

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 Castello 2				Lot: S50-2	
Municipality Bradford				Postal code	Plan number/ other description
B. Individual who reviews and takes responsibility for design activities					
Name David DaCosta			Firm gtaDesigns Inc.		
Street address 2985 Drew Road, Suite 202				Unit no.	Lot/con.
Municipality Mississauga		Postal code L4T 0A4	Province Ontario	E-mail dave@gtadesigns.ca	
Telephone number (905) 671-9800		Fax number (647) 494-9643		Cell number (416) 268-6820	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]					
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings ☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection ☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems					
Description of designer's work			Model Certification		Project #:
					Layout #:
Heating and Cooling Load Calculations			Main	X	Builder
Air System Design			Alternate		Project
Residential mechanical ventilation Design Summary			Area Sq ft:	4099	Model
Residential System Design per CAN/CSA-F280-12					SB-12
Residential New Construction - Forced Air					
Bayview Wellington Green Valley Estates Castello 2 S50-2 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: 1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.					
<u>November 20, 2017</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-04216
Building Location					
Address (Model): S50-2			Site: Green Valley Estates		
Model: Castello 2			Lot:		
City and Province: Bradford			Postal code:		
Calculations based on					
Dimensional information based on:			VA3 Design Dated 16/Oct/2017		
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? LifeBreath		RNC155	Internal shading: Light-translucent		Occupants: 6
Sensible Eff. at -25C 71%		Apparent Effect. at -0C 84%	Units: Imperial		Area Sq ft: 4099
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		

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Builder: **Bayview Wellington**

Date: **November 20, 2017**

Project: **Green Valley Estates**

Model: **Castello 2 S50-2**

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

Page 3
Project # **PJ-00041**
Layout # **JB-04216**

DESIGN LOAD SPECIFICATIONS		AIR DISTRIBUTION & PRESSURE		FURNACE/AIR HANDLER DATA:		BOILER/WATER HEATER DATA:		A/C UNIT DATA:	
Level 1 Net Load	22,457 btu/h	Equipment External Static Pressure	0.5 "w.c.	Make	Amana	Make	Type	Amana	3.5 Ton
Level 2 Net Load	26,093 btu/h	Additional Equipment Pressure Drop	0.225 "w.c.	Model	GMEC96-1004CNA	Model		Cond.-----	3.5
Level 3 Net Load	20,828 btu/h	Available Design Pressure	0.275 "w.c.	Input Btu/h	100000	Input Btu/h		Coil -----	3.5
Level 4 Net Load	0 btu/h	Return Branch Longest Effective Length	300 ft	Output Btu/h	96000	Output Btu/h			
Total Heat Loss	69,378 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	39,179 btu/h	S/A Plenum Pressure	0.14 "w.c.	Water Temp	deg. F.	Blower DATA:			
Combo System HL + 10%	76,316 Btu/h	Heating Air Flow Proportioning Factor	0.0238 cfm/btuh	AFUE	96%	Blower Speed Selected:	W2	Blower Type	ECM
Building Volume Vb	50004 ft³	Cooling Air Flow Proportioning Factor	0.0422 cfm/btuh	Aux. Heat				(Brushless DC OBC 12.3.1.5.(2))	
Ventilation Load	1,342 Btu/h.	R/A Temp	70 deg. F.	SB-12 Package	Package A1	Heating Check	1653 cfm	Cooling Check	1653 cfm
Ventilation PVC	95.4 cfm	S/A Temp	124 deg. F.			Selected cfm>	1653 cfm	Cooling Air Flow Rate	1653 cfm
Supply Branch and Grill Sizing		Diffuser loss	0.01 "w.c.	Temp. Rise>>>	54 deg. F.				

	Level 1														Level 2															
S/A Outlet No.	1	2	3	4	5	6									7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Room Use	BASE	BASE	BASE	BASE	BASE	BASE									KIT	KIT	DIN	DIN	LIV	FOY	FOY	MUD	LAUN	PWD	LIB	LIB	FAM	FAM		
Btu/Outlet	3743	3743	3743	3743	3743	3743	3743									2631	2631	1868	1868	3229	2413	2413	867	1513	636	1374	1374	1639	1639	
Heating Airflow Rate CFM	89	89	89	89	89	89	89									63	63	45	45	77	57	57	21	36	15	33	33	39	39	
Cooling Airflow Rate CFM	24	24	24	24	24	24	24									107	107	62	62	80	55	55	5	62	8	64	64	97	97	
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	59	49	34	50	49	13									60	50	46	54	69	59	65	23	16	7	20	25	60	49		
Equivalent Length	120	130	140	80	90	120	70	70	70	70	70	70	70	70	150	100	140	90	110	90	70	120	70	80	125	90				
Total Effective Length	179	179	174	130	139	133	70	70	70	70	70	70	70	70	210	150	186	144	179	149	175	113	86	127	90	105	185	139		
Adjusted Pressure	0.07	0.07	0.07	0.10	0.09	0.10	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.06	0.09	0.07	0.09	0.07	0.12	0.15	0.10	0.14	0.12	0.07	0.09				
Duct Size Round	6	6	6	6	6	6									6	6	6	6	6	5	5	3	5	3	5	5	6	6		
Outlet Size	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	3x10	3x10	3x10	3x10	3x10	4x10	4x10			
Trunk	H	G	F	D	D	A									E	D	F	F	H	G	G	A	A	B	B	B	E	E		

	Level 3														Level 4													
S/A Outlet No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34														
Room Use	MAST	MAST	WIC	BED 5	ENS 4	BED 4	BED 4	MEDIA	MEDIA	BED 3	ENS 3	BED 2	ENS 2	ENS														
Btu/Outlet	1815	1815	536	1345	806	1558	1558	1758	1758	2605	572	1561	970	2172														
Heating Airflow Rate CFM	43	43	13	32	19	37	37	42	42	62	14	37	23	52														
Cooling Airflow Rate CFM	56	56	6	44	16	51	51	64	64	52	8	36	10	65														
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	65	73	62	62	68	94	82	76	78	76	38	23	51	47														
Equivalent Length	120	135	150	135	125	120	150	140	150	110	130	130	120	115	70	70	70	70	70	70	70	70	70	70	70	70	70	
Total Effective Length	185	208	212	197	193	214	232	216	228	186	168	153	171	162	70	70	70	70	70	70	70	70	70	70	70	70	70	
Adjusted Pressure	0.07	0.06	0.06	0.07	0.07	0.06	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.08	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	3	5	4	5	5	6	6	5	3	4	4	5														
Outlet Size	3x10	3x10	3x10	3x10	3x10	3x10	3x10	4x10	4x10	3x10	3x10	3x10	3x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10		
Trunk	E	E	F	F	F	H	H	G	G	F	A	B	B	B														

