

#### **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 4 -		T	Lot/con.	
Municipality Clarington	Postal code	Plan number/ other description		
B. Individual who reviews and takes responsibility for design	gn activities	T		
Name David DaCosta		Firm	gtaDesigns Inc.	
Street address 2985 Drew Roa			Unit no.	_ot/con.
Municipality  Mississauga	Postal code L4T 0A4	Province Ontario	E-mail dave@gtadesig	ans.ca
Telephone number	Fax number		Cell number	
(905) 671-9800		') 494-9643	(416) 268-68	20
C. Design activities undertaken by individual identified in S	ection B. [Bu	lilding Code Table	3.5.2.1 of Division C	
☐ House ☑ HVAC – H	louse		■ Building Structural	
☐ Small Buildings ☐ Building Se	ervices		☐ Plumbing – House	
	Lighting and Po	wer	☐ Plumbing – All Buildings	
☐ Complex Buildings ☐ Fire Protect			☐ On-site Sewage Systems	
Description of designer's work Mod	del Certification	1	Project #	PJ-00022
Heating and Cooling Load Calculations		Builder	Layout # Delpark/Highcastle Ho	JB-00699
Air System Design		Project	Northglen	illes
Residential mechanical ventilation Design Summary		Model	<u>-</u>	
Residential System Design per CAN/CSA-F280-12		CD 40	FP Town 4 - Aberdee	en
Residential New Construction - Forced Air  D. Declaration of Designer		SB-12	Package D	
l David DaCosta	declare that (c	choose one as appro	opriate):	
(print name)			·F··/	
(p.m.r.a.ne)				
☐ I review and take responsibility for	the design work	on behalf of a firm reg	istered under subsection	
3.2.4 Division C of the Building Cocclasses/categories.	de. I am qualified	d, and the firm is regist	ered, in the appropriate	
Individual BCIN:				
Firm BCIN:				
T IIII BOIN.			-	
	•		. 0,	
Individual BCIN:	3296	64		
Basis for exemp	tion from registr	ation:	Division C 3.2.4.1. (4)	
☐ The design work is exempt from the	e registration and	d qualification requiren	nents of the Building Code.	
Basis for exemp	tion from registr	ation and qualification:		
I certify that:				
The information contained in this schedule is true to the best of n	ny knowledge.			
I have submitted this application with the knowledge and consent	of the firm.			
June 17, 2015		Mane 14	Cart .	
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 calcul	ation summary sheet CSA-F280-M12 Standard Form No. 1
These documents issued for the use of Delpa	rk/Highcastle Homes Layout No.
and may not be used by any other persons without authorization. Docum	
Building	Location
Address (Model): FP Town 4 - Aberdeen	Site: Northglen
Model:	Lot:
City and Province: Clarington	Postal code:
Calculation	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 1445
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 31	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
City: Mississauga	E-mail dave@gtadesigns.ca



Builder: Delpark/Highcastle Homes

#### Air System Design

SB-12 Package D June 17, 2015

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.

