

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 THWU-16E				Lot: Lot/con.	
Municipality Bradford		Postal code	Plan number/ other description		
B. Individual who reviews and takes responsibility for design activities					
Name David DaCosta			Firm gtaDesigns Inc.		
Street address 2985 Drew Road, Suite 202				Unit no.	Lot/con.
Municipality Mississauga		Postal code L4T 0A4	Province Ontario	E-mail dave@gtadesigns.ca	
Telephone number (905) 671-9800		Fax number (647) 494-9643		Cell number (416) 268-6820	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]					
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings		☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection		☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems	
Description of designer's work Model Certification				Project #:	PJ-00204
				Layout #:	JB-04879
Heating and Cooling Load Calculations		Main	X	Builder	Bayview Wellington
Air System Design		Alternate		Project	Green Valley East
Residential mechanical ventilation Design Summary		Area Sq ft:	1919	Model	THWU-16E
Residential System Design per CAN/CSA-F280-12				SB-12	Package A1
Residential New Construction - Forced Air					
D. Declaration of Designer					
I, <u>David DaCosta</u> declare that (choose one as appropriate): (print name)					
☐ I review and take responsibility for the design work on behalf of a firm registered under Subsection 3.2.4 Division C of the Building Code. I am qualified, and the firm is registered in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____					
☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5 of Division C, of the Building Code. Individual BCIN: <u>32964</u> Basis for exemption from registration: <u>Division C 3.2.4.1. (4)</u>					
☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____					
I certify that:					
1. The information contained in this schedule is true to the best of my knowledge.					
2. I have submitted this application with the knowledge and consent of the firm.					
<u>June 21, 2018</u>					
Date			Signature of Designer		

NOTE:

- 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, temporary license, or a certificate of authorization, issued by the Ontario Association 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.

Heat loss and gain calculation summary sheet				CSA-F280-M12 Standard Form No. 1	
These documents issued for the use of Bayview Wellington				Layout No.	
and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.				JB-04879	
Building Location					
Address (Model): THWU-16E			Site: Green Valley East		
Model:			Lot:		
City and Province: Bradford			Postal code:		
Calculations based on					
Dimensional information based on: VA3 DESIGN22/May/2018					
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: Bradford			Wind exposure: Sheltered		
HRV? LifeBreath		RNC155	Internal shading: Light-translucent		Occupants: 5
Sensible Eff. at -25C 71%		Apparent Effect. at -0C 84%	Units: Imperial		Area Sq ft: 1919
Sensible Eff. at -0C 75%					
Heating design conditions			Cooling design conditions		
Outdoor temp -9.4 Indoor temp: 72 Mean soil temp: 48			Outdoor temp 86 Indoor temp: 75 Latitude: 44		
Above grade walls			Below grade walls		
Style A: As per OBC SB12 Package A1 R 22			Style A: As per OBC SB12 Package A1 R 20ci		
Style B: Existing Walls (When Applicable) R 12			Style B:		
Style C:			Style C:		
Style D:			Style D:		
Floors on soil			Ceilings		
Style A: As per Selected OBC SB12 Package A1			Style A: As per Selected OBC SB12 Package A1 R 60		
Style B:			Style B: As per Selected OBC SB12 Package A1 R 31		
Exposed floors			Style C:		
Style A: As per Selected OBC SB12 Package A1 R 31			Doors		
Style B:			Style A: As per Selected OBC SB12 Package A1 R 4.00		
Windows			Style B:		
Style A: As per Selected OBC SB12 Package A1 R 3.55			Style C:		
Style B: Existing Windows (When Applicable) R 1.99			Skylights		
Style C:			Style A: As per Selected OBC SB12 Package A1 R 2.03		
Style D:			Style B:		
Attached documents: As per Shedule 1		Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values			
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		

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Builder: **Bayview Wellington**

Date: **June 21, 2018**

Project: **Green Valley East**

Model: **THWU-16E**

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.

Individual BCIN: 32964 *David DaCosta* David DaCosta

Project # **PJ-00204**
Layout # **JB-04879**

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DESIGN LOAD SPECIFICATIONS		AIR DISTRIBUTION & PRESSURE		FURNACE/AIR HANDLER DATA:		BOILER/WATER HEATER DATA:		A/C UNIT DATA:	
Level 1 Net Load	10,818 btu/h	Equipment External Static Pressure	0.5 "w.c.	Make	Amana	Make	Type	Amana	2.0 Ton
Level 2 Net Load	11,485 btu/h	Additional Equipment Pressure Drop	0.225 "w.c.	Model	AMEC960403ANA	Model		Cond.-----	2.0
Level 3 Net Load	9,797 btu/h	Available Design Pressure	0.275 "w.c.	Input Btu/h	40000	Input Btu/h		Coil -----	2.0
Level 4 Net Load	0 btu/h	Return Branch Longest Effective Length	300 ft	Output Btu/h	38400	Output Btu/h			
Total Heat Loss	32,100 btu/h	R/A Plenum Pressure	0.138 "w.c.	E.s.p.	0.50	" W.C.			
Total Heat Gain	18,291 btu/h	S/A Plenum Pressure	0.14 "w.c.	Water Temp		deg. F.			
Combo System HL + 10%	35,310 Btu/h	Heating Air Flow Proportioning Factor	0.0241 cfm/btuh	AFUE	96%				
Building Volume Vb	22130 ft³	Cooling Air Flow Proportioning Factor	0.0422 cfm/btuh	Aux. Heat					
Ventilation Load	1,118 Btu/h	R/A Temp	70 deg. F.	SB-12 Package	Package A1				
Ventilation PVC	79.5 cfm	S/A Temp	116 deg. F.						
Supply Branch and Grill Sizing		Diffuser loss	0.01 "w.c.	Temp. Rise>>>	46 deg. F.				

	Level 1													Level 2												
S/A Outlet No.	1	2	3											4	5	6	7	8								
Room Use	BASE	BASE	BASE											KIT/FAM	KIT/FAM	LAUN	PWD	FOY								
Btu/Outlet	3606	3606	3606											3175	3175	793	654	3687								
Heating Airflow Rate CFM	87	87	87											76	76	19	16	89								
Cooling Airflow Rate CFM	39	39	39											113	113	59	14	42								
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	
Actual Duct Length	29	10	14											41	29	2	5	25								
Equivalent Length	70	90	100	70	70	70	70	70	70	70	70	70	70	100	70	100	100	110	70	70	70	70	70	70	70	
Total Effective Length	99	100	114	70	70	70	70	70	70	70	70	70	70	70	141	99	102	105	135	70	70	70	70	70	70	
Adjusted Pressure	0.13	0.13	0.11	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.13	0.13	0.12	0.10	0.19	0.19	0.19	0.19	0.19	0.19	0.19	
Duct Size Round	6	6	6											6	6	5	3	6								
Outlet Size	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	
Trunk	A	A	C											B	B	A	C	C								