Return Branch And Grill Sizing		Grill Pressure Loss		0.02 "w.c.							
R/A Inlet No.	1R	2R	3R	4R	5R	6R	7R	8R	9R	10R	11R
Inlet Air Volume CFM	256	497	180	155	150	155	155	105			
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	33	26	19	48	60	59	63	81			
Equivalent Length	115	165	135	210	165	245	195	115	50	50	50
Total Effective Length	148	191	154	258	225	304	258	196	50	50	50
Adjusted Pressure	0.08	0.06	0.08	0.05	0.05	0.04	0.05	0.06	0.24	0.24	0.24
Duct Size Round	8.0	12.0	8.0	8.0	8.0	8.5	8.0	6.0			
Inlet Size	FLC	8	8	8	8	8	8	8			
" "	x	x	x	x	x	x	x	x	x	x	x
Inlet Size	9x6	30	14	14	14	14	14	14			
Trunk	Z	Z	Z	Z	Z	Y	Y	Y			

Return Trunk Duct Sizing							
Trunk	CFM	Press.	Round	Rect. Size			
Drop	1653	0.04	20.5	24x16			
Z	1653	0.04	20.5	40x10	32x14		
Y	415	0.04	12.0	16x8	12x10		
X							
W							
V							
U							
T							
S							
R							
Q							

Supply Trunk Duct Sizing							
Trunk	CFM	Press.	Round	Rect. Size			
A	160	0.08	7.5	8x8			
B	193	0.08	8.0	8x8	8x7		
C	1300	0.06	17.0	26x10	22x12		
D	468	0.06	12.0	16x8	12x10		
E	227	0.06	9.0	8x8	10x7		
F	832	0.06	14.5	24x8	18x10		
G	528	0.06	12.5	18x8	14x10		
H	240	0.06	9.0	8x8	10x7		
I							
J							
K							

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2012 OBC	Builder: Bayview Wellington	Date: November 20, 2017	System 1	Weather Data		Bradford	44	-9.4	86	22	48.2	Page 4
	Project: Green Valley Estates	Model: Castello 2 S50-2		Heat Loss ^T	81.4 deg. F	Ht gain ^T	11 deg. F	GTA:	4099	Project #	PJ-00041	
												JB-04216

Level 1											
BASE											
Run ft. exposed wall A	202	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	3.9	AG	3.9	AG	3.9	AG	3.9	AG	3.9	AG	3.9
Floor area	1810	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	788										
Gross Exp Wall B											
Components	R-Values	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain
North Shaded	3.55	22.93	10.91	3	69	33					
East/West	3.55	22.93	27.35	38	871	1039					
South	3.55	22.93	20.89	6	138	125					
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	21.12	3.85	0.52	720		375					
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 ()			8886							
Total Conductive	Heat Loss			10391							
	Heat Gain				1630						
Air Leakage	Heat Loss/Gain	1.1306	0.0405	11749		66					
Ventilation	Case 1	0.06	0.06								
	Case 2	14.07	11.88								
	Case 3	x	0.03	317		95					
Heat Gain People					239						
Appliances Loads	1 = .25 percent			0.5		885					
Duct and Pipe loss	10%										
Level 1 HL Total	22,457	Total HL for per room		22457							
Level 1 HG Total	3,479	Total HG per room x 1.3			3479						

Level 2											
KIT DIN LIV FOY LAUN PWD LIB FAM MUD											
Run ft. exposed wall A	40	A	36	A	29	A	20	A	19	A	6
Run ft. exposed wall B	B	B	B	B	B	B	B	B	B	B	B
Ceiling height	10.0		10.0		11.0		20.0		10.0		10.0
Floor area	364	Area	458	Area	168	Area	99	Area	86	Area	65
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	400		360		319		400		190		60
Gross Exp Wall B											
Components	R-Values	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	72	1651	1969					
South	3.55	22.93	20.89	28	642	585					
Existing Windows	1.99	40.90	22.15								
Skylight	2.03	40.10	88.23								
Doors	4.00	20.35	2.75				25	509	69		
Net exposed walls A	17.03	4.78	0.65	300	1434	194	309	1477	200	277	1324
Net exposed walls B	8.50	9.58	1.29								
Exposed Ceilings A	59.22	1.37	0.64				99	136	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 ()			x							
Total Conductive	Heat Loss			3727				2646		2287	
	Heat Gain				2748			1265		1328	
Air Leakage	Heat Loss/Gain	0.3815	0.0405	1422	111			1010	51	872	54
Ventilation	Case 1	0.02	0.06								
	Case 2	14.07	11.88								
	Case 3	x	0.03	114	160			81	74	70	77
Heat Gain People											
Appliances Loads	1 = .25 percent			0.5		885		0.5		885	
Duct and Pipe loss	10%										
Level 2 HL Total	26,093	Total HL for per room		5262				3737		3229	
Level 2 HG Total	21,942	Total HG per room x 1.3			5076				2957		1897

Total Heat Loss	69,378	btu/h
Total Heat Gain	39,179	btu/h

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under Division C subsection 3.2.5. of the Building Code. Individual BCIN: 32964

