


## Schedule 1: Designer Information

Type in the text you want to insert

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

<b>A. Project Information</b>			
Building number, street name MODEL CERTIFICATION		Unit no. N/A	Lot/con. N/A
Municipality KING CITY	Postal code N/A	Plan number/ other description N/A	
<b>B. Individual who reviews and takes responsibility for design activities</b>			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 65 CHURCH STREET SOUTH		Unit no.	Lot/con.
Municipality AJAX	Postal code L1S 6A7	Province ONTARIO	E-mail info@hvacdsgns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ( )	
<b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]</b>			
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings			
<input type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection			
<input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> On-site Sewage Systems			
Description of designer's work Heat Loss/Gain Calculations Duct Sizing Residential Mechanical Ventilation Design Summary Residential System Design per Can/CSA-F280-M90		Model: 50-4 OPT 1ST FL Project: CASTLES OF KING CITY	
<b>D. Declaration of Designer</b>			
I, <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)			
<input type="checkbox"/> review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____			
<input checked="" type="checkbox"/> I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: <u>19669</u> Basis for exemption from registration: <u>O.B.C. SENTENCE 3.2.4.1.(4)</u>			
<input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
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>JANUARY 30, 2014</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 qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by 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 license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

**BUILDER: ZANCOR HOMES**

**SITE NAME: TYPE: 50-4**

**OPT 1ST FL**

**CASTLES OF KING**

**DATE: Jan-14**

**LO# 53708**

**CALCULATIONS per HRAI**

**TEMP DIFF. DEG F 78**

**SUMMER TEMP. DIFF. F. 15**

**PAGE 1 of 3**

**2012 CBC - REV JAN 2014**

**REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.**

ROOM USE	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	WIC-2	STUDY	ENS-2	R1	R2
EXP. WALL	22	26	9	13	30	28	110	70	240	60	0	0
RM AREA	493	168	99	182	182	196	242	0	143	98	0	0
CLG. HT.	11	10	10	10	10	10	10	10	10	10	9	9
COLD FLOOR	0	0	0	0	0	0	0	0	0	0	0	0
COLD CEILING	493	168	99	182	182	196	242	77	143	98	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0	0	0	0	0	0
GROSS WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	0
GROSS WALL BAS BELOW GRADE	0	0	0	0	0	0	0	0	0	0	0	0
FACTORS												
GRS WALL AREA	242	260	90	130	300	280	110	70	240	60	0	0
GLAZING	0	0	0	0	0	14	0	0	0	7	0	0
NORTH	19.50	13.96	0	0	0	273	195	0	0	137	0	0
EAST/WEST	67	527	0	0	32	49	0	0	27	0	0	0
SOUTH	12	137	0	0	0	956	1617	0	527	0	0	0
SKYLT.	19.50	20.92	0	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	163	661	127	339	65	217	103	70	213	155	0	0
NET EXPOSED WALL BAS ABOVE GR	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	493	732	148	270	182	196	242	170	143	145	0	0
EXPOSED FLOOR	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR HT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
BELOW GRADE HT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2749	1755	410	882	1678	2617	797	501	1362	593	0	0
SUB TOTAL HT GAIN	2901	1318	120	486	1335	2162	375	129	1111	227	0	0
HT LOSS AIR LEAKAGE FACTOR	0.363	637	149	320	609	949	289	182	494	215	0	0
HT GAIN AIR LEAKAGE FACTOR	0.121	190	15	59	162	263	46	16	135	28	0	0
HT GAIN PEOPLE/APPLANCES	240	240	240	1	240	1	1086	1	1856	808	0	0
TOTAL HT LOSS BTU/H	4853	2392	559	1202	2287	3566	1086	683	1856	808	0	0
TOTAL HT GAIN x 1.3 BTU/H			487	1021	2288	3463	858	499	1932	642	0	0