	Level 3													Level 4													
S/A Outlet No.	9	10	11	12	13	14																					
Room Use	MAST	BED 4	BATH	BED 3	BED 2	ENS																					
Btu/Outlet	2723	1284	764	2089	2119	818																					
Heating Airflow Rate CFM	65	31	18	50	51	20																					
Cooling Airflow Rate CFM	96	43	15	64	69	28																					
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	46	17	10	34	36	68																					
Equivalent Length	110	100	90	150	110	140	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
Total Effective Length	156	117	100	184	146	208	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
Adjusted Pressure	0.08	0.11	0.13	0.07	0.09	0.06	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	
Duct Size Round	6	4	3	6	6	4																					
Outlet Size	4x10	3x10	3x10	4x10	4x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	
Trunk	B	A	C	C	C	B																					

Return Branch And Grill Sizing	Grill Pressure Loss											0.02 "w.c.
R/A Inlet No.	1R	2R	3R	4R	5R	6R	7R	8R	9R	10R	11R	
Inlet Air Volume CFM	130	312	105	105	120							
Duct Design Pressure	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	
Actual Duct Length	5	5	34	37	28							
Equivalent Length	115	125	185	180	135	50	50	50	50	50	50	
Total Effective Length	120	130	219	217	163	50	50	50	50	50	50	
Adjusted Pressure	0.10	0.09	0.05	0.05	0.07	0.24	0.24	0.24	0.24	0.24	0.24	
Duct Size Round	6.0	9.5	6.0	6.0	7.0							
Inlet Size	FLC	8	8	8	8							
" "	x	x	x	x	x	x	x	x	x	x	x	
Inlet Size		30	14	14	14							
Trunk		Z	Z	Z								

Return Trunk Duct Sizing	Trunk	CFM	Press.	Round	Rect. Size
Drop		772	0.05	14.5	24x10
Z		522	0.05	12.5	18x8 14x10
Y					
X					
W					
V					
U					
T					
S					
R					
Q					

Supply Trunk Duct Sizing	Trunk	CFM	Press.	Round	Rect. Size
A		461	0.06	11.5	14x8 12x10
B		238	0.06	9.0	8x8 10x7
C		311	0.07	10.0	12x8 10x10
D					
E					
F					
G					
H					
I					
J					
K					

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2012 OBC

Builder: Bayview Wellington

Date: June 21, 2018

Project: Green Valley East

Model: THWU-16E

System 1

Weather Data Bradford 44 -9.4 86 22 48.2

Heat Loss ^T 81.4 deg. F Ht gain ^T 11 deg. F GTA: 1919

Project #
Layout #

Level 1

Run ft. exposed wall A	104	A	A	A	A	A	A	A	A	A	A	A	A
Run ft. exposed wall B	B	B	B	B	B	B	B	B	B	B	B	B	B
Ceiling height	3.5	AG	3.5	AG	3.5	AG	3.5	AG	3.5	AG	3.5	AG	3.5
Floor area	791	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area
Exposed Ceilings A	A	A	A	A	A	A	A	A	A	A	A	A	A
Exposed Ceilings B	B	B	B	B	B	B	B	B	B	B	B	B	B
Exposed Floors	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr
Gross Exp Wall A	364												
Gross Exp Wall B													

Components	R-Values	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain
North Shaded	3.55	22.93	10.91														
East/West	3.55	22.93	27.35														
South	3.55	22.93	20.89														
WOB Windows	3.15	25.84	28.32														
Skylight	2.03	40.10	88.23														
Doors	4.00	20.35	2.75														
Net exposed walls A	21.13	3.85	0.52														
Net exposed walls B	14.49	5.62	0.76														
Exposed Ceilings A	59.22	1.37	0.64														
Exposed Ceilings B	22.86	3.56	1.66														
Exposed Floors	29.80	2.73	0.17														
Foundation Conductive Heatloss	On Grade () or Above																
Total Conductive	Heat Loss																
	Heat Gain																
Air Leakage	Heat Loss/Gain	0.9946	0.0417														
Ventilation	Case 1	0.11	0.11														
	Case 2	14.07	11.88														
	Case 3	x	0.06	0.11													
Heat Gain People			239														
Appliances Loads	1 = .25 percent		3200														
Duct and Pipe loss			10%														
Level 1 HL Total	10,818			10818													
Level 1 HG Total	2,772				2772												

Level 2

Run ft. exposed wall A	61	A	8	A	6	A	28	A	A	A	A	A	A	A	A	A	A
Run ft. exposed wall B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Ceiling height	10.0		10.0		10.0		13.0		10.0		10.0		10.0		10.0		10.0
Floor area	621	Area	63	Area	30	Area	73	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area
Exposed Ceilings A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Exposed Ceilings B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Exposed Floors	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr	Flr
Gross Exp Wall A	610		80		60		364										
Gross Exp Wall B																	

Components	R-Values	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain
North Shaded	3.55	22.93	10.91														
East/West	3.55	22.93	27.35														
South	3.55	22.93	20.89														
Existing Windows	1.99	40.90	22.15														
Skylight	2.03	40.10	88.23														
Doors	4.00	20.35	2.75														
Net exposed walls A	17.03	4.78	0.65														
Net exposed walls B	8.50	9.58	1.29														
Exposed Ceilings A	59.22	1.37	0.64														
Exposed Ceilings B	22.86	3.56	1.66														
Exposed Floors	29.80	2.73	0.17														
Foundation Conductive Heatloss	On Grade () or Above																
Total Conductive	Heat Loss																
	Heat Gain																
Air Leakage	Heat Loss/Gain	0.3987	0.0417														
Ventilation	Case 1	0.04	0.11														
	Case 2	14.07	11.88														
	Case 3	x	0.06	0.11													
Heat Gain People			239														
Appliances Loads	1 = .25 percent		3200														
Duct and Pipe loss			10%														
Level 2 HL Total	11,485			6350													
Level 2 HG Total	8,075				5363												

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

Dave DaCosta

Dave DaCosta

SB-12 Package

Package A1

Total Heat Loss	32,100	btu/h
Total Heat Gain	18,291	btu/h

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2012 OBC	Builder: Bayview Wellington	Date: June 21, 2018	System 1	Weather Data	Bradford	44	-9.4	86	22	48.2	Heat Loss ^T	81.4 deg. F	Ht gain ^T	11 deg. F	GTA:	1919	Project #	PJ-00204
	Project: Green Valley East	Model: THWU-16E															Layout #	JB-04879

