

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:	
TH-3				Lot/con.	
Municipality		Postal code	Plan number/ other description		
Bradford					
B. Individual who reviews and takes responsibility for design activities					
Name			Firm		
David DaCosta			gtaDesigns Inc.		
Street address			Unit no.	Lot/con.	
2985 Drew Road, Suite 202					
Municipality		Postal code	Province	E-mail	
Mississauga		L4T 0A4	Ontario	dave@gtadesigns.ca	
Telephone number		Fax number	Cell number		
(905) 671-9800		(647) 494-9643	(416) 268-6820		
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]					
<input type="checkbox"/> House		<input checked="" type="checkbox"/> HVAC – House		<input type="checkbox"/> Building Structural	
<input type="checkbox"/> Small Buildings		<input type="checkbox"/> Building Services		<input type="checkbox"/> Plumbing – House	
<input type="checkbox"/> Large Buildings		<input type="checkbox"/> Detection, Lighting and Power		<input type="checkbox"/> Plumbing – All Buildings	
<input type="checkbox"/> Complex Buildings		<input type="checkbox"/> Fire Protection		<input type="checkbox"/> On-site Sewage Systems	
Description of designer's work			Model Certification		Project #:
					PJ-00204
					Layout #:
					JB-04864
Heating and Cooling Load Calculations		Main	X	Builder	
Air System Design		Alternate		Project	
Residential mechanical ventilation Design Summary		Area Sq ft:	1714	Model	
Residential System Design per CAN/CSA-F280-12				TH-3	
Residential New Construction - Forced Air				SB-12	
				Package A1	
D. Declaration of Designer					
<p>I, <u>David DaCosta</u> declare that (choose one as appropriate):</p> <p style="text-align: center;">(print name)</p> <p><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.</p> <p style="margin-left: 150px;">Individual BCIN: _____</p> <p style="margin-left: 150px;">Firm BCIN: _____</p> <p><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.</p> <p style="margin-left: 150px;">Individual BCIN: <u>32964</u></p> <p style="margin-left: 150px;">Basis for exemption from registration: <u>Division C 3.2.4.1. (4)</u></p> <p><input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code.</p> <p style="margin-left: 150px;">Basis for exemption from registration and qualification:</p>					
<p>I certify that:</p> <ol style="list-style-type: none"> The information contained in this schedule is true to the best of my knowledge. I have submitted this application with the knowledge and consent of the firm. 					
<p><u>December 12, 2023</u></p> <p>Date</p>			<p><u>[Signature]</u></p> <p>Signature of Designer</p>		

TOWN OF BRADFORD WEST GWILLIMBURY
BUILDING DEPARTMENT
PLANS EXAMINED
ONTARIO BUILDING CODE APPLIES
DATE: 04/23/2024
INSPECTOR: BG

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.

REVIEWED

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-04864	
Building Location					
Address (Model): TH-3			Site: Green Valley		
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: 4
Sensible Eff. at -25C 71%		Apparent Effect. at -0C 84%	Units: Imperial		Area Sq ft: 1714
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		

REVIEWED

Builder: Bayview Wellington

Date: December 12, 2023

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.

Page 3

Project: Green Valley

Model: TH-3

System 1

Individual BCIN: 32964

David DaCosta

David DaCosta

Project # PJ-00204
Layout # JB-04864

DESIGN LOAD SPECIFICATIONS				AIR DISTRIBUTION & PRESSURE				FURNACE/AIR HANDLER DATA:				BOILER/WATER HEATER DATA:				A/C UNIT DATA:			
Level 1 Net Load	9,698	btu/h		Equipment External Static Pressure	0.5	"w.c.		Make	Amana			Make	Type	Amana	1.5	Ton			
Level 2 Net Load	8,320	btu/h		Additional Equipment Pressure Drop	0.225	"w.c.		Model	AMEC960403ANA			Model		Cond.	-----	1.5			
Level 3 Net Load	7,059	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	25,077	btu/h		R/A Plenum Pressure	0.138	"w.c.		E.s.p.	0.50	" W.C.		Min.Output Btu/h	AWH						
Total Heat Gain	14,979	btu/h		S/A Plenum Pressure	0.14	"w.c.		Water Temp		deg. F.		Blower DATA:							
Combo System HL + 10%	27,584	Btu/h		Heating Air Flow Proportioning Factor	0.0308	cfm/btuh		AFUE	96%			Blower Speed Selected:	W2			Blower Type	ECM		
Building Volume Vb	20138	ft³		Cooling Air Flow Proportioning Factor	0.0515	cfm/btuh		Aux. Heat								(Brushless DC OBC 12.3.1.5.(2))			
Ventilation Load	895	Btu/h		R/A Temp	70	deg. F.		SB-12 Package	Package A1			Heating Check	772	cfm		Cooling Check	772	cfm	
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.		Selected cfm>	772	cfm		Cooling Air Flow Rate	772	cfm	

