

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 Barossa 6				Lot: S38-6 WOB	
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 hvac@gtadesigns.ca	
Telephone number (905) 671-9800		Fax number		Cell number	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]					
☐ House		☒ HVAC – House		☐ Building Structural	
☐ Small Buildings		☐ Building Services		☐ Plumbing – House	
☐ Large Buildings		☐ Detection, Lighting and Power		☐ Plumbing – All Buildings	
☐ Complex Buildings		☐ Fire Protection		☐ On-site Sewage Systems	
Description of designer's work			Model Certification		Project #:
					PJ-00041
					Layout #:
					JB-08542
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:	2888	Model	Barossa 6
Residential System Design per CAN/CSA-F280-12					S38-6 WOB
Residential New Construction - Forced Air				SB-12	Package A1
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: - 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.					
<u>November 7, 2022</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-08542	
Building Location					
Address (Model): S38-6 WOB			Site: Green Valley East		
Model: Barossa 6			Lot:		
City and Province: Bradford			Postal code:		
Calculations based on					
Dimensional information based on:			VA3 Design11/May/2012		
Attachment: Detached			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? VanEE V150H75NT			Internal shading: Light-translucent		Occupants: 5
Sensible Eff. at -25C 60%		Apparent Effect. at -0C 83%		Units: Imperial Area Sq ft: 2888	
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:			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:			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:		
City: Mississauga			E-mail hvac@gtadesigns.ca		

Builder: **Bayview Wellington**

Date: **November 7, 2022**

Project: **Green Valley East**

Model: **Barossa 6
S38-6 WOB**

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-00041**
Layout # **JB-08542**

Page 3

DESIGN LOAD SPECIFICATIONS		AIR DISTRIBUTION & PRESSURE		FURNACE/AIR HANDLER DATA:		BOILER/WATER HEATER DATA:		A/C UNIT DATA:	
Level 1 Net Load	20,956 btu/h	Equipment External Static Pressure	0.5 "w.c.	Make	Amana	Make	Type	Amana	3.0 Ton
Level 2 Net Load	18,205 btu/h	Additional Equipment Pressure Drop	0.225 "w.c.	Model	AMEC960803BNA	Model		Cond.-----	3.0
Level 3 Net Load	18,690 btu/h	Available Design Pressure	0.275 "w.c.	Input Btu/h	80000	Input Btu/h		Coil -----	3.0
Level 4 Net Load	0 btu/h	Return Branch Longest Effective Length	300 ft	Output Btu/h	76800	Output Btu/h			
Total Heat Loss	57,850 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	30,598 btu/h	S/A Plenum Pressure	0.14 "w.c.	Water Temp	deg. F.	Blower DATA:			
		Heating Air Flow Proportioning Factor	0.0203 cfm/btuh	AFUE	96%	Blower Speed Selected:	W2	Blower Type	ECM
Building Volume Vb	33264 ft³	Cooling Air Flow Proportioning Factor	0.0383 cfm/btuh	Aux. Heat				(Brushless DC OBC 12.3.1.5.(2))	
Ventilation Load	1,188 Btuh.	R/A Temp	70 deg. F.	SB-12 Package	Package A1	Heating Check	1172 cfm	Cooling Check	1172 cfm
Ventilation PVC	79.5 cfm	S/A Temp	131 deg. F.						
Supply Branch and Grill Sizing		Diffuser loss	0.01 "w.c.	Temp. Rise>>>	61 deg. F.	Selected cfm>	1172 cfm	Cooling Air Flow Rate	1172 cfm

	Level 1														Level 2									
	1	2	3	4	5										6	7	8	9	10	11	12	13	14	25
S/A Outlet No.	BASE	BASE	BASE	BASE	BASE										KIT	KIT	STUDY	MUD	FOY	PWD	DIN	GRT	GRT	DIN
Room Use	4191	4191	4191	4191	4191										1940	1940	2170	1271	3134	761	1608	1887	1887	1608
Btu/Outlet	85	85	85	85	85										39	39	44	26	63	15	33	38	38	33
Heating Airflow Rate CFM	32	32	32	32	32										72	72	94	6	54	9	43	73	73	43
Cooling Airflow Rate CFM	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
Duct Design Pressure	64	35	44	26	24										45	50	5	23	32	23	29	53	43	38
Actual Duct Length	170	110	100	90	140	70	70	70	70	70	70	70	70	70	160	170	80	170	130	160	120	120	110	140
Equivalent Length	234	145	144	116	164	70	70	70	70	70	70	70	70	70	205	220	85	193	162	183	149	173	153	178
Total Effective Length	0.06	0.09	0.09	0.11	0.08	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.06	0.06	0.15	0.07	0.08	0.07	0.09	0.08	0.08	0.07
Adjusted Pressure	6	6	6	6	6										6	6	6	4	5	3	5	6	6	5
Duct Size Round	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	3x10	3x10	3x10	4x10	4x10	3x10
Outlet Size	D	C	C	B	E										D	D	A	E	E	E	B	D	D	C