Level 3				MAST		BED 4		BATH		BED 3		BED 2		ENS															
Run ft. exposed wall A	28	A		13	A	9	A	24	A	10	A	6	A	A		A		A		A		A		A		A		A	
Run ft. exposed wall B	B			B		B		B		B		B		B		B		B		B		B		B		B		B	
Ceiling height	8.0			8.0		8.0		8.0		8.0		8.0		8.0		8.0		8.0		8.0		8.0		8.0		8.0		8.0	
Floor area	319	Area		119	Area	69	Area	128	Area	205	Area	102	Area	Area		Area		Area		Area		Area		Area		Area		Area	
Exposed Ceilings A	319	A		119	A	69	A	128	A	205	A	102	A	A		A		A		A		A		A		A		A	
Exposed Ceilings B	B			B		B		B		B		B		B		B		B		B		B		B		B		B	
Exposed Floors	Flr			Flr		Flr		Flr		20	Flr	135	Flr	Flr		Flr		Flr		Flr		Flr		Flr		Flr		Flr	
Gross Exp Wall A	224			104		72		192		80		48																	
Gross Exp Wall B																													
Components	R-Values	Loss	Gain	Loss	Gain	Loss	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	3.55	22.93	10.91	28	642	766		16	367	334	7	161	146	22	504	602	13	298	356										
East/West	3.55	22.93	27.35																										
South	3.55	22.93	20.89																										
Existing Windows	1.99	40.90	22.15																										
Skylight	2.03	40.10	88.23																										
Doors	4.00	20.35	2.75																										
Net exposed walls A	17.03	4.78	0.65	196	937	127	88	421	57	65	311	42	170	813	110	58	277	37	35	167	23								
Net exposed walls B	8.50	9.58	1.29																										
Exposed Ceilings A	59.22	1.37	0.64	319	438	205	119	164	76	69	95	44	128	176	82	205	282	132	102	140	65								
Exposed Ceilings B	22.86	3.56	1.66																										
Exposed Floors	29.80	2.73	0.17										20	55	3	135	369	23											
Foundation Conductive Heatloss																													
Total Conductive	Heat Loss			2017				951		566		1548		1432		606													
	Heat Gain				1097			467		232		797		793		444													
Air Leakage	Heat Loss/Gain	0.2949	0.0417	595	46			280	20	167	10	456	33	422	33	179	19												
Ventilation	Case 1	0.03	0.11																										
	Case 2	14.07	11.88																										
	Case 3	x	0.06	111	125			52	53	31	27		85	91		79	90		33	51									
Heat Gain People			239	2	478		1		239			1	239																
Appliances Loads	1 =.25 percent		3200																										
Duct and Pipe loss			10%													1	185	103											
Level 3 HL Total	9,797		Total HL for per room	2723				1284		764		2089		2119		818													
Level 3 HG Total	7,444		Total HG per room x 1.3		2270			1013		349		1508		1637		667													

Level 4				A		A		A		A		A		A		A		A		A		A		A		A		A	
Run ft. exposed wall A	A			A		A		A		A		A		A		A		A		A		A		A		A		A	
Run ft. exposed wall B	B			B		B		B		B		B		B		B		B		B		B		B		B		B	
Ceiling height																													
Floor area	Area			Area		Area		Area		Area		Area		Area		Area		Area		Area		Area		Area		Area		Area	
Exposed Ceilings A	A			A		A		A		A		A		A		A		A		A		A		A		A		A	
Exposed Ceilings B	B			B		B		B		B		B		B		B		B		B		B		B		B		B	
Exposed Floors	Flr			Flr		Flr		Flr		Flr		Flr		Flr		Flr		Flr		Flr		Flr		Flr		Flr		Flr	
Gross Exp Wall A																													
Gross Exp Wall B																													
Components	R-Values	Loss	Gain	Loss	Gain	Loss	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	3.55	22.93	10.91																										
East/West	3.55	22.93	27.35																										
South	3.55	22.93	20.89																										
Existing Windows	1.99	40.90	22.15																										
Skylight	2.03	40.10	88.23																										
Doors	4.00	20.35	2.75																										
Net exposed walls A	17.03	4.78	0.65																										
Net exposed walls B	8.50	9.58	1.29																										
Exposed Ceilings A	59.22	1.37	0.64																										
Exposed Ceilings B	22.86	3.56	1.66																										
Exposed Floors	29.80	2.73	0.17																										
Foundation Conductive Heatloss																													
Total Conductive	Heat Loss																												
	Heat Gain																												
Air Leakage	Heat Loss/Gain	0.0000	0.0417																										
Ventilation	Case 1	0.00	0.11																										
	Case 2	14.07	11.88																										
	Case 3	x	0.06																										
Heat Gain People			239																										
Appliances Loads	1 =.25 percent		3200																										
Duct and Pipe loss			10%																										
Level 4 HL Total	0		Total HL for per room																										
Level 4 HG Total	0		Total HG per room x 1.3																										

SITE COPY

Total Heat Loss	32,100	btu/h
Total Heat Gain	18,291	btu/h

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

SB-12 Package

Package A1

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under Division C subsection 3.2.5. of the Building Code.

Individual BCIN: 32964



David DaCosta

Package: Package A1
Project: Bradford
Model: THWU-16E

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

For systems serving one dwelling unit & conforming to the Ontario Building Code, O.reg 332/12

Location of Installation	
Lot #	Plan #
Township	Bradford
Roll #	Permit #
Address	

Builder	
Name	Bayview Wellington
Address	
City	
Tel	Fax

Installing Contractor	
Name	
Address	
City	
Tel	Fax

Combustion Appliances 9.32.3.1(1)		
a)	x	Direct vent (sealed combustion) only
b)		Positive venting induced draft (except fireplaces)
c)		Natural draft, B-vent or induced draft fireplaces
d)		Solid fuel (including fireplaces)
e)		No combustion Appliances

Heating System		
x	Forced air	Non forced air
		Electric space heat (if over 10% of heat load)

House Type 9.32.3.1(2)		
I	x	Type a) or b) appliances only, no solid fuel
II		Type I except with solid fuel (including fireplace)
III		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		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

Total Ventilation Capacity 9.32.3.3(1)			
Bsmt & Master Bdrm	2 @ 21.2 cfm	42.4 cfm	
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm	
Bathrooms & Kitchen	4 @ 10.6 cfm	42.4 cfm	
Other rooms	3 @ 10.6 cfm	31.8 cfm	
Total		148.4	

Principal Ventilation Capacity 9.32.3.4(1)			
Master bedroom	1 @ 31.8 cfm	31.8 cfm	
Other bedrooms	3 @ 15.9 cfm	47.7 cfm	
Total		79.5	

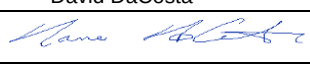
Principal Exhaust Fan Capacity			
Make	Model	Location	
LifeBreath	RNC155	Base	
132 cfm		Sones	or Equiv.

