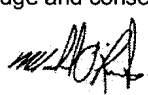


Schedule 1: Designer Information

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.

A. Project Information			
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. Individual who reviews and takes responsibility for design activities			
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 ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]			
<input type="checkbox"/> House <input 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: 50-3 Project: CASTLES OF KING CITY	
D. Declaration of Designer			
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.			
JANUARY 24, 2014			
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	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-5	WIC-2	ENS-2	R1	R2
EXP. WALL	36	33	4	17	22	19	6	0	14	0	0	0
RM AREA	308	192	75	165	210	300	120	0	165	0	0	0
CLG. HT.	11	11	10	10	11	10	10	10	10	165	9	9
COLD FLOOR	0	0	0	0	210	10	120	0	50	0	0	0
COLD CEILING	308	192	75	165	210	300	120	0	50	165	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	50	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	396	363	40	170	242	190	60	0	140	0	0	0
GLAZING	0	8	0	312	0	0	0	0	0	0	0	0
NORTH	156	112	0	223	0	0	0	0	0	0	0	0
EASTWEST	1950	3300	0	0	44	858	1452	0	5	98	0	0
SOUTH	1950	2092	0	0	0	0	0	0	0	0	0	0
SKYLT.	1950	13672	0	0	0	0	0	0	0	0	0	0
DOORS	2591	565	20	518	113	0	0	0	0	0	0	0
NET EXPOSED WALL	316	924	40	450	198	509	53	0	135	395	0	0
HT LOSS AIR LEAKAGE FACTOR	0.313	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN AIR LEAKAGE FACTOR	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN PEOPLE/APPLIANCES	240	240	240	240	240	240	240	240	240	240	240	240
TOTAL HT LOSS BTU/H	4162	2792	300	1323	3010	1694	989	0	899	322	0	0
TOTAL HT GAIN x 1.3 BTU/H	4592	2734	431	960	3037	1296	796	0	770	481	0	0
NET EXPOSED WALL BAS ABOVE GRADE	3169	2126	228	1007	1868	1290	753	0	885	245	0	0
EXPOSED WALL BAS BELOW GRADE	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
HT LOSS AIR LEAKAGE FACTOR	0.313	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN AIR LEAKAGE FACTOR	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN PEOPLE/APPLIANCES	240	240	240	240	240	240	240	240	240	240	240	240
TOTAL HT LOSS BTU/H	4162	2792	300	1323	3010	1694	989	0	899	322	0	0
TOTAL HT GAIN x 1.3 BTU/H	4592	2734	431	960	3037	1296	796	0	770	481	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.

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

ROOM USE	LIV	DIN	KITCH	PAN	LAUN	WIR	FOY	DEN	R3	R4	WOB	BAS
EXP. WALL	0	16	72	12	27	0	73	34	0	0	0	194
RM AREA	0	0	0	0	0	0	117	179	0	0	0	0
CLG. HT.	10	10	10	10	12	10	10	14	9	9	9	9
COLD FLOOR	0	0	0	0	0	0	0	0	0	0	0	0
COLD CEILING	0	0	0	0	0	0	117	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	12	0	0	0	0	180	0	0	0	0
GROSS WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	582
GROSS WALL BAS BELOW GRADE	0	0	0	0	0	0	0	0	0	0	0	1164
FACTORS												
GRS WALL AREA	0	160	720	120	324	0	730	476	0	0	0	0
GLAZING	0	488	10	0	0	0	9	0	0	0	0	5
NORTH	1950	3300	195	0	0	0	176	126	0	0	0	10
EASTWEST	1950	2092	108	0	0	0	45	878	1485	1980	0	330
SOUTH	1950	2092	20	0	0	0	0	0	0	0	0	5
SKYLT.	1950	13672	0	0	0	0	0	0	0	0	0	98
DOORS	2591	565	10	0	0	0	20	518	113	265	0	40
NET EXPOSED WALL	0	135	572	351	304	0	656	1919	418	416	0	1037
HT LOSS AIR LEAKAGE FACTOR	0.313	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN AIR LEAKAGE FACTOR	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN PEOPLE/APPLIANCES	240	240	240	240	240	240	240	240	240	240	240	240
TOTAL HT LOSS BTU/H	0	882	4652	351	1407	0	3663	2822	0	0	0	562
TOTAL HT GAIN x 1.3 BTU/H	0	947	8528	112	2320	0	3567	3909	0	0	0	2021
NET EXPOSED WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED WALL BAS BELOW GRADE	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
HT LOSS AIR LEAKAGE FACTOR	0.313	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN AIR LEAKAGE FACTOR	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN PEOPLE/APPLIANCES	240	240	240	240	240	240	240	240	240	240	240	240
TOTAL HT LOSS BTU/H	0	882	4652	351	1407	0	3663	2822	0	0	0	562
TOTAL HT GAIN x 1.3 BTU/H	0	947	8528	112	2320	0	3567	3909	0	0	0	2021
NET EXPOSED WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED WALL BAS BELOW GRADE	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
HT LOSS AIR LEAKAGE FACTOR	0.313	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN AIR LEAKAGE FACTOR	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN PEOPLE/APPLIANCES	240	240	240	240	240	240	240	240	240	240	240	240
TOTAL HT LOSS BTU/H	0	882	4652	351	1407	0	3663	2822	0	0	0	562
TOTAL HT GAIN x 1.3 BTU/H	0	947	8528	112	2320	0	3567	3909	0	0	0	2021
NET EXPOSED WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED WALL BAS BELOW GRADE	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
HT LOSS AIR LEAKAGE FACTOR	0.313	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN AIR LEAKAGE FACTOR	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
HT GAIN PEOPLE/APPLIANCES	240	240	240	240	240	240	240	240	240	240	240	240
TOTAL HT LOSS BTU/H	0	882	4652	351	1407	0	3663	2822	0	0	0	562
TOTAL HT GAIN x 1.3 BTU/H	0	947	8528	112	2320	0	3567	3909	0	0	0	2021

