


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

<b>A. Project Information</b>					
Building number, street name <div style="text-align: center;">THWU-12</div>				Lot: Lot/con.	
Municipality <div style="text-align: center;">Bradford</div>		Postal code	Plan number/ other description		
<b>B. Individual who reviews and takes responsibility for design activities</b>					
Name <div style="text-align: center;">David DaCosta</div>			Firm <div style="text-align: center;">gtaDesigns Inc.</div>		
Street address <div style="text-align: center;">2985 Drew Road, Suite 202</div>				Unit no.	Lot/con.
Municipality <div style="text-align: center;">Mississauga</div>		Postal code <div style="text-align: center;">L4T 0A4</div>	Province <div style="text-align: center;">Ontario</div>	E-mail <div style="text-align: center;"><a href="mailto:dave@gtadesigns.ca">dave@gtadesigns.ca</a></div>	
Telephone number <div style="text-align: center;">(905) 671-9800</div>		Fax number <div style="text-align: center;">(647) 494-9643</div>		Cell number <div style="text-align: center;">(416) 268-6820</div>	
<b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]</b>					
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> House  <input type="checkbox"/> Small Buildings  <input type="checkbox"/> Large Buildings  <input type="checkbox"/> Complex Buildings         </div> <div style="width: 33%;"> <input checked="" type="checkbox"/> HVAC – House  <input type="checkbox"/> Building Services  <input type="checkbox"/> Detection, Lighting and Power  <input type="checkbox"/> Fire Protection         </div> <div style="width: 33%;"> <input type="checkbox"/> Building Structural  <input type="checkbox"/> Plumbing – House  <input type="checkbox"/> Plumbing – All Buildings  <input type="checkbox"/> On-site Sewage Systems         </div> </div>					
<b>Description of designer's work</b>				<b>Model Certification</b>	
				Project #:	PJ-00204
				Layout #:	JB-04876
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:	1762	Model	THWU-12
Residential System Design per CAN/CSA-F280-12				SB-12	Package A1
Residential New Construction - Forced Air					
<b>D. Declaration of Designer</b>					
<p>I, <u>David DaCosta</u> declare that (choose one as appropriate):</p> <p style="text-align: center;">(print name)</p> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> 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: _____         </div> <div style="border: 2px solid red; padding: 5px; color: red; text-align: center;">             TOWN OF BRADFORD WEST GWILLIMBURY              BUILDING DEPARTMENT              PLANS EXAMINED              ONTARIO BUILDING CODE APPLIES              DATE: 2019-04-26              INSPECTOR: BG           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input checked="" type="checkbox"/> 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> </div> <div> <input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code.            Basis for exemption from registration and qualification: _____         </div> </div> <p>I certify that:</p> <ol style="list-style-type: none"> <li>The information contained in this schedule is true to the best of my knowledge.</li> <li>I have submitted this application with the knowledge and consent of the firm.</li> </ol> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div> <u>June 21, 2018</u>            Date         </div> <div>             Signature of Designer         </div> </div>					

**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.

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Heat loss and gain calculation summary sheet				CSA-F280-M12 Standard Form No. 1	
These documents issued for the use of <b>Bayview Wellington</b>				Layout No.	
and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.				<b>JB-04876</b>	
Building Location					
Address (Model): <b>THWU-12</b>			Site: <b>Green Valley East</b>		
Model:			Lot:		
City and Province: <b>Bradford</b>			Postal code:		
Calculations based on					
Dimensional information based on: <b>VA3 DESIGN22/May/2018</b>					
Attachment: <b>Townhome</b>			Front facing: <b>East/West</b>		Assumed? <b>Yes</b>
No. of Levels: <b>3</b>		Ventilated? <b>Included</b>	Air tightness: <b>1961-Present (ACH=3.57)</b>		Assumed? <b>Yes</b>
Weather location: <b>Bradford</b>			Wind exposure: <b>Sheltered</b>		
HRV? <b>LifeBreath</b>		<b>RNC155</b>	Internal shading: <b>Light-translucent</b>		Occupants: <b>4</b>
Sensible Eff. at -25C <b>71%</b>		Apparent Effect. at -0C <b>84%</b>	Units: <b>Imperial</b>		Area Sq ft: <b>1762</b>
Sensible Eff. at -0C <b>75%</b>					
Heating design conditions			Cooling design conditions		
Outdoor temp <b>-9.4</b> Indoor temp: <b>72</b> Mean soil temp: <b>48</b>			Outdoor temp <b>86</b> Indoor temp: <b>75</b> Latitude: <b>44</b>		
Above grade walls			Below grade walls		
Style A: <b>As per OBC SB12 Package A1 R 22</b>			Style A: <b>As per OBC SB12 Package A1 R 20ci</b>		
Style B: <b>Existing Walls (When Applicable) R 12</b>			Style B:		
Style C:			Style C:		
Style D:			Style D:		
Floors on soil			Ceilings		
Style A: <b>As per Selected OBC SB12 Package A1</b>			Style A: <b>As per Selected OBC SB12 Package A1 R 60</b>		
Style B:			Style B: <b>As per Selected OBC SB12 Package A1 R 31</b>		
Exposed floors			Style C:		
Style A: <b>As per Selected OBC SB12 Package A1 R 31</b>			Doors		
Style B:			Style A: <b>As per Selected OBC SB12 Package A1 R 4.00</b>		
Windows			Style B:		
Style A: <b>As per Selected OBC SB12 Package A1 R 3.55</b>			Style C:		
Style B: <b>Existing Windows (When Applicable) R 1.99</b>			Skylights		
Style C:			Style A: <b>As per Selected OBC SB12 Package A1 R 2.03</b>		
Style D:			Style B:		
Attached documents: <b>As per Shedule 1</b>		<b>Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values</b>			
Notes: <b>Residential New Construction - Forced Air</b>					
Calculations performed by					
Name: <b>David DaCosta</b>			Postal code: <b>L4T 0A4</b>		
Company: <b>gtaDesigns Inc.</b>			Telephone: <b>(905) 671-9800</b>		
Address: <b>2985 Drew Road, Suite 202</b>			Fax: <b>(416) 268-6820</b>		
City: <b>Mississauga</b>			E-mail: <b>dave@gtadesigns.ca</b>		