David DaCosta

SB-12 Package

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2012 OBC

Builder: Bayview Wellington

Date: November 20, 2017

Project: Green Valley Estates

Model: Castello 2
S50-2

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: 4099

Project #
Layout #

Level 3

	MAST	W/C	BED 5	ENS 4	BED 4	MEDIA	BED 3	ENS 3	BED 2	ENS 2	ENS
Run ft. exposed wall A	35 A	7 A	11 A	9 A	29 A	23 A	20 A	6 A	15 A	14 A	18 A
Run ft. exposed wall B	B	B	B	B	B	B	B	B	B	B	B
Ceiling height	9.0	8.0	8.0	8.0	9.0	10.0	8.0	8.0	8.0	8.0	9.0
Floor area	385 Area	96 Area	212 Area	81 Area	202 Area	233 Area	249 Area	51 Area	218 Area	44 Area	192 Area
Exposed Ceilings A	385 A	96 A	212 A	81 A	202 A	233 A	249 A	51 A	218 A	44 A	192 A
Exposed Ceilings B	B	B	B	B	B	B	B	B	B	B	B
Exposed Floors	Flr	Flr	Flr	Flr	Flr	155 Flr	103 Flr	Flr	Flr	Flr	Flr
Gross Exp Wall A	315	56	88	72	261	230	160	48	120	112	162
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	10.91																		
East/West	3.55	22.93	27.35	37	848	1012				44	1009	1204									
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	278	1329	180	56	268	36	72	344	47	64	306	41	217	1037	140	200	956	129
Net exposed walls B	8.50	9.58	1.29																		
Exposed Ceilings A	59.22	1.37	0.64	385	529	247	96	132	62	212	291	136	81	111	52	202	278	130	233	320	150
Exposed Ceilings B	22.86	3.56	1.66																		
Exposed Floors	29.80	2.73	0.17																		
Foundation Conductive Heatloss																					
Total Conductive																					
Air Leakage	Heat Loss/Gain	0.3108	0.0405																		
Ventilation	Case 1		0.02																		
	Case 2		14.07																		
	Case 3	x	0.03																		
Heat Gain People			239	2	83	84		12	6	1	31	30		18	15	1	71	86		73	66
Appliances Loads	1 =.25 percent		7079																		
Duct and Pipe loss			10%																		
Level 3 HL Total	20,828																				
Level 3 HG Total	13,757																				

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	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																					
Air Leakage	Heat Loss/Gain	0.0000	0.0405																		
Ventilation	Case 1		0.00																		
	Case 2		14.07																		
	Case 3	x	0.03																		
Heat Gain People			239																		
Appliances Loads	1 =.25 percent		7079																		
Duct and Pipe loss			10%																		
Level 4 HL Total	0																				
Level 4 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

SB-12 Package

Package A1

Total Heat Loss	69,378	btu/h
Total Heat Gain	39,179	btu/h

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



David DaCosta

Package:
Package A1
Project:
Bradford
Model:
S50-2
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) | ☒ | 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

- | | |
|-------------------------------------|--|
| ☒ | Forced air |
| ☐ | Non forced air |
| ☐ | Electric space heat (if over 10% of heat load) |

House Type 9.32.3.1(2)

- | | | |
|-------|-------------------------------------|---|
| I | ☒ | 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	4 @ 10.6 cfm	42.4 cfm
Bathrooms & Kitchen	6 @ 10.6 cfm	63.6 cfm
Other rooms	7 @ 10.6 cfm	74.2 cfm
Total		<u>222.6</u>

Principal Ventilation Capacity 9.32.3.4(1)

Master bedroom	1 @ 31.8 cfm	31.8 cfm
Other bedrooms	4 @ 15.9 cfm	63.6 cfm
Total		<u>95.4</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	222.6
Less principal exhaust capacity	95.4
REQUIRED supplemental vent. Capacity	<u>127.2</u> cfm

Supplemental Fans 9.32.3.5.

Location	cfm	Model	Sones
Ens	50	AER50C	0.5
Ens 2	50	AER50C	0.5
Ens 3	50	AER50C	0.5

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

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-00041
 Layout # JB-04216

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	Castello 2 S50-2	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>433.92</u> m ² or <u>4670.7</u> ft ²	W, S & G % = <u>14%</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>59.549</u> m ² or <u>641.0</u> ft ²	Utilize Window ☐ Yes Averaging ☒ 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		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 1
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	BCIN	Signature
David DaCosta	32964	

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

SITE COPY

Package: Package A1 System: System 1
Project: Bradford Model: S50-2

Air Leakage Calculations

Building Air Leakage Heat Loss				
B	LRairh	Vb	HL ^Δ T	HL _{leak}
0.018	0.321	50004	81.4	23498

Building Air Leakage Heat Gain				
B	LRairh	Vb	HG ^Δ T	HG _{Leak}
0.018	0.080	50004	11	787

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	23498	10391	1.1306
Level 2	0.3		18480	0.3815
Level 3	0.2		15122	0.3108
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	
	787		0.0405
BUILDING CONDUCTIVE HEAT GAIN			19421

Levels this Dwelling	
3	

Ventilation Calculations

Ventilation Heat Loss

Ventilation Heat Loss				
C	PVC	HL ^Δ T	(1-E) HRV	HL _{bvent}
1.08	95.4	81.4	0.16	1342

Ventilation Heat Gain

Ventilation Heat Gain			
C	PVC	HG ^Δ T	HG _{bvent}
1.1	95.4	11	1133

Case 1

Ventilation Heat Loss (Exhaust only Systems)

Case 1 - Exhaust Only				
Level	LF	HL _{bvent}	LVL Cond. HL	Multiplier
Level 1	0.5	1342	10391	0.06
Level 2	0.3		18480	0.02
Level 3	0.2		15122	0.02
Level 4	0		0	0.00

Case 1

Ventilation Heat Gain (Exhaust Only Systems)

Case 1 - Exhaust Only		Multiplier	
HG _{bvent}	1133	0.06	
Building	19421		

Case 2

Ventilation Heat Loss (Direct Ducted Systems)

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

Case 2

Ventilation Heat Gain (Direct Ducted Systems)

C	HG ^Δ T	Multiplier
1.08	11	11.88

Case 3

Ventilation Heat Loss (Forced Air Systems)

HL _{bvent}		Multiplier	
Total Ventilation Load	1342	0.03	

Case 3

Ventilation Heat Gain (Forced Air Systems)

Vent Heat Gain		Multiplier	
HG _{bvent}	HG*1.3	1133	
1133	1		

Foundation Conductive Heatloss Level 1

2604 Watts 8886 Btu/h

Foundation Conductive Heatloss Level 2

Watts 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

SITE COPY

Envelope Air Leakage Calculator

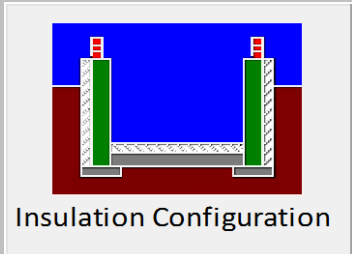
Supplemental tool for CAN/CSA-F280

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):	6.68			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1416.11			
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:	
	47.7		47.7	
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Heating Air Leakage Rate (ACH/H):		0.321		
Cooling Air Leakage Rate (ACH/H):		0.080		

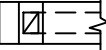
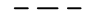
SITE COPY