Page 3 PJ-00022

Project: Nort	thglen			Model:		FP T	own 4 -	Aberde	an .			Sy	stem	1		of the Bui	_		Man	n 14	A		David Da			oject # yout #		-00022 -00699
Project: Nort				AIR DISTI	DIDUTION			Abordo				TUDNIA OF	'/AID !!A!	NDLER D		ilaiviaaai	DOIN.	BOILER/V	VATED III	TATED D			David Dav		A/C UNIT			
DESIGN LOAD SPECIFICATION	15		L	AIK DISTI	KIBUTION	I & PRES	SUKE				<u>II</u>	UKNACE	AIK HAI	NDLEK D	AIA:			BOILER/V	VAIEK HE	EATER DA	AIA:			1	A/C UNII	DATA:		
Level 1 Net Load	9,325	btu/h		Equipmer	nt Externa	I Static P	ressure		0.5 "	w.c.		Make		Ama	na			Make			Т	уре		,	Amana		1.5	Ton
Level 2 Net Load	7,397			Additiona	I Equipme	ent Press	ure Drop		0.225 "		ı	Model	(	SMEC960				Model							Cond		1.5	
Level 3 Net Load	5,955			Available	-				0.275 "			nput Btu/		3000				Input Btu						(	Coil		1.5	
Level 4 Net Load		btu/h		Return Br		-	ctive Len	gth	300 f			Output Bt	u/h	2880				Output B										
Total Heat Loss	22,677			R/A Plenu					0.138 "			E.s.p.		0.5		" W.C.		Min.Outp	ut Btu/h		A	WH						
Total Heat Gain	12,291			S/A Plenu			<b>F</b>		0.14 "			Nater Ter	np	000		deg. F.		Diamer C	0	-11-	T2		ower DATA		T.			
Total Heat Loss + 10% Building Volume Vb	24,944 16607			Heating A Cooling A		-	-		0.0274 c			AFUE Aux. Heat		96%	6			Blower S <sub>l</sub>	peea Sele	ctea:					Blower Ty	•	ECM BC 12.3.1	F (2))
Ventilation Load	5,521			Cooling A	III FIOW P		R/A Temp			leg. F.		SB-12 Pag	kane	Packa	ne D			Heating C	heck	621 c	fm				Cooling C		621	
Ventilation PVC		cfm					S/A Temp			leg. F.					<b>5</b>											-		
Supply Branch and Grill Sizing				Diffuser le	oss _	0.01					7	Гетр. Ris	e>>>	43 0	leg. F.			Selected	cfm>	621_c	fm		(	Cooling A	ir Flow R	ate _	621	cfm
																										-		
							Level 1 C	Outlets													Level 2 O	outlets						
S/A Outlet No.	8	13	14	15											7	9	10		12									
Room Use	CAV	BASE	BASE	BASE											KIT	PWD	FOY		MUD									
Btu/Outlet Heating Airflow Rate CFM	4844 133	1494 41	1494 41	1494 41											1719 47	923 25	1763 48		1612 44									
Cooling Airflow Rate CFM	5	41	41	41											96	61	27		54									
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
Actual Duct Length	39	26	21	18	00	00	00	00	00	00	00	00	0	00	35	19	22		18	00	00	00	00	00	00	00	00	00
Equivalent Length	140	100	90	140	90	90	90	90	90	90	90	90	90	90	120	130	110		130	90	90	90	90	90	90	90	90	90
Total Effective Length	179	126	111	158	90	90	90	90	90	90	90	90	90	90	155	149	132		148	90	90	90	90	90	90	90	90	90
Adjusted Pressure	0.07	0.10	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	0.09	0.10	0.10	0.09	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Duct Size Round	7	4	4	5											6	5	5	6	5									
Outlet Size	4x10	3x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	3x10	4x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10
Trunk	D	В	В	D											С	D	D	С	В									
							Level 3 C	Outlets													Level 4 O	utlets						
S/A Outlet No.	1	2	3	4	5	6	Level 3 C	Outlets													Level 4 C	Outlets						
Room Use	MAST	MAST	BED 2	BED 3	BATH	6 ENS	Level 3 C	Outlets													Level 4 O	Outlets						
Room Use Btu/Outlet	MAST 1173	MAST 1173	BED 2 1595	BED 3 1305	BATH 106	6 ENS 601	Level 3 C	Outlets													Level 4 C	outlets						
Room Use Btu/Outlet Heating Airflow Rate CFM	MAST 1173 32	MAST 1173 32	BED 2 1595 44	BED 3 1305 36	BATH 106 3	6 ENS 601 16	Level 3 C	Outlets													Level 4 C	Outlets						
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM	MAST 1173 32 59	MAST 1173 32 59	BED 2 1595 44 70	BED 3 1305 36 62	BATH 106 3 3	6 ENS 601 16 20			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
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure	MAST 1173 32 59 0.13	MAST 1173 32 59 0.13	BED 2 1595 44 70 0.13	BED 3 1305 36 62 0.13	BATH 106 3 3 0.13	6 ENS 601 16 20 0.13	0.13	Outlets  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
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length	MAST 1173 32 59 0.13 39	MAST 1173 32 59 0.13 41	BED 2 1595 44 70 0.13 35	BED 3 1305 36 62 0.13 42	BATH 106 3 3 0.13 26	6 ENS 601 16 20 0.13 46	0.13	0.13												0.13	0.13	0.13						
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length	MAST 1173 32 59 0.13 39 140	MAST 1173 32 59 0.13 41 150	BED 2 1595 44 70 0.13 35 120	BED 3 1305 36 62 0.13 42 110	BATH 106 3 3 0.13 26 130	6 ENS 601 16 20 0.13 46 110	0.13 90	0.13 90	90	90	90	90	90	90	90	90	90	90	90	0.13 90	0.13 90	0.13 90	90	90	90	90	0.13 90 90	90
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length	MAST 1173 32 59 0.13 39	MAST 1173 32 59 0.13 41	BED 2 1595 44 70 0.13 35	BED 3 1305 36 62 0.13 42	BATH 106 3 3 0.13 26	6 ENS 601 16 20 0.13 46	0.13	0.13										90		0.13	0.13	0.13					90	
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length	MAST 1173 32 59 0.13 39 140 179	MAST 1173 32 59 0.13 41 150 191	BED 2 1595 44 70 0.13 35 120 155	BED 3 1305 36 62 0.13 42 110 152	BATH 106 3 3 0.13 26 130 156	6 ENS 601 16 20 0.13 46 110 156	0.13 90 90	0.13 90 90	90 <b>90</b>	90 <b>90</b>	90 <b>90</b>	90 <b>90</b>	90 90	90 <b>90</b>	90 <b>90</b>	90 90	90 90	90 90	90 90	0.13 90 90	0.13 90 90	0.13 90 90	90 90	90 90	90 90	90 90	90 90	90 90
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure	MAST 1173 32 59 0.13 39 140 179 0.07	MAST 1173 32 59 0.13 41 150 191 0.07	BED 2 1595 44 70 0.13 35 120 155 0.08	BED 3 1305 36 62 0.13 42 110 152 0.09	BATH 106 3 3 0.13 26 130 156 0.08	6 ENS 601 16 20 0.13 46 110 156 0.08	0.13 90 90	0.13 90 90	90 <b>90</b>	90 <b>90</b>	90 <b>90</b>	90 <b>90</b>	90 90	90 <b>90</b>	90 <b>90</b>	90 90	90 90	90 90 0.14	90 90	0.13 90 90	0.13 90 90	0.13 90 90	90 90	90 90	90 90	90 90	90 90	90 90
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round	MAST 1173 32 59 0.13 39 140 179 0.07 6	MAST 1173 32 59 0.13 41 150 191 0.07 6	BED 2 1595 44 70 0.13 35 120 155 0.08	BED 3 1305 36 62 0.13 42 110 152 0.09	BATH 106 3 3 0.13 26 130 156 0.08	6 ENS 601 16 20 0.13 46 110 156 0.08	0.13 90 90 0.14	0.13 90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	0.13 90 90 0.14	0.13 90 90 0.14	0.13 90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C	0.13 90 90 0.14 4x10	0.13 90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk Return Branch And Grill Sizing	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No.	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C	0.13 90 90 0.14 4x10	0.13 90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing	90 90 0.14 4x10	90 90 0.14	90 90 0.14	90 90 0.14 4x10	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing	90 90 0.14 4x10	90 90 0.14	90 90 0.14	90 90 0.14 4x10	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D ssure Loss 4R 80	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C	0.13 90 90 0.14 4x10 w.c	0.13 90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing	90 90 0.14 4x10	90 90 0.14 4x10 Round	90 90 0.14 4x10	90 90 0.14 4x10	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10 supply Tru	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No.	