INDIVIDUAL BCIN: 19669

ROOM USE	WIC-3	DIN	KT/PM	FAM	LAUN	WIR	FOY	DEN	R3	R4	WOB	BAS
EXP. WALL	6	12	96	0	19	6	29	34	0	0	0	196
RM AREA	84	10	10	0	10	10	10	0	9	9	0	9
CLG. HT.	84	10	10	0	10	10	10	10	9	9	0	9
COLD FLOOR	84	0	0	0	0	0	0	0	0	0	0	0
COLD CEILING	0	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	10	0	0	0	0	26	0	0	0	588
GROSS WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	1176
GROSS WALL BAS BELOW GRADE	0	0	0	0	0	0	0	0	0	0	0	0
FACTORS												
GRS WALL AREA	60	120	960	0	190	60	290	340	0	0	0	0
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	19.50	13.96	0	0	0	0	0	0	0	0	0	0
EAST/WEST	0	0	125	0	0	0	12	47	0	0	0	0
SOUTH	0	30	0	0	0	7	0	917	0	0	0	10
SKYLT.	19.50	20.92	0	0	0	137	0	0	0	0	0	10
DOORS	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	60	263	51	0	170	155	258	283	0	0	0	568
NET EXPOSED WALL BAS ABOVE GR	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	84	125	0	0	0	0	20	0	0	0	0	20
EXPOSED CLG HT LOSS	0	0	0	0	0	0	518	145	0	0	0	518
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	84	198	0	0	0	0	0	63	0	0	0	100
EXPOSED FLOOR HT LOSS	0	0	0	0	0	0	0	30	0	0	0	258
BELOW GRADE HT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	499	848	5364	0	1015	292	1507	1836	0	0	0	0
SUB TOTAL HT GAIN	131	308	4695	0	368	106	547	666	0	0	0	0
HT LOSS AIR LEAKAGE FACTOR	0.363	181	1946	0	0	21	78	212	0	0	0	0
HT GAIN AIR LEAKAGE FACTOR	0.121	82	570	0	1200	240	240	240	0	0	0	0
HT GAIN PEOPLE/APPLANCES	240	1	7309	3	5	1	2053	2502	0	0	0	0
TOTAL HT LOSS BTU/H	679	1156	7780	0	1384	397	1246	2857	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H				936	1845	589						

TOTAL HEAT GAIN BTU/H

3.36 TONS

LOSS DUE TO VENTILATION LOAD BTU/H

16073

TOTAL STRUCTURE HEAT LOSS BTU/H

45853

TOTAL COMBINED HEAT LOSS BTU/H

61926

SITE NAME: CASTLES OF KING  
BUILDER: ZANCOR HOMES

OPT 1ST FL

DATE: Jan-14 GFA: 3596 LO# 53708 CALCULATIONS per HRAI PAGE 2 of 3

FURNACE CFM 1285 FURNACE CFM 1285  
TOTAL HEAT LOSS 45853 TOTAL HEAT GAIN 35281  
AIR FLOW RATE CFM 28.02 AIR FLOW RATE CFM 35.42

\*LENOX  
ML195UH050XP48C 90  
FAN SPEED LOW 1285  
MEDIUM 1460  
HIGH 1675  
DESIGN CFM = 1285  
TEMPERATURE RISE 61 DEG.F.

3rd	2nd	1st	Bas
0	15	9	4
0	4	3	1

plenum pressure s/a 0.14  
s/a diff. press. loss 0.01  
adjusted pressure s/a 0.13

r/a pressure 0.14  
r/a grille press. loss 0.02  
adjusted pressure r/a 0.12

All S/A diffusers 4"x10" unless noted otherwise on layout.  
All S/A runs 5'x2 unless noted otherwise on layout.