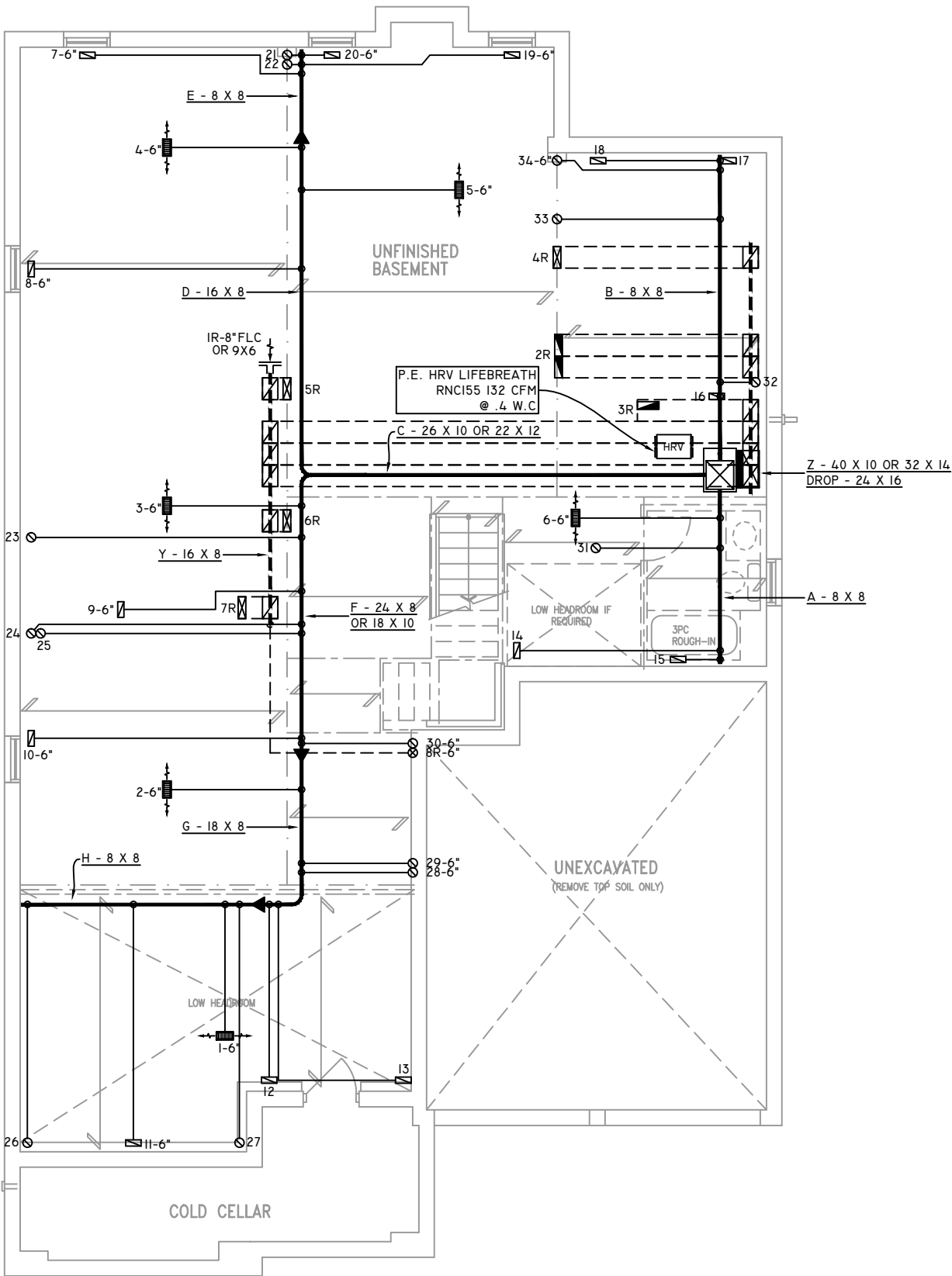
Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

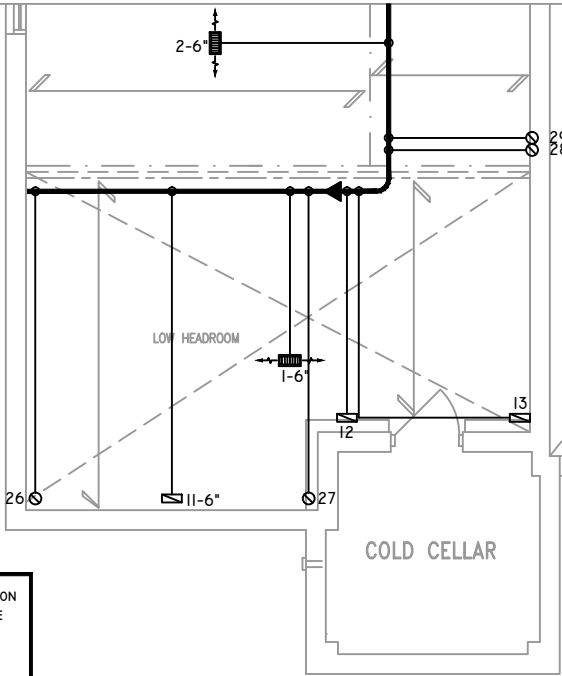
Weather Station Description		
Province:	Ontario	▼
Region:	Bradford	▼
Site Description		
Soil Conductivity:	High conductivity: moist soil	▼
Water Table:	Normal (7-10 m, 23-33 Ft)	▼
Foundation Dimensions		
Floor Length (m):	23.69	 Insulation Configuration
Floor Width (m):	7.10	
Exposed Perimeter (m):	61.57	
Wall Height (m):	2.74	
Depth Below Grade (m):	1.55	
Window Area (m ²):	4.37	
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):		2604

