	v	BAS 62 A B 2.0 AG 616 Area	SE .	A B AG Area	A B A		A B AG Area	A B AG Area		A B AG Area	A B AG Area		A B AG Area	A B AG Area		A 3 AG Area
Exposed Ceilings A Exposed Ceilings B			A B		A B		A B	A B		A B	A B		A B	A B		A B	A B		A 3
Exposed Ceilings B Exposed Floors			170 Flr		Flr		Flr	FI		Flr	Fir		Flr	Flr		Fir	Fir		e Filr
Gross Exp Wall A			28		124														
Gross Exp Wall B Components	R-Values I	Loss Gain	Loss	Gain	Loss	Gain	Loss	Gain Lo	oss Gain	Loss Ga	in Loss	Gain	Loss Gain	Loss	Gain	Loss Gain	Loss	Gain	oss Gain
North Shaded	3.15	24.13 10.74				15 460													
East/West South	3.15 3.15	24.13 27.18 24.13 20.71			6 14	163													
Existing Windows	1.99	38.19 21.24																	
Skylight Doors	2.03 3.01	37.44 87.34 25.25 3.06																	
Net exposed walls A	13.79	5.51 0.67	28	19	118	79													
Net exposed walls B Exposed Ceilings A	8.50 50.00	8.94 1.08 1.52 0.72																	
Exposed Ceilings B	22.86	3.32 1.58																	
Exposed Floors Foundation Conductive Heatloss	22.05 Slab On G	3.45 0.15	170 58 124		275	:0													
Total Conductive Heat Loss	Siab Oil G	stade (x)	182		289														
Heat Gain Air Leakage Heat Loss/Gain		0.3672 0.0054	67	43	106	242													
Case 1	x	0.52 0.0054	95		150														
Ventilation Case 2		82.08 9.94																	
Case 3 Heat Gain People		0.35 0.11																	
Appliances Loads	1 =.25 p	ercent 2730																	
Duct and Pipe loss Level 1 HL Total 8,919	To	10% otal HL for per room	345	:2	546	:7													
Level 1 HG Total 415	Total	HG per room x 1.3	343	63	340	352													
Level 2			КП	г	FO	Y	PWD	ı	LAUND	GRT									
Run ft. exposed wall A	•		20 A		00.4					12 A	Α		_						
Run ft. exposed wall B					20 A		5 A	5 A					A	A		A	A		4
			В		В		В	В		В	В		A B	A B		A B	A B		A B
Ceiling height Floor area					B 10.0 108 Area		B 10.0 25 Area			B 10.0 187 Area	B Area		B Area	B Area		B Area	B Area	!	3 Area
Ceiling height Floor area Exposed Ceilings A			B 10.0 180 Area A		B 10.0 108 Area A		B 10.0 25 Area A	10.0 62 A A	rea	B 10.0 187 Area A	B Area A		B Area A	B Area A		B Area A	B Area A		3 Area A
Ceiling height Floor area			B 10.0 180 Area		B 10.0 108 Area		B 10.0 25 Area	10.0 62 A	rea	B 10.0 187 Area	B Area		B Area	B Area		B Area	B Area		3 Area A
Ceiling height Flor area Exposed Ceilings A Exposed Floors Gross Exp Wall A			B 10.0 180 Area A B		B 10.0 108 Area A B		B 10.0 25 Area A B	B 10.0 62 A A B	rea	B 10.0 187 Area A B	B Area A B		B Area A B	B Area A B		B Area A B	B Area A B		3 Area A 3
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors			B 10.0 180 Area A B Fir 200	Gain	B 10.0 108 Area A B Fir	Gain	B 10.0 25 Area A B Fir 50	B 10.0 62 A A B FI 50	rea	B 10.0 187 Area A B Fir	B Area A B Fir	Gain	B Area A B	B Area A B Fir		B Area A B	B Area A B	, , ,	3 Area A 3
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded	3.15	24.13 10.74	B 10.0 180 Area A B Fir 200		B 10.0 108 Area A B FIr 200 Loss		B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A B Fi 50 Gain Lo	rea Ir	B 10.0 187 Area A B Fir 120	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components			B 10.0 180 Area A B Fir 200		B 10.0 108 Area A B Fir 200		B 10.0 25 Area A B Fir	B 10.0 62 Ai A B Fi 50 Gain Lo	rea Ir	B 10.0 187 Area A B Fir	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South	3.15 3.15 3.15 1.99	24.13 10.74 24.13 27.18 24.13 20.71 38.19 21.24	B 10.0 180 Area A B Flr 200 Loss		B 10.0 108 Area A B FIr 200 Loss		B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A B Fi 50 Gain Lo	rea Ir	B 10.0 187 Area A B Fir 120	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight	3.15 3.15 3.15 1.99 2.03	24.13 10.74 24.13 