Heat Recovery Ventilator			
Make	LifeBreath		
Model	RNC155		
	132 cfm high	80 cfm low	
Sensible efficiency @ -25 deg C		71%	
Sensible efficiency @ 0 deg C		75%	

Note: Installer to balance HRV/ERV to within 10 percent of PVC

Supplemental Ventilation Capacity	
Total ventilation capacity	148.4
Less principal exhaust capacity	79.5
REQUIRED supplemental vent. Capacity	68.9 cfm

Supplemental Fans 9.32.3.5.			
Location	cfm	Model	Sones
Ens	50	XB50	0.3
Bath	50	XB50	0.3
all fans HVI listed		Make	Broan or Equiv.

Designer Certification	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name	David DaCosta
Signature	
HRAI #	5190 BCIN # 32964
Date	June 21, 2018

SITE COPY



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

Energy Efficiency Design Summary: Prescriptive Method (Building Code Part 9, Residential)

Page 7
 Project # PJ-00204
 Layout # JB-04879

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sidelights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

For use by Principal Authority

Application No:

Model/Certification Number

A. Project Information

Building number, street name THWU-16E		Unit number	Lot/Con
Municipality Bradford	Postal code	Reg. Plan number / other description	

B. Prescriptive Compliance [indicate the building code compliance package being employed in the house design]

SB-12 Prescriptive (input design package):

Package A1

Table: 3.1.1.2.A

C. Project Design Conditions

Climatic Zone (SB-1):	Heat. Equip. Efficiency	Space Heating Fuel Source		
☒ Zone 1 (< 5000 degree days) ☐ Zone 2 (≥ 5000 degree days)	☒ ≥ 92% AFUE ☐ ≥ 84% < 92% AFUE	☒ Gas ☐ Oil	☐ Propane ☐ Electric	☐ Solid Fuel ☐ Earth Energy
Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area		Other Building Characteristics		
Area of Walls = <u>286.09</u> m ² or <u>3079.4</u> ft ²	W, S & G % = <u>8%</u>	☐ Log/Post&Beam ☐ Slab-on-ground ☒ Air Conditioning ☐ Air Sourced Heat Pump (ASHP) ☐ Ground Source Heat Pump (GSHP)		
Area of W, S & G = <u>22.482</u> m ² or <u>242.0</u> ft ²	Utilize Window Averaging ☐ Yes ☒ No	☐ ICF Above Grade ☐ Walkout Basement ☐ Combo Unit		

D. Building Specifications [provide values and ratings of the energy efficiency components proposed]

Energy Efficiency Substitutions			
☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5)) ☐ Combined space heating and domestic water heating systems (3.1.1.2(7) / 3.1.1.3.(7))			
☐ Airtightness substitution(s) Airtightness test required (Refer to Design Guide Attached)	☐ Table 3.1.1.4.B Required:		Permitted Substitution:
	☐ Table 3.1.1.4.C Required:		Permitted Substitution:
Building Component	Minimum RSI/R-Values or Maximum U-Value ¹		Efficiency Ratings
Thermal Insulation	Nominal	Effective	Windows & Doors Provide U-Value ⁽¹⁾ or ER rating
Ceiling with Attic Space	60		Windows/Sliding Glass Doors 1.6
Ceiling without Attic Space	31		Skylights 2.8
Exposed Floor	31		Mechanicals
Walls Above Grade	22		Heating Equip.(AFUE) 96%
Basement Walls	20.0ci		HRV Efficiency (SRE% at 0°C) 75%
Slab (all >600mm below grade)	x		DHW Heater (EF) 0.80
Slab (edge only ≤600mm below grade)	10		DWHR (CSA B55.1 (min. 42% efficiency)) #Showers 2
Slab (all ≤600mm below grade, or heated)	10		Combined Heating System

(1) U value to be provided in either W/(m²·K) or Btu/(h·ft²·°F) but not both.

E. Designer(s) [name(s) & BCIN(s), if applicable, of person(s) providing information herein to substantiate that design meets building code]

Name David DaCosta	BCIN 32964	Signature
------------------------------	----------------------	---------------

Form authorized by OHBA, OBOA, LMCBO. Revised December 1, 2016.

SITE COPY

Package: Package A1 System: System 1
Project: Bradford Model: THWU-16E

Air Leakage Calculations

Building Air Leakage Heat Loss				
B	LRairh	Vb	HL^T	HLleak
0.018	0.324	22130	81.4	10499

Building Air Leakage Heat Gain				
B	LRairh	Vb	HG^T	HG Leak
0.018	0.079	22130	11	346

Air Leakage Heat Loss/Gain Multiplier Table (Section 11)				
Level	Level Factor (LF)	Building Air	Level Conductive Heat Loss	Air Leakage Heat Loss Multiplier
Level 1	0.5	10499	5278	0.9946
Level 2	0.3		7900	0.3987
Level 3	0.2		7120	0.2949
Level 4	0		0	0.0000

Levels			
1	2	3	4
(LF)	(LF)	(LF)	(LF)
1.0	0.6	0.5	0.4
	0.4	0.3	0.3
		0.2	0.2
			0.1

HG LEAK		Air Leakage Heat Gain	
	346		0.0417
BUILDING CONDUCTIVE HEAT GAIN			8281

Levels this Dwelling	
3	

Ventilation Calculations

Ventilation Heat Loss

Ventilation Heat Loss				
C	PVC	HL^T	(1-E) HRV	HLbvent
1.08	79.5	81.4	0.16	1118

Ventilation Heat Gain

Ventilation Heat Gain			
C	PVC	HG^T	HGbvent
1.1	79.5	11	944

Case 1

Ventilation Heat Loss (Exhaust only Systems)

Case 1 - Exhaust Only				
Level	LF	HLbvent	LVL Cond. HL	Multiplier
Level 1	0.5	1118	5278	0.11
Level 2	0.3		7900	0.04
Level 3	0.2		7120	0.03
Level 4	0		0	0.00

Case 1

Ventilation Heat Gain (Exhaust Only Systems)

Case 1 - Exhaust Only		Multiplier	
HGbvent	944	0.11	
Building	8281		

Case 2

Ventilation Heat Loss (Direct Ducted Systems)

C	HL^T	(1-E) HRV	Multiplier
1.08	81.4	0.16	14.07

Case 2

Ventilation Heat Gain (Direct Ducted Systems)

C	HG^T	Multiplier
1.08	11	11.88

Case 3

Ventilation Heat Loss (Forced Air Systems)

HLbvent		Multiplier
Total Ventilation Load	1118	0.06

Case 3

Ventilation Heat Gain (Forced Air Systems)