FURNACE CFM 1285 FURNACE CFM 1285
TOTAL HEAT LOSS 45816 TOTAL HEAT GAIN 35979
AIR FLOW RATE CFM 28.05 AIR FLOW RATE CFM 35.72

*LENNOX
ML195UH090XP48C 90 OUTPUT 85000 BTUH
FAN SPEED CFM @ .5" E.S.P.

LOW 1285
MEDIUM 1460
HIGH 1830
DESIGN CFM = 1285
TEMPERATURE RISE 61 DEG/F.

RUN COUNT	3rd	2nd	1st	Bas
S/A	0	13	11	5
R/A	0	4	2	1

All S/A diffusers 4"x10" unless noted otherwise on layout.
All R/A diffusers 4"x10" 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	BATH	BED-3	WIC-2	ENS-2	DEN	DIN	KT/FM	LAUN	KT/FM	FOY	DEN	BAS	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	2.08	1.40	0.30	1.32	1.50	1.69	0.49	1.50	2.08	0.32	1.85	1.16	1.53	1.53	1.53	1.53	1.85	2.41	1.85	2.45	2.45	2.45	2.45	2.45
CFM PER RUN HEAT	58	39	8	37	42	48	14	42	25	58	52	33	43	43	43	43	52	67	52	69	69	69	69	69
RM GAIN MBH	2.30	1.37	0.43	0.96	1.52	1.30	0.40	1.52	0.77	2.30	0.49	1.95	2.13	2.13	2.13	2.13	2.32	2.13	1.78	1.95	0.30	0.30	0.30	0.30
CFM PER RUN COOLING	82	49	15	34	54	46	14	54	28	82	70	34	76	76	76	76	83	76	64	70	11	11	11	11
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
ACTUAL DUCT LGH	45	29	22	51	57	22	53	55	55	52	36	56	37	25	34	32	21	44	40	48	23	34	32	38
EQUIVALENT LENGTH	170	140	140	140	140	190	160	130	150	150	150	110	130	120	120	120	140	120	180	130	130	100	140	160
TOTAL EFFECTIVE LH	215	169	162	191	197	212	213	185	205	202	186	166	167	145	154	162	161	164	220	178	153	134	172	198
ADJUSTED PRESSURE	0.06	0.07	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.08	0.07	0.09	0.08	0.08	0.08	0.08	0.06	0.07	0.08	0.09	0.07	0.06
ROUND DUCT SIZE	6	5	5	5	5	5	5	5	5	6	5	5	5	5	5	5	6	5	5	5	5	5	5	6
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10
TRUNK	F	B	B	E	D	B	D	D	D	E	F	C	E	A	A	F	B	E	C	C	A	F	E	C