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10	0.13 90 90 0.14 4x10 supply Tru	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D Grill Pres 3R 180 0.12	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D ssure Loss 4R 80 0.12	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C	0.13 90 90 0.14 4x10 w.c	0.13 90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr Trunk	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 <u>S</u>	0.13 90 90 0.14 4x10 supply Tru	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F	90 90 0.14 4x10 Press. F	90 90 0.14 4x10	90 90 0.14 4x10 Rect.	90 90 0.14 4x10 Size	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D Grill Pres 3R 180 0.12	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D ssure Loss 48 80 0.12 27	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B 5R 121 0.12 8	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C	0.13 90 90 0.14 4x10 W.C 7R 0.12	0.13 90 90 0.14 4x10 8R 0.12	90 90 0.14 4x10 9R 0.12	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr Trunk	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 S T	0.13 90 90 0.14 4x10 supply Tru runk	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round 12.5 9.5	90 90 0.14 4x10 Rect. 18x8 10x8	90 90 0.14 4x10 Size 14x10 127	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C 2R 100 0.12 29 175	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D Grill Pres 3R 180 0.12 7	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D ssure Loss 4R 80 0.12 27 170	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B 5R 121 0.12 8 175	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C 0.02 "	0.13 90 90 0.14 4x10 w.c 7R 0.12	0.13 90 90 0.14 4x10 8R 0.12	90 90 0.14 4x10 9R 0.12	90 90 0.14 4x10 10R 0.12	90 90 0.14 4x10 11R 0.12	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr Trunk	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 <u>S</u> T	0.13 90 90 0.14 4x10 supply Tro	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F 622 295 166	90 90 0.14 4x10 Press. F 0.07 0.07	90 90 0.14 4x10 Round 12.5 9.5 8.0	90 90 0.14 4x10 Rect. 18x8 10x8 8x8	90 90 0.14 4x10 Size 14x10 127 8x7	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Equivalent Length Total Effective Length	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C  1R 140 0.12 17 185 202	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C 2R 100 0.12 29 175 204	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D Grill Pres 3R 180 0.12 7 145	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D  ssure Loss 4R 80 0.12 27 170 197	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B 5R 121 0.12 8 175 183	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C 0.02 ** 6R 0.12 70 70	0.13 90 90 0.14 4x10 W.c 7R 0.12 70 70	0.13 90 90 0.14 4x10 8R 0.12 70	90 90 0.14 4x10 9R 0.12 70	90 90 0.14 4x10 10R 0.12 70	90 90 0.14 4x10 11R 0.12 70	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr Trunk Orop	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 S T	0.13 90 90 0.14 4x10 supply Tro	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F 622 295 166	90 90 0.14 4x10 Press. F 0.07 0.07	90 90 0.14 4x10 Round 12.5 9.5 8.0	90 90 0.14 4x10 Rect. 18x8 10x8 8x8	90 90 0.14 4x10 Size 14x10 127 8x7	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C  1R 140 0.12 17 185 202 0.06	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C 2R 100 0.12 29 175 204 0.06	BED 2 1595 44 70 0.13 35 120 155 0.08 6 4x10 D Grill Pres 3R 180 0.12 7 145 152	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D ssure Loss 4R 80 0.12 27 170 197 0.06	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B 5R 121 0.12 8 175 183 0.06	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C 0.02 ** 6R 0.12 70 70	0.13 90 90 0.14 4x10 W.c 7R 0.12 70 70	0.13 90 90 0.14 4x10 8R 0.12 70	90 90 0.14 4x10 9R 0.12 70	90 90 0.14 4x10 10R 0.12 70	90 90 0.14 4x10 11R 0.12 70	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr Trunk Orop	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 S T	0.13 90 90 0.14 4x10 supply Trurk	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F 622 295 166	90 90 0.14 4x10 Press. F 0.07 0.07	90 90 0.14 4x10 Round 12.5 9.5 8.0	90 90 0.14 4x10 Rect. 18x8 10x8 8x8	90 90 0.14 4x10 Size 14x10 127 8x7	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Inlet Size " "	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C  1R 140 0.12 17 185 202 0.06 7.5 8 x	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C  2R 100 0.12 29 175 204 0.06 6.0 8 x	BED 2 1595 44 70 0.13 355 120 1555 0.08 6 4x10 D  Grill Pres 3R 180 0.12 7 145 152 0.08 8.0 6 x	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D  ssure Loss 4R 80 0.12 27 170 197 0.06 6.0	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B 5R 121 0.12 8 175 183 0.06 6.0	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C 0.02 ** 6R 0.12 70 70	0.13 90 90 0.14 4x10 W.c 7R 0.12 70 70	0.13 90 90 0.14 4x10 8R 0.12 70	90 90 0.14 4x10 9R 0.12 70	90 90 0.14 4x10 10R 0.12 70	90 90 0.14 4x10 11R 0.12 70	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr Trunk Orop	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 S T A B C D E F	0.13 90 90 0.14 4x10 Supply Trunk	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F 622 295 166	90 90 0.14 4x10 Press. F 0.07 0.07	90 90 0.14 4x10 Round 12.5 9.5 8.0	90 90 0.14 4x10 Rect. 18x8 10x8 8x8	90 90 0.14 4x10 Size 14x10 127 8x7	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Inlet Size	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C  1R 140 0.12 17 185 202 0.06 7.5 8	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C  2R 100 0.12 29 175 204 0.06 6.0 8	BED 2 1595 44 70 0.13 355 120 155 0.08 6 4x10 D Grill Pres 3R 180 0.12 7 145 152 0.08 8.0 6	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D ssure Loss 4R 80 0.12 27 170 0.06 6.0 FLC	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B 5R 121 0.12 8 175 183 0.06 6.0 FLC	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C 0.02 6R 0.12	0.13 90 90 0.14 4x10 W.c 7R 0.12 70 70	0.13 90 90 0.14 4x10 8R 0.12 70	90 90 0.14 4x10 9R 0.12 70 70	90 90 0.14 4x10 10R 0.12 70 70 0.17	90 90 0.14 4x10 11R 0.12 70 70 0.17	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr Trunk Orop 2	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 S T A B C D E F G	0.13 90 90 0.14 4x10 Supply Trunk	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F 622 295 166	90 90 0.14 4x10 Press. F 0.07 0.07	90 90 0.14 4x10 Round 12.5 9.5 8.0	90 90 0.14 4x10 Rect. 18x8 10x8 8x8	90 90 0.14 4x10 Size 14x10 127 8x7	90 90 0.14
Room Use Btu/Outlet Heating Airflow Rate CFM Cooling Airflow Rate CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Inlet Size " "	MAST 1173 32 59 0.13 39 140 179 0.07 6 4x10 C  1R 140 0.12 17 185 202 0.06 7.5 8 x	MAST 1173 32 59 0.13 41 150 191 0.07 6 4x10 C  2R 100 0.12 29 175 204 0.06 6.0 8 x	BED 2 1595 44 70 0.13 355 120 1555 0.08 6 4x10 D  Grill Pres 3R 180 0.12 7 145 152 0.08 8.0 6 x	BED 3 1305 36 62 0.13 42 110 152 0.09 5 3x10 D ssure Loss 4R 80 0.12 27 170 0.06 6.0 FLC	BATH 106 3 3 0.13 26 130 156 0.08 2 3x10 B 5R 121 0.12 8 175 183 0.06 6.0 FLC	6 ENS 601 16 20 0.13 46 110 156 0.08 4 3x10 C 0.02 6R 0.12	0.13 90 90 0.14 4x10 W.c 7R 0.12 70 70	0.13 90 90 0.14 4x10 8R 0.12 70	90 90 0.14 4x10 9R 0.12 70 70	90 90 0.14 4x10 10R 0.12 70 70 0.17	90 90 0.14 4x10 11R 0.12 70 70 0.17	90 90 0.14 4x10	90 90 0.14 4x10 Return Tr runk Orop	90 90 0.14 4x10 unk Duct	90 90 0.14 4x10 Sizing CFM	90 90 0.14 4x10 Press. F	90 90 0.14 4x10 Round	90 90 0.14 4x10 Rect.	90 90 0.14 4x10	0.13 90 90 0.14 4x10 S T A B C D E F G	0.13 90 90 0.14 4x10 supply Tru runk	0.13 90 90 0.14 4x10	90 90 0.14 4x10 t Sizing CFM F 622 295 166	90 90 0.14 4x10 Press. F 0.07 0.07	90 90 0.14 4x10 Round 12.5 9.5 8.0	90 90 0.14 4x10 Rect. 18x8 10x8 8x8	90 90 0.14 4x10 Size 14x10 127 8x7	90 90 0.14