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Builder: **Bayview Wellington**

Date: **June 21, 2018**

Project: **Green Valley East**

Model: **THWU-12**

**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-04876**

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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	9,604 btu/h	Equipment External Static Pressure	0.5 "w.c.	Make	Amana	Make	Type	Amana	1.5 Ton
Level 2 Net Load	8,672 btu/h	Additional Equipment Pressure Drop	0.225 "w.c.	Model	AMEC960403ANA	Model		Cond.-----	1.5
Level 3 Net Load	7,639 btu/h	Available Design Pressure	0.275 "w.c.	Input Btu/h	40000	Input Btu/h		Coil -----	1.5
Level 4 Net Load	0 btu/h	Return Branch Longest Effective Length	300 ft	Output Btu/h	38400	Output Btu/h			
Total Heat Loss	25,914 btu/h	R/A Plenum Pressure	0.138 "w.c.	E.s.p.	0.50	" W.C.			
Total Heat Gain	15,714 btu/h	S/A Plenum Pressure	0.14 "w.c.	Water Temp		deg. F.			
Combo System HL + 10%	28,506 Btu/h	Heating Air Flow Proportioning Factor	0.0298 cfm/btuh	AFUE	96%				
Building Volume Vb	20307 ft³	Cooling Air Flow Proportioning Factor	0.0491 cfm/btuh	Aux. Heat					
Ventilation Load	895 Btu/h	R/A Temp	70 deg. F.	SB-12 Package	Package A1				
Ventilation PVC	63.6 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	BASE											FAM/KIT	FAM/KIT	PWD	FOY										
Btu/Outlet	2401	2401	2401	2401											2635	2635	456	2945										
Heating Airflow Rate CFM	72	72	72	72											79	79	14	88										
Cooling Airflow Rate CFM	37	37	37	37											112	112	3	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	0.13		
Actual Duct Length	33	24	4	15											35	37	4	34										
Equivalent Length	70	80	120	110	70	70	70	70	70	70	70	70	70	80	110	110	130	70	70	70	70	70	70	70	70	70		
Total Effective Length	103	104	124	125	70	70	70	70	70	70	70	70	70	70	115	147	114	164	70	70	70	70	70	70	70	70		
Adjusted Pressure	0.13	0.13	0.10	0.10	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.11	0.09	0.11	0.08	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19		
Duct Size Round	5	5	5	5											6	6	3	6										
Outlet Size	3x10	3x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10		
Trunk	A	A	C	C											B	B	A	C										

	Level 3								Level 4																								
S/A Outlet No.	9	10	11	12	13	14	15																										
Room Use	MAST	MAST	LAUN	BED 3	BED 2	BATH	ENS																										
Btu/Outlet	1294	1294	121	2164	2208	353	205																										
Heating Airflow Rate CFM	39	39	4	64	66	11	6																										
Cooling Airflow Rate CFM	59	59	50	100	80	4	5																										
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							
Actual Duct Length	55	54	30	39	36	29	25																										
Equivalent Length	130	120	120	120	140	110	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70							
Total Effective Length	185	174	150	159	156	169	135	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70							
Adjusted Pressure	0.07	0.07	0.09	0.08	0.08	0.08	0.10	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	5	5	5	6	6	3	2																										
Outlet Size	3x10	3x10	3x10	4x10	4x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10							
Trunk	B	B	A	C	C	C	A																										

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	143	374	105	150							
Duct Design Pressure	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Actual Duct Length	5	13	36	31							
Equivalent Length	110	170	125	180	50	50	50	50	50	50	50
Total Effective Length	115	183	161	211	50	50	50	50	50	50	50
Adjusted Pressure	0.10	0.06	0.07	0.06	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Duct Size Round	7.0	11.0	6.0	8.0							
Inlet Size	FLC	6	8	8							
" "	x	x	x	x	x	x	x	x	x	x	x
Inlet Size		30	14	14							
Trunk	Z	Z	Z								

Return Trunk Duct Sizing				
Trunk	CFM	Press.	Round	Rect. Size
Drop	772	0.06	14.0	24x10
Z	667	0.06	13.5	20x8 16x10
Y				
X				
W				
V				
U				
T				
S				
R				
Q				

Supply Trunk Duct Sizing				
Trunk	CFM	Press.	Round	Rect. Size
A	400	0.07	11.0	14x8 10x10
B	234	0.07	9.0	8x8 10x7
C	372	0.08	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-12