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	ENS	BATH	FOY	PAN																			
RM LOSS MBH	2.45	1.40	0.49	2.41	0.46																			
CFM PER RUN HEAT	69	39	14	67	13																			
RM GAIN MBH	0.30	1.37	0.40	1.78	0.11																			
CFM PER RUN COOLING	11	49	14	64	4																			
ADJUSTED PRESSURE	0.125	0.13	0.125	0.13	0.13																			
ACTUAL DUCT LGH	49	45	46	43	11																			
EQUIVALENT LENGTH	120	170	170	140	150																			
TOTAL EFFECTIVE LH	169	215	216	183	161																			
ADJUSTED PRESSURE	0.07	0.06	0.06	0.07	0.08																			
ROUND DUCT SIZE	5	5	5	5	5																			
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10																			
TRUNK	C	A	D	C	B																			

SUPPLY AIR TRUNK SIZE						
	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		
TRUNK A	194	0.06	8.2	8	x	8
TRUNK B	354	0.06	10.2	12	x	8
TRUNK C	376	0.06	10.4	12	x	8
TRUNK D	513	0.06	11.7	16	x	8
TRUNK E	240	0.06	8.8	9	x	8
						</

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	155	0.05	7.8	7
TRUNK X	1285	0.05	17.3	27
TRUNK Y	960	0.05	15.5	27
TRUNK Z	450	0.05	11.7	16
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'BRIEN
BCIN: 19699

Michael O'Brien

(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	15	BR
AIR VOLUME		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PLENUM PRESSURE		155	135	135	75	300	315	0	0	0	0	0	0	0	0	0	170
ACTUAL DUCT LGH.		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	0.12
EQUIVALENT LENGTH		32	42	52	64	33	38	1	1	1	1	1	1	1	1	1	16
TOTAL EFFECTIVE LH		160	185	195	185	205	200	0	0	0	0	0	0	0	0	0	165
ADJUSTED PRESSURE		192	227	247	249	238	238	1	1	1	1	1	1	1	1	1	181
ROUND DUCT SIZE		0.06	0.05	0.05	0.05	0.05	0.05	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.07
INLET GRILL SIZE		7.5	7.5	7.5	6	10.1	10.2	0	0	0	0	0	0	0	0	0	7.5
INLET GRILL SIZE		8	8	8	8	8	8	0	0	0	0	0	0	0	0	8	8
INLET GRILL SIZE		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE		14	14	14	14	30	30	0	0	0	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

MICHAEL O'ROURKE

TYPE: 50-3

LO # 53712

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	5	@ 10.6 cfm	53	cfm
Other Rooms	8	@ 10.6 cfm	84.8	cfm
Table 9.32.3.A	TOTAL		212	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	212	cfm
Less Principal Ventil. Capacity	120	cfm
Required Supplemental Capacity	92	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model:	VANEE 90H-V ECM	Location:	BSMT
120	cfm	<input checked="" type="checkbox"/>	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
BATH	QTXEN050C	50		<input checked="" type="checkbox"/>	0.3
LAUN	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
@ 32 deg F (0 deg C)	<input checked="" type="checkbox"/> HVI Approved