Total Heat Loss

Total Heat Gain

22,677 btu/h

12,291 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	stle Homes	s	Date:			June 1	7, 2015							Weath	er Data	Durham	44	-4.0	84 20	48.2					Page 4
2012 OBC	Project:	Northgle	en		Model:		F	P Town 4	- Aberde	en			5	System	1	Heat	Loss ^T	76 deg. F	Ht gain ^T	9.	.2 deg. F	GTA:	1445		Project # Layout #	PJ-0 JB-0	00022 00699
Run ft. exposed wall A Run ft. exposed wall E Ceiling heigh Floor area	t 1		55 A B 1.0 AG 180 Are			B AG Area	:	A B AG Are			A B AG Area			A B AG Area	•	A B AG Area		A B AG Area	A B AG Area		A B AG Are	a	Α	iG irea		A B AG Area	
Exposed Ceilings A Exposed Ceilings E			A B			A B		A B			A B			A B		A B		A B	A B		A B		A B			A B	
Exposed Floors			180 Flr			Flr		Fir			Flr			Flr		Fir		Fir	Flr		Fir		F			Fir	
Gross Exp Wall A Gross Exp Wall B			55		128																						
Components	R-Values		Lo	ss Gain	_	Loss	Gain	Los	s Gain		Loss	Gain		Loss G	ain	Loss	Gain	Loss Gain	Loss	Gain	Los	s Gain	L	oss (	Gain	Loss G	ain
North Shaded East/Wes	t 3.15	24.13 27.18			3	72	82																				
South Existing Windows		24.13 20.71 38.19 21.24																									
Skyligh	t 2.03	37.44 87.34																									
Doors Net exposed walls A		25.25 3.06 5.51 0.67		3	7 125		83																				
Net exposed walls E	8.50	8.94 1.08																									
Exposed Ceilings A Exposed Ceilings B		1.52 0.72 3.32 1.58																									
Exposed Floors	22.05	3.45 0.15	180	620 2	:6																						
Foundation Conductive Heatloss  Total Conductive Heat Loss	Slab On C	Grade (x)		2101 2722		2445 2517																					
Heat Gair				6	3		165																				
Air Leakage Heat Loss/Gair		0.3099 0.0052 0.47 0.12			7	780 1183	19																				
Ventilation Case 2		82.08 9.94		12/9	'	1103	19																				
Case 3		0.34 0.12																									
Heat Gain People Appliances Loads		239 percent 2730																									
Duct and Pipe loss	3	10%																									
Level 1 HL Total         9,325           Level 1 HG Total         333	Tota	otal HL for per room Il HG per room x 1.3		4844	2	4481	241																				
Run ft. exposed wall / Run ft. exposed wall / Run ft. exposed wall E Geiling heigh Floor are Exposed Ceilings E Exposed Ceilings E Exposed Floors Gross Exp Wall / Gross Exp Wall /	1 1 1 1 1 1 1 1 1		13 A B 10.0 210 Are 50 A B Fir 130		10.0 25	Area A B Flr		14 A B 10.0 85 Are A B Fir	FOY a	10.0 247	B Area A B Fir	ı	10.0 31	MUD A B Area A B Fir		A B Area A B Fir		A B Area A B Fir	A B Area A B Fir		A B Are A B Fir	a	A A A B	area		A B Area A B Fir	
Components	R-Values		Lo	ss Gain	_	Loss	Gain	Los	s Gain		Loss	Gain	ı	Loss G	ain	Loss	Gain	Loss Gain	Loss	Gain	Los	s Gain		oss (	Gain	Loss G	ain
North Shaded East/Wes				531 59	8 6	145	163	9	217 2	45 22	531	598															
South	3.15	24.13 20.71																									
Existing Windows Skyligh	t 2.03	38.19 21.24 37.44 87.34																									
Doors	3.01	25.25 3.06								46			21	530	64												
Net exposed walls A Net exposed walls B		5.02 0.61 8.94 1.08		542 6	6 94	472	57	116	583	71 78	392	47	109	548	66												
Exposed Ceilings A	50.00	1.52 0.72		76 3	6																						
Exposed Ceilings E Exposed Floors		3.32 1.58 3.45 0.15																									
Foundation Conductive Heatloss	Slab On C																										
Total Conductive Heat Loss Heat Gair				1149 70	0	617	220	1	179	61	923	645		1078	130												
Air Leakage Heat Loss/Gair		0.1970 0.0052		226	4	122	1		232	2	182	3		212	1												
Ventilation Case 2	2	0.30 0.12 82.08 9.94		343 8	3	184	26		352	43	276	76		322	15												
Case 3		0.34 0.12 239																									
Appliances Loads	1 =.25 p	percent 2730	1.0	68	3 1.0		683			1.0		683	1.0		683												
Duct and Pipe loss Level 2 HL Total 7,397		otal HL for per room		1719		923		1	763		1380			1612													
Level 2 HL Total 7.397																											
Level 2 HG Total 7,397  Level 2 HG Total 6,552		I HG per room x 1.3		190	9	020	1209			27	1300	1830		1012	1078												