Vent Heat Gain		Multiplier
HGbvent	HG*1.3	0.11
944	1	

Foundation Conductive Heatloss Level 1

1392 Watts 4750 Btu/h

Foundation Conductive Heatloss Level 2

Watts Btu/h

Envelope Air Leakage Calculator

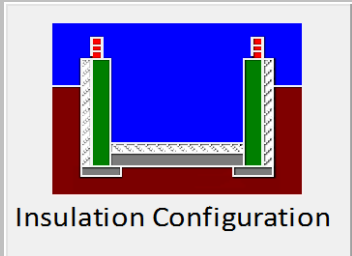
Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Bradford			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	6.55			
Building Configuration				
Type:	Semi-Detached			
Number of Stories:	Two			
Foundation:	Shallow			
House Volume (m ³):	626.71			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (ACH=3.57)			
Custom BDT Data:	ELA @ 10 Pa. 322.44 cm ²			
	3.57 ACH @ 50 Pa			
Mechanical Ventilation (L/s):	Total Supply:		Total Exhaust:	
	39.75		39.75	
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Heating Air Leakage Rate (ACH/H): 0.324				
Cooling Air Leakage Rate (ACH/H): 0.079				

SITE COPY

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario ▼	
Region:	Bradford ▼	
Site Description		
Soil Conductivity:	High conductivity: moist soil ▼	
Water Table:	Normal (7-10 m, 23-33 Ft) ▼	
Foundation Dimensions		
Floor Length (m):	17.02	 Insulation Configuration
Floor Width (m):	4.32	
Exposed Perimeter (m):	31.70	
Wall Height (m):	2.59	
Depth Below Grade (m):	1.52	
Window Area (m ²):	2.14	
Door Area (m ²):	0.00	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1392

SITE COPY

5-6" 9-6" 4-6" 14"

B - 8 X 8

1-6"

UNFINISHED BASEMENT

A - 14 X 8

10"

IR-6" FLC
3PC
ROUGH-IN

5R

2-6"

UP 14R

6"

2-6"

Z - 18 X 8
DROP - 24 X 10

C - 12 X 8

2R

3-6"

4R-6"
5R-6"
3-6"

8-6"

LOW HEADROOM
(-5R)

UNEXCAVATED

UNEXCAVATED

UNEXCAVATED

P.E. HRV LIFE BREATH
RNC155 132 CFM
@ .4 W.C.

HRV

7

FOR THE PURPOSE OF
HEATLOSS/GAIN
CALCULATIONS ALL
ELEVATIONS HAVE BEEN
CONSIDERED

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

INSULATE ALL DUCTS IN
UNCONDITIONED
SPACES MIN. R12

ALL DUCTWORK LOCATED IN
CONDITIONED AREAS
MUST BE SEALED TO CLASS
C LEVEL AS PER OBC PART
6-6.2.4.3.(12)

OPTIONAL TIMER/
CONTROL

CAREFULLY INSULATE
DUCTS ON COLD SIDE OF
SYSTEM

6" MINIMUM HORIZONTAL
SEPARATION BETWEEN
HOODS, OR OTHER CODE
APPROVED METHOD

STALE AIR FROM
KITCHEN AND
BATHROOM

STALE AIR
EXHAUST

FRESH AIR
INLET

HEAT EXCHANGE
CORE

FRESH AIR TO
LIVING SPACE AND
BEDROOMS
OPTION 3

FURNACE
HANDLER

RETURN
AIR

SIMPLIFIED CONNECTION TO
FURNACE AIR SYSTEM
HRV DIAGRAM
OPTION 3

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 *David Da Costa* B.C.I.N. 32964

SIGNATURE OF DESIGNER

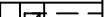
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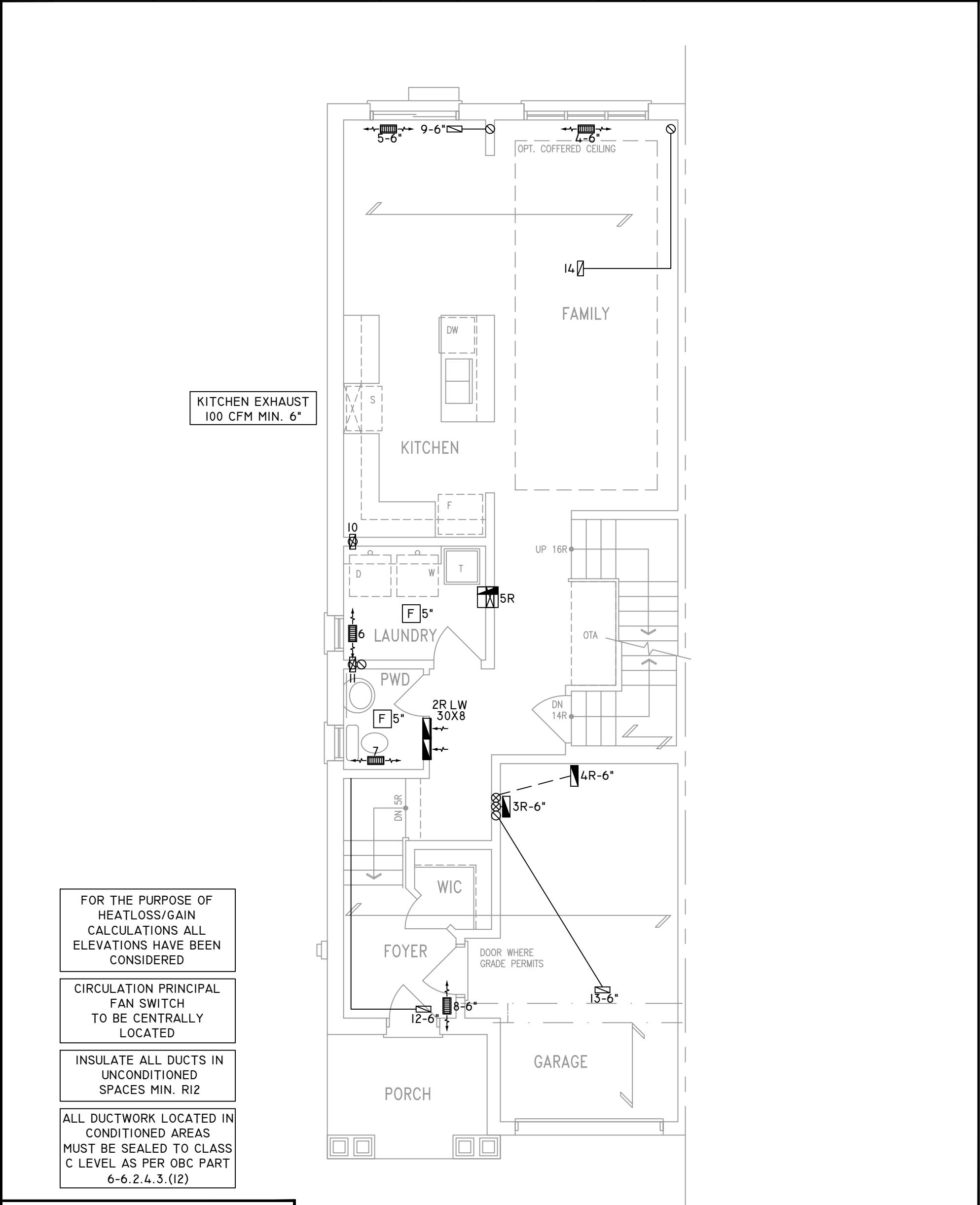
BASEMENT PLAN 'A' / 'B'