27.18 24.13 20.71 38.19 21.24 37.44 87.34	B 10.0 180 Area A B Fir 200 Loss 35 84		B 10.0 108 Area A B FIr 200 Loss	326	B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A B Fi 50 Gain Lo	rea Ir	B 10.0 187 Area A B Fir 120	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Net exposed walls A	3.15 3.15 3.15 1.99 2.03 3.01 15.13	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	B 10.0 180 Area A B Fir 200 Loss 35 84	4 951	B 10.0 108 Area A B Fir 200 Loss	90 326	B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A B Fi 50 Gain Lo	rea Ir	B 10.0 187 Area A B Fir 120	B Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
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 Net exposed walls A	3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50	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	B 10.0 180 Area A B Fir 200 Loss 35 84	4 951	B 10.0 108 Area A B Fir 200 Loss 12 25	90 326	B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A B B 50 61 Ai A B B 61 Ai A B B 61 Ai A B 61 Ai A B 61 Ai	rea Ir	B 10.0	Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Net exposed walls A Net exposed Ceilings A Exposed Ceilings A	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	B 10.0 1800 Area A B B Fir 2000 Loss 844	4 951	B 10.0 108 Area A B Fir 200 Loss 12 25	90 326	B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A B B 50 61 Ai A B B 61 Ai A B B 61 Ai A B 61 Ai A B 61 Ai	rea Ir	B 10.0	Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
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 Net exposed walls A Net exposed walls B Exposed Ceilings A Exposed Ceilings A	3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	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	B 10.0 1800 Area A B B Fir 2000 Loss 844	4 951	B 10.0 108 Area A B Fir 200 Loss 12 25	90 326	B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A B B 50 61 Ai A B B 61 Ai A B B 61 Ai A B 61 Ai A B 61 Ai	rea Ir	B 10.0	Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Net exposed walls A Net exposed ceilings A Exposed Ceilings A Exposed Ceilings A Exposed Ceilings A Fexposed Ceilings A Exposed Ce	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	B 10.0 1800 Area A B B Fir 2000 Loss 844	951	B 10.0 108 Area A B Fir 200 Loss 12 25	9 46 9 105	B 10.0 25 Area A B Fir 50 Loss	B 10.0 62 Ai A A B FI 50 Gain Lot 163 27 50	rea Ir	B 10.0	B Area A B Fir Loss	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
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 Net exposed walls A Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors Foundation Conductive Heat Loss Total Conductive Heat Casi	3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	24.13 10.74 24.13 27.18 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 6rade (x) x	B 10.0 1800 Area A B Fir 200 Loss 35 84	951	10.0 108 Area A B Fir 200 Loss 12 25 173 86	326 79 46 99 105	B 10.0 25 Area A B Fir 50 Loss 44 221	B 10.0 62 Ai A B B 50 61 Ai A B B 61 Ai A B B 61 Ai A B 61 Ai A B 61 Ai	rea ir oss Gain 251 30	B 10.0 187 Area A B Fir 120 Loss Ga 21 507	Area A B Fir	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Net exposed walls A Net exposed ceilings A Heat Loss/Gain Air Leakage Heat Loss/Gain Gase 1	3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05	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 6rade (x) x	B 10.0 1800 Area A B Fir 200 Loss 84 165 82 165 55 55 55	951 9 100 19 1051 1051 10 6	10.0 108 Area A B Fir 200 Loss 12 25 15 33 173 86	79 46 199 105 177 477 11 3	B 10.0 25 Area A B Fir 50 Loss 44 221	B 10.0 62 Ai A B B 50 F F F F F F F F F F F F F F F F F F	rea	B 10.0 187 Area A B Fir 120 Loss G: 21 507	B Area A B Fir Loss	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
