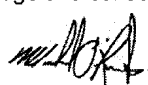


**Schedule 1: Designer Information**

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@hvacdesigns.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"/> HVAC – House <input type="checkbox"/> Building Structural <input type="checkbox"/> Small Buildings <input type="checkbox"/> Building Services <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Large Buildings <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> Complex Buildings <input type="checkbox"/> Fire Protection <input type="checkbox"/> On-site Sewage Systems			
Description of designer's work Heat Loss/Gain Calculations Duct Sizing Residential Mechanical Ventilation Design Summary Residential System Design per Can/CSA-F280-M90		Model: 50-9 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 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.

ROOM USE	EXP. WALL	RM AREA	CLG. HT.	COLD FLOOR	COLD CEILING	NO ATTIC EXPOSED CLG	GROSS WALL BAS ABOVE GRADE	GROSS WALL BAS BELOW GRADE	FACTORS	LOSS	GAIN	ENS	WIC	BED-2	BED-3	BED-4	ENS-3	ENS-4	GAME	ENS-2	STDY	R2
GRS. WALL AREA	23	351	11	0	351	0	0	0		253	1950	280	90	150	380	140	60	50	720	60	225	0
GLAZING	0	0	0	0	0	0	0	0		0	117	6	0	0	0	0	0	0	0	0	0	0
NORTH	0	0	0	0	0	0	0	0		0	117	6	0	0	0	0	0	0	0	0	0	0
EAST/WEST	34	663	1122	34	663	1122	34	663		34	1950	34	663	1122	34	663	1122	34	663	1122	34	663
SOUTH	0	0	0	0	0	0	0	0		0	1950	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	0	0	0	0	0	0	0	0		0	1950	0	0	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0		0	1950	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL BAS ABOVE GR	199	582	119	240	702	144	90	263		134	392	80	324	948	194	120	351	72	54	158	32	205
NET EXPOSED WALL BAS BELOW GRADE	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	351	521	254	192	285	139	144	214		104	396	588	286	364	540	263	66	98	48	55	82	40
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
BELOW GRADE HT. LOSS FLOOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2284	1602	772	213	480	1	638	545		1060	477	158	477	358	1227	521	179	238	4426	417	1054	0
SUB TOTAL HT GAIN	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
HT LOSS AIR LEAKAGE FACTOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
HT GAIN AIR LEAKAGE FACTOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
HT GAIN PEOPLE/APPLIANCES	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2	2	2	2
TOTAL HT LOSS BTU/H	3057	2983	3057	2983	3057	2983	3057	2983		1419	1015	3191	3191	240	4857	2062	708	612	5922	559	1410	0
TOTAL HT GAIN x 1.3 BTU/H	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0

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.  
MICHAEL O'ROURKE

ROOM USE	EXP. WALL	RM AREA	CLG. HT.	COLD FLOOR	COLD CEILING	NO ATTIC EXPOSED CLG	GROSS WALL BAS ABOVE GRADE	GROSS WALL BAS BELOW GRADE	FACTORS	LOSS	GAIN	DIN	KT/FM	MUD	LAUN	WIR	FOY	DEN	R3	R4	WOB	BAS
GRS. WALL AREA	70	70	10	0	70	0	0	0		230	1396	190	880	230	0	99	280	430	0	0	0	0
GLAZING	0	0	0	0	0	0	0	0		0	1396	0	0	0	0	0	0	0	0	0	0	0
NORTH	0	0	0	0	0	0	0	0		0	1396	0	0	0	0	0	0	0	0	0	0	0
EAST/WEST	0	0	0	0	0	0	0	0		0	1396	0	0	0	0	0	0	0	0	0	0	0
SOUTH	0	0	0	0	0	0	0	0		0	1396	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	0	0	0	0	0	0	0	0		0	1396	0	0	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0		0	1396	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL BAS ABOVE GR	70	205	42	148	433	89	717	2097		430	210	614	126	0	0	0	28	585	32	624	1056	5
NET EXPOSED WALL BAS BELOW GRADE	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
BELOW GRADE HT. LOSS FLOOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	205	42	42	148	433	89	717	2097		430	210	614	126	0	0	0	28	585	32	624	1056	5
SUB TOTAL HT GAIN	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
HT LOSS AIR LEAKAGE FACTOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
HT GAIN AIR LEAKAGE FACTOR	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
HT GAIN PEOPLE/APPLIANCES	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL HT LOSS BTU/H	274	374	274	374	274	374	274	374		1515	342	2158	2158	1515	534	565	2891	2393	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0