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: 50-3
SFQT: 3401

LO# 53712

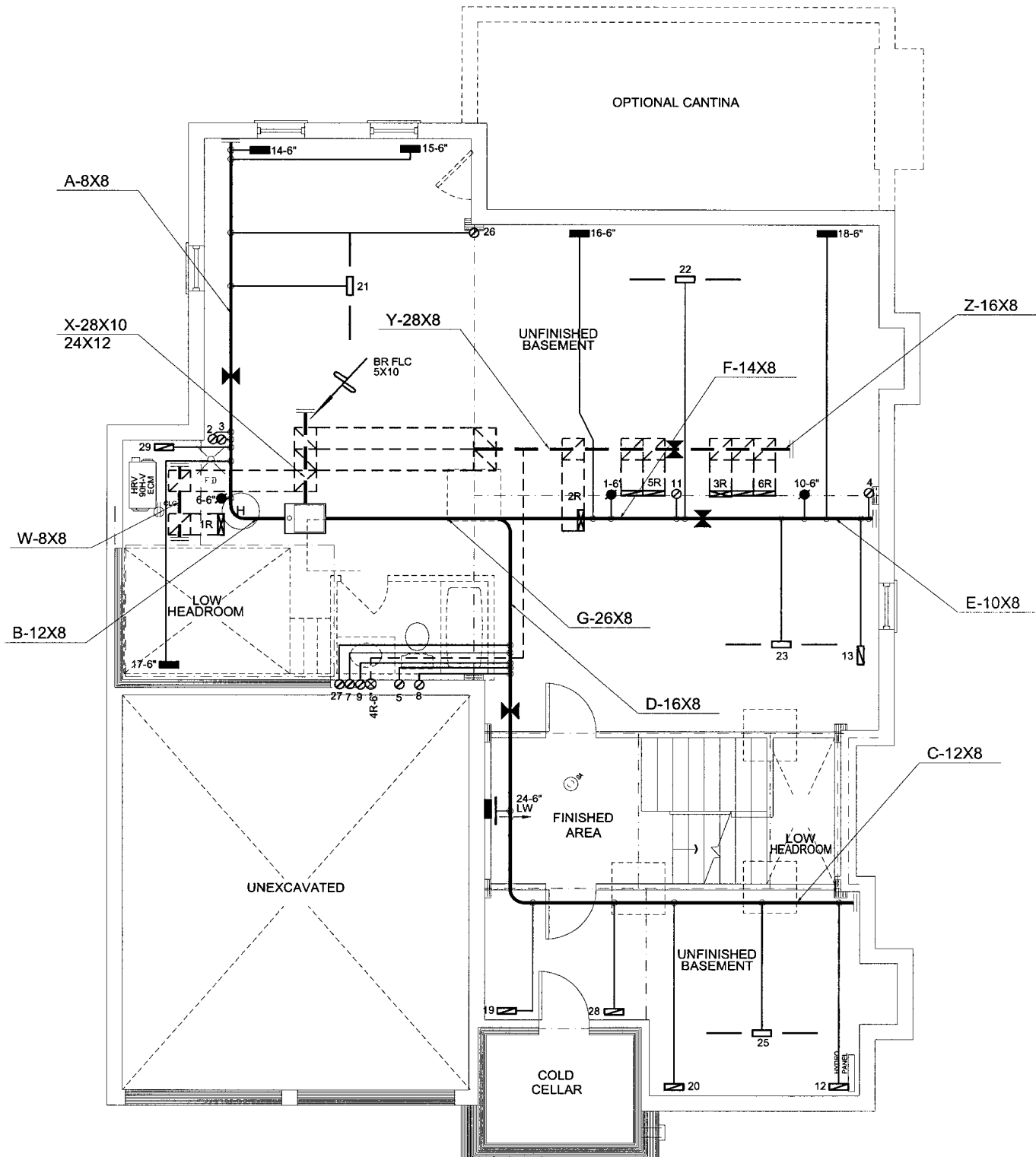
BUILDER: ZANCOR HOMES

ENERGYSTAR 12.1

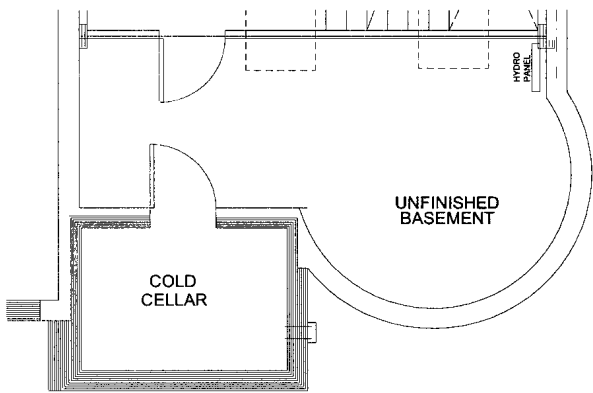
Component	Compliance Package
	ZONE 1
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	24
Basement Walls Minimum RSI (R)-Value	20
Below Grade Slab Entire surface > 600 mm 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



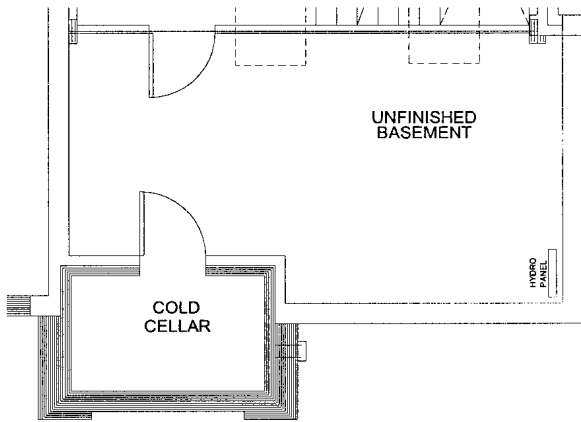
INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE



BASEMENT FLOOR ELEV. 'A'



PARTIAL BASEMENT FLOOR ELEV. 'B'



PARTIAL BASEMENT FLOOR ELEV. 'C'

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.