SITE COPY

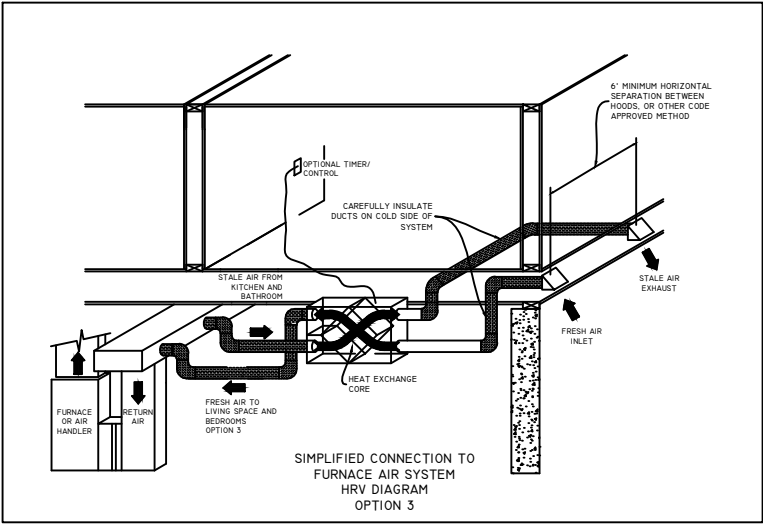
	FLEX DUCT		LOW/HIGH WALL/KICK SUPPLY DIFFUSER		DUCT CONNECTION TO JOIST LINING		RETURN AIR GRILLE (SIZE INDICATED ON DRAWING)	S.A.	SUPPLY AIR
	RIGID ROUND DUCT		HRV EXHAUST GRILLE		RETURN AIR PIPE RISER		RETURN AIR RISER UP TO FLOOR ABOVE	R.A.	RETURN AIR
	SUPPLY DIFFUSER		SUPPLY AIR PIPE RISER		RETURN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



BASEMENT PLAN 'A'



PARTIAL BASEMENT PLAN 'B'



OBC 2012

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

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

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

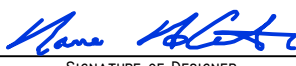
INSULATE ALL DUCTS IN
UNCONDITIONED
SPACES MIN. R12

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

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

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

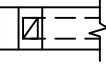
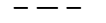
HEAT-LOSS	69,378	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	GMEC96-1004CNA	OR EQUAL.
UNIT HEATING INPUT	100,000	BTU/HR.
UNIT HEATING OUTPUT	96,000	BTU/HR.
A/C COOLING CAPACITY	3.5	TONS.
FAN SPEED	1653	CFM

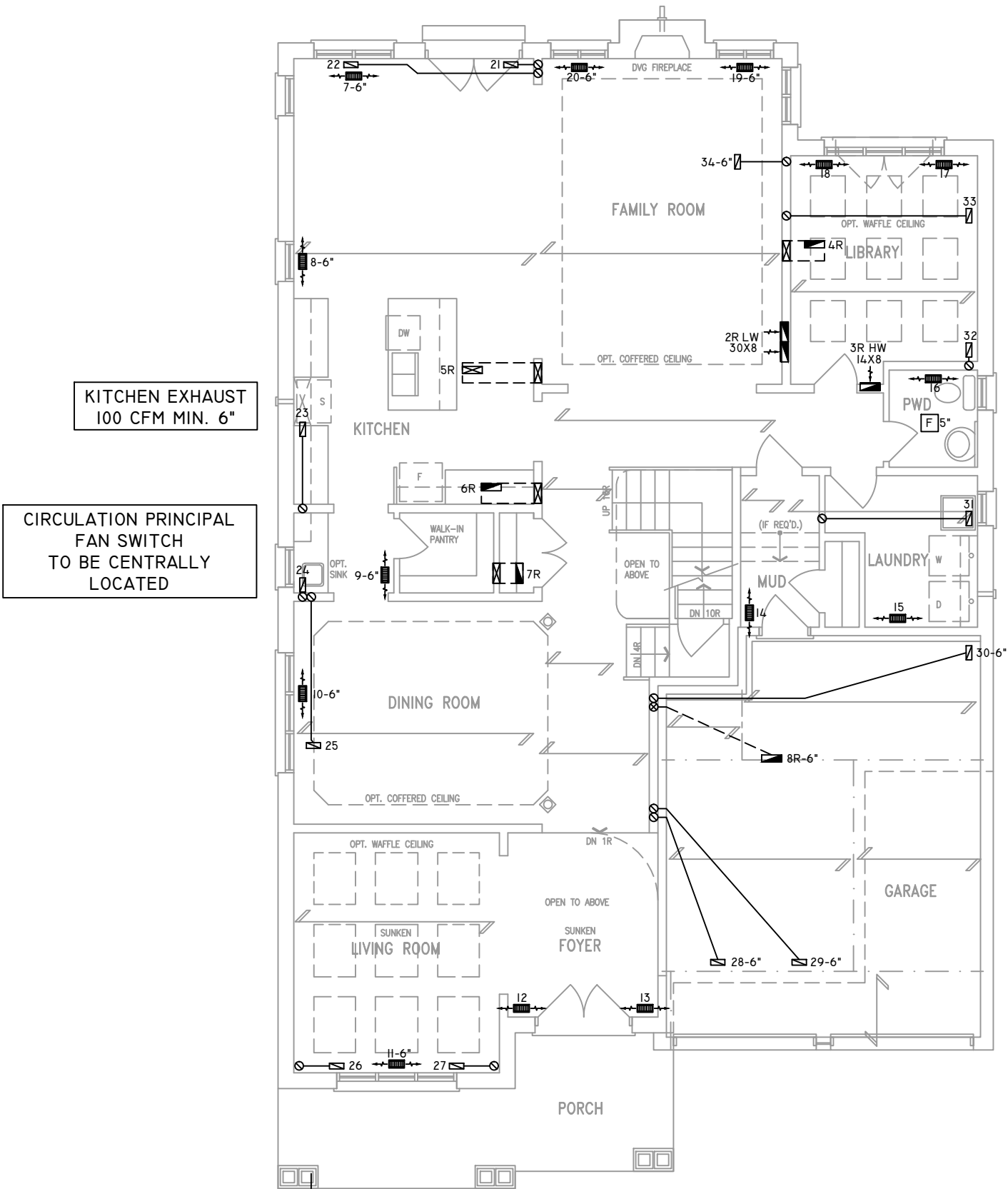
# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	14	5	5
1ST FLOOR	14	2	2
BASEMENT	6	1	

FLOOR PLAN:	BASEMENT
DRAWN BY:	AM
CHECKED:	DD
SQFT	4099
LAYOUT NO.	JB-04216
DRAWING NO.	