SITE NAME: CASTLES OF KING  
BUILDER: ZANCOR HOMES

DATE: Jan-14 GFA: 4596 LO#: 53767 CALCULATIONS per HRAI PAGE 2 of 3

FURNACE CFM 1460 FURNACE CFM 1460  
TOTAL HEAT LOSS 53738 TOTAL HEAT GAIN 39864  
AIR FLOW RATE CFM 27.17 AIR FLOW RATE CFM 36.62

\*LENNOX  
ML195UH09XP48C 90 OUTPUT 85000 BTUH  
FAN SPEED CFM @ 5" E.S.P.  
LOW 1285  
MEDIUM 1460  
HIGH 1830

RUN COUNT	3rd	2nd	1st	Bas
S/A	0	14	12	6
R/A	0	5	3	1

All S/A diffusers 4"x10" unless noted otherwise on layout.

All S/A runs 5/2 unless noted otherwise on layout.

RUN #	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	ENS-3	ENS-4	GAME	MBR	ENS-2	PAN	DIN	KT/FM	KT/FM	LAUN	W/R	FOY	DEN	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.53	1.18	0.64	1.42	2.43	2.06	0.71	0.17	2.96	1.53	0.56	0.27	1.68	1.82	1.82	1.82	0.53	0.56	2.89	2.39	2.17	2.17	2.17	2.17
CFM PER RUN HEAT	42	32	17	39	66	56	19	80	42	15	7	46	49	49	49	49	15	79	65	59	59	59	59	59
RM GAIN MBH	1.49	1.25	0.54	1.02	1.80	1.50	0.66	0.63	2.49	1.49	0.59	0.37	1.31	2.41	2.41	2.41	2.16	2.24	2.33	2.22	0.27	0.27	0.27	0.27
CFM PER RUN COOLING	55	46	20	37	58	55	24	23	91	55	21	14	48	88	88	88	79	85	81	10	10	10	10	10
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	0.125	0.13	0.13	0.13	0.13	0.13	0.13
EQUIVALENT LENGTH	36	65	42	62	73	24	35	28	83	44	12	40	15	28	28	34	29	50	53	64	22	26	32	35
TOTAL EFFECTIVE LH	140	190	180	200	150	140	120	130	190	150	170	120	170	110	110	140	160	190	200	180	90	160	100	180
ADJUSTED PRESSURE	0.07	0.05	0.06	0.05	0.06	0.08	0.08	0.08	0.05	0.06	0.06	0.06	0.06	0.1	0.09	0.07	0.07	0.05	0.05	0.05	0.11	0.07	0.09	0.06
ROUND DUCT SIZE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	B	D	D	E	E	E	C	A	B	E	D	B	A	A	C	C	C	B	A	A	B	D

RUN#	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	BAS	BAS	ENS	STDY	BED-3	GAME	KT/FM	MUD																
RM LOSS MBH:	2.17	2.17	1.18	1.41	2.43	2.96	1.82	1.52	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	59	59	32	38	66	80	49	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RM GAIN MBH:	0.27	0.27	1.25	1.06	1.60	2.49	2.41	0.34	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	10	10	46	39	58	91	88	13	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	0.125	0.13	0.13	0.13	0.13	
ACTUAL DUCT LGH.	60	62	67	42	69	60	46	44	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
EQUIVALENT LENGTH	180	160	200	190	140	190	150	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL EFFECTIVE LH	240	222	267	232	209	250	196	204	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
ADJUSTED PRESSURE	0.05	0.06	0.05	0.05	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	
ROUND DUCT SIZE	5	5	5	5	5	6	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	
TRUNK	C	C	A	E	D	D	A	D	A	A	B	E	D	B	A	A	E	C	C	B	A	A	D	

## SUPPLY AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK A	354	0.05	10.7	13
TRUNK B	553	0.05	12.6	18
TRUNK C	357	0.05	10.7	13
TRUNK D	754	0.05	14.2	23
TRUNK E	906	0.05	15.2	26

## RETURN AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK O	0	0.04	0	0
TRUNK P	0	0.04	0	0
TRUNK Q	0	0.04	0	0
TRUNK R	0	0.04	0	0
TRUNK S	0	0.04	0	0
TRUNK T	0	0.04	0	0
TRUNK U	0	0.04	0	0
TRUNK V	0	0.04	0	0
TRUNK W	0	0.04	0	0
TRUNK X	1460	0.04	19.2	33
TRUNK Y	0	0.04	0	0
TRUNK Z	655	0.04	14.2	23
DROP	1460	0.04	19.2	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.