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

Mana Alexa

David DaCosta

Package D



Total Heat Loss

Total Heat Gain

22,677

12,291

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 da	ve@gtadesigns.ca							
		Builder:	Delpark/	Highcastle	e Homes		ate:		June	17, 2015		- 1			Weather Da	ta Durham	44	-4.0 8	34 20	48.2			Page 5
2012 OBC		Project:		Northglen	ı	_ Mc	del:	F	P Town	4 - Aberde	en	_	System	1	Heat Loss	^T 76 deg. F	Ht gain ^T	9.2 d	deg. F	GTA:	1445	Project # Layout #	PJ-00022 B-00699
	Level 3				MAST		BED	2		BED 3	BATH		ENS										
Run	ft. exposed wall A				17 A		12 A		9 A		Α		5 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				222 Area 222 A		154 Area 154 A		154 Ar 154 A	ea	50 Area 50 A		52 Area 52 A		Area	Area A	Area		Area		Area A		Area
	xposed Ceilings A xposed Ceilings B				222 A B		154 A B		154 A B		50 A B		52 A B		A B	B	A B		A B		В		A B
-	Exposed Floors				Flr		Fir		FI		Flr		Fir		Fir	Flr	Fir		Fir		Flr		Fir
	Gross Exp Wall A				136		96		72				40										
	Gross Exp Wall B																						
	Components			ain	Loss	Gain	Loss	Gain	Lo	ss Gair	n Loss	Gain	Loss	Gain	Loss Gain	Loss Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss Gain
	North Shaded East/West	3.15 3.15	24.13 24.13	10.74 27.18	35 844	951	18 43	4 489	18	434	489		8 193	217									
	South	3.15	24.13	20.71	33 044	331	10 43	4 403	10	454	403		0 193	217									
	Existing Windows	1.99	38.19	21.24																			
	Skylight	2.03	37.44	87.34																			
	Doors	3.01	25.25	3.06				_															
	et exposed walls A et exposed walls B	15.13 8.50	5.02 8.94	0.61 1.08	101 507	61	78 39	2 47	54	271	33		32 161	19									
	xposed Ceilings A	50.00	1.52		222 337	161	154 23	4 111	154	234	111 50 76	36	52 79	38									
E	xposed Ceilings B	22.86	3.32	1.58	337	,						30	- 13										
	Exposed Floors	22.05	3.45	0.15																			
Foundation Cond																							
Total Conductive	Heat Loss Heat Gain				1689	1173	106	648		940	633	36	433	275									
Air Leakage	Heat Loss/Gain		0.1547	0.0052	261	6	16-			145	3 12		67	1									
	Case 1	х	0.23	0.12	396	139	24				75 18	4	102	32									
Ventilation	Case 2		82.08	9.94																			
	Case 3		0.34	0.12																			
	Heat Gain People Appliances Loads	1 =.25 pe	rcont	239 2730	2	478	1	239	7		239												
	Duct and Pipe loss	1 =.25 pe	ei Ceiil	10%			1 12	2 96															
Level 3 HL Total	5,955	Tot	tal HL for pe		2347		159			1305	106		601										
Level 3 HG Total	5,407	Total	HG per rooi	m x 1.3		2335		1382		1	236	53		401									
	Level 4																						
Run	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		Ar		Area		Area		Area	Area	Area		Area		Area		Area
F	xposed Ceilings A				Area		Area		A	ea	Area A		Area		A	A	Area		A		Area		A A
	xposed Ceilings B				В		В		В		В		В		В	В	В		В		В		В
	Exposed Floors				Flr		Flr		Fli		Flr		Fir		Flr	Flr	Flr		Fir		Flr		Flr
	Gross Exp Wall A																						
	Gross Exp Wall B Components	R-Values L	oss G	ain	Loss	Gain	Loss	Gain	Lo	ss Gair	n Loss	Gain	Loss	Gain	Loss Gain	Loss Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss Gain
	North Shaded	3.15	24.13	10.74	LUSS	Gaiii	LUSS	Gaiii		SS Gail	LUSS	Gaiii	LUSS	Gaiii	LUSS Gain	LUSS Gain	LUSS	Gaiii	LUSS	Gain	LUSS	Gaiii	LUSS Gaill
	East/West	3.15	24.13	27.18																			
	South	3.15	24.13	20.71																			
	Existing Windows	1.99	38.19	21.24																			
	Skylight Doors	2.03 3.01	37.44 25.25	87.34 3.06																			
Ne	et exposed walls A	15.13	5.02	0.61																			
Ne	et exposed walls B	8.50	8.94	1.08																			
E	xposed Ceilings A	50.00	1.52	0.72																			
E	xposed Ceilings B	22.86	3.32	1.58																			
Foundation Cond	Exposed Floors uctive Heatloss	22.05	3.45	0.15																			
	Heat Loss																						
Total Conductive	Heat Gain																						
Air Leakage	Heat Loss/Gain		0.0000	0.0052																			
Ventilation	Case 1	x	0.00	0.12																			
venulation	Case 2		82.08 0.34	9.94 0.12																			
	Heat Gain People		0.54	239																			
	Appliances Loads	1 =.25 pe	ercent	2730																			
	Ouct and Pipe loss			10%																			
Level 4 HL Total	0		tal HL for pe																				
Level 4 HG Total	0	Total	HG per rooi	m x 1.3	<u> </u>		L		╙		→	1			<u> </u>	_	→		L	1	ı		
•																							