	Level 3										Level 4													
	15	16	17	18	19	20	21	22	23	24														
S/A Outlet No.	MAST	ENS	BED 2	BATH	BED 3	BED 4	BED 4	ENS 2	LAUND	WIC														
Room Use	3196	2142	1304	619	1635	3076	3076	2149	735	758														
Btu/Outlet	65	43	26	13	33	62	62	44	15	15														
Heating Airflow Rate CFM	90	56	41	14	43	72	72	69	9	6														
Cooling Airflow Rate CFM	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
Duct Design Pressure	60	63	49	47	50	51	46	47	31	44														
Actual Duct Length	150	150	150	140	140	150	140	150	150	140	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Equivalent Length	210	213	199	187	190	201	186	197	181	184	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Total Effective Length	0.06	0.06	0.07	0.07	0.07	0.06	0.07	0.07	0.07	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
Adjusted Pressure	6	6	6	3	6	6	6	6	3	3														
Duct Size Round	4x10	4x10	4x10	3x10	4x10	4x10	4x10	4x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10
Outlet Size	D	D	C	B	B	E	E	E	B	C														

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	212	395	160	105	150	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	30	30	56	31	40						
Equivalent Length	110	125	160	120	125	145	50	50	50	50	50	
Total Effective Length	119	155	190	176	156	185	50	50	50	50	50	
Adjusted Pressure	0.10	0.08	0.06	0.07	0.08	0.06	0.24	0.24	0.24	0.24	0.24	
Duct Size Round	8.0	10.5	8.0	6.0	7.5	8.0						
Inlet Size	FLC	8	8	8	8	8						
" "	x	x	x	x	x	x	x	x	x	x	x	
Inlet Size	9X6	30	14	14	14	14						
Trunk	Z	Y	Y	Z	Z	Z						

Return Trunk Duct Sizing	Trunk	CFM	Press.	Round	Rect. Size
Drop		1172	0.06	16.5	24x10
Z		1172	0.06	16.5	32x8 24x10
Y		555	0.06	12.5	18x8 14x10
X					
W					
V					
U					
T					
S					
R					
Q					

Supply Trunk Duct Sizing	Trunk	CFM	Press.	Round	Rect. Size
A		1172	0.06	16.5	32x8 24x10
B		770	0.06	14.0	22x8 18x10
C		592	0.06	13.0	18x8 14x10
D		348	0.06	10.5	12x8 10x10
E		358	0.06	10.5	12x8 10x10
F					
G					
H					
I					
J					
K					

2012 OBC

Builder: Bayview Wellington

Date: November 7, 2022

Project: Green Valley East

Model: Barossa 6
S38-6 WOB

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: 2888

Project # PJ-00041
Layout # JB-08542

Level 1

BASE

Run ft. exposed wall A	120	A	A	A	A	A	A	A	A	A	A	A	A
Run ft. exposed wall B	43	B	B	B	B	B	B	B	B	B	B	B	B
Ceiling height	5.5	AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG	5.5 AG
Floor area	1015	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	660												
Gross Exp Wall B	366												

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	11.62	3	69	35											
East/West	3.55	22.93	29.56														
South	3.55	22.93	22.50	3	69	68											
WOB Windows	3.55	22.93	27.86	81	1857	2257											
Skylight	2.03	40.10	88.23														
Doors	4.00	20.35	2.75	21	427	58											
Net exposed walls A	21.12	3.85	0.52	633		330											
Net exposed walls B	17.03	4.78	0.65	285	1360	184											
Exposed Ceilings A	59.22	1.37	0.64														
Exposed Ceilings B	27.65	2.94	1.37														
Exposed Floors	29.80	2.73	0.17														
Foundation Conductive Heatloss																	
Total Conductive																	
Air Leakage																	
Ventilation																	
Heat Gain People																	
Appliances Loads	1 =.25 percent																
Duct and Pipe loss																	
Level HL Total	20,956			20956													
Level HG Total	4,188				4188												