MICHAEL OROURKE  
BCIN: 19669

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	BR
AIR VOLUME	175	155	75	135	95	310	275	75	0	0	0	0	0	0	165
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
ACTUAL DUCT LGH.	32	41	54	64	77	27	45	62	1	1	1	1	1	1	14
EQUIVALENT LENGTH	135	145	185	195	205	160	200	195	0	0	0	0	0	0	145
TOTAL EFFECTIVE LH	167	186	239	259	282	187	245	257	1	1	1	1	1	1	159
ADJUSTED PRESSURE	0.07	0.06	0.05	0.05	0.04	0.06	0.05	0.05	12	12	12	12	12	12	0.08
ROUND DUCT SIZE	7.5	7.5	6	7.5	6.9	9.7	9.7	6	0	0	0	0	0	0	7.1
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	8
INLET GRILL SIZE	14	14	14	14	14	30	30	14	0	0	0	0	0	0	14

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

TYPE: 50-9

LO # 53767

MICHAEL O'ROURKE

PAGE 3 of 3

SITE NAME: CASTLES OF KING

## RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

**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 gas fireplace

d) ☐ Solid Fuel (including fireplaces)

e) ☐ No Combustion Appliances

**HEATING SYSTEM**

☒ Forced Air ☐ Non Forced Air

☐ Electric Space Heat

**HOUSE TYPE** 9.32.1(2)

☒ I Type a) or b) appliance only, no solid fuel

☐ II Type I except with solid fuel (including fireplaces)

☐ III Any Type c) appliance

☐ IV Type I, or II with electric space heat

☐ Other: Type I, II or IV no forced air

**SYSTEM DESIGN OPTIONS** O.N.H.W.P.

☐ 1 Exhaust only/Forced Air System

☐ 2 HRV with Ducting/Forced Air System

☒ 3 HRV Simplified/connected to forced air system

☐ 4 HRV with Ducting/non forced air system

☐ 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	6	@ 10.6 cfm	63.6	cfm
Other Rooms	11	@ 10.6 cfm	116.6	cfm
Table 9.32.3.A.	TOTAL		254.4	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	254.4	cfm
Less Principal Ventil. Capacity	120	cfm
Required Supplemental Capacity	134.4	cfm

**PRINCIPAL EXHAUST FAN CAPACITY**

Model: VANEE 90H-V ECM Location: BSMT

120 cfm ☒ HVI Approved

0.6 sones

SUPPLEMENTAL FANS		NUTONE		HVI	Sones
Location	Model	cfm			
ENS	QTXEN050C	50		<input checked="" type="checkbox"/>	0.3
W/R	QTXEN050C	50		<input checked="" type="checkbox"/>	0.3
LAUN	QTXEN050C	50		<input checked="" type="checkbox"/>	0.3
BATH	QTXEN050C	50		<input checked="" type="checkbox"/>	0.3

**HEAT RECOVERY VENTILATOR** 9.32.3.11.

Model: VANEE 90H-V ECM

159 cfm high 65 cfm low

75 % Sensible Efficiency ☒ 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: *Michael O'Rourke*

HRAI # 001820

Date: January-14

MODEL: 50-9  
SFQT: 4596

LO# 53767

BUILDER: ZANCOR HOMES

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**ENERGYSTAR 12.1**

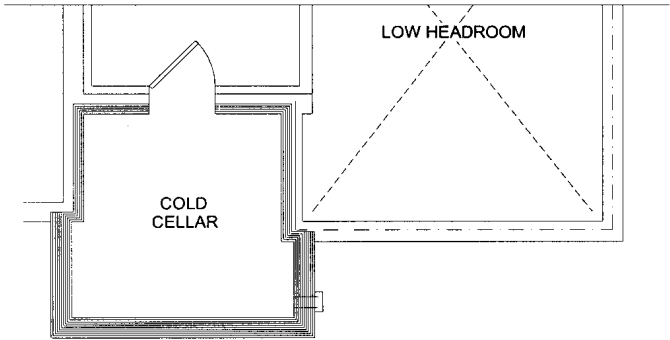
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**Component****Compliance Package****ZONE 1**