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 Net exposed walls A Exposed Ceilings A Exposed Ceilings A Exposed Ceilings B Exposed Ceilings B Exposed Floors Total Conductive Heatloss Total Conductive Heat Loss Heat Loss/Gain Air Leakage Heat Loss/Gain Ventilation Case 2 Ventilation	3.15 3.15 3.15 3.15 3.19 2.03 3.01 15.13 8.50 50.00 22.86 22.05 Slab On G	24.13 10.74 24.13 27.18 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 6rade (x) x 0.2154 0.0054 0.31 0.11 82.08 9.94	B 10.0 1800 Area A B Fir 200 Loss 84 165 82 167 36 51	951 9 100 19 1051 1051 10 6	10.0 108 Area A B Fir 200 Loss 12 25 15 33 173 86	79 46 199 105 177 477 11 3	B 10.0 25 Area A B Fir 50 Loss 44 221 366 79	B 10.0 62 Ai A B B 50 F F F F F F F F F F F F F F F F F F	rea	B 10.0 187 Area A B Fir 120 Loss G: 21 507 99 497	B Area A B Fir in Loss 571 60 631 3	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area Exposed Ceilings A Exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors Net exposed walls A Net exposed ceilings A Heat Loss/Gain Air Leakage Heat Loss/Gain Gase 1	3.15 3.15 3.15 3.15 3.19 2.03 3.01 15.13 8.50 50.00 22.86 22.05 Slab On G	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 6rade (x) x	B 10.0 1800 Area A B Fir 2000 Loss 844 165 82 167 36 51	951 9 100 9 1051 1051 10 6	10.0 108 Area A B Fir 200 Loss 12 25 15 33 173 86	79 46 199 105 177 477 11 3	B 10.0 25 Area A B Fir 50 Loss 44 221 366 79	B 10.0 62 Ai A B B 50 F F F F F F F F F F F F F F F F F F	rea	B 10.0 187 Area A B Fir 120 Loss G: 21 507 99 497	B Area A B Fir in Loss 571 60 631 3	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area	3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.65 22.05 Slab On G	24.13 10.74 24.13 27.18 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 6rade (x) x 0.2154 0.0054 0.31 0.11 82.08 9.94 0.35 0.11 239 ercent 2730	B 10.0 1800 Area A B Fir 200 Loss 84 165 82 167 36 51	951 9 100 9 1051 1051 10 6	10.0 108 Area A B Fir 200 Loss 12 25 15 33 173 86	79 46 199 105 177 477 11 3	B 10.0 25 Area A B Fir 50 Loss 44 221 366 79	B 10.0 62 Ai A B B 50 F F F F F F F F F F F F F F F F F F	rea	99 497 1004 216 307	B Area A B Fir in Loss 571 60 631 3	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area	3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05 Slab On G	24.13 10.74 24.13 27.18 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 3.35 1.58 3.45 0.15 6rade (x) x 0.2154 0.0054 0.31 0.11 82.08 9.94 0.35 0.11 239 ercent 2730	B 10.0 1800 Area A B Fir 200 Loss 84 165 82 167 36 51	.4 951 .9 100 .9 100 .0 6 .0 6 .119	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	79 46 199 105 177 477 11 3 170 54	B 10.0 25 Area A B Fir 50 Loss 44 221 366 79	B 10.0 62 Ai A B FI 50 Gain L 163 27 50 190 1 21 21	rea lr 251 30 251 30 54 0 777 3	B 10.0 187 Area A B Fir 120 Loss Ga 21 507 99 497 1004 216 307	B Area A B Fir Control	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir
Ceiling height Floor area	3.15 3.15 3.15 1.99 2.03 3.01 15.13 8.50 50.00 22.86 22.05 Slab On G	24.13 10.74 24.13 27.18 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 6rade (x) x 0.2154 0.0054 0.31 0.11 82.08 9.94 0.35 0.11 239 ercent 2730	B 10.0 1800 Area A B Fir 200 Loss 84 165 82 167 51	.4 951 .9 100 .9 100 .0 6 .0 6 .119	B 10.0 108 Area A B Fir 200 Loss 12 25 15 33 47 47	79 46 199 105 177 477 11 3 170 54	B 10.0 25 Area A B Fir 50 Loss 44 221 366 79 112	B 10.0 62 Ai A B FI 50 Gain L 163 27 50 190 1 21 21	rea Ir	99 497 1004 1100 1100 1100 1100 1100 1100	B Area A B Fir Control	Gain	B Area A B Fir	B Area A B Fir		B Area A B Fir	B Area A B Fir	, , ,	3 Area A 3 Fir