Level 2

KIT

STUDY

MUD

FOY

PWD

DIN

GRT

Run ft. exposed wall A	36	A	21	A	9	A	24	A	6	A	34	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		12.0		11.0		10.0		10.0		10.0		10.0		10.0
Floor area	297	Area	133	Area	27	Area	68	Area	36	Area	391	Area	222	Area	5	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	360		210		108		264		60		340		340				
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	11.62														
East/West	3.55	22.93	29.56														
South	3.55	22.93	22.50														
Existing Windows	1.99	40.90	23.66														
Skylight	2.03	40.10	88.23														
Doors	4.00	20.35	2.75														
Net exposed walls A	17.03	4.78	0.65	313	1496	202	186	889	120	87	416	56	216	1032	140	48	229
Net exposed walls B	8.50	9.58	1.29														
Exposed Ceilings A	59.22	1.37	0.64														
Exposed Ceilings B	27.65	2.94	1.37														
Exposed Floors	29.80	2.73	0.17														
Foundation Conductive Heatloss																	
Total Conductive																	
Air Leakage																	
Ventilation																	
Heat Gain People																	
Appliances Loads	1 =.25 percent																
Duct and Pipe loss																	
Level HL Total	18,205			3880			2170	1271	163	3134			761	244		3216	3774
Level HG Total	14,097				3773		2442			1423				244		2252	3801

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

Name: [Signature]

David DaCosta

SB-12 Package

Package A1

Total Heat Loss	57,850	btu/h
Total Heat Gain	30,598	btu/h

2012 OBC

Builder: Bayview Wellington

Date: November 7, 2022

Project: Green Valley East

Model: Barossa 6
S38-6 WOB

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: 2888

Project #
Layout #

Level 3

	MAST	ENS	BED 2	BATH	BED 3	BED 4	ENS 2	LAUND	WIC		
Run ft. exposed wall A	32 A	23 A	12 A	6 A	12 A	43 A	19 A	9 A	12 A	A	A
Run ft. exposed wall B	B	B	B	B	B	B	B	B	B	B	B
Ceiling height	10.0	8.0	8.0	8.0	8.0	10.0	9.0	8.0	8.0	8.0	8.0
Floor area	295 Area	129 Area	180 Area	72 Area	219 Area	314 Area	79 Area	66 Area	88 Area	Area	Area
Exposed Ceilings A	295 A	129 A	180 A	72 A	219 A	320 A	79 A	66 A	88 A	A	A
Exposed Ceilings B	B	B	B	B	B	B	B	B	B	B	B
Exposed Floors	Flr	Flr	Flr	Flr	73 Flr	190 Flr	10 Flr	Flr	Flr	Flr	Flr
Gross Exp Wall A	320	184	96	48	96	430	171	72	96		
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
North Shaded	3.55	22.93	11.62																		
East/West	3.55	22.93	29.56	28	642	828	16	367	473	16	367	360	8	183	180	16	367	360			
South	3.55	22.93	22.50																		
Existing Windows	1.99	40.90	23.66																		
Skylight	2.03	40.10	88.23																		
Doors	4.00	20.35	2.75																		
Net exposed walls A	17.03	4.78	0.65	292	1396	189	152	727	98	80	382	52	40	191	26	80	382	52	360	1721	233
Net exposed walls B	8.50	9.58	1.29																		
Exposed Ceilings A	59.22	1.37	0.64	295	405	189	129	177	83	180	247	116	72	99	46	219	301	141	320	440	205
Exposed Ceilings B	27.65	2.94	1.37																		
Exposed Floors	29.80	2.73	0.17																		
Foundation Conductive Heatloss																					
Total Conductive																					
Air Leakage	Heat Loss/Gain	0.2759	0.0400																		
Ventilation	Case 1	0.02	0.06																		
	Case 2	14.95	11.88																		
	Case 3	x	0.03	0.06																	
Heat Gain People			239	2	78	72		53	60	1	32	31		15	15	1	40	34		138	131
Appliances Loads	1 =.25 percent		4611																		
Duct and Pipe loss			10%																		
Level HL Total	18,690																				
Level HG Total	12,313																				

Level 4

Run ft. exposed wall 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
Ceiling height											
Floor 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
Exposed Ceilings 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
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
North Shaded	3.55	22.93	11.62																		
East/West	3.55	22.93	29.56																		
South	3.55	22.93	22.50																		
Existing Windows	1.99	40.90	23.66																		
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	27.65	2.94	1.37																		
Exposed Floors	29.80	2.73	0.17																		
Foundation Conductive Heatloss																					
Total Conductive																					
Air Leakage	Heat Loss/Gain	0.0000	0.0400																		
Ventilation	Case 1	0.00	0.06																		
	Case 2	14.95	11.88																		
	Case 3	x	0.03	0.06																	
Heat Gain People			239																		
Appliances Loads	1 =.25 percent		4611																		
Duct and Pipe loss			10%																		
Level HL Total	0																				
Level HG Total	0																				