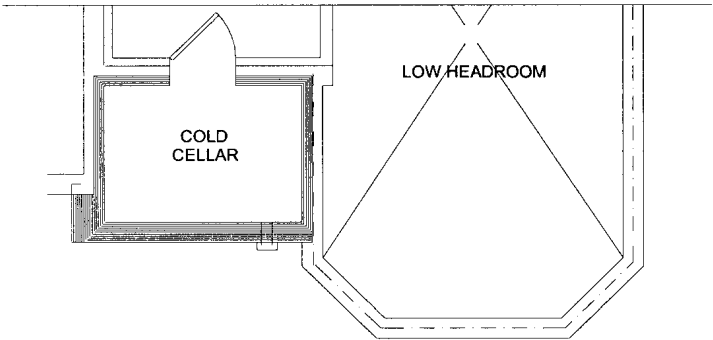
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	24
Basement Walls Minimum RSI (R)-Value	20
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-
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



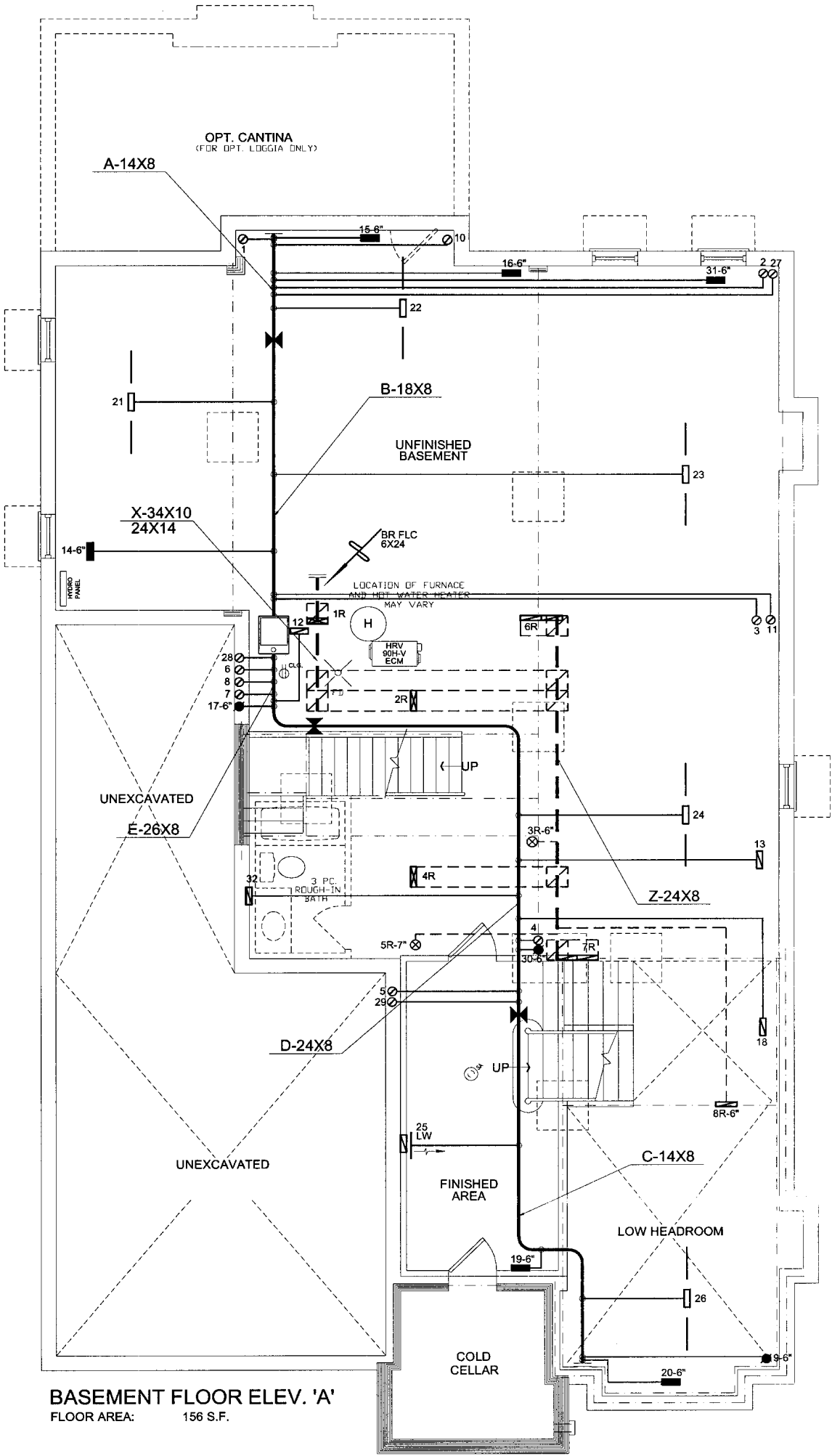
INDIVIDUAL BCIN: 19669  
MICHAEL O'ROURKE