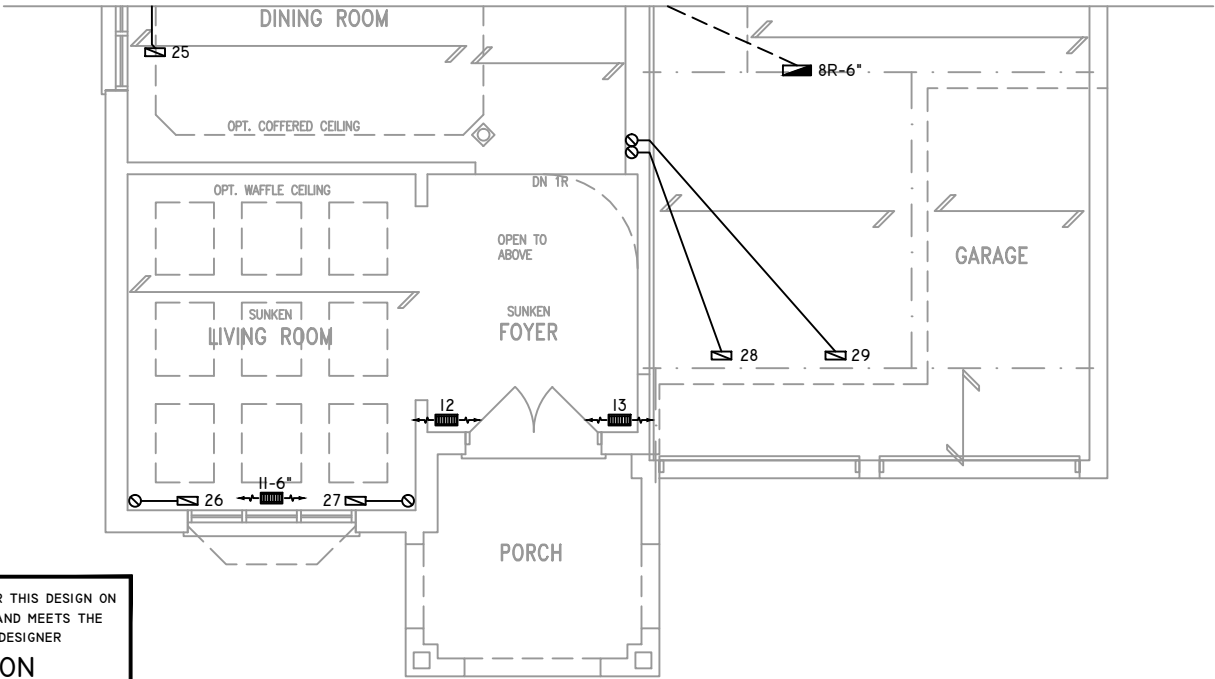
DATE:	NOVEMBER 20, 2017
CLIENT:	BAYVIEW WELLINGTON
MODEL:	S50-2 CASTELLO 2
PROJECT:	GREEN VALLEY ESTATES BRADFORD, ONT
SCALE:	1/8" = 1' 0"

SITE COPY

	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



GROUND FLOOR PLAN 'A'



PARTIAL GROUND FLOOR PLAN 'B'

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

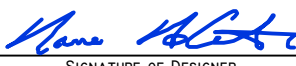
INSULATE ALL DUCTS IN
UNCONDITIONED
SPACES MIN. R12

FOR THE PURPOSE OF
HEATLOSS/GAIN
CALCULATIONS ALL
ELEVATIONS HAVE BEEN
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THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON
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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
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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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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

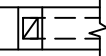
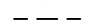
HEAT-LOSS	69,378	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	GMEC96-1004CNA	OR EQUAL.
UNIT HEATING INPUT	100,000	BTU/HR.
UNIT HEATING OUTPUT	96,000	BTU/HR.
A/C COOLING CAPACITY	3.5	TONS.
FAN SPEED	1653	CFM

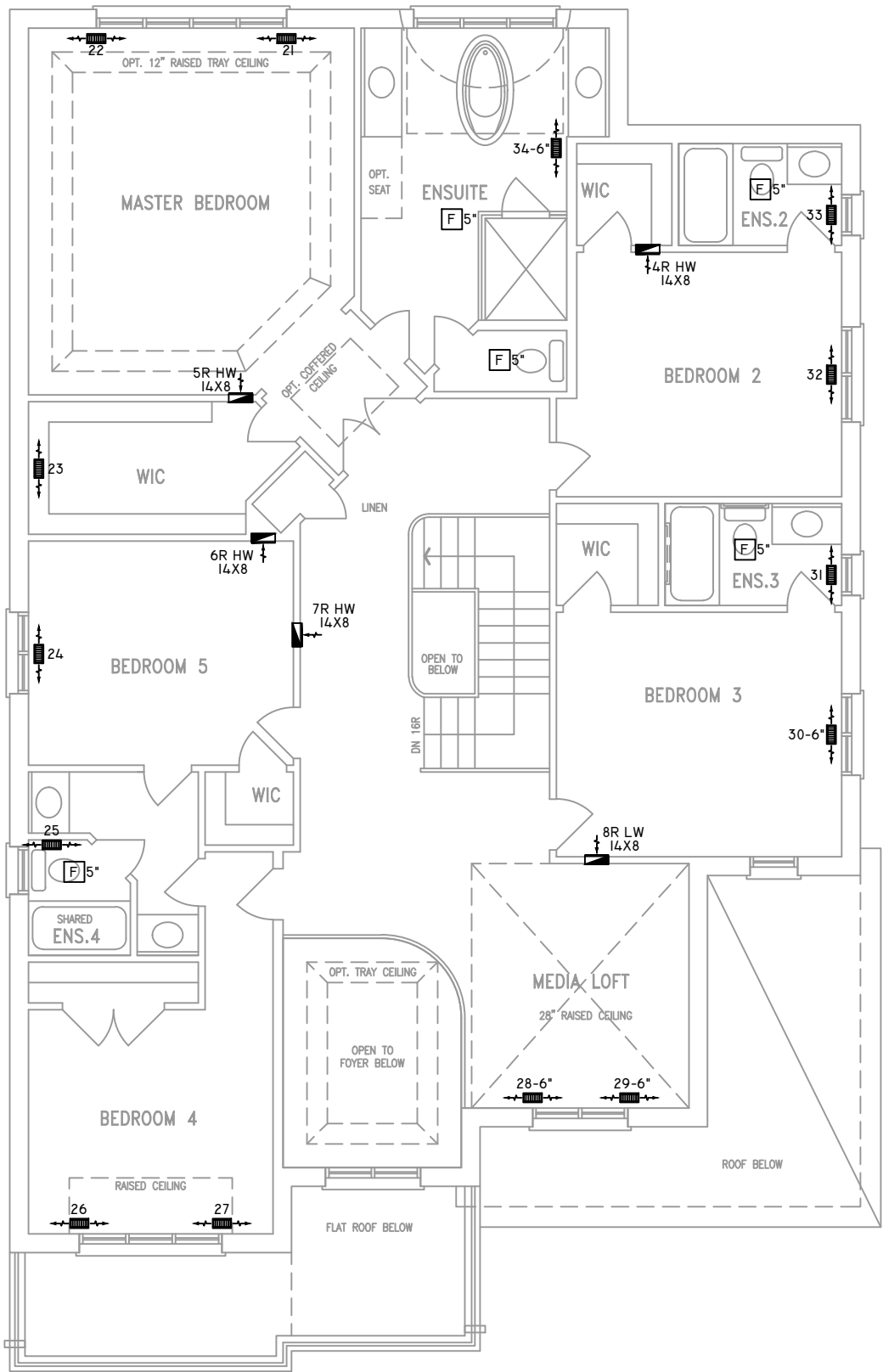
# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	14	5	5
1ST FLOOR	14	2	2
BASEMENT	6	1	