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

SB-12 Package

Package A1

Total Heat Loss	57,850	btu/h
Total Heat Gain	30,598	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: S38-6 WOB

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	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	5 @	10.6 cfm	53	cfm
Other rooms	5 @	10.6 cfm	53	cfm
Total			180.2	

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	

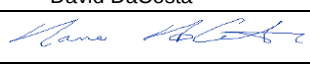
Principal Exhaust Fan Capacity				
Make	Model		Location	
VanEE	V150H75NT		Base	
140 cfm			Sones	or Equiv.

Heat Recovery Ventilator				
Make	VanEE			
Model	V150H75NT			
	140 cfm high		80 cfm low	
Sensible efficiency @ -25 deg C			60%	
Sensible efficiency @ 0 deg C			75%	

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

Supplemental Ventilation Capacity				
Total ventilation capacity			180.2	
Less principal exhaust capacity			79.5	
REQUIRED supplemental vent. Capacity			100.7	cfm

Supplemental Fans 9.32.3.5.				
Location	cfm	Model	Sones	
Ens	50	XB50	0.3	
Ens 2	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	November 7, 2022		



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-00041
 Layout # JB-08542

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	Barossa 6 S38-6 WOB	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 ☐ Propane ☐ Solid Fuel ☐ Oil ☐ Electric ☐ Earth Energy
Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area	Other Building Characteristics	
Area of Walls = <u>392.08</u> m ² or <u>4220.4</u> ft ²	W, S & G % = <u>11.6%</u>	☐ Log/Post&Beam ☐ ICF Above Grade ☐ ICF Basement ☐ Slab-on-ground ☒ Walkout Basement ☒ Air Conditioning ☐ Combo Unit ☐ Air Sourced Heat Pump (ASHP) ☐ Ground Source Heat Pump (GSHP)
Area of W, S & G = <u>45.335</u> m ² or <u>488.0</u> ft ²	Utilize Window Averaging ☐ Yes ☒ No	

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	59.22	Windows/Sliding Glass Doors
Ceiling without Attic Space	31	27.65	Skylights
Exposed Floor	31	29.80	Mechanicals
Walls Above Grade	22	17.03	Heating Equip.(AFUE)
Basement Walls	20.0ci	21.12	HRV Efficiency (SRE% at 0°C)
Slab (all >600mm below grade)	x	x	DHW Heater (EF)
Slab (edge only ≤600mm below grade)	10	11.13	DWHR (CSA B55.1 (min. 42% efficiency))
Slab (all ≤600mm below grade, or heated)	10	11.13	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	BCIN	Signature
David DaCosta	32964	

Package:
Project:

Package A1
Bradford

System:
Model:

System 1
S38-6 WOB

Air Leakage Calculations

Building Air Leakage Heat Loss				
B	LRairh	Vb	HL^T	HLleak
0.018	0.393	33264	81.4	19136

Building Air Leakage Heat Gain				
B	LRairh	Vb	HG^T	HG Leak
0.018	0.097	33264	11	636

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	19136	11033	0.8672
Level 2	0.3		12076	0.4754
Level 3	0.2		13870	0.2759
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		636	Air Leakage Heat Gain	
BUILDING CONDUCTIVE HEAT GAIN		15906	0.0400	

Levels this Dwelling	
3	

Ventilation Calculations

Vent	Ventilation Heat Loss					Ventilation Heat Gain				Vent	
	Ventilation Heat Loss					Ventilation Heat Gain					
	C	PVC	HL^T	(1-E) HRV	HLbvent	C	PVC	HG^T	HGbvent		
	1.08	79.5	81.4	0.17	1188	1.1	79.5	11	944		
Case 1						Case 1					
Case 1	Ventilation Heat Loss (Exhaust only Systems)					Ventilation Heat Gain (Exhaust Only Systems)					Case 1
	Case 1 - Exhaust Only					Case 1 - Exhaust Only		Multiplier			
	Level	LF	HLbvent	LVL Cond. HL	Multiplier	HGbvent	944	0.06			
	Level 1	0.5	1188	11033	0.05	Building	15906				
	Level 2	0.3		12076	0.03						
	Level 3	0.2		13870	0.02						
Level 4	0	0		0.00							
Case 2						Case 2					
Case 2	Ventilation Heat Loss (Direct Ducted Systems)					Ventilation Heat Gain (Direct Ducted Systems)					Case 2
				Multiplier					Multiplier		
	C	HL^T	(1-E) HRV	14.95		C	HG^T	11.88			
	1.08	81.4	0.17			1.08	11				
Case 3						Case 3					
Case 3	Ventilation Heat Loss (Forced Air Systems)					Ventilation Heat Gain (Forced Air Systems)					Case 3
			HLbvent	Multiplier				Vent Heat Gain	Multiplier		
	Total Ventilation Load		1188	0.03		HGbvent	HG*1.3	944	0.06		
						944	1				