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

Mana Alexa

David DaCosta

SB-12 Package

Package D



Total Heat Loss

Total Heat Gain

22,420

12,599

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

													e-man dave	@gtadesigns.ca							
		Builder:	Delpark/High	castle Homes	Date	e:		June 17, 201	15				Weather Data	Durham	44	-4.0 84	20	48.2			Page 5
2012 OBC		Project:	Norti	nglen	Mode	l:	FP	Town 5 - Win	dham		System	1	Heat Loss ^T	76 deg. F	Ht gain ^T	9.2 de	g. F	GTA: 1	1528	Project # Layout #	PJ-00022 JB-00701
	Level 3			MAST	т	ENS		BATH	BED 2		BED 3										
Run	ft. exposed wall A			16 A		6 A		Α	12 A		12 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.			8.0	8.0		8.0										
	Floor area			268 Area 268 A		O Area		75 Area 75 A	175 Area 175 A		169 Area 169 A		Area	Area A	Area		Area		Area A		Area
	xposed Ceilings A xposed Ceilings B			268 A B	8	B		75 A B	1/5 A B		169 A B		A B	В	A B		A B		В		A B
	Exposed Floors			Flr		Flr		Flr	Fir		Fir		Flr	Flr	Fir		Fir		Flr		Flr
	Gross Exp Wall A			128	4	8			96		96										
	Gross Exp Wall B			_																	
	Components North Shaded	R-Values L	24.13 Gain	Loss	Gain	Loss	Gain	Loss (Gain Loss	Gain	Loss	Gain	Loss Gain	Loss Gain	Loss	Gain	Loss	Gain	Loss (Gain	Loss Gain
	East/West	3.15	24.13 10.		652	9 217	245		18 434	489	18 434	489									
	South	3.15	24.13 20.		002	2.17	243		10 404	403	10 404	403									
	Existing Windows	1.99	38.19 21.	.24																	
	Skylight	2.03	37.44 87.																		
	Doors	3.01		.06																	
	et exposed walls A et exposed walls B			.61 104 522 .08	63 3	9 196	24		78 392	47	78 392	47									
	xposed Ceilings A			72 268 407	194 8	0 122	58	75 114	54 175 266	127	169 257	122									
E	xposed Ceilings B	22.86	3.32 1.	.58					200												
	Exposed Floors	22.05	3.45 0.	.15																	
Foundation Cond								444	4000		4000										
Total Conductive	Heat Loss Heat Gain			1509	909	535	326	114	1092 54	663	1083	659									
Air Leakage	Heat Loss/Gain		0.1601 0.00	54 242		86	2	18	0 175	4	173	4									
	Case 1	X	0.23 0.	.11 343	103	122	37	26	6 248	75	246	74									
Ventilation	Case 2			.94																	
	Case 3			.11	4=0																
	Heat Gain People Appliances Loads	1 =.25 pe		39 2	478				1	239	1	239									
	Duct and Pipe loss	1 =.23 pc		0%				1 13	6 1 127	98											
Level 3 HL Total	6,151	Tot	al HL for per roo		3	742		171	1642		1503										
Level 3 HG Total	5,176	Total	HG per room x	1.3	1944		474		87	1402		1269									
-																					
	Level 4																				
	ft. exposed wall A			Α		Α	2015	Α	Α		Α		Α	Α	Α		Α		Α		Α
Run	ft. exposed wall B			В		В		В	В		В		В	В	В		В		В		В
	Ceiling height Floor area			Area		Area		Area	Area		Area		Area	Area	Area		Area		Area		Area
E:	xposed Ceilings A			A		A		A	A		A		A	A	A		A		A		A
	xposed Ceilings B			В		В		В	В		В		В	В	В		В		В		В
	Exposed Floors			Flr		Flr		Flr	Flr		Flr		Flr	Flr	Flr		Flr		Flr		Fir
	Gross Exp Wall A																				
	Gross Exp Wall B Components	R-Values L	oss Gain	Loss	Gain	Loss	Gain	Loss (Gain Loss	Gain	Loss	Gain	Loss Gain	Loss Gain	Loss	Gain	Loss	Gain	Loss (Gain	Loss Gain
	North Shaded	3.15	24.13 10.		Juni	2033	Juin	2033	Jani Loss	Cam		Juni	LUSS Cam	LUSS Cam	T [Juni	2033	Cam	1033	Juin	Loss Guiii
	East/West	3.15	24.13 27.	.18																	
	South	3.15	24.13 20.																		
	Existing Windows	1.99	38.19 21.																		
	Skylight Doors	2.03 3.01	37.44 87. 25.25 3.	.06																	
Ne	et exposed walls A			.61																	
Ne	et exposed walls B	8.50	8.94 1.	.08																	
	xposed Ceilings A			.72																	
E	xposed Ceilings B Exposed Floors			.58 .15																	
Foundation Cond		22.03	3.43 0.																		
Total Conductive	Heat Loss																				
	Heat Gain																				
Air Leakage	Heat Loss/Gain		0.0000 0.00																		
Ventilation	Case 1	х		.11 .94																	
* GridiauOri	Case 2			.11																	
	Heat Gain People		2	39																	
	Appliances Loads	1 =.25 pe	rcent 27	30																	
	Ouct and Pipe loss			0%																	
Level 4 HL Total Level 4 HG Total	0		al HL for per roo HG per room x																		
Level 4 HG 10tal	U	rotar	no per room X	1.3	1	<u> </u>		L		L	L		L	l	→	1	<u> </u>	1	L		
									for the design work an				category as an "othe							CD 40	Package