	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	MUD	FOY										
Btu/Outlet	2424	2424	2424	2424											2443	2443	1180	2254										
Heating Airflow Rate CFM	75	75	75	75											75	75	36	69										
Cooling Airflow Rate CFM	38	38	38	38											110	110	8	41										
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	25	17	10	23											32	21	19	30										
Equivalent Length	100	110	120	90	70	70	70	70	70	70	70	70	70	70	100	70	140	100	70	70	70	70	70	70	70	70	70	
Total Effective Length	125	127	130	113	70	70	70	70	70	70	70	70	70	70	132	91	159	130	70	70	70	70	70	70	70	70	70	
Adjusted Pressure	0.10	0.10	0.10	0.12	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.10	0.14	0.08	0.10	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	4	5										
Outlet Size	3x10	3x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	
Trunk	A	A	B	B											A	A	B	B										

	Level 3							Level 4																												
S/A Outlet No.	9	10	11	12	13	14																														
Room Use	MAST	LAUN	BED 3	BED 2	BATH	ENS																														
Btu/Outlet	1821	127	1697	2278	170	966																														
Heating Airflow Rate CFM	56	4	52	70	5	30																														
Cooling Airflow Rate CFM	99	52	75	86	3	35																														
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	38	24	50	38	40	59																														
Equivalent Length	110	150	120	120	170	140	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70									
Total Effective Length	148	174	170	158	210	199	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70									
Adjusted Pressure	0.09	0.07	0.08	0.08	0.06	0.07	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	5	6	6	2	5																														
Outlet Size	4x10	3x10	4x10	4x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10									
Trunk	A	A	B	B	A	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	150	367	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	9	15	42	34																													
Equivalent Length	155	175	105	150	50	50	50	50	50	50	50																						
Total Effective Length	164	190	147	184	50	50	50	50	50	50	50																						
Adjusted Pressure	0.07	0.06	0.08	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	8	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					Supply Trunk Duct Sizing				
Trunk	CFM	Press.	Round	Rect. Size	Trunk	CFM	Press.	Round	Rect. Size
Drop	772	0.06	14.0	24x10	A	395	0.06	11.0	14x8 10x10
Z	667	0.06	13.5	20x8 16x10	B	377	0.08	10.5	12x8 10x10
Y					C				
X					D				
W					E				
V					F				
U					G				
T					H				
S					I				
R					J				
Q					K				

REVIEWED

2012 OBC

Builder: Bayview Wellington

Date: December 12, 2023

Project: Green Valley

Model: TH-3

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: 1714

Project # PJ-00204
Layout # JB-04864

Level 1

BASE

Run ft. exposed wall A	57	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
Ceiling height	3.5	AG	3.5	AG	3.5	AG	3.5	AG	3.5	AG	3.5	AG	3.5	AG	3.5
Floor area	716	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
Exposed Ceilings 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
Gross Exp Wall A	200														
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	20	459	547											
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	21	427	58											
Net exposed walls A	21.13	3.85	0.52	159		83											
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	1.0309	0.0486														
Ventilation	Case 1	0.10	0.12														
	Case 2	14.07	11.88														
	Case 3	x	0.06	0.12													
Heat Gain People			239														
Appliances Loads	1 = .25 percent		2913														
Duct and Pipe loss			10%														
Level 1 HL Total	9,698																
Level 1 HG Total	2,935																

Level 2

FAM/KIT

MUD

FOY

Run ft. exposed wall A	35	A	7	A	16	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
Ceiling height	10.0		12.0		11.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Floor area	589	Area	62	Area	63	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
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	350		84		176												
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	74	1697	2024											
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	276	1319	178											
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	0.5581	0.0486														
Ventilation	Case 1	0.05	0.12														
	Case 2	14.07	11.88														
	Case 3	x	0.06	0.12													
Heat Gain People			239														
Appliances Loads	1 = .25 percent		2913														
Duct and Pipe loss			10%														
Level 2 HL Total	8,320																
Level 2 HG Total	5,231																