Foundation Conductive Heatloss Level 1	Level 1	1925	Watts	6569	Btu/h
Foundation Conductive Heatloss Level 2	Level 2		Watts		Btu/h
Slab on Grade Foundation Conductive Heatloss			Watts		Btu/h
Walk Out Basement Foundation Conductive Heatloss		200	Watts	682	Btu/h

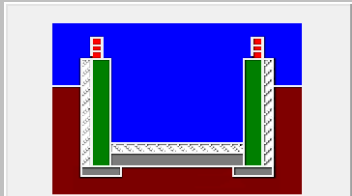
Envelope Air Leakage Calculator

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):	8.53			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Shallow			
House Volume (m ³):	942.02			
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):		0.393		
Cooling Air Leakage Rate (ACH/H):		0.097		

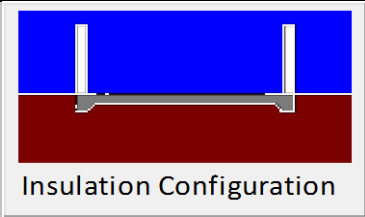
Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

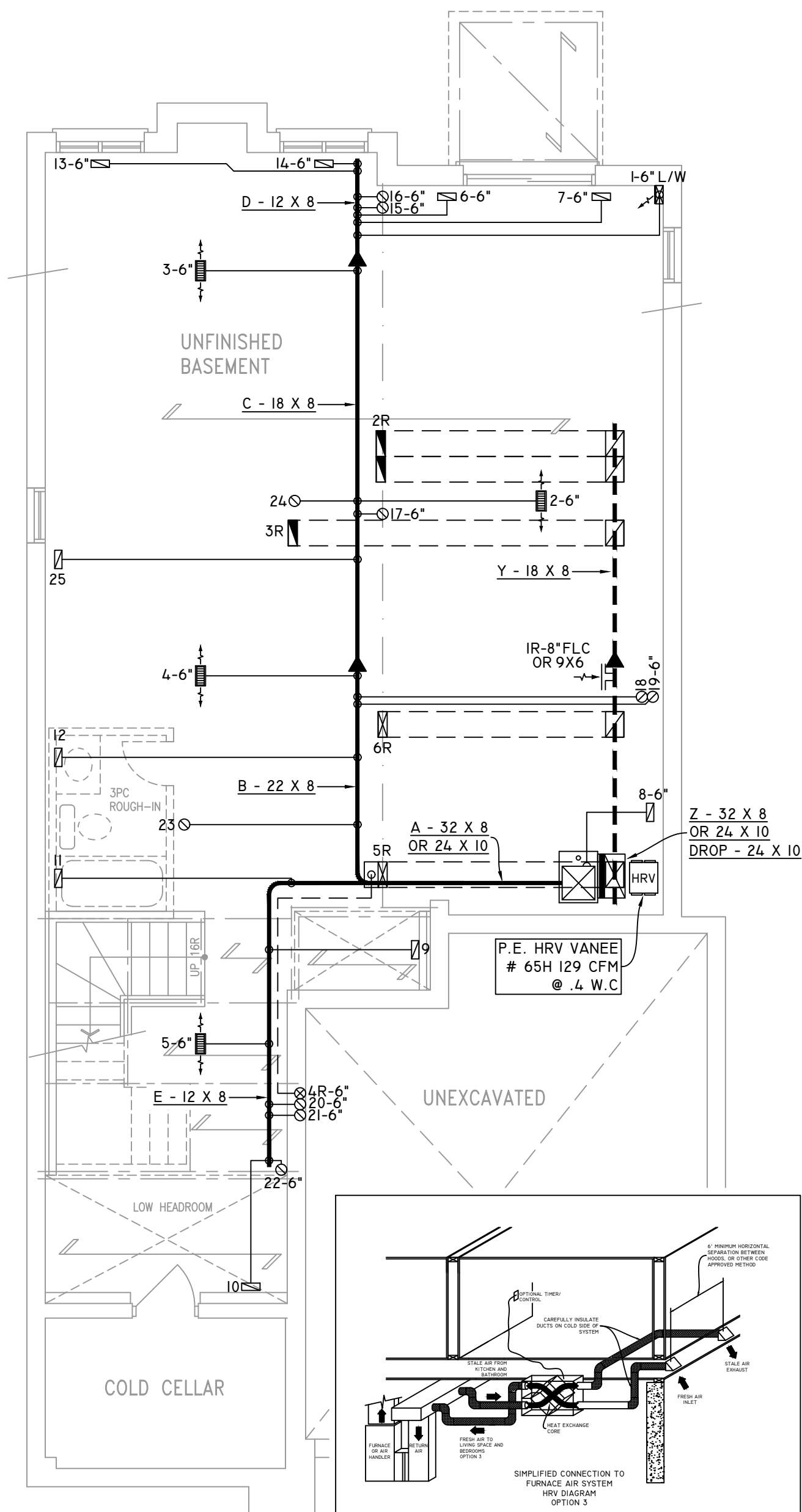
Weather Station Description		
Province:	Ontario	▼
Region:	Bradford	▼
Site Description		
Soil Conductivity:	High conductivity: moist soil	▼
Water Table:	Normal (7-10 m, 23-33 Ft)	▼
Foundation Dimensions		
Floor Length (m):	17.01	 Insulation Configuration
Floor Width (m):	5.54	
Exposed Perimeter (m):	36.58	
Wall Height (m):	2.59	
Depth Below Grade (m):	0.91	
Window Area (m ²):	0.56	
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):		1925