FLOOR PLAN:		
GROUND FLOOR		
DRAWN BY:	CHECKED:	SQFT
AM	DD	4099
LAYOUT NO.	DRAWING NO.	
JB-04216		

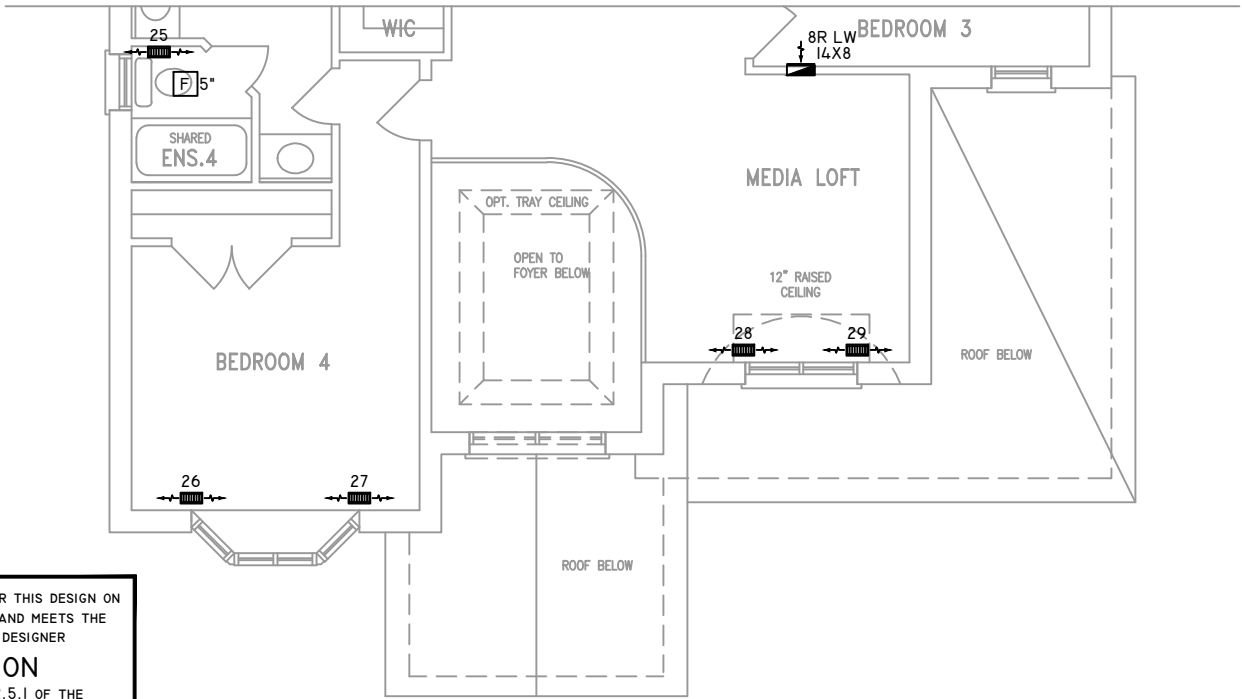
DATE:	NOVEMBER 20, 2017
CLIENT:	BAYVIEW WELLINGTON
MODEL:	S50-2 CASTELLO 2
PROJECT:	GREEN VALLEY ESTATES BRADFORD, ONT
SCALE:	1/8" = 1'-0"

SITE COPY

	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



SECOND FLOOR PLAN 'A'



PARTIAL SECOND FLOOR PLAN 'B'

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

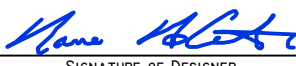
INSULATE ALL DUCTS IN
UNCONDITIONED
SPACES MIN. R12

FOR THE PURPOSE OF
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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**

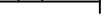
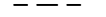
HEAT-LOSS	69,378	BTU/HR.
UNIT MAKE	AMANA	OR EQUAL.
UNIT MODEL	GMEC96-1004CNA	OR EQUAL.
UNIT HEATING INPUT	100,000	BTU/HR.
UNIT HEATING OUTPUT	96,000	BTU/HR.
A/C COOLING CAPACITY	3.5	TONS.
FAN SPEED	1653	CFM

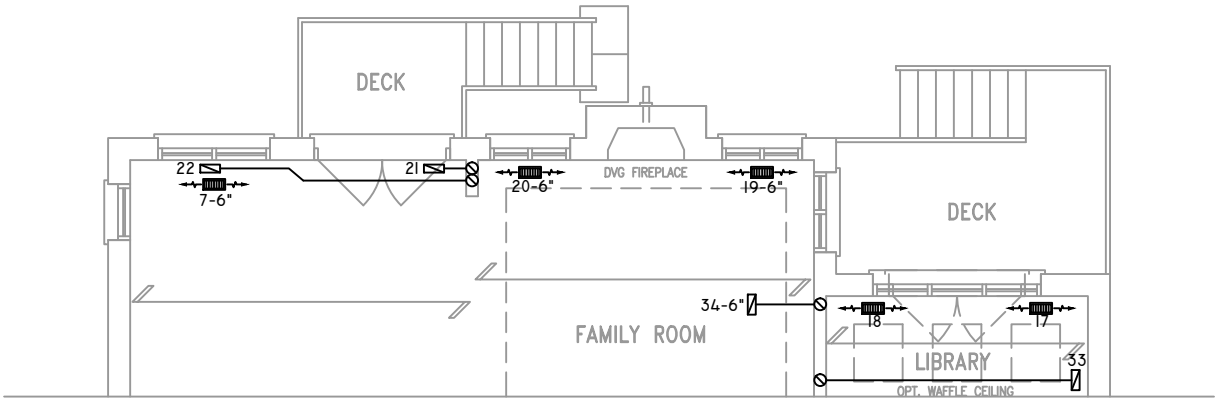
# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	14	5	5
1ST FLOOR	14	2	2
BASEMENT	6	1	