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:

Name Maleta

David DaCosta

SB-12 Package 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-00701

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: David DaCosta

	Package D	5200	24
Package: Project:	Package D Clarington	Model: F	FP Town 5 - Windham
	RESIDENTIAL MECHANICA	L VENTILATION DESIGN	SUMMARY
	For systems serving one dwelling unit &	conforming to the Ontario Building Code,	O.geg 159/93
	Location of Installation	Total Ventilation	on Capacity 9.32.3.3(1)
Lot #	Plan #		
Township	Clarington	Bsmt & Master Bdrm Other Bedrooms Bathrooms & Kitchen	2 @ 20 cfm 40 cfm 2 @ 10 cfm 20 cfm 4 @ 10 cfm 40 cfm
Roll #	Permit #	Other rooms	2 @ 10 cfm 20 cfm Total 120
Address			
L		Principal Ventila	tion Capacity 9.32.3.4(1)
	Builder		
Name	Delpark/Highcastle Homes	Master bedroom Other bedrooms	1 @ 30 cfm 30 cfm 2 @ 15 cfm 30 cfm
Address	Delparki lighteastie Homes	Outer bedrooms	Total60
City			
Tel	Fax	Principal Ex	thaust Fan Capacity Model Location
101	I dA	Wake	Woder Escation
	In stelling Contractor	Broan	684N Ensuite
Name	Installing Contractor	90 cfm	2.5 Sones
Address		Heat Red	covery Ventilator
		Make	Sovery Ventuator
City		Model	m high 0 cfm low
Tel	Fax	Sensible efficiency @ -25 de	g C <u>0</u>
		Sensible efficiency @ 0 deg	<u>0</u>
	Combustion Appliances 9.32.3.1(1)	Supplementa	I Ventilation Capacity
b) x P c) N d) S	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 capacity Less principal exhaust capac REQUIRED supplemental ve	
		Suppleme	ntal Fans 9.32.3.5.
N	Heating System Forced air Non forced air Electric space heat (if over 10% of heat load)	Location Pwd. Bath	cfm Model Sones 50 770 50 770
· — ·	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 M	ake Broan or Equiv.
III A	Any type c) appliance		er Certification
	ype I or II either electric space heat ype I, II or IV no forced air	I hereby certify that this venti in accordance with the Ontar	lation system has been designed rio Building Code.

Type I or II either electric space heat Type I, II or IV no forced air	I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.
System Design Option	Name David DaCosta
Exhaust only / forced air system HRV WITH DUCTING / forced air system	Signature Mana Alexander
HRV simplified connection to forced air system HRV full ducting/not coupled to forced air system	HRAI # 5190 BCIN # 32964
Part 6 design	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