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	25,077	btu/h
Total Heat Gain	14,979	btu/h

REVIEWED

Builder: Bayview Wellington Date: December 12, 2023
Project: Green Valley Model: TH-3

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: 1714

2012 OBC				Level 3												Level 4											
				MAST			LAUN			BED 3			BED 2			BATH			ENS								
				Run ft. exposed wall A			Run ft. exposed wall B			Ceiling height			Floor area			Exposed Ceilings A			Exposed Ceilings B			Exposed Floors			Gross Exp Wall A		
				Gross Exp Wall B																							
				Components			R-Values			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			0.4101			0.0486														
				Case 1						0.04			0.12														
				Case 2						14.07			11.88														
				Case 3			x			0.06			0.12														
				Heat Gain People						239																	
				Appliances Loads			1 =.25 percent			2913																	
				Duct and Pipe loss						10%																	
				Level 3 HL Total			7,059			Total HL for per room																	
				Level 3 HG Total			6,812			Total HG per room x 1.3																	

REVIEWED

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

Total Heat Loss	25,077	btu/h
Total Heat Gain	14,979	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:
TH-3

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				137.8

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				63.6

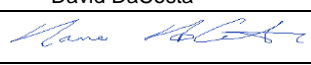
Principal Exhaust Fan Capacity				
Make	Model		Location	
LifeBreath	RNC155		Base	
132 cfm			Sones or Equiv.	

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		74.2 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	December 12, 2023

REVIEWED



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-04864

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 TH-3		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		
<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>272.94</u> m ² or <u>2937.9</u> ft ²	W,S & G % = <u>6%</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>17.558</u> m ² or <u>189.0</u> ft ²	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: <input type="checkbox"/> Table 3.1.1.4.C Required:	Permitted Substitution: Permitted Substitution: 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.

REVIEWED

Package: Project: Package A1 Bradford System: Model: System 1 TH-3

Air Leakage Calculations

Building Air Leakage Heat Loss				
B	LRairh	Vb	HL^T	HLleak
0.018	0.324	20138	81.4	9554

Building Air Leakage Heat Gain				
B	LRairh	Vb	HG^T	HG Leak
0.018	0.079	20138	11	315

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	9554	4634	1.0309
Level 2	0.3		5136	0.5581
Level 3	0.2		4660	0.4101
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	
	315		0.0486
BUILDING CONDUCTIVE HEAT GAIN			6478

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	4634	0.10
Level 2	0.3		5136	0.05
Level 3	0.2		4660	0.04
Level 4	0		0	0.00

Case 1

Ventilation Heat Gain (Exhaust Only Systems)

Case 1 - Exhaust Only		Multiplier	
HGbvent	756	0.12	
Building	6478		

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	0.12
756	1	

Foundation Conductive Heatloss Level 1

1098 Watts 3748 Btu/h

Foundation Conductive Heatloss Level 2

Watts Btu/h

Envelope Air Leakage Calculator

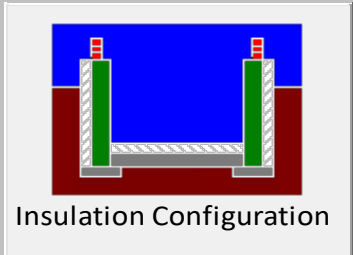
Supplemental tool for CAN/CSA-F280

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):	570.31			
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:	
	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				

















REVIEWED

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):	16.56	 Insulation Configuration
Floor Width (m):	4.02	
Exposed Perimeter (m):	17.37	
Wall Height (m):	2.59	
Depth Below Grade (m):	1.52	
Window Area (m ²):	1.86	
Door Area (m ²):	1.95	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1098

REVIEWED

	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

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)

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

Z - 20 X 8
DROP - 24 X 10

UNFINISHED BASEMENT

UNEXCAVATED

BASEMENT PLAN 'A'

PARTIAL PLAN SUNKEN 1R COND

PARTIAL PLAN SUNKEN 2R OR MORE COND

OPTION 3

OBC 2012

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

REVIEWED

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.