FLOOR PLAN:		
SECOND FLOOR		
DRAWN BY:	CHECKED:	SQFT
AM	DD	4099
LAYOUT NO.	DRAWING NO.	
JB-04216		

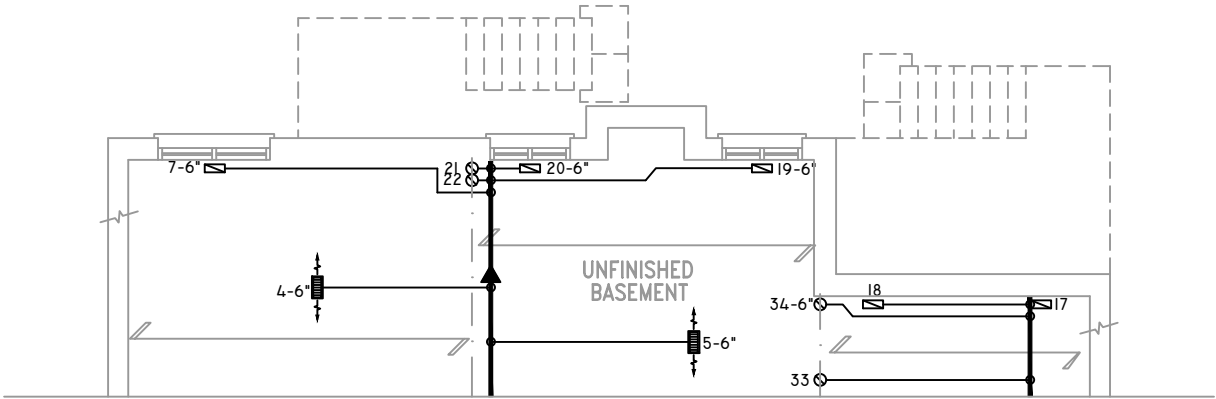
DATE:	NOVEMBER 20, 2017
CLIENT:	BAYVIEW WELLINGTON
MODEL:	S50-2 CASTELLO 2
PROJECT:	GREEN VALLEY ESTATES BRADFORD, ONT
SCALE:	1/8" = 1'-0"

SITE COPY

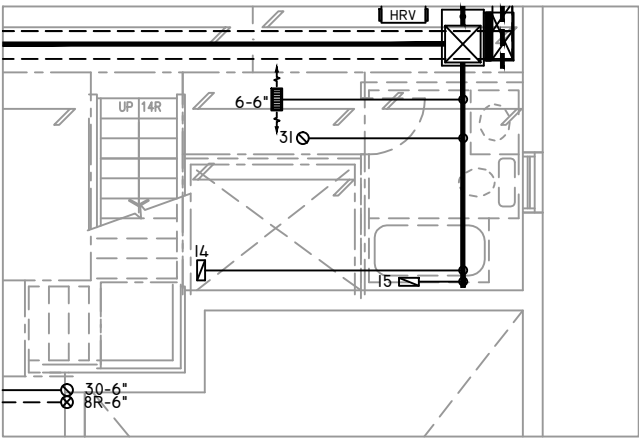
	FLEX DUCT		LOW/HIGH WALL/KICK		DUCT CONNECTION TO JOIST LINING		RETURN AIR GRILLE (SIZE INDICATED ON DRAWING)	S.A.	SUPPLY AIR
	RIGID ROUND DUCT		HRV EXHAUST GRILLE		RETURN AIR PIPE RISER		RETURN AIR RISER UP TO FLOOR ABOVE	R.A.	RETURN AIR
	SUPPLY DIFFUSER		VOLUME DAMPER		RETURN ROUND DUCT		RETURN AIR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



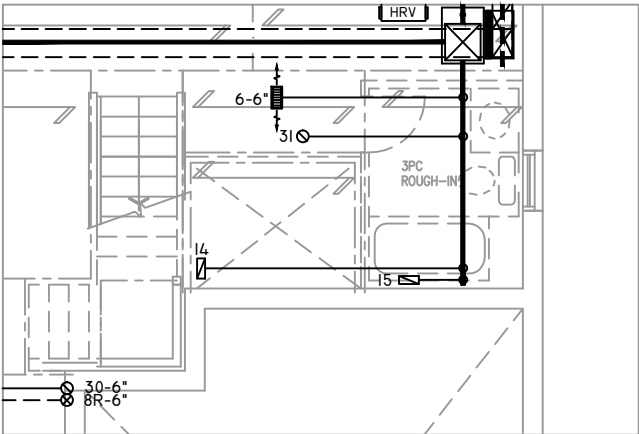
PARTIAL GROUND FLOOR PLAN W/
W.O.D. 9R & MORE CONDITION



PARTIAL BASEMENT PLAN W/
W.O.D. 9R OR MORE CONDITION



PARTIAL BASEMENT PLAN W/
OPT. SUNKEN LAUNDRY 1R

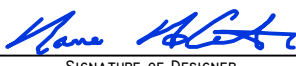


PARTIAL BASEMENT PLAN W/
OPT. SUNKEN LAUNDRY 2R
AND MORE

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

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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PROVIDE BALANCING DAMPERS ON ALL BRANCHES.

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UNIT MAKE	AMANA	OR EQUAL.
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FAN SPEED	1653	CFM

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	14	5	5
1ST FLOOR	14	2	2
BASEMENT	6	1	

FLOOR PLAN:		
PARTIAL PLAN(S)		
DRAWN BY: AM	CHECKED: DD	SQFT 4099
LAYOUT NO. JB-04216	DRAWING NO.	

DATE:	NOVEMBER 20, 2017
CLIENT:	BAYVIEW WELLINGTON
MODEL:	S50-2 CASTELLO 2
PROJECT:	GREEN VALLEY ESTATES BRADFORD, ONT
SCALE:	1/4" = 1'-0"

SITE COPY