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: 1762

Project # PJ-00204  
Layout # JB-04876

## Level 1

## BASE

Run ft. exposed wall A	62	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	704	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	217												
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	23	527	629											
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	194		101											
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	1.0663	0.0461														
Ventilation	Case 1	0.10	0.11														
	Case 2	14.07	11.88														
	Case 3	x	0.06	0.11													
Heat Gain People			239														
Appliances Loads	1 = .25 percent		2943														
Duct and Pipe loss	10%																
Level 1 HL Total	9,604																
Level 1 HG Total	3,010																

## Level 2

## FAM/KIT

## PWD

## FOY

Run ft. exposed wall A	39	A	6	A	17	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	10.0		10.0		13.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Floor area	573	Area	36	Area	100	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	390		60		221								
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	80	1834	2188											
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	310	1482	200	60	287	39	172	822	111					
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	0.5297	0.0461														
Ventilation	Case 1	0.05	0.11														
	Case 2	14.07	11.88														
	Case 3	x	0.06	0.11													
Heat Gain People			239														
Appliances Loads	1 = .25 percent		2943														
Duct and Pipe loss	10%																
Level 2 HL Total	8,672																
Level 2 HG Total	5,454																

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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	25,914	btu/h
Total Heat Gain	15,714	btu/h

2012 OBC

Builder: Bayview Wellington

Date: June 21, 2018

Project: Green Valley East

Model: THWU-12

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: 1762

## Level 3

Run ft. exposed wall A	19 A	MAST	A	LAUN	A	BED 3	14 A	BED 2	10 A	BATH	A	ENS	A	A	A	A	A	A
Run ft. exposed wall 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
Floor area	352 Area		61 Area		123 Area		203 Area		61 Area		103 Area		Area	Area	Area	Area	Area	Area
Exposed Ceilings A	352 A		61 A		123 A		203 A		61 A		103 A		A	A	A	A	A	A
Exposed Ceilings B	B		B		B		B		B		B		B	B	B	B	B	B
Exposed Floors	Flr		Flr		23 Flr		122 Flr		51 Flr		Flr		Flr	Flr	Flr	Flr	Flr	Flr
Gross Exp Wall A	152				112		80											
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
North Shaded	3.55	22.93	10.91																
East/West	3.55	22.93	27.35	32	734	875		33	757	903	22	504	602						
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	120	574	78		79	378	51	58	277	37						
Net exposed walls B	8.50	9.58	1.29																
Exposed Ceilings A	59.22	1.37	0.64	352	484	226	61	84	39	123	169	79	203	279	130	61	84	39	103
Exposed Ceilings B	22.86	3.56	1.66																
Exposed Floors	29.80	2.73	0.17																
Foundation Conductive Heatloss																			
Total Conductive																			
Heat Loss				1791				84		1366		1394		223		142			
Heat Gain					1179		39		1036		790		48		66				
Air Leakage	Heat Loss/Gain	0.3854	0.0461	690	54		32	2	526	48	537	36	86	2	55	3			
Ventilation	Case 1		0.04		0.11														
Case 2			14.07		11.88														
Case 3	x		0.06		0.11														
Heat Gain People			239	2	107	129	5	4	82	114	83	87	13	5	8	7			
Appliances Loads	1 =.25 percent		2943		478				1	239	1	239							
Duct and Pipe loss			10%				1.0	736	1	189	128	1	193	103	1	31	5		
Level 3 HL Total	7,639			2588				121	2164		2208		353		205				
Level 3 HG Total	7,250				2393			1015		2034		1632			99				
Total HL for per room																			
Total HG per room x 1.3																			

## Level 4

Run ft. exposed wall A	A	A	A	A	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	B	B	B	B	B
Ceiling height																			
Floor area	Area	Area	Area	Area	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	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	B	B
Exposed Floors	Flr	Flr	Flr	Flr	Flr	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
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	0.0461																
Ventilation	Case 1		0.00		0.11														
Case 2			14.07		11.88														
Case 3	x		0.06		0.11														
Heat Gain People			239																
Appliances Loads	1 =.25 percent		2943																
Duct and Pipe loss			10%																
Level 4 HL Total	0																		
Level 4 HG Total	0																		
Total HL for per room																			
Total HG per room x 1.3																			

# SITE COPY

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

*[Signature]*

David DaCosta

SB-12 Package

Package A1

Total Heat Loss	25,914	btu/h
Total Heat Gain	15,714	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

**Package:** Package A1

**Project:** Bradford

**Model:**
**THWU-12**

## 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	2	@	10.6 cfm	21.2 cfm
Bathrooms & Kitchen	4	@	10.6 cfm	42.4 cfm
Other rooms	3	@	10.6 cfm	31.8 cfm
Total				<u>137.8</u>

Principal Ventilation Capacity 9.32.3.4(1)				
Master bedroom	1	@	31.8 cfm	31.8 cfm
Other bedrooms	2	@	15.9 cfm	31.8 cfm
Total				<u>63.6</u>

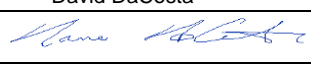
Principal Exhaust Fan Capacity				
Make	Model		Location	
LifeBreath	RNC155		Base	
132 cfm			Sones	or Equiv.