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:

Mana Alexa

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-00699

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 4 - Abe	rdeen
	RESIDENTIAL MECHANICAL \	/ENTILATION DES	SIGN SUMMARY	
	For systems serving one dwelling unit & confi	orming to the Ontario Buildir	ng Code, O.geg 159/93	
	Location of Installation	Total \	Ventilation Capacity 9.32.3.	3(1)
Lot #	Plan #	Bsmt & Master Bdrn	-	
Township	Clarington	Other Bedrooms	2 @ 10 cfm	n 20 cfm
Roll #	Permit #	Bathrooms & Kitche Other rooms	2 @ 10 cfm	n <u>20</u> cfm
Address			Total	<u>120</u>
		Principa	al Ventilation Capacity 9.32.	3.4(1)
	Builder			- ( )
Name	Delpark/Highcastle Homes	Master bedroom Other bedrooms	1 @ 30 cfm 2 @ 15 cfm	
Address			Total	60
City				
Tel	Fax	Make	ncipal Exhaust Fan Capacity Model	y Location
		Broan	684N	Ensuite
	Installing Contractor	Dioan	004IN	Ensuite
Name	-	90 cfm	2.5	5 Sones
Address			Heat Recovery Ventilator	
City		Make Model		
City		- Iviodei	cfm high	0 cfm low
Tel	Fax	Sensible efficiency Sensible efficiency		<u>0</u> <u>0</u>
	Combustion Appliances 9.32.3.1(1)	Sunn	elemental Ventilation Capac	itv
a)	Direct vent (sealed combustion) only	Зирр	nemental ventilation capac	ity
b) x	Positive venting induced draft (except fireplaces)	Total ventilation cap		120.0
c) d)	Natural draft, B-vent or induced draft fireplaces Solid fuel (including fireplaces)	Less principal exhau REQUIRED suppler	ust capacity mental vent. Capacity	60.0 60.0 cfm
e)	No combustion Appliances			
		Si	upplemental Fans 9.32.3.5.	
	Heating System	Location	cfm Model	Sones
Х	Forced air Non forced air	Pwd. Bath	50 770 50 770	
	Electric space heat (if over 10% of heat load)	Datii	30 770	
, , ,	House Type 9.32.3.1(2)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
l x	Type a) or b) appliances only, no solid fuel Type I except with solid fuel (including fireplace)	all fans HVI listed	Make Broan	or Equiv.
I	rype rexcept with solid ruer (including lireplace)		Decime of Contification	

		House Type 9.32.3.1(2)
I	Х	Type a) or b) appliances only, no solid fuel
П		Type I except with solid fuel (including fireplace)
Ш		Any type c) appliance
IV		Type I or II either electric space heat
Other		Type I, II or IV no forced air

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

1 114.	00	110		
Bath	50	770		
all fans HVI listed	Make	Broan	or Equiv.	
D	esigner Ce	ertification		
I hereby certify that this	s ventilation	ı system has t	een designed	
in accordance with the	Ontario Bu	ilding Codo		

	200.9.10. 0	or unioution									
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.											
Name	David Da	aCosta									
Signature	Mane	146	7								
HRAI#	5190	BCIN#	32964								
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@gtadesigns.ca									Layout #	JB-00699
This form is use	d to summarize th	ne energy			he project. Information in the project. Information in the project	on on completi	ng this	form is or	n the reverse	
Application No:				400 by 1 111	Model/Certification Num	nber				
A. Project Informat	ion									
Building number, street name						Unit number		Lot/Con		
			FP Town	n 4 - Aber	deen					
Municipality Claring	jton		Postal code	9	Reg. Plan number / other	er description				
B. Compliance Opt	tion		ı							
☑ SB-12 Prescripti		1.]		Table:	Package: A B C	DEFG	ΗΙJ	KLM	Packag	je D
☐ SB-12 Performa	nce* [SB-12 - 2.	1.2.]		* Attach	energy performance	calculations	using	an appro	oved software	
☐ Energy Star®* [	SB-12 - 2.1.3.]			* Attach I	BOP form					
☐ EnerGuide 80®	*			* House i	must be evaluated b	oy NRCan ad	visor a	and meet	a rating of 80	)
C. Project Design (	Conditions									
Climatic Zone (S	•	Heat	ing Equip	ment		Space Hea	ting F			
☑ Zone 1 (< 5000 deg		<b>V</b>	≥ 90% AF	UE	☑ Gas	☐ Pro	pane		Solid Fuel	
Zone 2 (≥ 5000 deg	ree days)		≥ 78% < 9	00% AFUE	☐ Oil	☐ Ele	ctric		Earth Energy	
Window	s+Skylights+Gl	ass Doors	3			Other Buil	ding C	Condition	S	
Gross Wall Area =	105 m²	0/.	Windows+	13%	☐ ICF Basement	☐ Wal	kout Ba	asement	☐ Log/Post&E	3eam
Gross Window+ Area =	13 m²	/0	vviiluows+	13/0	☐ ICF Above Grade	☐ Slab	o-on-gr	ound		
D. Building S	<b>pecifications</b> [pr	ovide value					ttach Energy Star BOP form]			
Building Co	omponent		RSI/R	values	Buildi	ng Compone	ent		Efficiency	Ratings
Thermal Insulation			T		Windows & Doors				_	
Ceiling with Attic Space				50	Windows/Sliding G	Blass Doors			1.8	
Ceiling without Attic Space	9			31	Skylights				2.8	
Exposed Floor				31	Mechanicals	. 2			0.40	,
Walls Above Grade Basement Walls				24	Space Heating Equation HRV Efficiency (%				94%	
Slab (all >600mm below g	rade)			20	DHW Heater (EF)	)			0%	
`				X	NOTES				0.67	7
Slab (edge only ≤600mm			1	10		1. Provide U	-Value	in W/m2.K	C, or ER rating	
Slab (all ≤600mm below g				10	2. Provide AFUE or inc					
	e Design Verif	ication [d	omplete ap	plicable sec	ctions if SB-12 Performa	ance, Energy St	ar or E	nerGuide8	0 options used]	
SB-12 Performance:			00.400			01 (4 01 4				
The annual energy consump	_			-	IS	Gj (1 Gj =10	JOOMJ)	1		
The annual energy consump		_		-						
The software used to simula The building is being designed				-	er hour @50Pa					
Energy Star: BOP form attace Energy Star and EnerGuide		will be lab	eled on co	inpletion b	y					
Evaluator/Advisor/Rater Name:					Evaluator/Advisor/Rater	Licence #:				
F. Designers	[names of designe	ers who are	responsible	e for the bui	Iding code design and v	whose plans acc	compar	ny the perm	nit application1	
Architectural	<u> </u>		-		Mechanical					
					David DaCo	sta	Mo	ine /	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