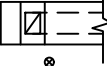













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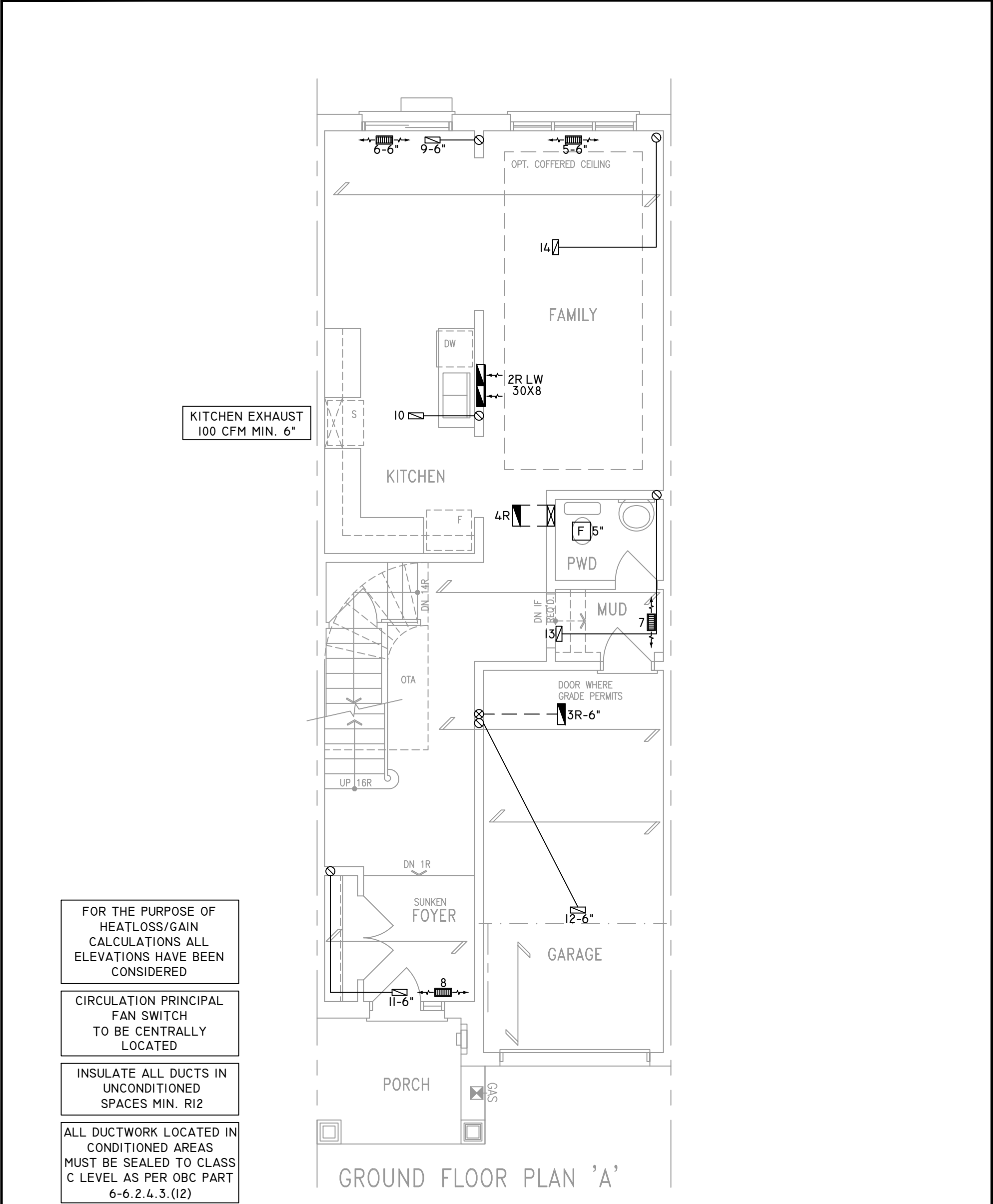
HEAT-LOSS	25,077	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960403ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	1.5	TONS.
FAN SPEED	772	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	6	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

FLOOR PLAN:	BASEMENT
DRAWN BY:	JL
CHECKED:	DD
SQFT	1714
LAYOUT NO.	JB-04864
DRAWING NO.	MI

DATE:	DECEMBER 11, 2023
CLIENT:	BAYVIEW WELLINGTON
MODEL:	TH-3
PROJECT:	GREEN VALLEY 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



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

REVIEWED

OBC 2012

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

NOTES

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.

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ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)

INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.