Project # PJ-00022

This form is used to summarize the energy efficiency design of the project. Information on completing this form is on the reverse										
					ncipal Authority					
Application No:					Model/Certification Num	nber				
A Drainet Informatio										
A. Project Informatio Building number, street name	on					Unit number	Lot/Con			
Danaing Hambor, on oot hamo			FP Town	n 5 - Wind	dham	Criik Hambor	200 0011			
Municipality Claringto	on.		Postal code		Reg. Plan number / oth	er description				
Ciarrigit	JII									
B. Compliance Option	n		l		1					
☑ SB-12 Prescriptive [SB-12 - 2.1.1.]				Table:	Package: A B (CDEFGHI	JKLM	Package D		
☐ SB-12 Performand	-	1.2.]		* Attach	energy performance	e calculations using	an appro	oved software		
☐ Energy Star®* [SE	3-12 - 2.1.3.]				BOP form					
☐ EnerGuide 80® *				* House	must be evaluated l	by NRCan advisor	and meet	a rating of 80		
C. Project Design Co										
Climatic Zone (SB	•		ing Equip			Space Heating F				
☑ Zone 1 (< 5000 degree	e days)	V	≥ 90% AF	UE	☑ Gas	☐ Propane		Solid Fuel		
☐ Zone 2 (≥ 5000 degree	e days)		≥ 78% < 9	00% AFUE	☐ Oil	☐ Electric		Earth Energy		
Windows	+Skylights+Gla	ss Doors	5			Other Building (Conditions	s		
Gross Wall Area =	106 m²	%	Windows+ <u>13%</u>		☐ ICF Basement	☐ Walkout B	asement	☐ Log/Post&Beam		
Gross Window+ Area =	14 m²				☐ ICF Above Grade					
		ovide value	es and ratin	gs of the er	ergy efficiency compon		ch <i>Energy</i> S	Star BOP form]		
Building Con	nponent		RSI/R	values	Buildi	Efficiency Ratings				
Thermal Insulation					Windows & Door			1		
Ceiling with Attic Space			5	50	Windows/Sliding C	Glass Doors		1.8		
Ceiling without Attic Space			3	31	Skylights			2.8		
Exposed Floor			3	31	Mechanicals			1		
Walls Above Grade				24	Space Heating Eq			94%		
Basement Walls			2	20	HRV Efficiency (%	o)		0%		
Slab (all >600mm below gra	de)			Х	DHW Heater (EF)			0.67		
Slab (edge only ≤600mm be	low grade)		1	10	NOTES 1. Provide U-Value in	W/m2.K, or ER rating				
Slab (all ≤600mm below gra	de, or heated)		1	10	2. Provide AFUE or in	dicate if condensing ty	pe combine	d system used		
E. Performance	Design Verifi	cation [c	omplete ap	plicable sec	ctions if SB-12 Performa	ance, Energy Star or E	nerGuide80	0 options used]		
SB-12 Performance:										
The annual energy consumption	on using Subsec	tion 2.1.1	. SB-12 Pa	ackage	is	Gj (1 Gj =1000Mj)			
The annual energy consumption	on of this house	as desigr	ned is	Gj						
The software used to simulate		0,		•			-			
The building is being designed	using an air lea	kage of _	air	changes p	er hour @50Pa.					
	Energy Star: BOP form attached. The house will be labeled on completion by:									
Energy Star and EnerGuide80):									
Evaluator/Advisor/Rater Name:					Evaluator/Advisor/Rate	r Licence #:				
<u> </u>										
F. Designers [n	ames of designe	rs who are	responsible	e for the bu	ilding code design and Mechanical	whose plans accompa	ny the perm	it application]		
					David DaCo	sta //	ane d	4C+		