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		137.8
Less principal exhaust capacity		63.6
REQUIRED supplemental vent. Capacity		<u>74.2</u> 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-04876

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 <b>THWU-12</b>		Unit number	Lot/Con
Municipality <b>Bradford</b>	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		
<input checked="" type="checkbox"/> Zone 1 (< 5000 degree days) <input type="checkbox"/> Zone 2 (≥ 5000 degree days)	<input checked="" type="checkbox"/> ≥ 92% AFUE <input type="checkbox"/> ≥ 84% < 92% AFUE	<input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil	<input type="checkbox"/> Propane <input type="checkbox"/> Electric	<input type="checkbox"/> Solid Fuel <input type="checkbox"/> Earth Energy
Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area		Other Building Characteristics		
Area of Walls = <u>282.23</u> m <sup>2</sup> or <u>3037.9</u> ft <sup>2</sup>	W,S & G % = <u>7%</u>	<input type="checkbox"/> Log/Post&Beam <input type="checkbox"/> Slab-on-ground <input checked="" type="checkbox"/> Air Conditioning <input type="checkbox"/> Air Sourced Heat Pump (ASHP) <input type="checkbox"/> Ground Source Heat Pump (GSHP)		
Area of W, S & G = <u>18.859</u> m <sup>2</sup> or <u>203.0</u> ft <sup>2</sup>	Utilize Window Averaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> ICF Above Grade <input type="checkbox"/> Walkout Basement <input type="checkbox"/> Combo Unit		

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

Energy Efficiency Substitutions			
<input type="checkbox"/> ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5)) <input type="checkbox"/> Combined space heating and domestic water heating systems (3.1.1.2(7) / 3.1.1.3.(7))			
<input type="checkbox"/> Airtightness substitution(s) Airtightness test required (Refer to Design Guide Attached)	<input type="checkbox"/> Table 3.1.1.4.B Required:		Permitted Substitution:
	<input type="checkbox"/> Table 3.1.1.4.C Required:		Permitted Substitution:
Building Component	Minimum RSI/R-Values or Maximum U-Value <sup>1</sup>		Efficiency Ratings
<b>Thermal Insulation</b>	Nominal	Effective	<b>Windows &amp; Doors</b> Provide U-Value <sup>(1)</sup> 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		<b>Mechanicals</b>
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/(m<sup>2</sup>·K) or Btu/(h·ft<sup>2</sup>·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 <b>David DaCosta</b>	BCIN <b>32964</b>	Signature 
------------------------------	----------------------	---------------

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

# SITE COPY



Package: Project: Package A1 Bradford System: Model: System 1 THWU-12

## Air Leakage Calculations

Building Air Leakage Heat Loss				
B	LRairh	Vb	HL^T	HLleak
0.018	0.324	20307	81.4	9634

Building Air Leakage Heat Gain				
B	LRairh	Vb	HG^T	HG Leak
0.018	0.079	20307	11	317

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	9634	4517	1.0663
Level 2	0.3		5456	0.5297
Level 3	0.2		5000	0.3854
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	
	317		0.0461
BUILDING CONDUCTIVE HEAT GAIN			6881

Levels this Dwelling	
3	

## Ventilation Calculations

### Ventilation Heat Loss

Ventilation Heat Loss				
C	PVC	HL^T	(1-E) HRV	HLbvent
1.08	63.6	81.4	0.16	895

### Ventilation Heat Gain

Ventilation Heat Gain			
C	PVC	HG^T	HGbvent
1.1	63.6	11	756

### Case 1

#### Ventilation Heat Loss (Exhaust only Systems)

Case 1 - Exhaust Only				
Level	LF	HLbvent	LVL Cond. HL	Multiplier
Level 1	0.5	895	4517	0.10
Level 2	0.3		5456	0.05
Level 3	0.2		5000	0.04
Level 4	0		0	0.00

### Case 1

#### Ventilation Heat Gain (Exhaust Only Systems)

Case 1 - Exhaust Only		Multiplier	
HGbvent	756	0.11	
Building	6881		

### 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	895	0.06

### Case 3

#### Ventilation Heat Gain (Forced Air Systems)

Vent Heat Gain		Multiplier
HGbvent	HG*1.3	0.11
756	1	

Foundation Conductive Heatloss Level 1

1169 Watts 3990 Btu/h

Foundation Conductive Heatloss Level 2

Watts Btu/h



# Envelope Air Leakage Calculator

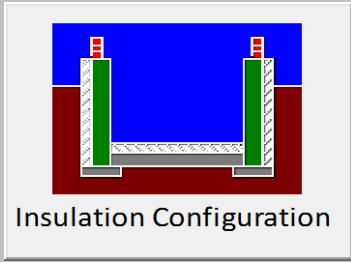
Supplemental tool for CAN/CSA-F280

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 <sup>3</sup> ):	575.08			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (ACH=3.57)			
Custom BDT Data:	ELA @ 10 Pa. 322.44 cm <sup>2</sup>			
	3.57 ACH @ 50 Pa			
Mechanical Ventilation (L/s):	Total Supply:		Total Exhaust:	
	31.8		31.8	
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**