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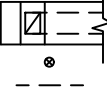













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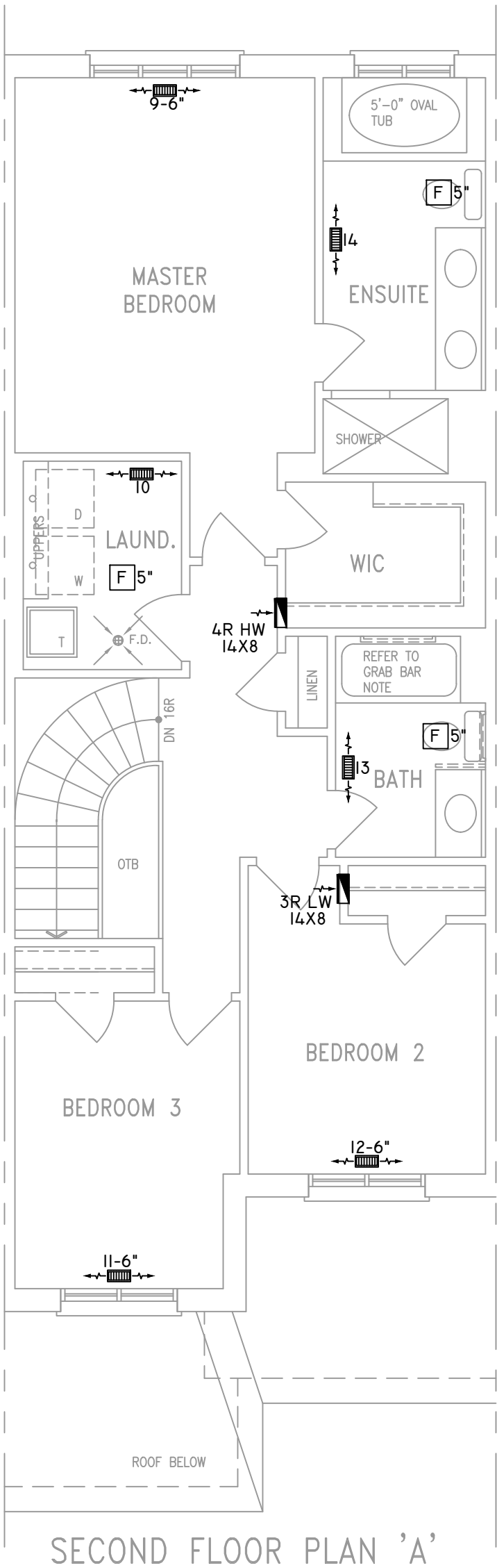
HEAT-LOSS	25,077	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960403ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	1.5	TONS.
FAN SPEED	772	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	6	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

FLOOR PLAN: GROUND FLOOR		
DRAWN BY: JL	CHECKED: DD	SQFT 1714
LAYOUT NO. JB-04864	DRAWING NO. M2	

DATE: DECEMBER 11, 2023
CLIENT: BAYVIEW WELLINGTON
MODEL: TH-3
PROJECT: GREEN VALLEY 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

REVIEWED

OBC 2012

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

NOTES

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ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)

INSULATE DUCTS IN UNCONDITIONED SPACES R12 UNDERCUT ALL DOORS 1" MIN.

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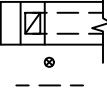












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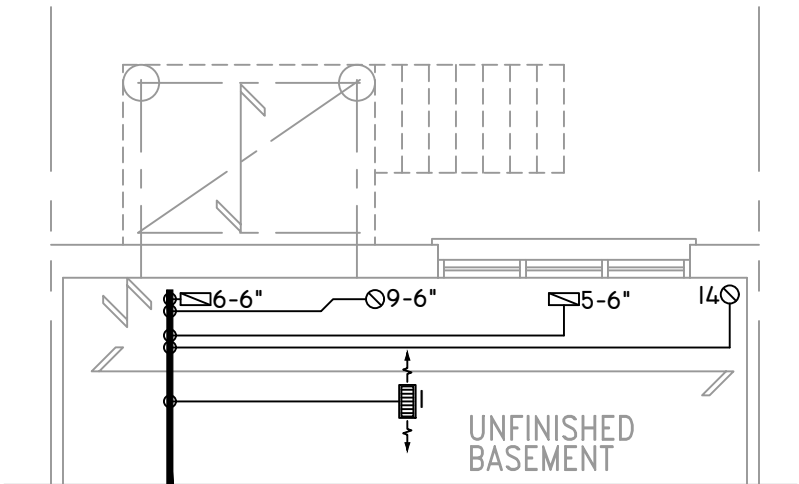
HEAT-LOSS	25,077	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC9604.03ANA	OR EQUAL.
UNIT HEATING INPUT	40,000	BTU/HR.
UNIT HEATING OUTPUT	38,400	BTU/HR.
A/C COOLING CAPACITY	1.5	TONS.
FAN SPEED	772	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	6	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