Project # Layout #

Page 8 PJ-00022 JB-00699

	kage: ject:	Package D Claringtor		System: Model:		FP	Syste Town 4 -		en .	
			Air Leakage	Calcula	tions					
	Build	ding Air Leakage	Heat Loss		Building	Air Leaka	ge Heat Ga	in		
		airh Vb 43 16607	HL^T HLleak 76 3247		B 0.018	LRairh 0.010	Vb 16607	HG^T 9.2	HG Leak 26	
							Lev	/els		
	Air Leakag	e Heat Loss/Gair	Multiplier Table (Section 1	1)	7 I	1	2	3	4	
	Level Level Build		•	Heat Loss	†	(LF)	(LF)	(LF)	(LF)	
	Factor (LF) A	ir Heat L 523			4	1.0	0.6	0.5	0.4	
	2 0.3	101			┪	1.0	0.4	0.3	0.4	
	3 0.2	47 419			] [			0.2	0.2	
	4 0	0	0.000	)()	_  Լ				0.1	
			Air Leakage I	leat Gain	] [		Levels thi	s Dwelling		
	HG LEAI BUILDING CONDUCTI		26 5050 0.005	52				3		
			Ventilation (	Calculati	ons					
		Ventilation Heat Lo	ss			Ventila	ation Heat G	ain		
Vent	Ve	ntilation Heat Los	SS		V	entilation I	leat Gain		1	Vent
>		^T (1-E) HRV	HLbvent	С	PVC	HG^T		vent		Š
	1.08 60 7	6 1.00	4925	1.1	60	9.2	5	96		
		Case 1					Case 1			
	Ventilation	Heat Loss (Exhaust	only Systems)		Ventila	ation Heat G	ain (Exhaust	Only Syster	ms)	_
_	Ca	se 1 - Exhaust Or	nly	Cas	se 1 - Exh	aust Only	Mult	iplier	1	<b>←</b>
Case	Level LF HLb	vent LVL Coi			Gbvent	596 5050	0.	12		Case
ပိ	2 03	25 494		Б	uilding	5050				ပြို
	3 0.2	419								
	4 0	0	0.00							
	Mandiladian I	Case 2	and all Contains			*: U+ C	Case 2			_
5	ventilation	Heat Loss (Direct Du	icteu Systems)		ventila	uon neat G	ain (Direct D	uctea Syste	ms)	2
ase	0   111.5   (4.5)	Multip	olier		•		Mult	iplier		Case
ပိ	C HL^T (1-E) 1.08 76 1.	00 82.0	08		1.08	HG^T 9.2	9.	94		Ö
		Case 3					Case 3			
3	Ventilation	Heat Loss (Forced	Air Systems)		Vent	ilation Heat	Gain (Forced	d Air System	s)	
Case		HLbvent	Multiplier				Vent He	eat Gain	Multiplier	Se
Ca	Total Ventilation Load	4925	0.34	Н	Gbvent 596	HG*1.3	5	96	0.12	Case
		andustive Uset								

1332

Watts

4546

Btu/h

**Foundation Conductive Heatloss Level 1** 

## **Envelope Air Leakage Calculator**

Supplemental tool for CAN/CSA-F280

Weather Station	on Description	
Province:	Ontario	
Region:	Durham	,
Weather Station Location:	Open flat terrain, grass	]
Anemometer height (m):	10	
Local Sh	ielding	
Building Site:	Suburban, forest	
Walls:	Heavy	•
Flue:	Heavy	•
Highest Ceiling Height (m):		5.79
Building Cor	nfiguration 6.4	1
Type:	Semi-Detached -	
Number of Stories:	Two	]
Foundation:	Full	
House Volume (m³):	566.3	470.31
Air Leakage/	<b>Ventilation</b>	
Air Tightness Type:	Present (1961-) (ACH=3.57) ▼	]
Custom DDT Data	ELA @ 10 Pa 185,83 cm <sup>2</sup>	
Custom BDT Data:	3.57 ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply: Total Exhaust:	
	0 30	
Flue	Size	
Flue #:	#1 #2 #3	#4
Diameter (mm):	0 0 0	0
Envelope Air I	Leakage Rate	
Heating Air Leakage Rate (ACH/H):	0.143	
Cooling Air Leakage Rate (ACH/H):	0.010	

## **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)	
Fou	undatio	n Dimensions	
Floor Length (m):	13.82		
Floor Width (m):	4.16		
Exposed Perimeter (m):	36.27		
Wall Height (m):	2.74		
Depth Below Grade (m):	2.13	Insulation Configuration	
Window Area (m²):	0.28		
Door Area (m²):	0.00		
	Radi	ant Slab	
Heated Fraction of the Slab:	0		
Fluid Temperature (°C):	23		
	Design Months		
Heating Month	1		
	Founda	ntion Loads	
Heating Load (Watts):	Heating Load (Watts): 1332		

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 0 SUPPLY AIR PIPE RISER 8 PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER RETURN AIR FROM BASEMENT SECOND FLOOR VOLUME DAMPER RETURN ROUND DUCT W/R & PRINCIPAL EXHAUST FAN 7 🔛 <sup>(</sup>6" 6" ROUGH-IN 6" 0 1 6" 0 2 C - 8 X 8 14 13 unfinished basement B - 10 X 8

A - <u>18 X 8</u>

D - 12 X 8

<sup>10</sup> []

15

UNEXCAVATED

Z - 18 X 8 DROP 24 X 10

> 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 FOUIPPED 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**

**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

22,011	
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	

22 677

BTU/HR.