Residential Slab on Grade 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)	▼
Floor Dimensions		
Length (m):	9.21	 Insulation Configuration
Width (m):	1.61	
Exposed Perimeter (m):	13.11	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		200

  	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
--	---	--	---	--	--	---	---	-------------------------------------	---



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
UNCONDITIONED AREAS
MUST BE SEALED TO CLASS
A LEVEL AS PER OBC PART
6-6.2.4.3.(II)

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

OBC 2012

ZONE I COMPLIANCE
PACKAGE "AI" 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.

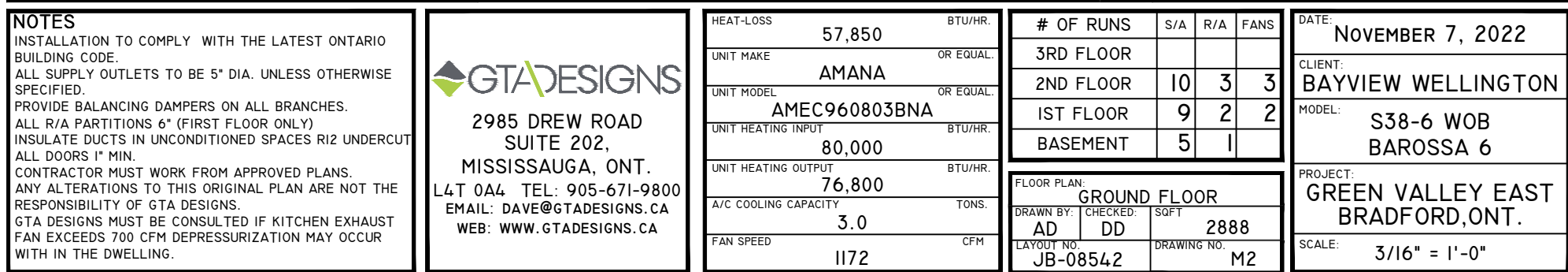
L4T 0A4 TEL: 905-671-9800
EMAIL: DAVE@GTADESIGNS.CA
WEB: WWW.GTADESIGNS.CA

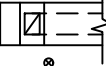
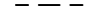
HEAT-LOSS	57,850	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL
UNIT MODEL	AMEC960803BNA	OR EQUAL
UNIT HEATING INPUT	80,000	BTU/HR.
UNIT HEATING OUTPUT	76,800	BTU/HR.
A/C COOLING CAPACITY	3.0	TONS.
FAN SPEED	1172	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	10	3	3
1ST FLOOR	9	2	2
BASEMENT	5	1	

FLOOR PLAN: BASEMENT		
DRAWN BY: AD	CHECKED: DD	SQFT 2888
LAYOUT NO. JD 08512		DRAWING NO. MI

DATE:	NOVEMBER 7, 2022
CLIENT:	BAYVIEW WELLINGTON
MODEL:	S38-6 WOB BAROSSA 6
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

INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. R12

ALL DUCTWORK LOCATED IN UNCONDITIONED AREAS MUST BE SEALED TO CLASS A LEVEL AS PER OBC PART 6-6.2.4.3.(II)

ALL DUCTWORK LOCATED IN CONDITIONED AREAS MUST BE SEALED TO CLASS C LEVEL AS PER OBC PART 6-6.2.4.3.(I2)

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

MASTER BEDROOM

15'-6"

OPT. RAISED TRAY CEILING

ENSUITE

16'-6"

60"x42" GLASS SHOWER

SEAT

F 5"

BEDROOM 2

17'-6"

WIC

24"

LAUNDRY

23"

UPPERS

D

W

T

F.D.