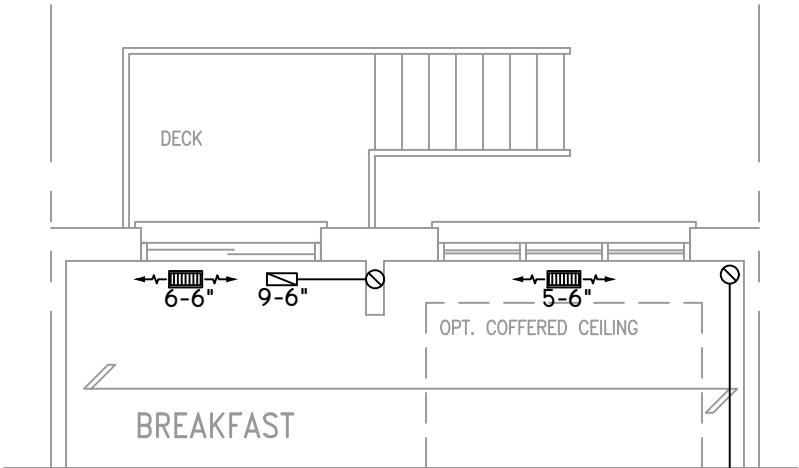
FLOOR PLAN: SECOND FLOOR		
DRAWN BY: JL	CHECKED: DD	SQFT 1714
LAYOUT NO. JB-04864	DRAWING NO. M3	

DATE:	DECEMBER 11, 2023
CLIENT:	BAYVIEW WELLINGTON
MODEL:	TH-3
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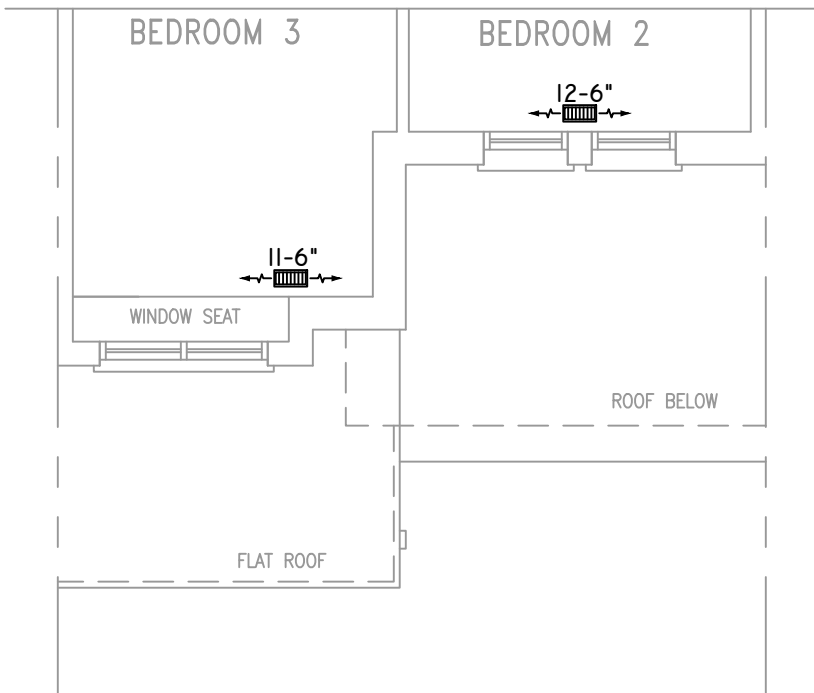
	FLEX DUCT		LOW/HIGH WALL/KICK SUPPLY DIFFUSER		DUCT CONNECTION TO JOIST LINING		RETURN AIR GRILLE (SIZE INDICATED ON DRAWING)	S.A.	SUPPLY AIR
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	SUPPLY DIFFUSER		VOLUME DAMPER		RETURN ROUND DUCT		RETURN AIR FROM BASEMENT SECOND FLOOR		THERMOSTAT
									PRINCIPAL EXHAUST FAN SWITCH
									W/R & PRINCIPAL EXHAUST FAN