OBC 2012

ZONE I COMPLIANCE
PACKAGE "AI" REF. TABLE 3.1.1.2.A

	2000	2001	2002	2003	2004
1. Total population	1,200,000	1,250,000	1,300,000	1,350,000	1,400,000
2. Total population aged 15 and over	800,000	850,000	900,000	950,000	1,000,000
3. Total population aged 15 and over, female	400,000	425,000	450,000	475,000	500,000
4. Total population aged 15 and over, male	400,000	425,000	450,000	475,000	500,000
5. Total population aged 15 and over, female, 15-19	100,000	105,000	110,000	115,000	120,000
6. Total population aged 15 and over, female, 20-24	80,000	85,000	90,000	95,000	100,000
7. Total population aged 15 and over, female, 25-29	70,000	75,000	80,000	85,000	90,000
8. Total population aged 15 and over, female, 30-34	60,000	65,000	70,000	75,000	80,000
9. Total population aged 15 and over, female, 35-39	50,000	55,000	60,000	65,000	70,000
10. Total population aged 15 and over, female, 40-44	40,000	45,000	50,000	55,000	60,000
11. Total population aged 15 and over, female, 45-49	30,000	35,000	40,000	45,000	50,000
12. Total population aged 15 and over, female, 50-54	20,000	25,000	30,000	35,000	40,000
13. Total population aged 15 and over, female, 55-59	10,000	15,000	20,000	25,000	30,000
14. Total population aged 15 and over, female, 60-64	5,000	10,000	15,000	20,000	25,000
15. Total population aged 15 and over, female, 65-69	2,000	5,000	10,000	15,000	20,000
16. Total population aged 15 and over, female, 70-74	1,000	2,000	5,000	10,000	15,000
17. Total population aged 15 and over, female, 75-79	500	1,000	2,000	5,000	10,000
18. Total population aged 15 and over, female, 80-84	200	500	1,000	2,000	5,000
19. Total population aged 15 and over, female, 85-89	100	200	500	1,000	2,000
20. Total population aged 15 and over, female, 90-94	50	100	200	500	1,000
21. Total population aged 15 and over, female, 95-99	20	50	100	200	500
22. Total population aged 15 and over, female, 100+	10	20	50	100	200
23. Total population aged 15 and over, female, 105+	5	10	20	50	100
24. Total population aged 15 and over, female, 110+	2	5	10	20	50
25. Total population aged 15 and over, female, 115+	1	2	5	10	20
26. Total population aged 15 and over, female, 120+	0	1	2	5	10
27. Total population aged 15 and over, female, 125+	0	0	1	2	5
28. Total population aged 15 and over, female, 130+	0	0	0	1	2
29. Total population aged 15 and over, female, 135+	0	0	0	0	1
30. Total population aged 15 and over, female, 140+	0	0	0	0	0
31. Total population aged 15 and over, female, 145+	0	0	0	0	0
32. Total population aged 15 and over, female, 150+	0	0	0	0	0
33. Total population aged 15 and over, female, 155+	0	0	0	0	0
34. Total population aged 15 and over, female, 160+	0	0	0	0	0
35. Total population aged 15 and over, female, 165+	0	0	0	0	0
36. Total population aged 15 and over, female, 170+	0	0	0	0	0
37. Total population aged 15 and over, female, 175+	0	0	0	0	0
38. Total population aged 15 and over, female, 180+	0	0	0	0	0
39. Total population aged 15 and over, female, 185+	0	0	0	0	0
40. Total population aged 15 and over, female, 190+	0	0	0	0	0
41. Total population aged 15 and over, female, 195+	0	0	0	0	0
42. Total population aged 15 and over, female, 200+	0	0	0	0	0
43. Total population aged 15 and over, female, 205+	0	0	0	0	0
44. Total population aged 15 and over, female, 210+	0	0	0	0	0
45. Total population aged 15 and over, female, 215+	0	0	0	0	0
46. Total population aged 15 and over, female, 220+	0	0	0	0	0
47. Total population aged 15 and over, female, 225+	0	0	0	0	0
48. Total population aged 15 and over, female, 230+	0	0	0	0	0
49. Total population aged 15 and over, female, 235+	0	0	0	0	0
50. Total population aged 15 and over, female, 240+	0	0	0	0	0
51. Total population aged 15 and over, female, 245+	0	0	0	0	0
52. Total population aged 15 and over, female, 250+	0	0	0	0	0
53. Total population aged 15 and over, female, 255+	0	0	0	0	0

	FLEX DUCT		LOW/HIGH WALL/KICK SUPPLY DIFFUSER		DUCT CONNECTION TO JOIST LINING		RETURN AIR GRILLE (SIZE INDICATED ON DRAWING)	S.A.	SUPPLY AIR
	RIGID ROUND DUCT		HRV EXHAUST GRILLE		RETURN AIR PIPE RISER		RETURN AIR RISER UP TO FLOOR ABOVE	R.A.	RETURN AIR
	SUPPLY DIFFUSER		SUPPLY AIR PIPE RISER		RETURN ROUND DUCT		RETURN AIR FROM BASEMENT SECOND FLOOR		THERMOSTAT
			VOLUME DAMPER						PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN



FOR THE PURPOSE OF
HEATLOSS/GAIN
CALCULATIONS ALL
ELEVATIONS HAVE BEEN
CONSIDERED

CIRCULATION PRINCIPAL
FAN SWITCH
TO BE CENTRALLY
LOCATED

INSULATE ALL DUCTS IN
UNCONDITIONED
SPACES MIN. R12

ALL DUCTWORK LOCATED IN
CONDITIONED AREAS
MUST BE SEALED TO CLASS
C LEVEL AS PER OBC PART
6-6.2.4.3.(12)

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

SITE COPY

GROUND FLOOR PLAN 'A'

OBC 2012

ZONE I COMPLIANCE
PACKAGE "A1" REF. TABLE 3.1.1.2.A

NOTES
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.
ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.
PROVIDE BALANCING DAMPERS ON ALL BRANCHES.
ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)
INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.
CONTRACTOR MUST WORK FROM APPROVED PLANS.
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSIBILITY OF GTA DESIGNS.
GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.