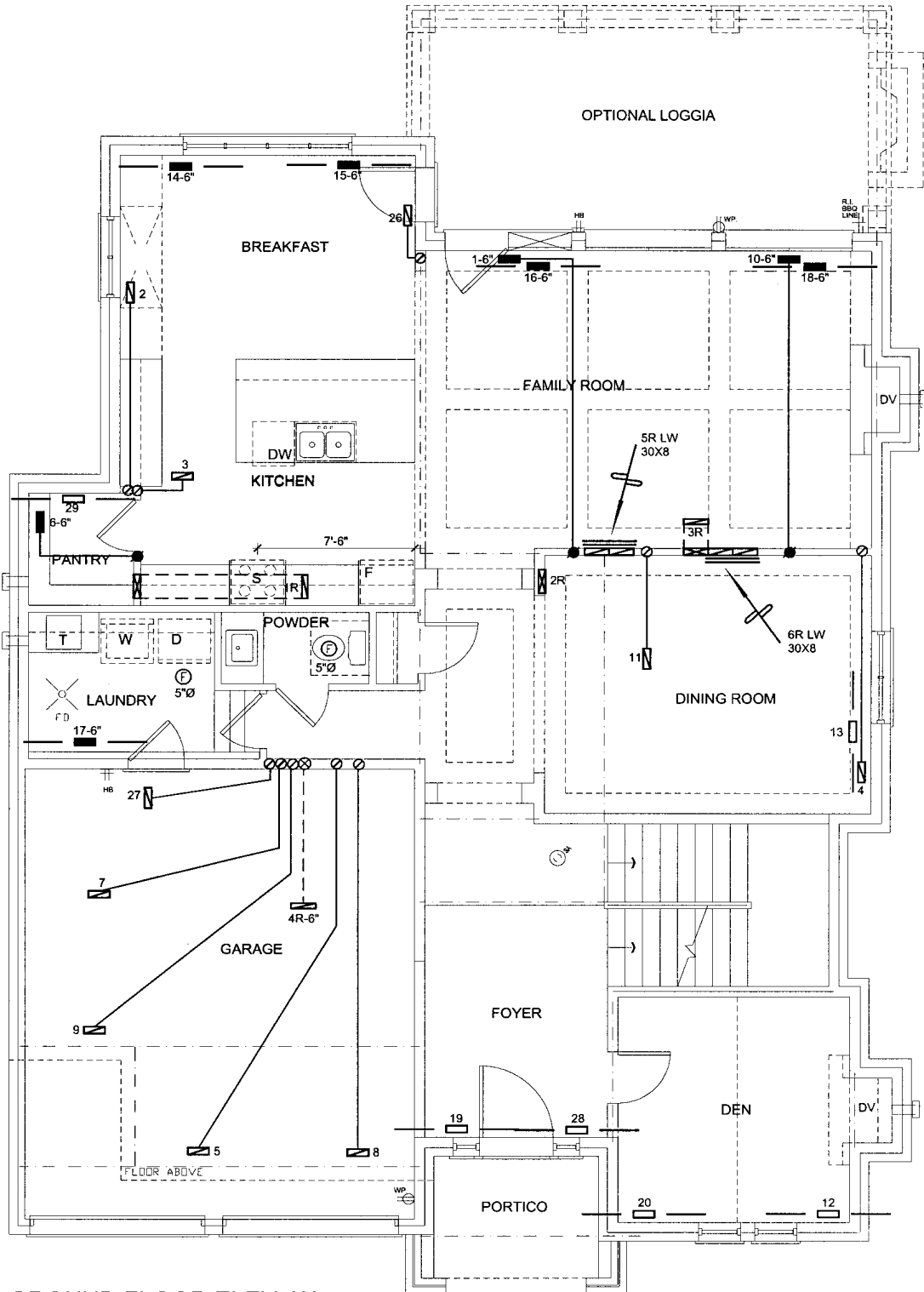
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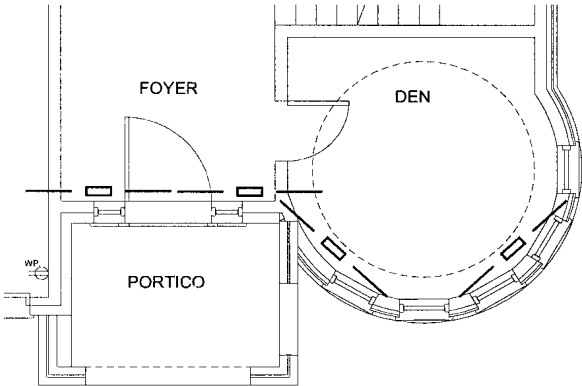
HVAC LEGEND							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK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