OTB

DN 16R

ENS.2

12" RAISED CEILING

F 5"

22'-6"

CANOPY ABOVE

FLAT ROOF BELOW

WIC 2

6R HW 14X8

WIC 3

5R LW 14X8

WIC 4

4R LW 14X8

BEDROOM 3

19'-6"

BEDROOM 4

20'-6"

21'-6"

CANOPY ABOVE

METAL ROOF BELOW

SHARED BATH

18"

F 5"

LOW WALL

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.



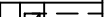
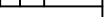
2985 DREW ROAD
SUITE 202,
MISSISSAUGA, ONT.
L4T 0A4 TEL: 905-671-9800
EMAIL: DAVE@GTADESIGNS.CA
WEB: WWW.GTADESIGNS.CA

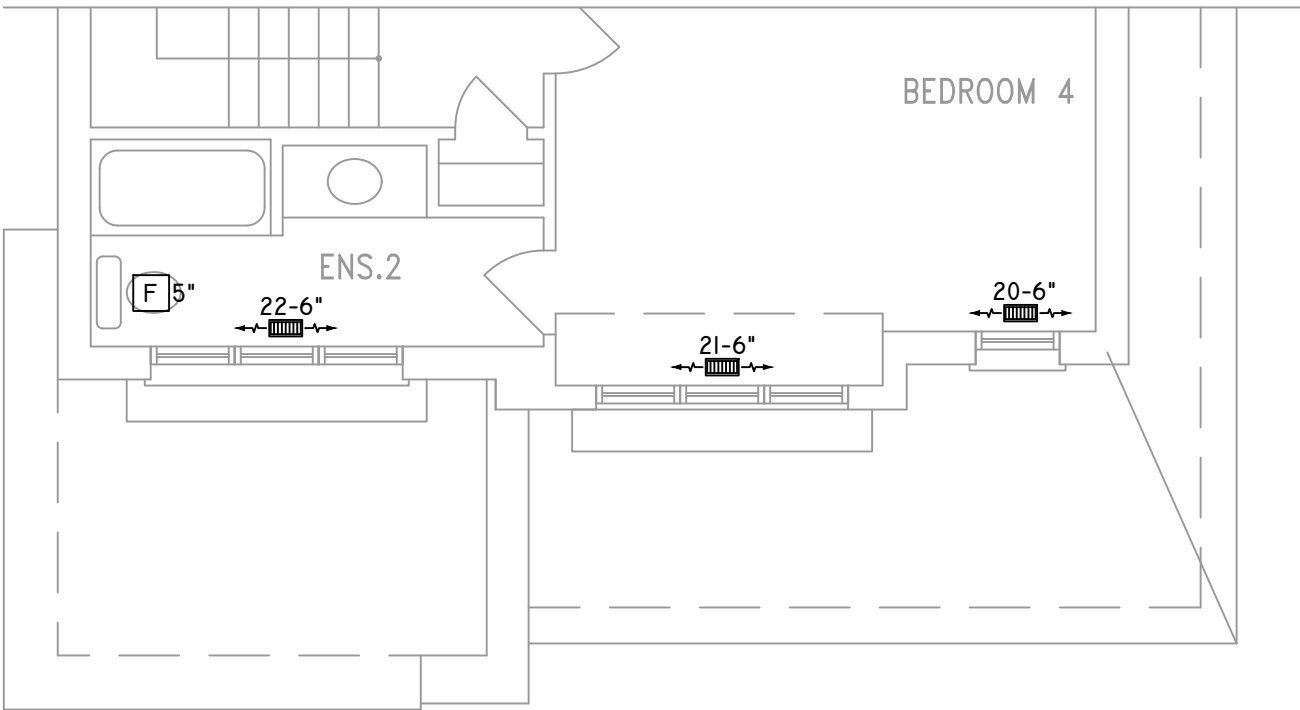
HEAT-LOSS	57,850	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960803BNA	OR EQUAL.
UNIT HEATING INPUT	80,000	BTU/HR.
UNIT HEATING OUTPUT	76,800	BTU/HR.
A/C COOLING CAPACITY	3.0	TONS.
FAN SPEED	1172	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	10	3	3
1ST FLOOR	9	2	2
BASEMENT	5	1	