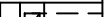
2985 DREW ROAD
SUITE 202,
MISSISSAUGA, ONT.
L4T 0A4 TEL: 905-671-9800
EMAIL: DAVE@GTADESIGNS.CA
WEB: WWW.GTADESIGNS.CA

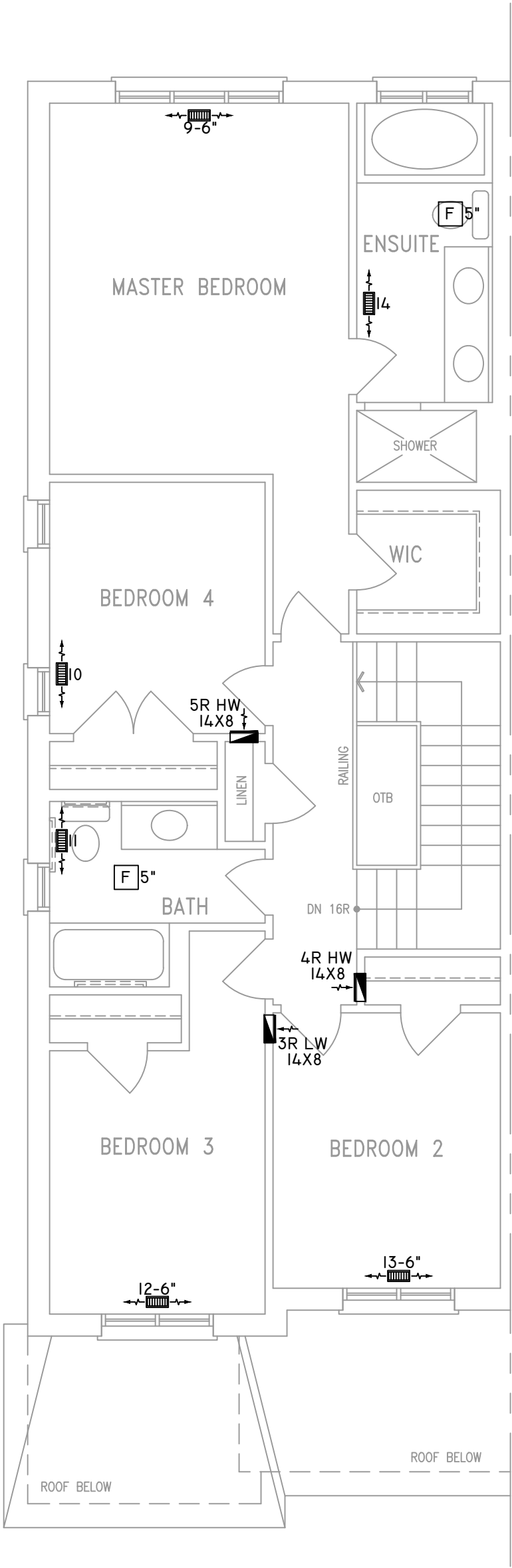
HEAT-LOSS	32,100	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960403ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	2.0	TONS.
FAN SPEED	772	CFM

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

FLOOR PLAN: GROUND FLOOR		
DRAWN BY: JL	CHECKED: DD	SQFT 1919
LAYOUT NO. JB-04879	DRAWING NO. M2	

DATE:	JUNE 21, 2018
CLIENT:	BAYVIEW WELLINGTON
MODEL:	THWU-I6E
PROJECT:	GREEN VALLEY EAST BRADFORD,ONT.
SCALE:	3/16" = 1'-0"

	FLEX DUCT		LOW/HIGH WALL/KICK SUPPLY DIFFUSER		DUCT CONNECTION TO JOIST LINING		RETURN AIR GRILLE (SIZE INDICATED ON DRAWING)	S.A.	SUPPLY AIR
	RIGID ROUND DUCT		HRV EXHAUST GRILLE		RETURN AIR PIPE RISER		RETURN AIR RISER UP TO FLOOR ABOVE	R.A.	RETURN AIR
	SUPPLY DIFFUSER		SUPPLY AIR PIPE RISER		RETURN ROUND DUCT		RETURN AIR FROM BASEMENT SECOND FLOOR		THERMOSTAT
			VOLUME DAMPER						PRINCIPAL EXHAUST FAN SWITCH
									W/R & PRINCIPAL EXHAUST FAN



- FOR THE PURPOSE OF
HEATLOSS/GAIN
CALCULATIONS ALL
ELEVATIONS HAVE BEEN
CONSIDERED
- INSULATE ALL DUCTS IN
UNCONDITIONED
SPACES MIN. R12
- ALL DUCTWORK LOCATED IN
CONDITIONED AREAS
MUST BE SEALED TO CLASS
C LEVEL AS PER OBC PART
6-6.2.4.3.(12)

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

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DAVID DA COSTA  B.C.I.N. 32964

SIGNATURE OF DESIGNER

SITE COPY

OBC 2012

ZONE I COMPLIANCE
PACKAGE "A1" REF. TABLE 3.1.1.2.A

NOTES
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.
ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.
PROVIDE BALANCING DAMPERS ON ALL BRANCHES.
ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)
INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.
CONTRACTOR MUST WORK FROM APPROVED PLANS.
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE RESPONSIBILITY OF GTA DESIGNS.
GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.



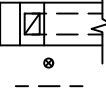
2985 DREW ROAD
SUITE 202,
MISSISSAUGA, ONT.
L4T 0A4 TEL: 905-671-9800
EMAIL: DAVE@GTADESIGNS.CA
WEB: WWW.GTADESIGNS.CA

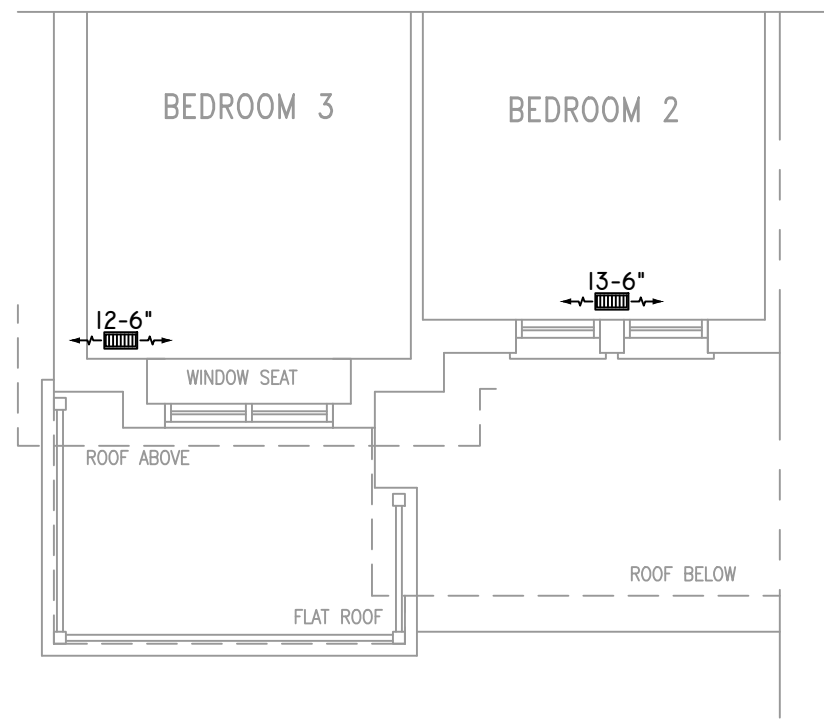
HEAT-LOSS	32,100	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960403ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	2.0	TONS.
FAN SPEED	772	CFM