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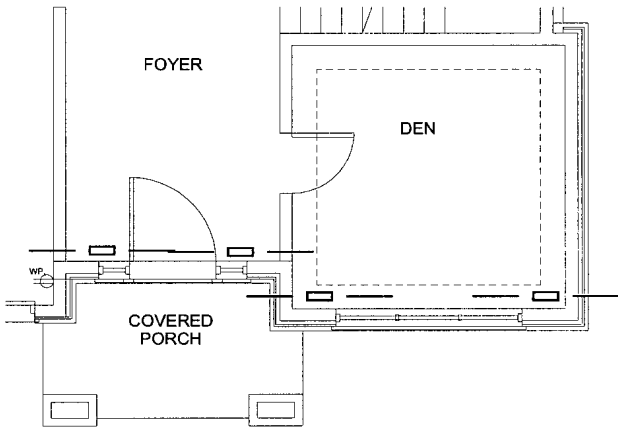
Client		<div><div>HVACDESIGNS LTD.</div><div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div><div>Installation to comply with the latest Ontario 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></div>	HEAT LOSS 63675 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title <div>BASEMENT HEATING LAYOUT</div>	
Project Name			MAKE LENNOX		3RD FLOOR				
CASTLES OF KING CITY KING CITY, ONTARIO			MODEL ML195UH090XP48C-90		2ND FLOOR 13 4 4				
			INPUT 88 MBTU/H		1ST FLOOR 11 2 3				
			OUTPUT 85 MBTU/H		BASEMENT 5 1 0				
50-3			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			Date JAN/2014	
			FAN SPEED 1285 cfm @ 0.5" w.c.					Scale 1/8" = 1'-0"	
							BCIN# 19669		
3401 sqft							LO# 53712		



GROUND FLOOR ELEV. 'A'



PARTIAL GROUND FLOOR ELEV. 'B'



PARTIAL GROUND FLOOR ELEV. 'C'