David DaCosta



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

Page 8

Project # PJ-00022 Layout # JB-00701

Package: Package D Systom: System 1

Packag Projec					System: System 1 Model: FP Town 5 - Windham						
				ir Leakage (Calculat	tions					
		Building Air Leakag	je Heat Loss	3		Building	ı Air Leaka	ge Heat Ga	in		
	B 0.018	LRairh Vb 0.147 17300	HL^T 76	HLleak 3468		B 0.018	LRairh 0.010	Vb 17300	HG^T 9.2	HG Leak 29	
								Lev	/els		
	Air Le	eakage Heat Loss/G		r Table (Section 11)			1	2	3	4	
	Level Factor (LF)	U	onductive t Loss	Air Leakage Ho Multiplio			(LF)	(LF)	(LF)	(LF)	
	1 0.5	- 4	723 831	0.3672 0.2154		1	1.0	0.6 0.4	0.5 0.3	0.4	
	3 0.2		333	0.1601 0.0000		†		0.4	0.2	0.2	
	4 0		U			1				0.1	
		LEAK	29	Air Leakage H				Levels thi	s Dwelling 3		
	BUILDING COND	UCTIVE HEAT GAIN	5277	0.000-1		<u> </u>			,		
-			V	entilation C	alculati	ons					-
		Ventilation Heat	Loss				Ventila	ation Heat G	ain		
Vent		Ventilation Heat L	nss			V	entilation I	Heat Gain		1	Vent
$ \stackrel{\bullet}{>} $	C PVC	HL^T (1-E) HR	/ HL	bvent	С	PVC	HG^T	HGb	vent		\ \ \ \
	1.08 60	76 1.00	4	925	1.1	60	9.2	59	96		
		Case 1						Case 1			
ш	Ventil	ation Heat Loss (Exhau	st only Systen	ns)		Ventil	ation Heat G	ain (Exhaust	Only Syste	ms)	_
_		Case 1 - Exhaust	Only		Cas	se 1 - Exh	aust Only	Multi	iplier	1	_
Case	Level LF	HLbvent LVL C	ond. HL	Multiplier	H	Gbvent	596		<u>. </u>	_	Case
Ca	1 0.5 2 0.3		723 831	0.52 0.31	В	uilding	5277			_	Ca
	3 0.2 4 0	4925	333 0	0.23 0.00							
		03	•	3.53				C 2			
	Ventile	Case 2 ation Heat Loss (Direct	Ducted System	ms)		Ventil	ation Heat G	Case 2	ucted Syste	ms)	
2		·				• • • • • • • • • • • • • • • • • • • •					9 2
ase	C HL^T	/1 E) UDV	tiplier 2.08			С	HG^T		iplier		Case
O	1.08 76	1.00		1.08	9.2	9.	94		O		
		Case 3						Case 3			
3	Vent		Vent	ilation Heat	Gain (Forced	l Air System	s)	3			
Case		HLbvent	Mul	tiplier				Vent He	eat Gain	Multiplier	
Ca	Total Ventilation Load	4925	C	0.35	H	Gbvent 596	HG*1.3	59	96	0.11	Case
	Foundatio	n Conductive He	atloss Lev	rel 1	117	0	Watts	39	92	Btu/h	

Foundation Conductive Heatioss Level 1	1170	watts	3992	Btu/n	
Foundation Conductive Heatloss Level 2		Watts		Btu/h	

Envelope Air Leakage Calculator

Supplemental tool for CAN/CSA-F280

Weather Station	n Description		
Province:	Ontario	•	
Region:	Durham	~	
Weather Station Location:	Open flat terrain, grass	T	
Anemometer height (m):	10		
Local Shi	elding		
Building Site:	Suburban, forest	•	
Walls:	Heavy	•	
Flue:	Heavy	•	
Highest Ceiling Height (m):			5.79
Building Con	figuration	6.4	
Type:	Semi-Detached	Ŧ	
Number of Stories:	Two	Ŧ	
Foundation:	Full		
House Volume (m³):	566.3	48	39.94
Air Leakage/\	/entilation		
Air Tightness Type:	Present (1961-) (ACH=3.57)	T	
Custom DDT Date.	ELA @ 10 Pa. 135.83 CI	n²	
Custom BDT Data:	3.57 ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply: Total Exhaust:		
	0 30		
Flue S	ize		
Flue #:	#1 #2 #3	#-	4
Diameter (mm):	0 0 0		0
Envelope Air L	eakage Rate		
Heating Air Leakage Rate (ACH/H):	0.147		
Cooling Air Leakage Rate (ACH/H):	0.010		

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station 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)									
Foundation Dimensions											
Floor Length (m):	13.63										
Floor Width (m):	4.20										
Exposed Perimeter (m):	27.43										
Wall Height (m):	2.74										
Depth Below Grade (m):	2.13	Insulation Configuration									
Window Area (m²):	0.56										
Door Area (m²):	0.00										
	Radi	ant Slab									
Heated Fraction of the Slab:	0										
Fluid Temperature (°C):	23										
	Desig	n Months									
Heating Month	1										
	Foundation Loads										
Heating Load (Watts):		1170									

RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE DUCT CONNECTION LOW/HIGH WALL/KICK SUPPLY DIFFUSER FLEX DUCT TO JOIST LINING R.A. HRV EXHAUST GRILL RIDIT ROUND DUCT 1 THERMOSTAT 0 SUPPLY AIR PIPE RISER 8 RETURN AIR PIPE RISER RETURN AIR FROM BASEMENT SECOND FLOOR PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER VOLUME DAMPER RETURN ROUND DUCT W/R & PRINCIPAL EXHAUST FAN 6" 13 B-8X8unfinished basement A - 12 X 8 ROUGH-IN 1R6" Z - 18 X 8 DROP 24 X 10 h FLC 5R 11 -6" Y - 8 X 8 INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. R12 ·₩[™]13R -**©**2R -6" 0 4R ALL DUCTWORK UNEXCAVATED MUST BE SEALED TO CLASS A LEVEL AS PER OBC PART 6-6.2.4.3. (11) 70 6" C - 12 X 8 CIRCULATION PRINCIPAL **FAN SWITCH** TO BE CENTRALLY LOCATED UNEXCAVATED 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 **OBC 2012** Jane 166 B.C.I.N. 32964 **ZONE 1 COMPLIANCE** PACKAGE "D" REF. TABLE 2.1.1.2.A **NOTES** HEAT-LOSS BTU/HR. 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.