ROOM #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-4	BED-3	MBR	ENS-2	DEN	DIN	KT/FM	KT/FM	KT/FM	W/R	FOY	LAUN	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.87	1.20	0.56	1.20	1.14	1.78	1.09	1.78	1.09	1.14	1.87	2.50	1.16	1.83	1.83	1.83	1.83	2.05	1.38	3.05	3.05	3.05	3.05	3.05
CFM PER RUN HEAT	52	34	16	34	32	50	30	50	30	32	52	70	32	51	51	51	51	58	39	85	85	85	85	85
RM GAIN MBH	2.43	1.12	0.49	1.02	1.13	1.73	0.86	1.73	0.86	1.13	2.43	2.86	1.30	1.95	1.95	1.95	1.95	1.25	1.84	0.33	0.33	0.33	0.33	0.33
CFM PER RUN COOLING	86	40	17	36	40	61	30	61	30	40	86	101	46	69	69	69	69	44	65	12	12	12	12	12
ADJUSTED PRESSURE	0.125	0.13	0.125	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
EQUIVALENT LENGTH	71	63	57	44	39	55	32	46	45	79	53	34	33	61	71	19	64	24	33	43	60	34	22	26
TOTAL EFFECTIVE LH	190	210	200	180	170	190	160	160	160	190	170	140	180	180	180	180	180	150	150	170	150	160	150	160
ADJUSTED PRESSURE	0.05	0.05	0.05	0.06	0.06	0.05	0.07	0.05	0.05	0.05	0.06	0.07	0.06	0.05	0.05	0.05	0.06	0.07	0.06	0.05	0.05	0.07	0.07	0.07
ROUND DUCT SIZE	6	5	5	5	5	6	5	5	5	6	5	6	5	6	6	6	6	5	5	6	6	6	6	6
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	4X10	4X10	4X10	4X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10
TRUNK	A	B	D	B	C	D	D	D	C	A	D	C	B	A	A	A	A	C	B	A	B	B	B	C

ROOM #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
ROOM NAME	RM LOSS MBH	0.00	0.00	0.68	1.86	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFM PER RUN HEAT	0	0	19	52	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RM GAIN MBH	0.00	0.00	0.19	0.50	1.93	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFM PER RUN COOLING	0	0	7	18	68	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED PRESSURE	0.125	0.13	0.125	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
EQUIVALENT LENGTH	1	1	43	54	76	49	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL EFFECTIVE LH	1	1	193	244	216	199	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	12.5	12.5	0.06	0.05	0.06	0.06	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
ROUND DUCT SIZE	0	0	5	5	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	B	D	D	A	B	D	D	C	A	D	C	B	A	A	A	A	C	B	A	B	B	C	C

## SUPPLY AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK A	445	0.05	11.6	15
TRUNK B	788	0.05	14.4	24
TRUNK C	288	0.05	9.9	11
TRUNK D	495	0.05	12.1	17
TRUNK E	1285	0.05	17.3	27

## RETURN AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK O	0	0.05	0	0
TRUNK P	0	0.05	0	0
TRUNK Q	0	0.05	0	0
TRUNK R	0	0.05	0	0
TRUNK S	0	0.05	0	0
TRUNK T	0	0.05	0	0
TRUNK U	0	0.05	0	0
TRUNK V	0	0.05	0	0
TRUNK W	0	0.05	0	0
TRUNK X	730	0.05	14	22
TRUNK Y	555	0.05	12.7	18
TRUNK Z	135	0.05	7.5	6
DROP	1285	0.05	17.3	24

REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
MICHAEL O'ROURKE  
BCIN: 19669

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	BR
AIR VOLUME	135	135	135	115	285	185	135	0	0	0	0	0	0	0	160
PLENUM PRESSURE	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EQUIVALENT LENGTH	61	50	46	56	57	19	26	1	1	1	1	1	1	1	15
TOTAL EFFECTIVE LH	221	255	256	231	242	154	231	1	1	1	1	1	1	1	200
ADJUSTED PRESSURE	0.05	0.05	0.05	0.05	0.05	0.08	0.05	12	12	12	12	12	12	12	0.06
ROUND DUCT SIZE	7.5	7.5	7.5	7	9.9	7.5	7.5	0	0	0	0	0	0	0	7.6
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	30	14	14	0	0	0	0	0	0	0	24

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER"  
UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

TYPE: 50-4

LO # 53708

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SITE NAME: CASTLES OF KING

**RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY**

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	<input checked="" type="checkbox"/> Direct vent (sealed combustion) only	
b)	<input type="checkbox"/> Positive venting induced draft (except fireplaces)	
c)	<input type="checkbox"/> Natural draft, B-vent or induced draft gas fireplace	
d)	<input type="checkbox"/> Solid Fuel (including fireplaces)	
e)	<input type="checkbox"/> No Combustion Appliances	