PARTIAL BASEMENT FLOOR ELEV. 'B'  
FLOOR AREA: 156 S.F.



PARTIAL BASEMENT FLOOR ELEV. 'C'  
FLOOR AREA: 156 S.F.



BASEMENT FLOOR ELEV. 'A'  
FLOOR AREA: 156 S.F.

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.

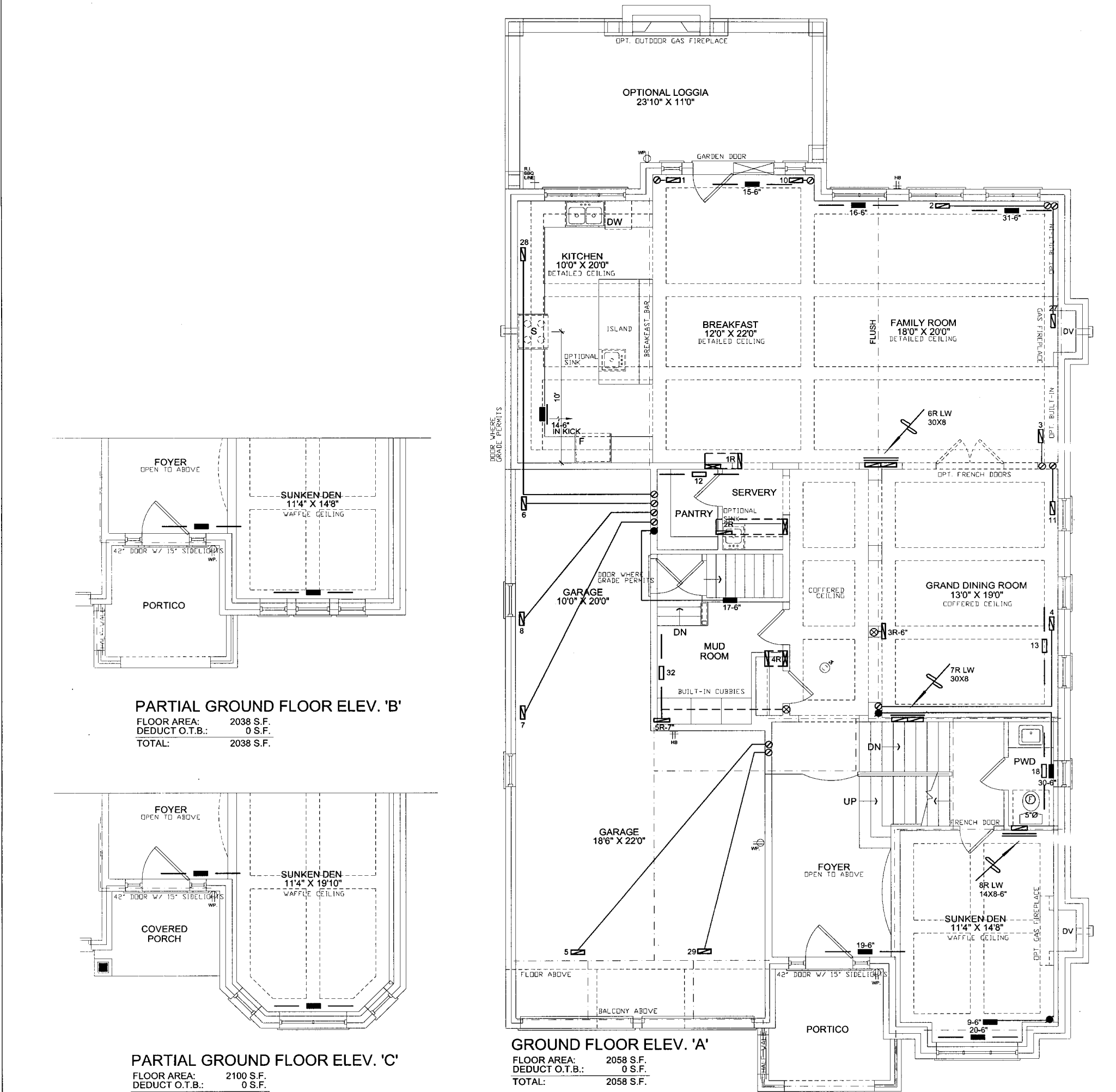
OBC 2012-Rev. 2014

PACKAGE J

HVAC LEGEND									
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		<div><div><div>HVAC</div><div>DESIGNS LTD.</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>		HEAT LOSS 75169 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
ZANCOR HOMES				MAKE LENNOX		3RD FLOOR			BASEMENT HEATING LAYOUT	
Project Name		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.		MODEL ML195UH090XP48C-90		2ND FLOOR			Date	
CASTLES OF KING CITY KING CITY, ONTARIO				INPUT 88 MBTU/H		1ST FLOOR			JAN/2014	
50-9				OUTPUT 85 MBTU/H		BASEMENT			Scale	
				COOLING 4.0 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			3/16" = 1'-0"	
4596 sqft				FAN SPEED 1460 cfm @ 0.5" w.c.		BCIN# 19669			LO# 53767	



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.