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22,420	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
GMEC960302BNA	١
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	

S/A	R/A	FANS
5	2	2
6	2	2
3	1	
FLOOR PLAN:		
	5	5 2 6 2

DD

JB-00701

RB

1528

M1

JUNE 17, 2015
DELPARK HIGHCASTLE
10DEL:
FP TOWN 5 - WINDHAM
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 LOW/HIGH WALL/KICK SUPPLY DIFFUSER FLEX DUCT 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 2 < 12 0 4" X 10" 6"Ø 4" X 10" 6"Ø GREAT ROOM DW S KITCHEN 3R LW 30X8 1R 6' D DJ 1R F 5" 4" X 10" 6"Ø 11 Т ⊭Š" FLC4R GARAGE UP 14R **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

JUNE 17, 2015

DELPARK HIGHCASTLE

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

10

COVERED PORCH

F 5"

2985 DREW ROAD SUITE 202,

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

22,420

HEAT-LOSS

9 4" X 10" 6"Ø

5

⊘6"**▽**

0

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	5	2	2
1ST FLOOR	6	2	2
BASEMENT	3	1	
FLOOR PLAN: GROUND FLOOR			
ONOUND I LOOK			
DRAWN BY: CHECKED: SQFT			

1528

M2

DD

JB-00701

RB

8 CAV

1	MODEL:					
1	FP TOWN 5 - WINDHAM					
7	PROJECT:					
	NORTHGLEN					
1	BOWMANVILLE,ONT.					

NT. 3/16" = 1"-0"

FLEX DUCT RIDIT ROUND DUCT SUPPLY DIFFUSER

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



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

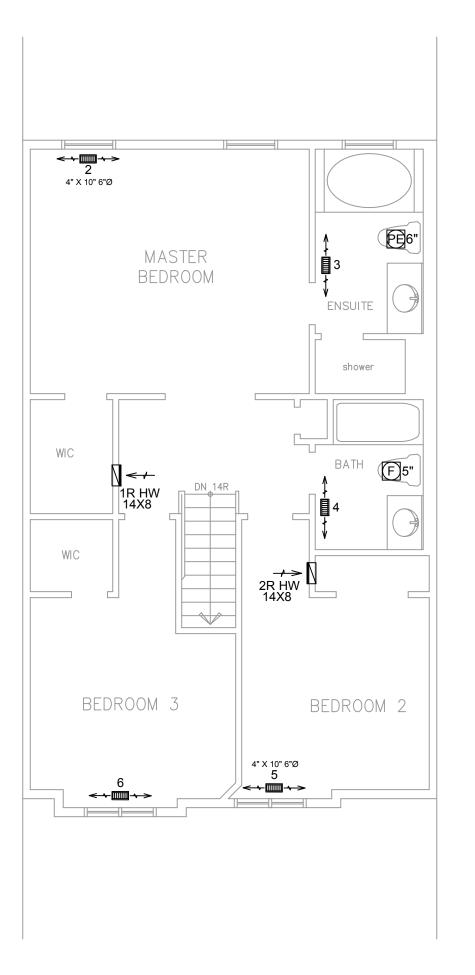
‡

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

R.A. ①

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

SUPPLY AIR



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

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

OBC 2012

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

NOTES

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28,800	
A/C COOLING CAPACITY	TONS.
1.5	
FAN SPEED	CFM
621	

BTU/HR.

RΒ

DD YOUT NO. JB-00701

HEAT-LOSS

				Ξ
# OF RUNS	S/A	R/A	FANS	
3RD FLOOR				l
2ND FLOOR	5	2	2	l
1ST FLOOR	6	2	2	l
BASEMENT	3	1		l
SECOND FLOOR				

1528

M3

JUNE 17, 2015 DELPARK HIGHCASTLE MODEL: FP TOWN 5 - WINDHAM

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