HEATING SYSTEM	
<input checked="" type="checkbox"/> Forced Air	<input type="checkbox"/> Non Forced Air
<input type="checkbox"/> Electric Space Heat	

HOUSE TYPE		9.32.1(2)
<input checked="" type="checkbox"/> I	Type a) or b) appliance only, no solid fuel	
<input type="checkbox"/> II	Type I except with solid fuel (including fireplaces)	
<input type="checkbox"/> III	Any Type c) appliance	
<input type="checkbox"/> IV	Type I, or II with electric space heat	
<input type="checkbox"/> Other:	Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
<input type="checkbox"/> 1	Exhaust only/Forced Air System	
<input type="checkbox"/> 2	HRV with Ducting/Forced Air System	
<input checked="" type="checkbox"/> 3	HRV Simplified/connected to forced air system	
<input type="checkbox"/> 4	HRV with Ducting/non forced air system	
<input type="checkbox"/>	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement & Master Bedroom	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	190.8 cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED		9.32.3.4.(1)
Master Bedroom	31.8 cfm	
Two Bedrooms	47.7 cfm	
Three Bedrooms	63.6 cfm	
Four Bedrooms	79.5 cfm	
Table 9.32.3.B.	TOTAL	79.5 cfm
More than 5 - Part 6		

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	120	cfm
Required Supplemental Capacity	70.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANE 90H-V ECM	Location: BSMT
120 cfm	<input checked="" type="checkbox"/> HVI Approved
0.6	sones


SUPPLEMENTAL FANS		NUTONE			
Location	Model	cfm	HVI	Sones	
ENS	QT Xen050C	50	<input checked="" type="checkbox"/>	0.3	
W/R	QT Xen050C	50	<input checked="" type="checkbox"/>	0.3	
BATH	QT Xen050C	50	<input checked="" type="checkbox"/>	0.3	
LAUN	QT Xen050C	50	<input checked="" type="checkbox"/>	0.3	

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 90H-V ECM		
159 cfm high	65 cfm low	
75 % Sensible Efficiency	<input checked="" type="checkbox"/> HVI Approved	
@ 32 deg F ( 0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER	
Name:	
Address:	
City:	
Telephone #:	Fax #:

INSTALLING CONTRACTOR	
Name:	
Address:	
City:	
Telephone #:	Fax #:

DESIGNER CERTIFICATION	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name:	HVAC Designs Ltd.
Signature:	
HRAI #	001820
Date:	January-14