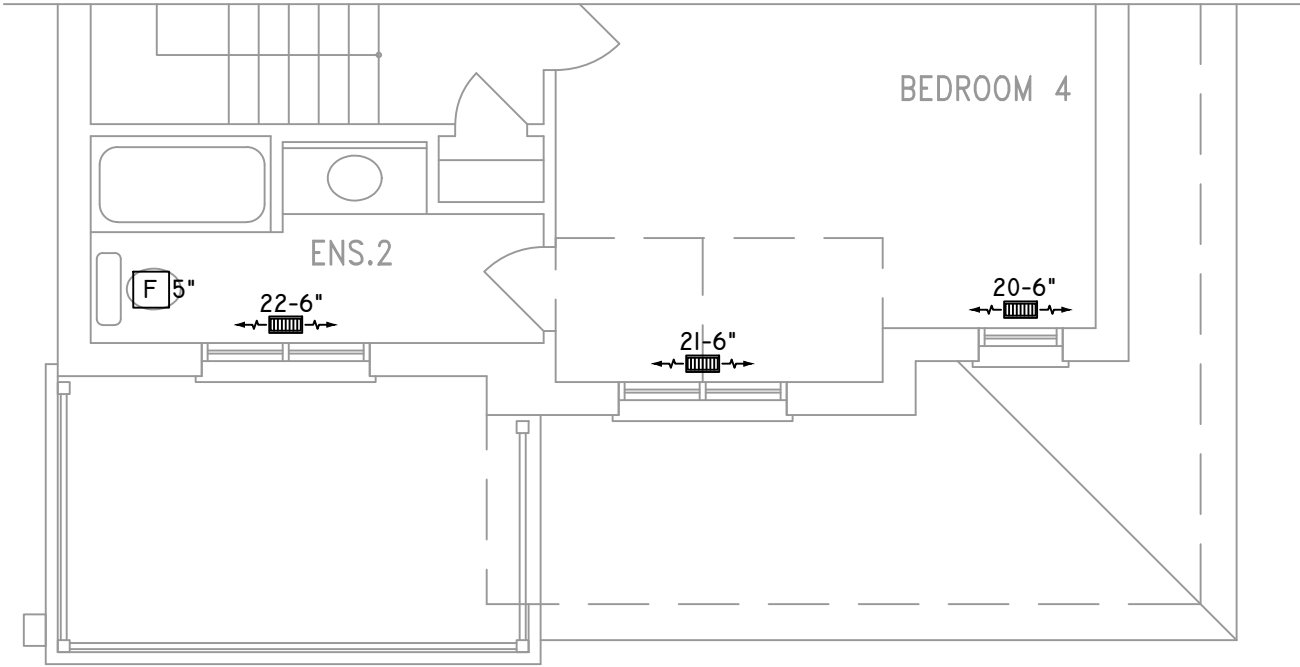
FLOOR PLAN: SECOND FLOOR		
DRAWN BY: AD	CHECKED: DD	SQFT 2888
LAYOUT NO. JB-08542	DRAWING NO. M3	

DATE: NOVEMBER 7, 2022
CLIENT: BAYVIEW WELLINGTON
MODEL: S38-6 WOB BAROSSA 6
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 'A'



PARTIAL SECOND FLOOR PLAN 'B'

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

QUALIFICATION INFORMATION

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

DAVID DA COSTA



B.C.I.N. 32964

SIGNATURE OF DESIGNER

OBC 2012

ZONE I COMPLIANCE
PACKAGE "AI" 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	57,850	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	AMEC960803BNA	OR EQUAL.
UNIT HEATING INPUT	80,000	BTU/HR.
UNIT HEATING OUTPUT	76,800	BTU/HR.
A/C COOLING CAPACITY	3.0	TONS.
FAN SPEED	1172	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	10	3	3
1ST FLOOR	9	2	2
BASEMENT	5	1	

FLOOR PLAN:		
PARTIAL PLANS		
DRAWN BY: AD	CHECKED: DD	SQFT 2888
LAYOUT NO. JB-08542	DRAWING NO. M4	

DATE:	NOVEMBER 7, 2022
CLIENT:	BAYVIEW WELLINGTON
MODEL:	S38-6 WOB BAROSSA 6
PROJECT:	GREEN VALLEY EAST BRADFORD,ONT.
SCALE:	3/16" = 1'-0"