RΒ

JB-00699

HEAT-LOSS

-⊙ 5

**∏**9

8

possible

UNEXCAVATED

₽12

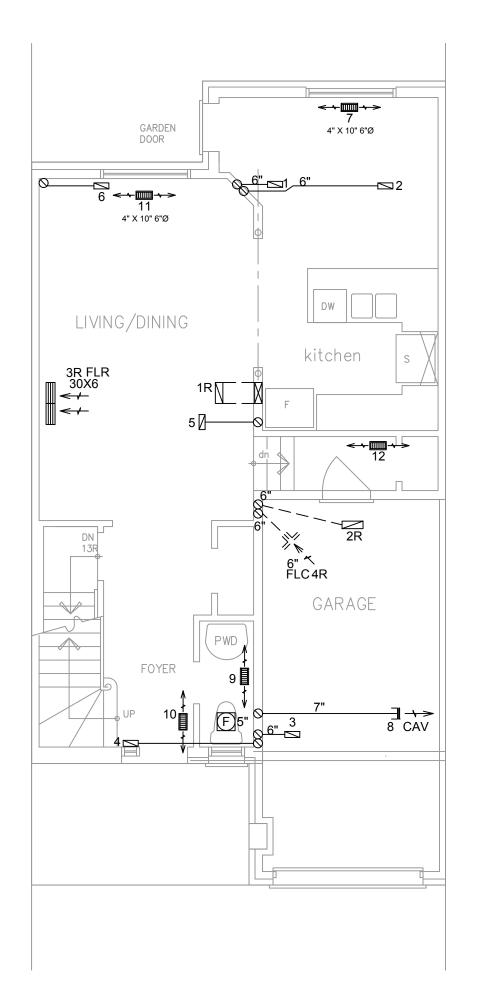
# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	6	2	2
1ST FLOOR	6	2	2
BASEMENT	3	1	
LELOOD DLANI.			

		DE
		1''
BASE	MENIT I	
CHECKED:	SQFT	
DD	l 1445 <b>i</b>	
טט	' <del>   </del>	$\vdash$
	DRAWING NO	S
าคดด	I М1 I	

JUNE 17, 2015 DELPARK HIGHCASTLE MODEL: FP TOWN 4 - ABERDEEN

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

RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE SUPPLY AIR DUCT CONNECTION TO JOIST LINING LOW/HIGH WALL/KICK SUPPLY DIFFUSER FLEX DUCT R.A. 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



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

2985 DREW ROAD SUITE 202,

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

HEAT-LOSS	22 677	BTU/HR.	ı
	22,677		Н
UNIT MAKE		OR EQUAL.	L
	AMANA		r
UNIT MODEL		OR EQUAL.	L
0	C960302E		Г
UNIT HEATING INP	UT	BTU/HR.	Н
	30,000		L
UNIT HEATING OU	TPUT	BTU/HR.	Ξ
	28,800		F
A/C COOLING CAP.	ACITY	TONS.	h
	1.5		ľ
FAN SPEED		CFM	T
	621		

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

1445

M2

DD

JB-00699

RB

FP TOWN 4 - ABERDEEN
PROJECT: NORTHGLEN BOWMANVILLE,ONT.

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

FLEX DUCT
RIDIT ROUND DUCT
SUPPLY DIFFUSER

LOW/HIGH WALL/KICK SUPPLY DIFFUSER

HRV EXHAUST GRILL
SUPPLY AIR PIPE RISER
VOLUME DAMPER

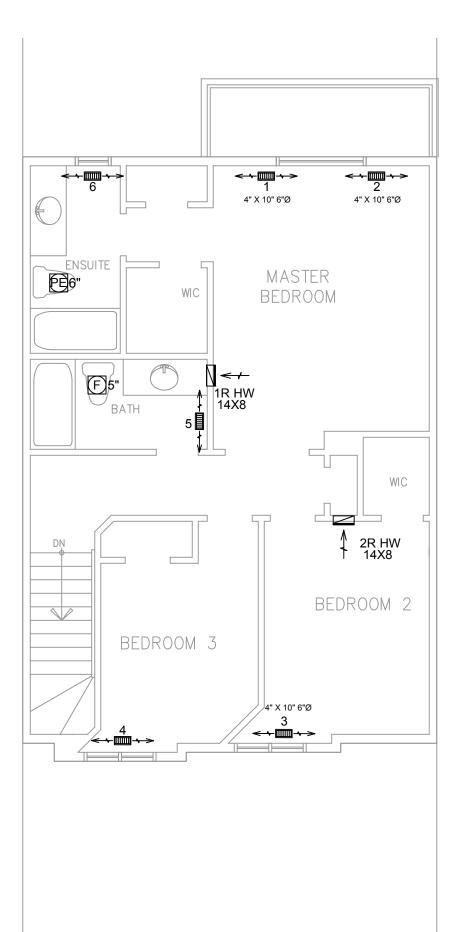


DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT RETURN AIR GRILLE
(SIZE INDICATED ON DRAWING)
RETURN AIR RISER UP TO
FLOOR ABOVE
RETURN AIR FROM BASEMENT
SECOND FLOOR

S.A. R.A. T

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

The undersigned has reviewed and takes responsibility for this design on behalf of GTA Designs Inc. and has the qualifications and meets the requirements set out in the Building Code to be a designer

QUALIFICATION INFORMATION

Required unless design is exempt under Division C 3.2.5.1 of the Ontario building code

David Da Costa

B.C.I.N. 32964

Signature of Designer

**OBC 2012** 

ZONE 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

ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT TH 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

22,677	
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.

HEAT-LOSS

				Ξ
				_
# OF RUNS	S/A	R/A	FANS	l
3RD FLOOR				l
2ND FLOOR	6	2	2	l
1ST FLOOR	6	2	2	l
BASEMENT	3	1		l
				:
FLOOR PLAN:	FLO	ΛD		l

1445

M3

DD

70UT NO. JB-00699

RΒ

ł	JUNE 17, 2015
l	DELPARK HIGHCASTLE
1	MODEL:
	FP TOWN 4 - ABERDEEN
1	PROJECT: NORTHGLEN

BOWMANVILLE, ONT.

3/16" = 1"-0"