MODEL: 50-4  
SFQT: 3596

LO# 53708

BUILDER: ZANCOR HOMES

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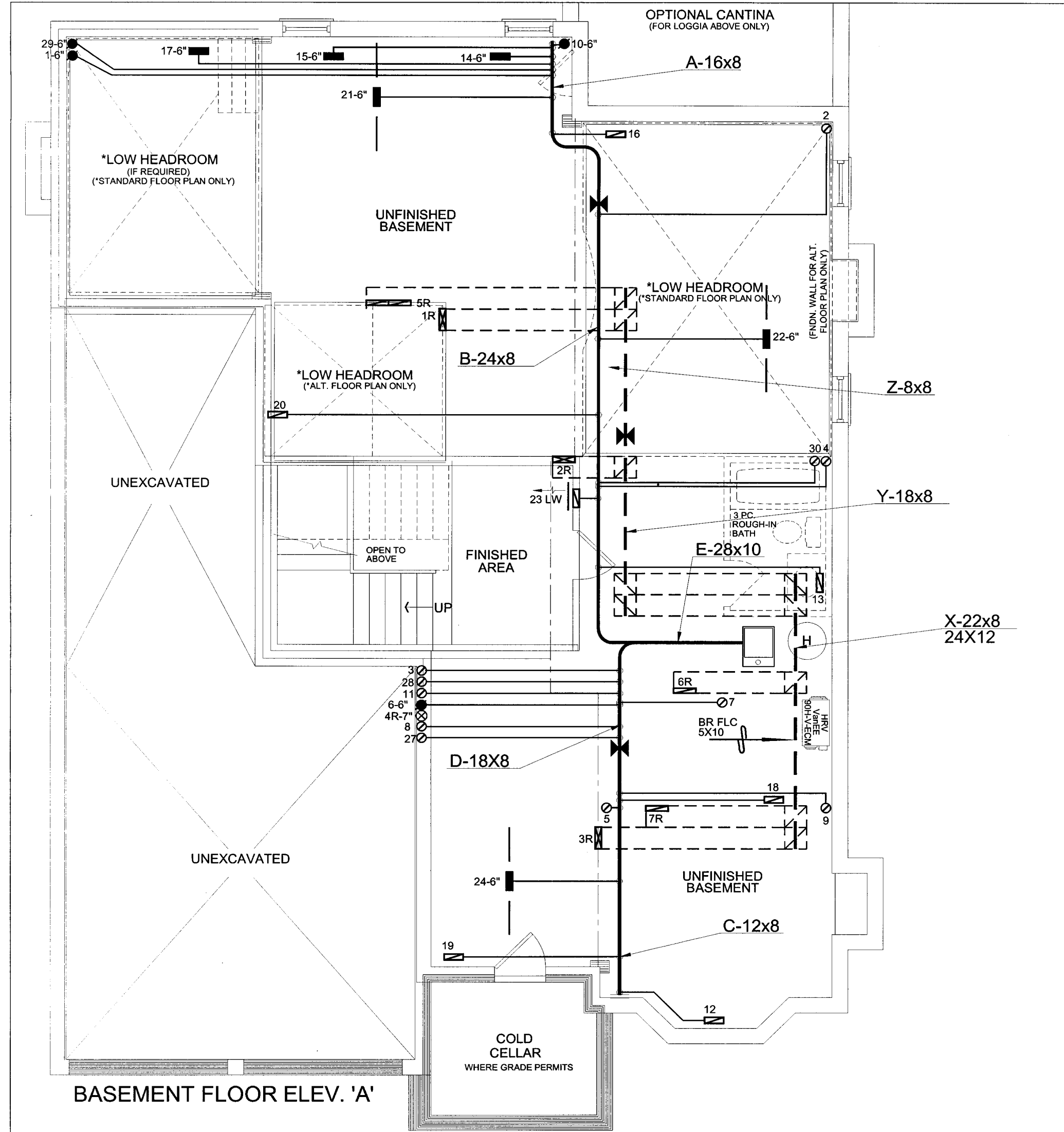
**ENERGYSTAR 12.1**

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Component	Compliance Package
	ZONE 1
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	24
Basement Walls Minimum RSI (R)-Value	20
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
Windows and Sliding Glass Doors Maximum U-Value	ZONE C
Skylights Maximum U-Value	2.8
Space Heating Equipment Minimum AFUE	95%
HRV Minimum Efficiency	75%
Domestic Hot Water Heater Minimum EF	0.9

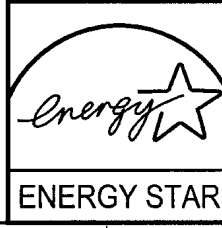


INDIVIDUAL BCIN: 19669  
MICHAEL O'ROURKE



BASEMENT FLOOR ELEV. 'A'