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

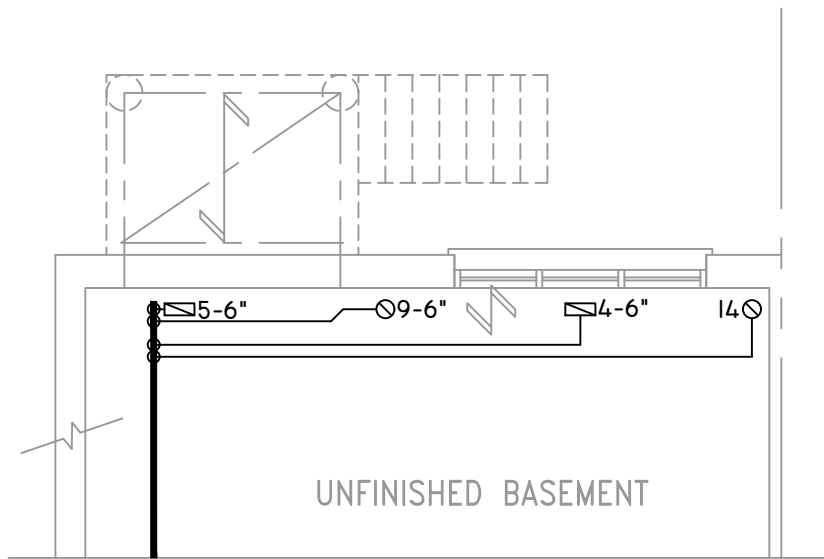
FLOOR PLAN: SECOND FLOOR		
DRAWN BY: JL	CHECKED: DD	SQFT 1919
LAYOUT NO. JB-04879	DRAWING NO. M3	

DATE:	JUNE 21, 2018
CLIENT:	BAYVIEW WELLINGTON
MODEL:	THWU-I6E
PROJECT:	GREEN VALLEY EAST BRADFORD,ONT.
SCALE:	3/16" = 1'-0"

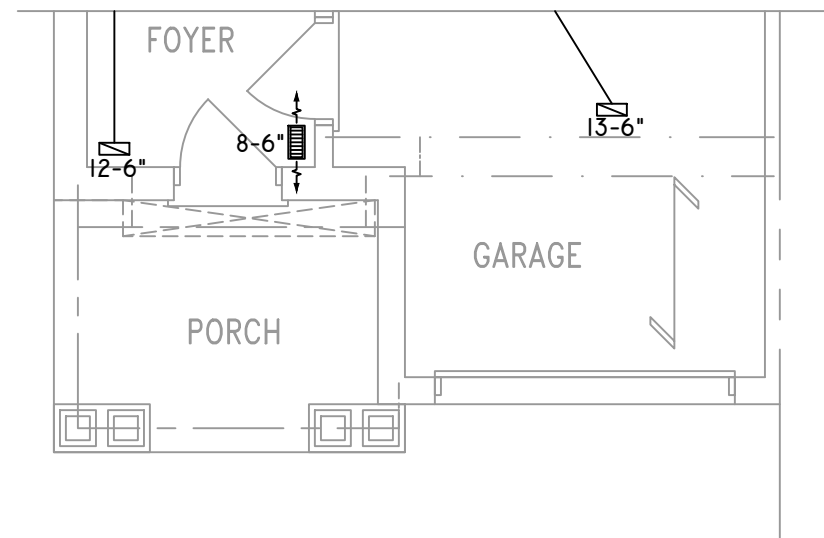
	FLEX DUCT		LOW/HIGH WALL/KICK SUPPLY DIFFUSER		DUCT CONNECTION TO JOIST LINING		RETURN AIR GRILLE (SIZE INDICATED ON DRAWING)	S.A.	SUPPLY AIR
	RIGID ROUND DUCT		HRV EXHAUST GRILLE		RETURN AIR PIPE RISER		RETURN AIR RISER UP TO FLOOR ABOVE	R.A.	RETURN AIR
	SUPPLY DIFFUSER		SUPPLY AIR PIPE RISER		RETURN ROUND DUCT		RETURN AIR FROM BASEMENT SECOND FLOOR		THERMOSTAT
			VOLUME DAMPER						PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN



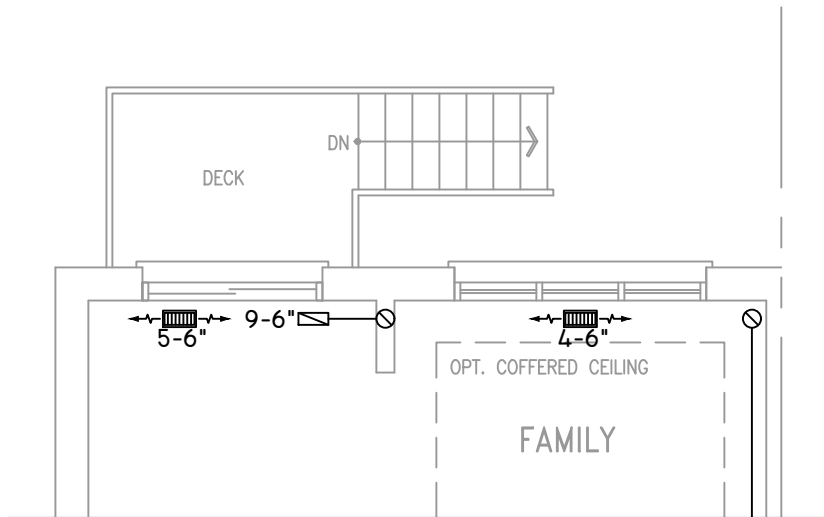
PARTIAL SECOND FLOOR PLAN 'B'



PARTIAL BASEMENT PLAN
W.O.D. CONDITION (9R OR GREATER)



PARTIAL GROUND FLOOR PLAN 'B'



PARTIAL GROUND FLOOR PLAN
W.O.D. CONDITION (9R OR GREATER)

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

SITE COPY

OBC 2012

ZONE I COMPLIANCE
PACKAGE "A1" REF. TABLE 3.1.1.2.A

NOTES
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.
ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE SPECIFIED.
PROVIDE BALANCING DAMPERS ON ALL BRANCHES.
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# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	6	3	2
1ST FLOOR	5	1	3
BASEMENT	3	1	

FLOOR PLAN:	
PARTIAL PLAN(S)	
DRAWN BY: JL	CHECKED: DD
SQFT 1919	
LAYOUT NO. JB-04879	DRAWING NO. M4

DATE:	JUNE 21, 2018
CLIENT:	BAYVIEW WELLINGTON
MODEL:	THWU-I6E
PROJECT:	GREEN VALLEY EAST BRADFORD,ONT.
SCALE:	3/16" = 1'-0"