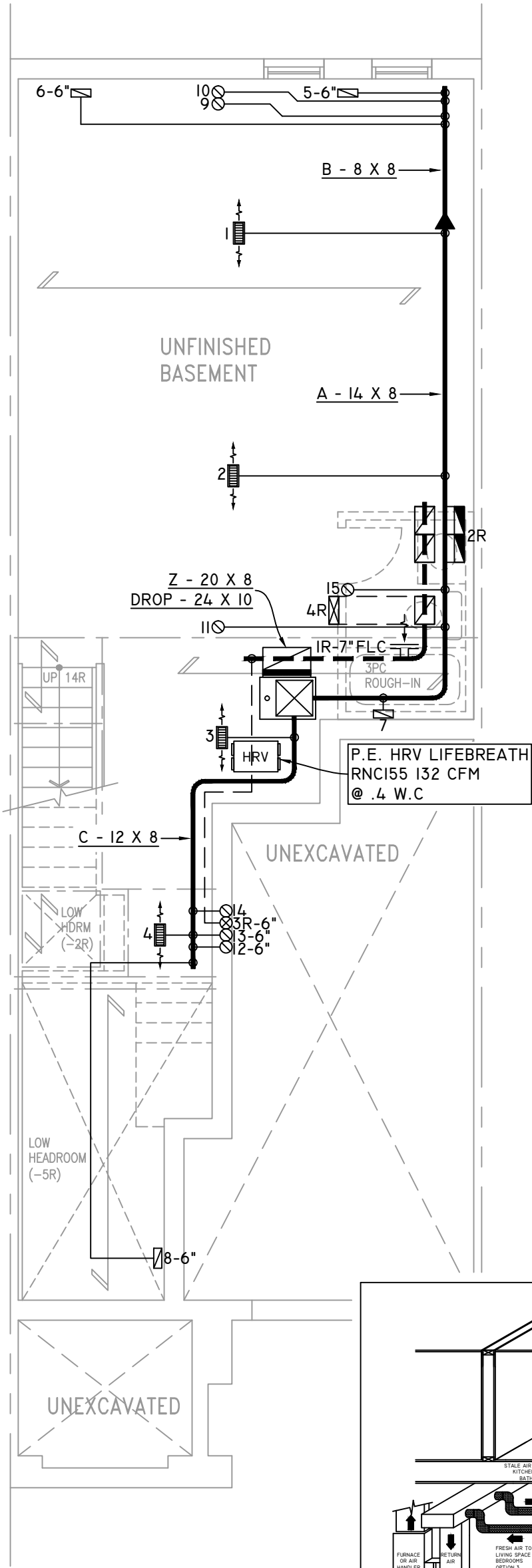
# Residential Foundation Thermal Load Calculator

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):	17.62	 <p>Insulation Configuration</p>
Floor Width (m):	3.72	
Exposed Perimeter (m):	18.90	
Wall Height (m):	2.59	
Depth Below Grade (m):	1.52	
Window Area (m <sup>2</sup> ):	2.14	
Door Area (m <sup>2</sup> ):	0.00	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1169

**SITE COPY**

	FLEX DUCT RIGID ROUND DUCT SUPPLY DIFFUSER		LOW/HIGH WALL/KICK SUPPLY DIFFUSER HRV EXHAUST GRILLE 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 \$ F PE	SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN
--	--	--	--	--	---	--	--	---------------------------------	---



- 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)

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

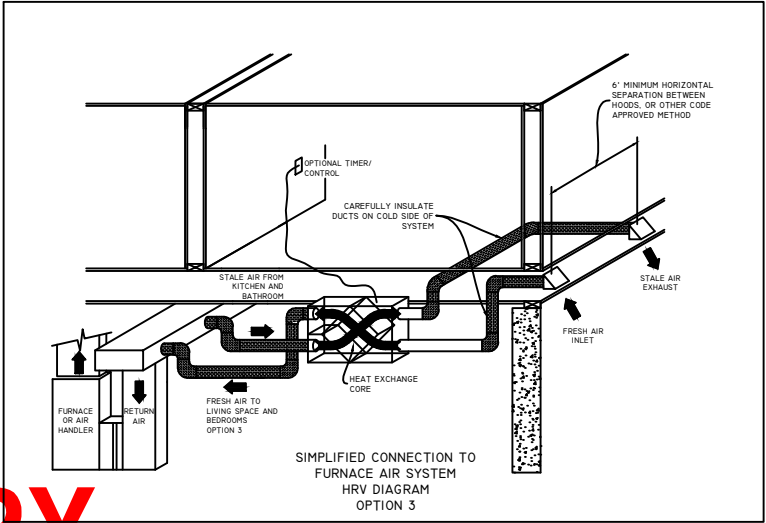
REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE ONTARIO BUILDING CODE

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

SIGNATURE OF DESIGNER

SITE COPY

BASEMENT PLAN 'A' & 'B'



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.