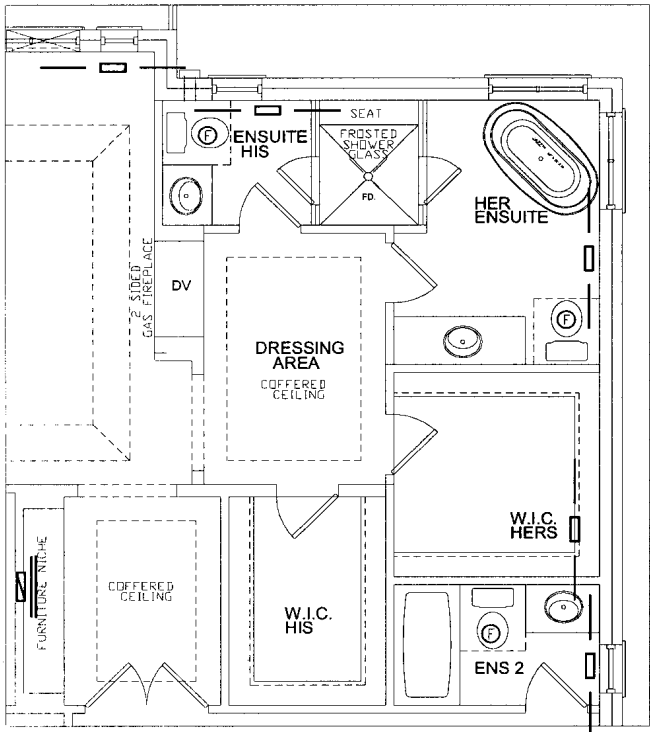
OBC 2012-Rev. 2014

**PACKAGE J**

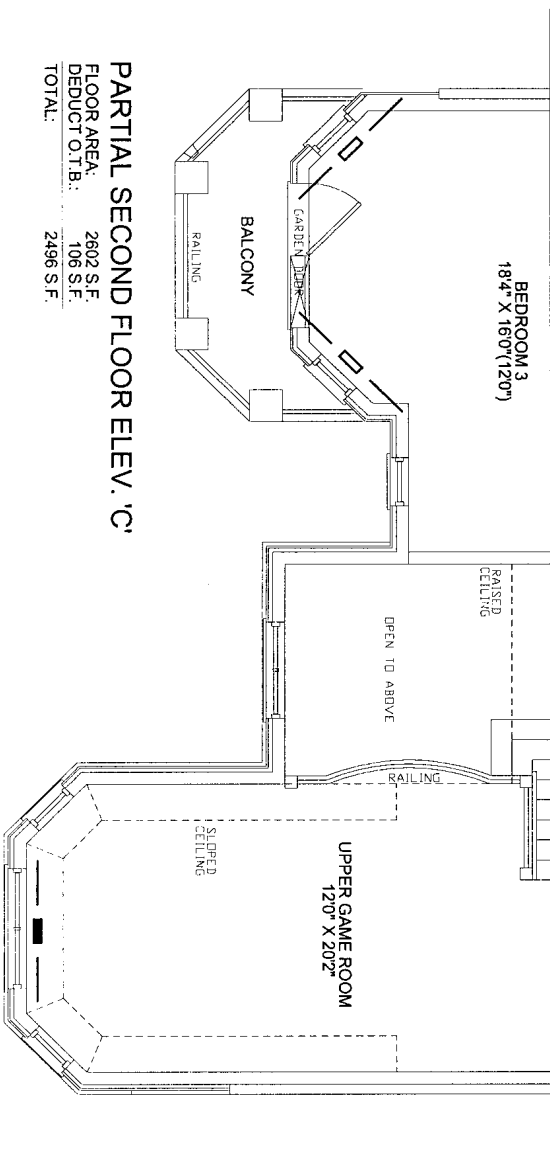
HVAC LEGEND										
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		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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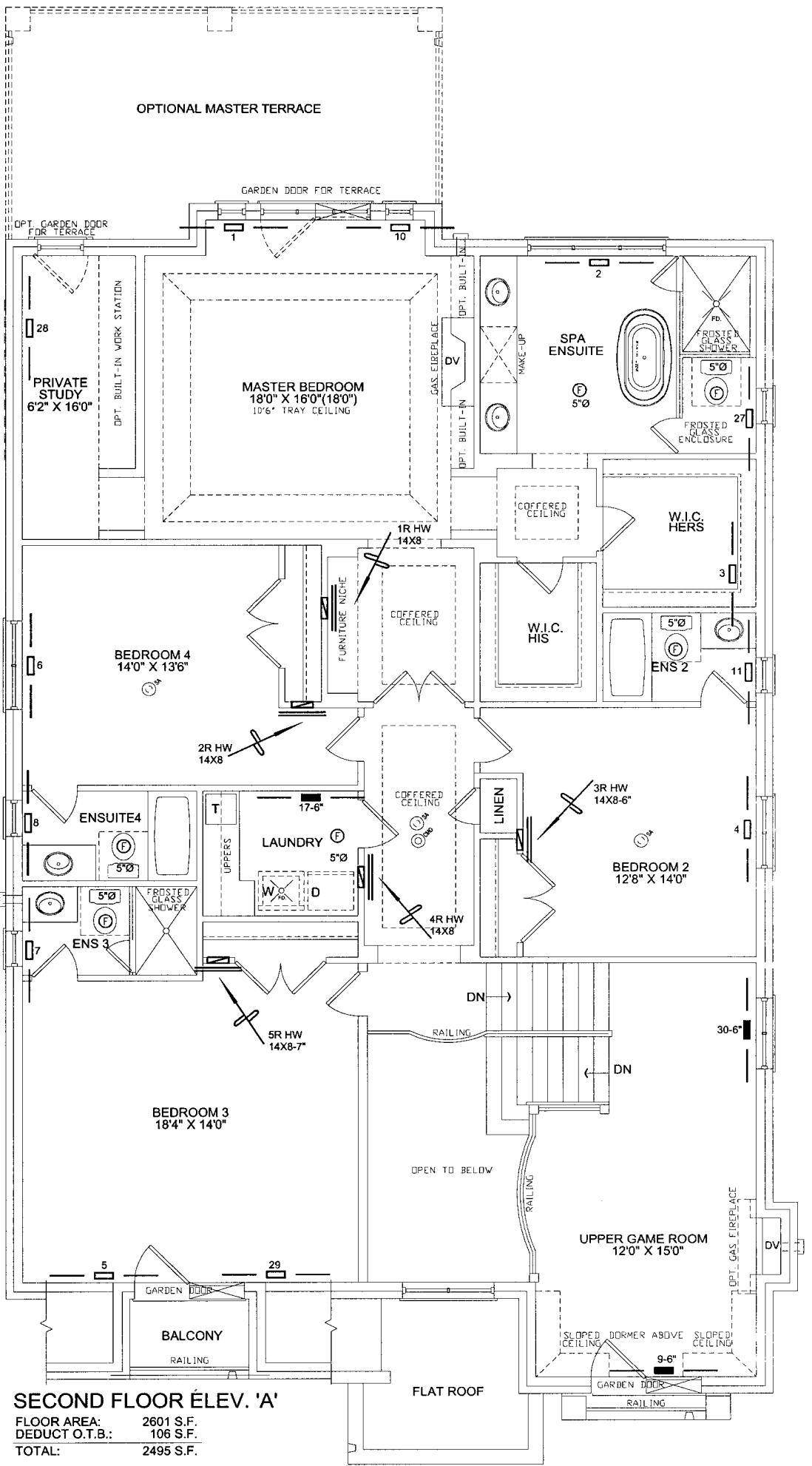
Client		<div><b>HVAC</b>DESIGNS LTD.</div> <div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div> <div>Installation to comply with the latest 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>	Sheet Title	
ZANCOR HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2014
CASTLES OF KING CITY KING CITY, ONTARIO			Scale	3/16" = 1'-0"
			BCIN# 19669	
50-9	4596 sqft	LO#	53767	