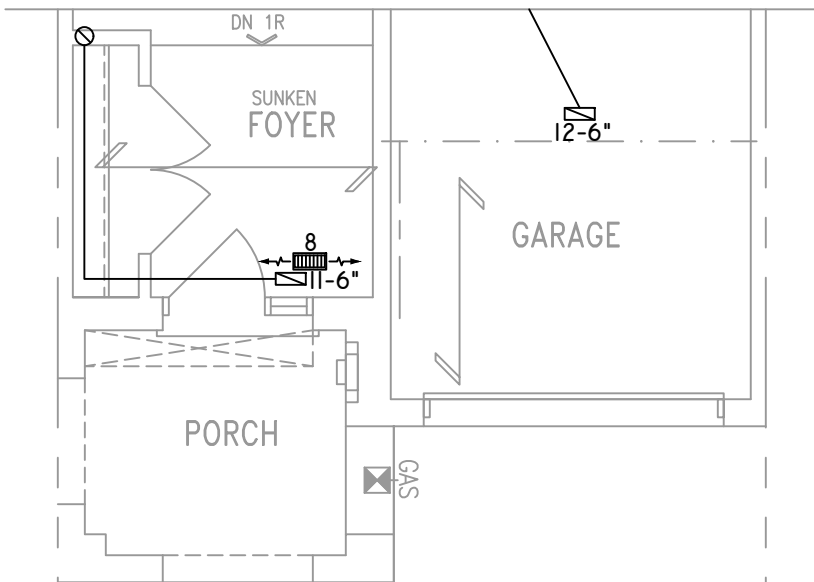
PARTIAL BASEMENT PLAN
WOD COND 9R AND MORE



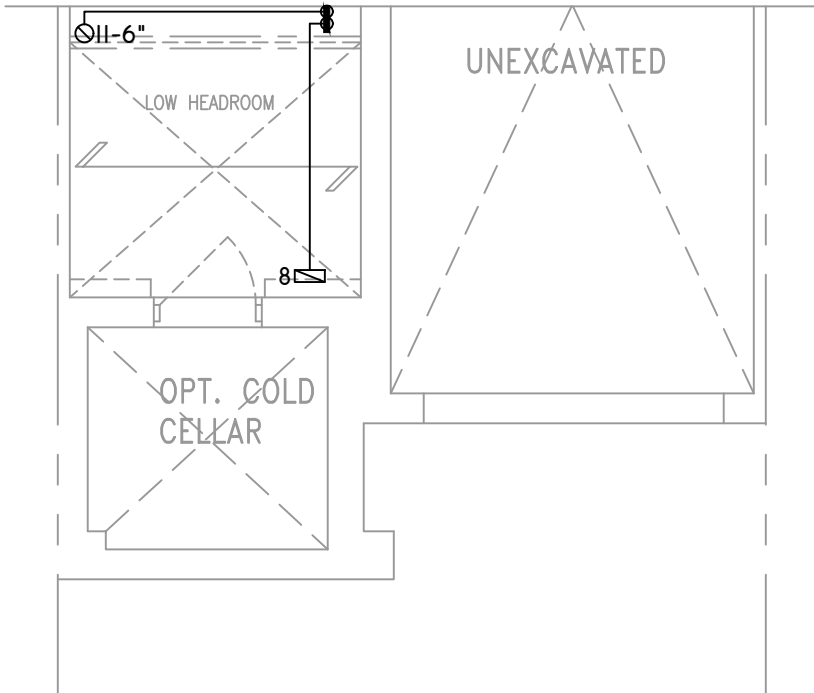
PARTIAL GROUND FLOOR PLAN
WOD COND 9R & MORE



PARTIAL SECOND FLOOR PLAN 'B'



PARTIAL GROUND FLOOR PLAN 'B'



PARTIAL BASEMENT PLAN 'B'

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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

REVIEWED

OBC 2012

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

NOTES
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HEAT-LOSS	25,077	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	6	2	3
1ST FLOOR	4	1	2
BASEMENT	4	1	

FLOOR PLAN: PARTIAL PLAN(S)		
DRAWN BY: JL	CHECKED: DD	SQFT 1714
LAYOUT NO. JB-04864	DRAWING NO. M4	

DATE:	DECEMBER 11, 2023
CLIENT:	BAYVIEW WELLINGTON
MODEL:	TH-3
PROJECT:	GREEN VALLEY BRADFORD,ONT.
SCALE:	3/16" = 1'-0"