GTADESIGNS



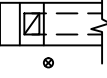















2985 DREW ROAD  
SUITE 202,  
MISSISSAUGA, ONT.  
L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

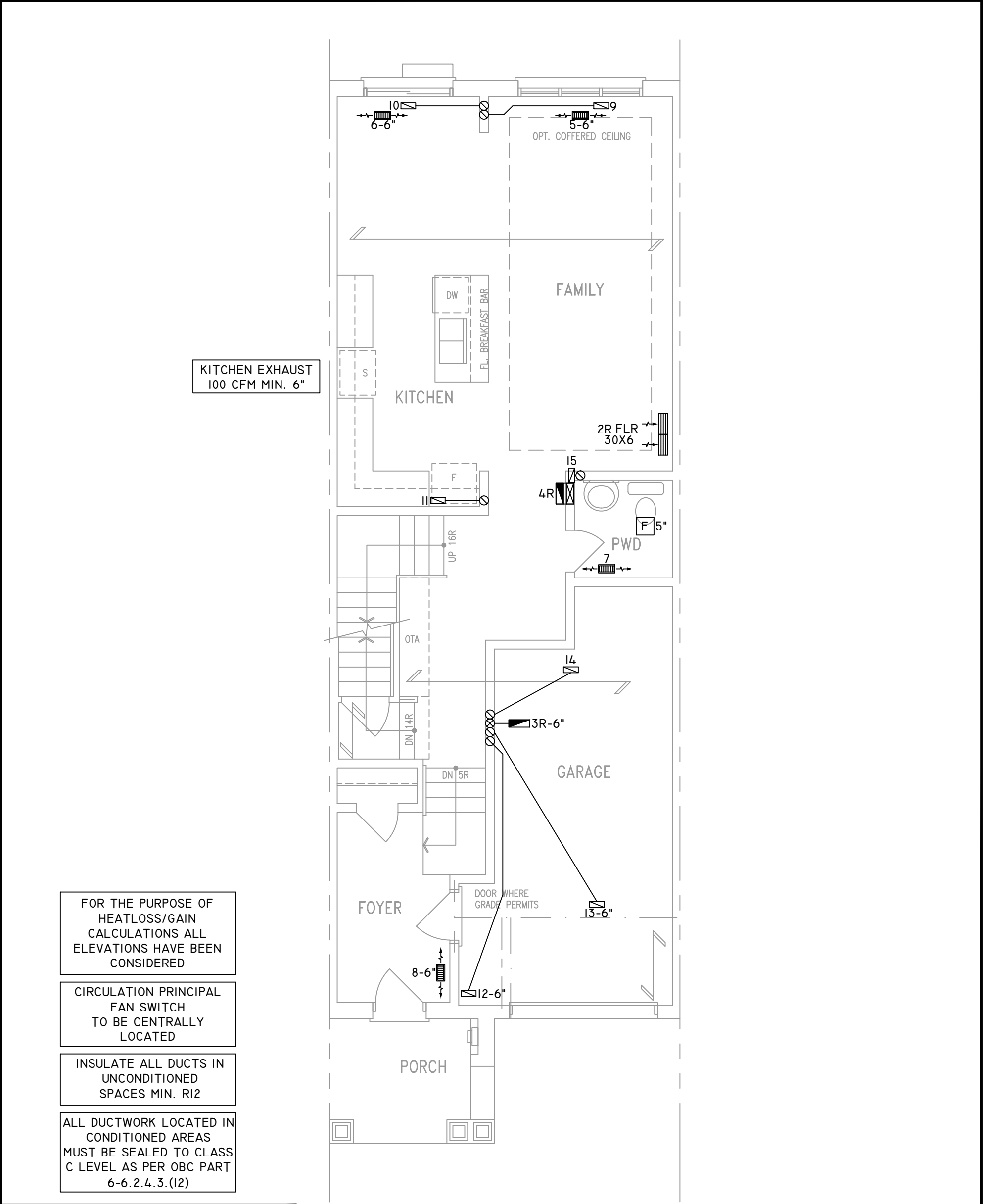
HEAT-LOSS	25,914	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960403ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	1.5	TONS.
FAN SPEED	772	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	7	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

FLOOR PLAN: BASEMENT	
DRAWN BY: JL	CHECKED: DD
LAYOUT NO. JB-04876	SQFT 1762
	DRAWING NO. MI

DATE:	JANUARY 15, 2019
CLIENT:	BAYVIEW WELLINGTON
MODEL:	THWU-12
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		F
							W/R & PRINCIPAL EXHAUST FAN		PE



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.





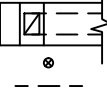













2985 DREW ROAD  
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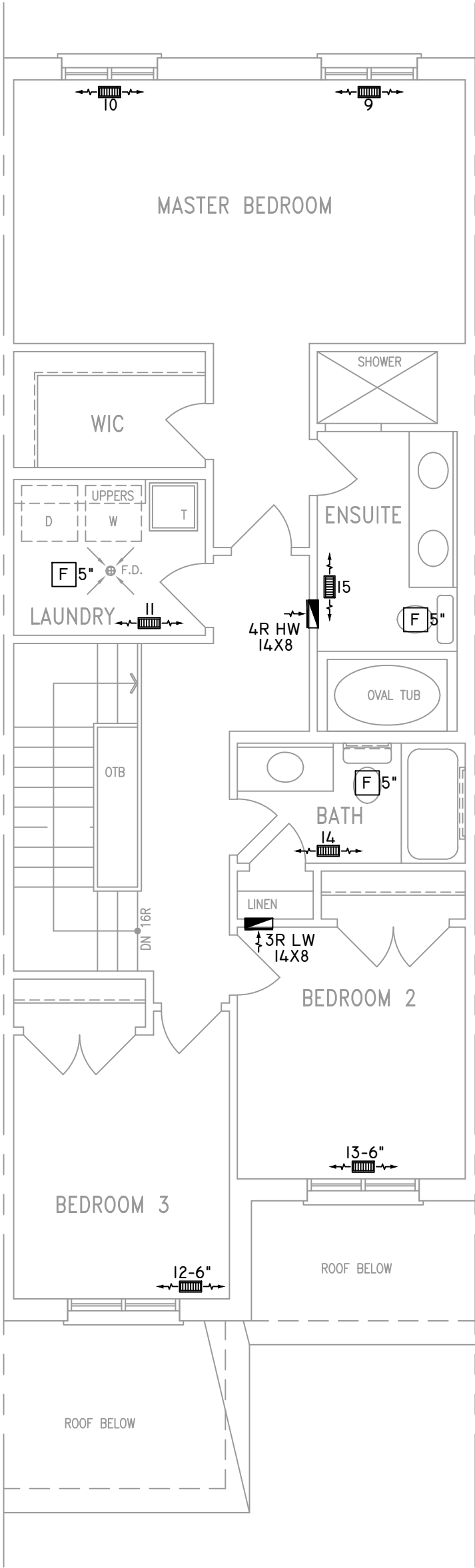
HEAT-LOSS	25,914	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960403ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	1.5	TONS.
FAN SPEED	772	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	7	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