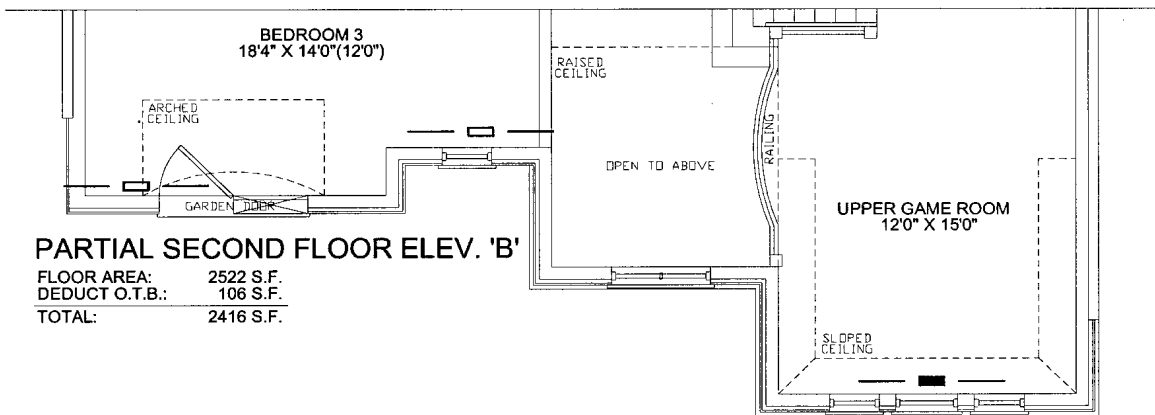
OPT. HIS/HER ENSUITE



PARTIAL SECOND FLOOR ELEV. 'C'  
FLOOR AREA: 2602 S.F.  
DEDUCT O.T.B.: 106 S.F.  
TOTAL: 2496 S.F.



SECOND FLOOR ELEV. 'A'  
FLOOR AREA: 2601 S.F.  
DEDUCT O.T.B.: 106 S.F.  
TOTAL: 2495 S.F.



PARTIAL SECOND FLOOR ELEV. 'B'  
FLOOR AREA: 2522 S.F.  
DEDUCT O.T.B.: 106 S.F.  
TOTAL: 2416 S.F.

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, BCIN# 19669  
HVAC DESIGNS LTD.

OBC 2012-Rev. 2014

PACKAGE J

HVAC LEGEND									
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		<div><div><div>HVAC</div><div>DESIGNS LTD.</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>	Sheet Title	
ZANCOR HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name		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.	Date	JAN/2014
CASTLES OF KING CITY KING CITY, ONTARIO			Scale	3/16" = 1'-0"
			BCIN# 19669	
50-9	4596 sqft		LO#	53767