OBC 2012-Rev. 2014



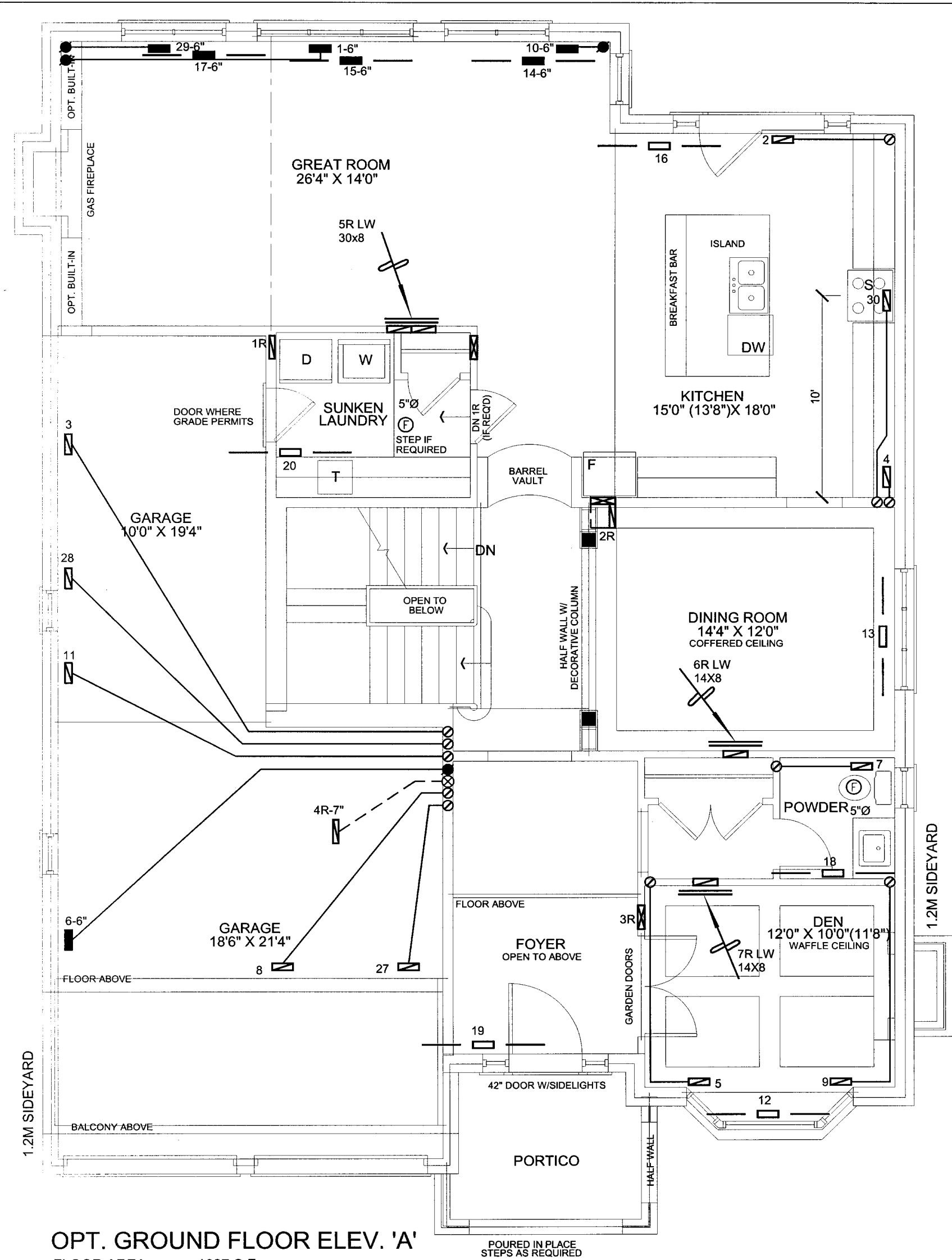
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

HVAC LEGEND							REVISIONS		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Date
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR		
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER		

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Client <b>ZANCOR HOMES</b>		<div><b>HVAC</b>DESIGNS LTD.</div> <div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div> <div>Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.</div>	HEAT LOSS 61926 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title <b>BASEMENT HEATING LAYOUT</b>	
Project Name <b>THE CASTLES OF KING KING CITY, ONTARIO</b>			MAKE LENNOX		3RD FLOOR				
			MODEL ML195UH090XP48C-90		2ND FLOOR				
			INPUT 88 MBTU/H		1ST FLOOR				
			OUTPUT 85 MBTU/H		BASEMENT				
			COOLING 3.5 TONS		ALL S/A DIFFUSERS 4"x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A				
OPT 1ST FL 50-4			FAN SPEED 1285 cfm @ 0.5" w.c.					Date JAN/2014	
3596 sqft							Scale 3/16" = 1'-0"		
							BCIN# 19669		
							LO# 53708		

Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.