FLOOR PLAN: GROUND FLOOR		
DRAWN BY: JL	CHECKED: DD	SQFT 1762
LAYOUT NO. JB-04876	DRAWING NO. M2	

DATE:	JANUARY 15, 2019
CLIENT:	BAYVIEW WELLINGTON
MODEL:	THWU-I2
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

**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

SECOND 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.  
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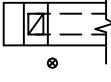








2985 DREW ROAD  
SUITE 202,  
MISSISSAUGA, ONT.  
L4T 0A4 TEL: 905-671-9800  
EMAIL: DAVE@GTADESIGNS.CA  
WEB: WWW.GTADESIGNS.CA

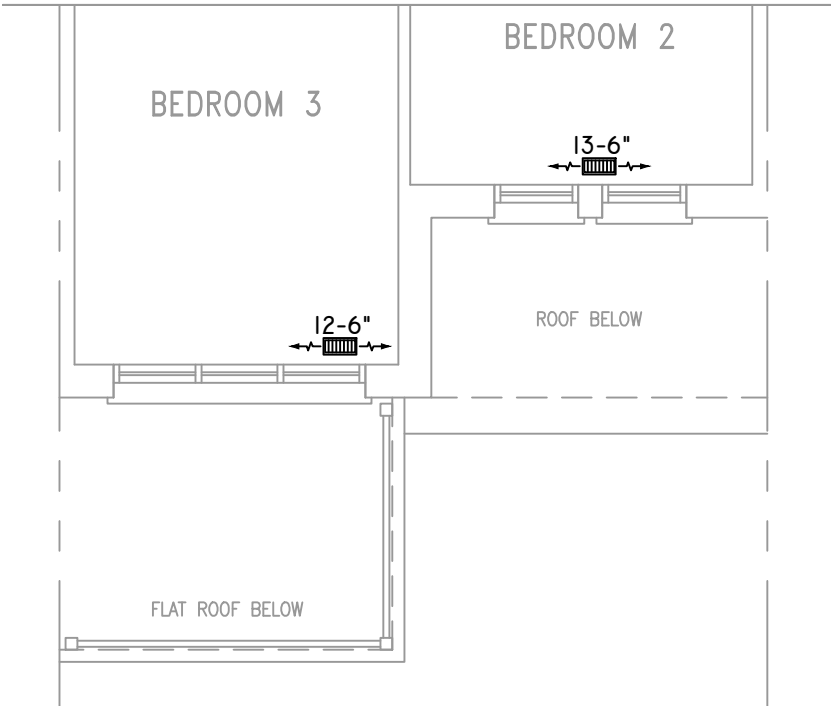
HEAT-LOSS	25,914	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC9604.03ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	1.5	TONS.
FAN SPEED	772	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	7	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

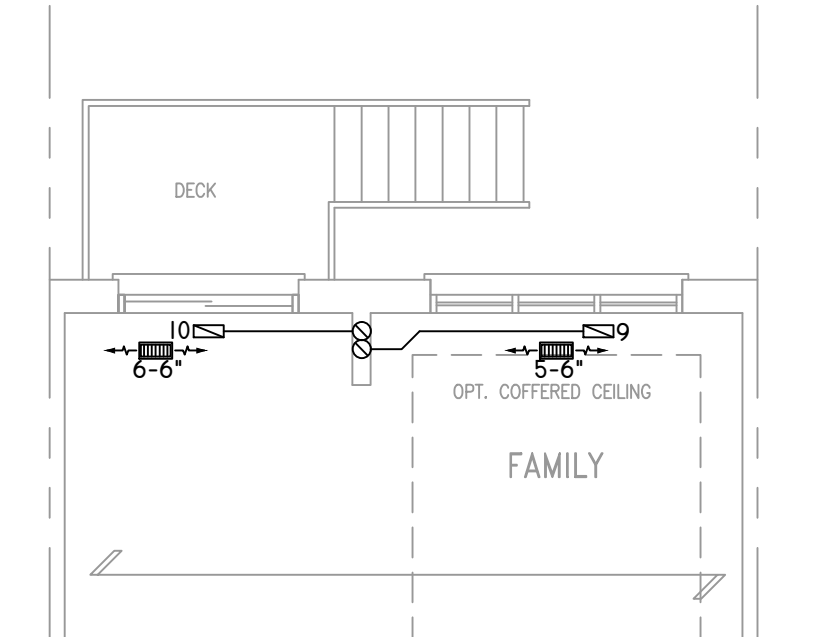
FLOOR PLAN: SECOND FLOOR		
DRAWN BY: JL	CHECKED: DD	SQFT 1762
LAYOUT NO. JB-04876	DRAWING NO. M3	