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

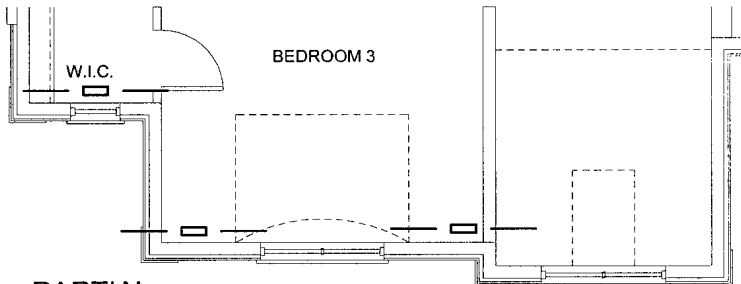
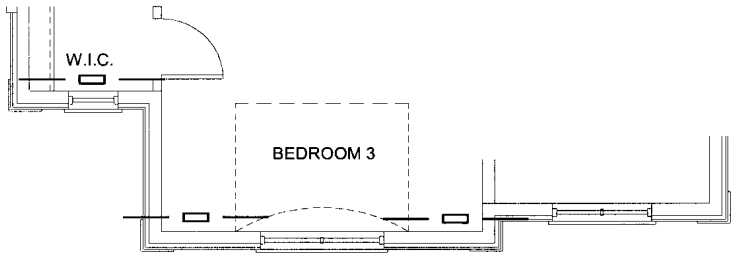
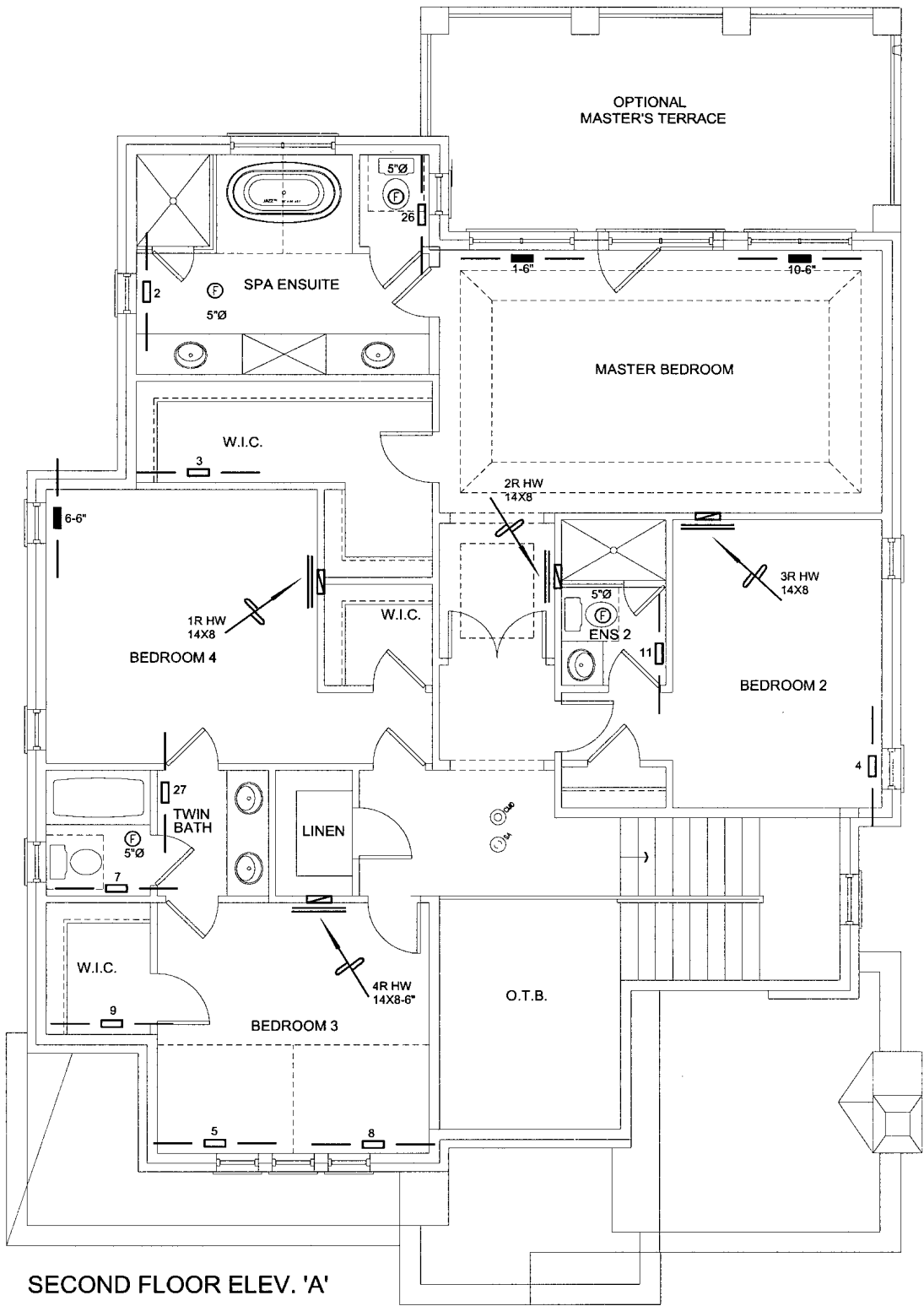
OBC 2012-Rev. 2014



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 ZANCOR HOMES		<div>HVAC DESIGNS LTD. 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 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 CASTLES OF KING CITY KING CITY, ONTARIO			Date	JAN/2014
50-3			Scale	1/8" = 1'-0"
3401 sqft			BCIN# 19669	
			LO#	53712



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

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Client ZANCOR HOMES		<div><p>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</p></div>	Sheet Title SECOND FLOOR HEATING LAYOUT	
Project Name CASTLES OF KING CITY KING CITY, ONTARIO			Date JAN/2014	Scale 1/8" = 1'-0"
50-3 3401 sqft		BCIN# 19669		
		LO#	53712	

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.