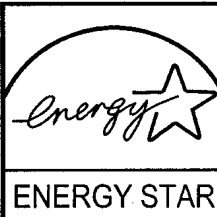
OPT. GROUND FLOOR ELEV. 'A'

FLOOR AREA: 1627 S.F.  
DEDUCT O.T.B.: 8 S.F.  
TOTAL: 1619 S.F.

9' BASEMENT/10' MAIN FLOOR/9' SECOND FLOOR

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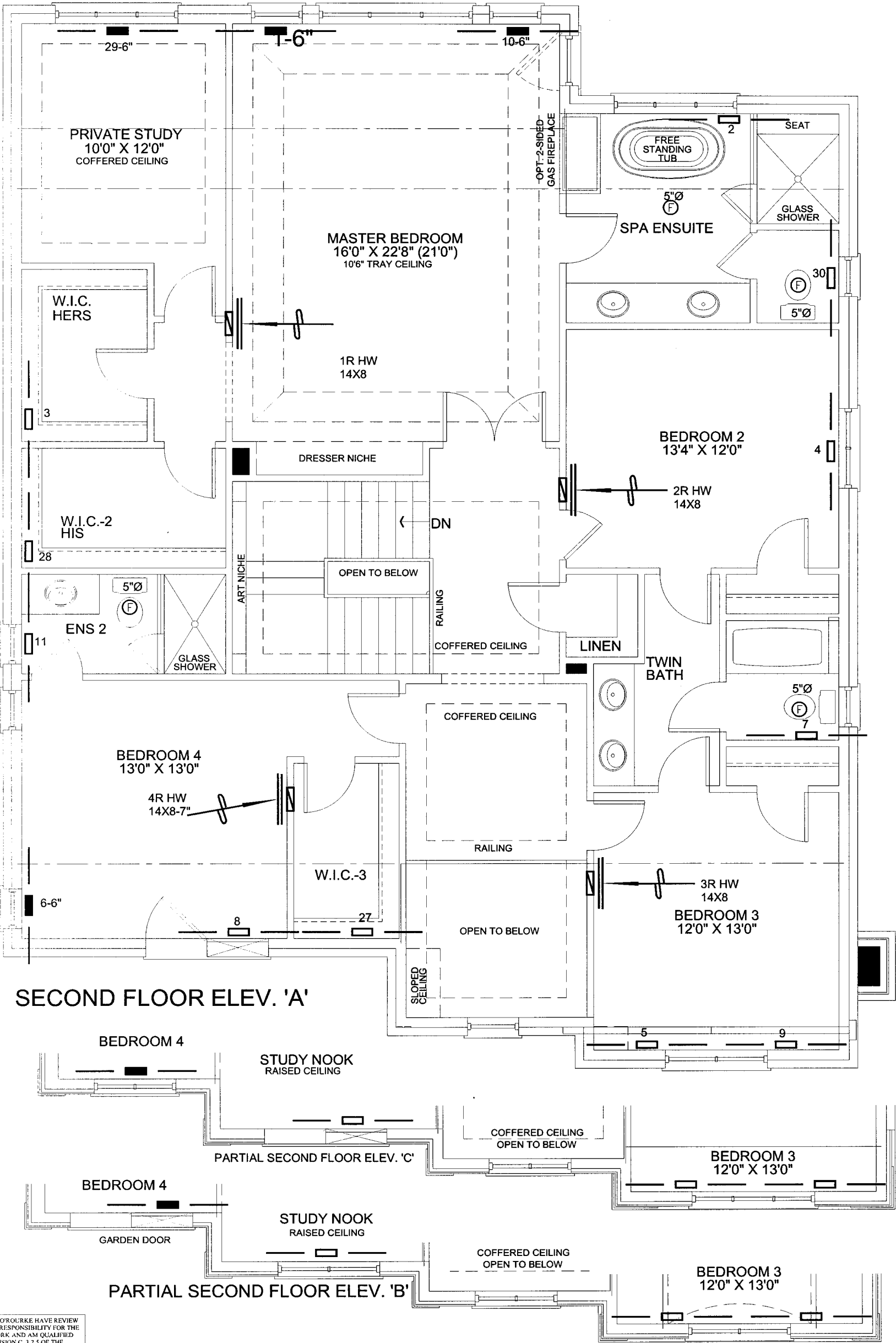
OBC 2012-Rev. 2014