DATE: JANUARY 15, 2019
CLIENT: BAYVIEW WELLINGTON
MODEL: THWU-12
PROJECT: GREEN VALLEY EAST BRADFORD,ONT.
SCALE: 3/16" = 1'-0"

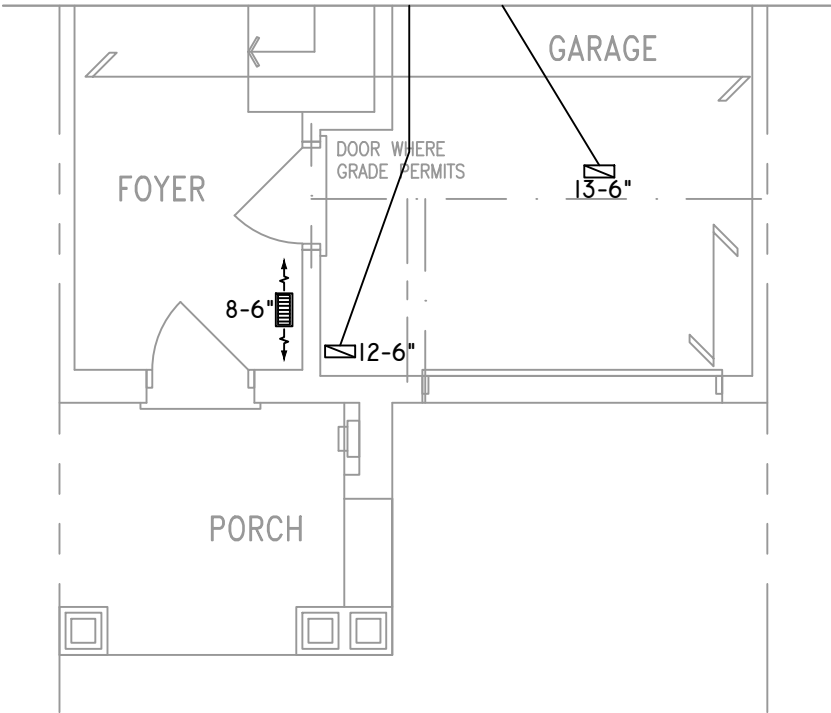
 FLEX DUCT  RIGID ROUND DUCT  SUPPLY DIFFUSER	 LOW/HIGH WALL/KICK SUPPLY DIFFUSER  HRV EXHAUST GRILLE  SUPPLY AIR PIPE RISER  VOLUME DAMPER	 DUCT CONNECTION TO JOIST LINING  RETURN AIR PIPE RISER  RETURN ROUND DUCT	 RETURN AIR GRILLE (SIZE INDICATED ON DRAWING)  RETURN AIR RISER UP TO FLOOR ABOVE  RETURN AIR FROM BASEMENT SECOND FLOOR	S.A. R.A.  T  \$  F PE	SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN
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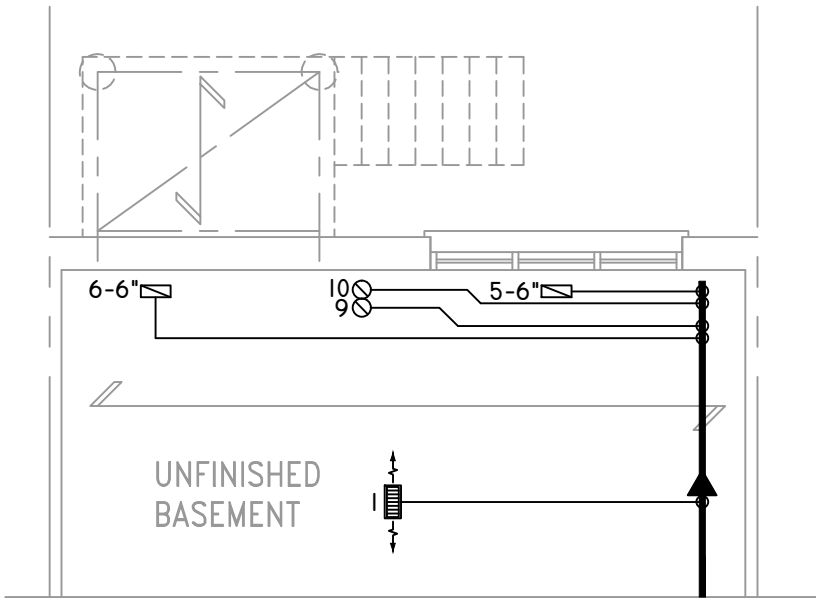
PART. SECOND FLOOR PLAN 'B'



PARTIAL GROUND FLOOR PLAN  
WOD COND 9R AND MORE



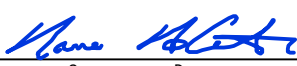
PART. GROUND FLOOR PLAN 'B'



PARTIAL BASEMENT PLAN  
WOD COND 9R AND MORE

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.  
 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.  
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# OF RUNS	S/A	R/A	FANS
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2ND FLOOR	7	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

FLOOR PLAN:	
PARTIAL PLAN(S)	
DRAWN BY: JL	CHECKED: DD
LAYOUT NO. JB-04876	SQFT 1762
DRAWING NO. M4	

DATE:	JANUARY 15, 2019
CLIENT:	BAYVIEW WELLINGTON
MODEL:	THWU-12
PROJECT:	GREEN VALLEY EAST BRADFORD,ONT.
SCALE:	3/16" = 1'-0"