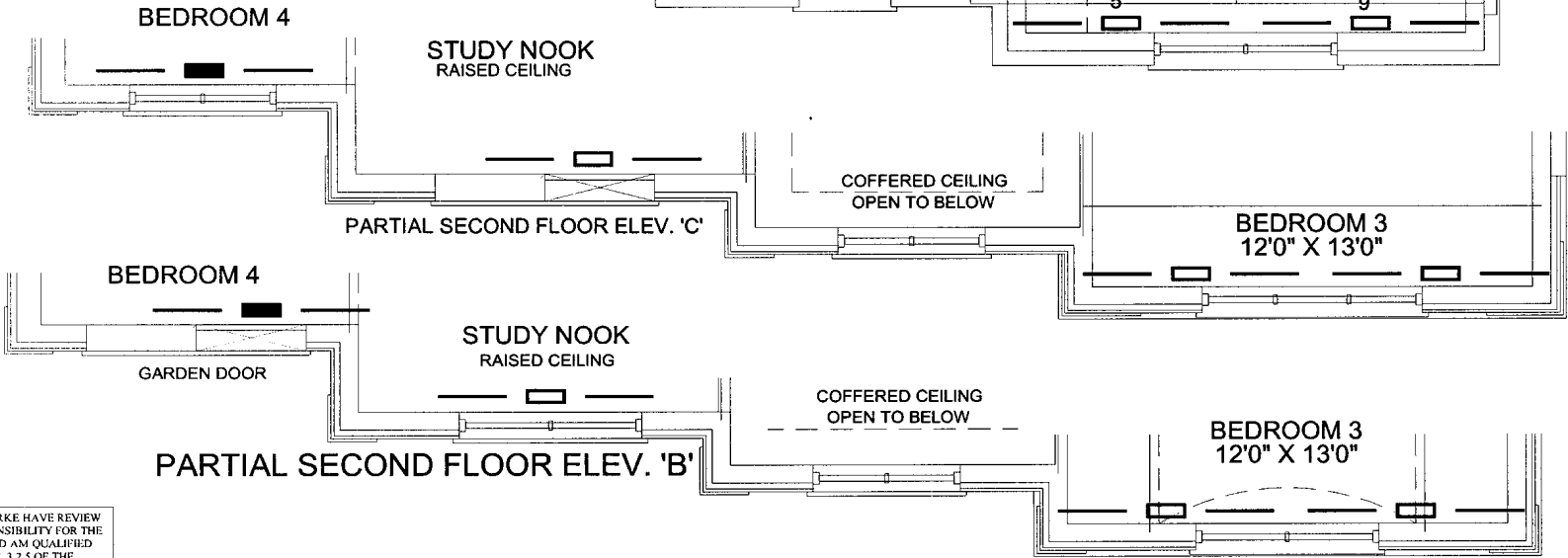
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Client ZANCOR HOMES		<div></div> <div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div> <div>Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.</div>	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name THE CASTLES OF KING KING CITY, ONTARIO			Date JAN/2014	
OPT 1ST FL 50-4			Scale 3/16" = 1'-0"	
3596 sqft			BCIN# 19669	
			LO# 53708	



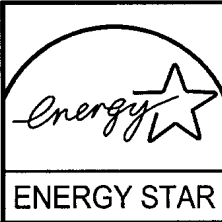
SECOND FLOOR ELEV. 'A'



PARTIAL SECOND FLOOR ELEV. 'B'

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*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

OBC 2012-Rev. 2014



HVAC LEGEND								REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Date
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	3.	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	2.	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	1.	

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ZANCOR HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2014
THE CASTLES OF KING KING CITY, ONTARIO			Scale	3/16" = 1'-0"
OPT 1ST FL 50-4			BCIN# 19669	
3596 sqft		LO#	53708	