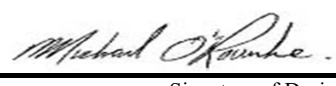


Schedule 1: Designer Information

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		Unit no.	Lot/con.
Municipality BRAMPTON	Postal code	Plan number/ other description	
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdesigns.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]			
☐ 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 HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: AUBURN 7 UNFIN BSMT Project: OSTIENSE	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> (print name) declare that (choose one as appropriate):			
☐ I 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: _____			
☒ 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 and qualification: <u>O.B.C SENTENCE 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.			
August 1, 2017			
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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

SITE NAME: OSTIENSE			UNFIN BSMT			DATE: Aug-17			WINTER NATURAL AIR CHANGE RATE 0.287			HEAT LOSS ΔT °F. 74			CSA-F280-12																							
BUILDER: GREENYORK HOMES			TYPE: AUBURN 7			GFA: 3188			LO# 75361			SUMMER NATURAL AIR CHANGE RATE 0.102			HEAT GAIN ΔT °F. 14			SB-12 PACKAGE A1																				
ROOM USE			MBR			ENS			WIC			BED-2			BED-3			BED-4			ENS-3			ENS-2			ENS-4											
EXP. WALL			36			14			6			12			31			46			6			17			14											
CLG. HT.			9			9			9			9			9			9			9			9			9											
FACTORS																																						
GRS.WALL AREA			LOSS			GAIN			306			119			51			102			279			391			51			145			119					
GLAZING			LOSS			GAIN			LOSS			GAIN			LOSS			GAIN			LOSS			GAIN			LOSS			GAIN			LOSS			GAIN		
NORTH			20.7	16.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	166	130	0	0	0	0	0	0						
EAST			20.7	41.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
SOUTH			20.7	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	477	580	0	0						
WEST			20.7	41.9	32	663	1340	15	311	628	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
SKYLT.			20.7	86.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
DOORS			24.6	4.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
NET EXPOSED WALL			4.3	0.8	274	1191	225	104	452	85	51	222	42	87	378	72	233	1012	192	354	1538	291	43	187	35	137	593	112	96	417	79	0	0					
NET EXPOSED BSMT WALL ABOVE GR			3.5	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
EXPOSED CLG			1.2	0.6	370	462	225	143	179	87	60	75	36	228	285	139	288	360	175	257	321	156	150	187	91	66	82	40	210	262	128	0	0					
NO ATTIC EXPOSED CLG			2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	22	59	29	42	112	55	0	0	0	0	0	0	0	0	0	0	0	0				
EXPOSED FLOOR			2.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	324	805	152	0	0	0	144	358	68	0	0	0	0	0	0	0	0	0				
BASEMENT/CRAWL HEAT LOSS			0			0			0			0			0			0			0			0			0			0			0			0		
SLAB ON GRADE HEAT LOSS			0			0			0			0			0			0			0			0			0			0			0			0		
SUBTOTAL HT LOSS			2316			941			297			974			3189			2738			898			841			1156											
SUB TOTAL HT GAIN			1791			801			78			455			2474			2052			325			283			787											
LEVEL FACTOR / MULTIPLIER			0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29		0.20	0.29				
AIR CHANGE HEAT LOSS			669			272			86			281			921			791			259			243			334											
AIR CHANGE HEAT GAIN			155			69			7			39			215			178			28			25			68											
DUCT LOSS			0			0			0			0			411			0			116			0			0											
DUCT GAIN			0			0			0			0			361			0			35			0			0											
HEAT GAIN PEOPLE			240		2	480	0	0	0	0	0	1	240	1	240	1	240	1	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
HEAT GAIN APPLIANCES/LIGHTS			683			0			0			683			683			683			683			0			0											
TOTAL HT LOSS BTU/H			2985			1213			382			1255			4520			3529			1272			1084			1490											
TOTAL HT GAIN x 1.3 BTU/H			4042			1131			111			1843			5165			4099			505			400			1112											

ROOM USE	LIV					KT/FM			W/R			FOY			LAUN			WUB			BAS		
EXP. WALL	57					84			12			15			22			15			186		
CLG. HT.	10					10			10			10			11			9			9		
FACTORS																							
GRS.WALL AREA	LOSS	GAIN		570		840			120			150			242			135			1302		
GLAZING		LOSS	GAIN		LOSS		GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN	
NORTH	20.7	16.3	0	0	0	0	0	0	0	0	0	0	0	0	9	186	147	0	0	0	0	0	0
EAST	20.7	41.9	50	1036	2094	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	20.7	25.2	19	394	479	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	311	379
WEST	20.7	41.9	0	0	0	98	2031	4105	0	0	0	0	0	0	0	0	0	0	0	0	5	104	209
SKYLT.	20.7	86.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	24.6	4.7	0	0	0	16	393	74	0	0	0	45	1106	209	20	492	93	20	492	93	20	492	93
NET EXPOSED WALL	4.3	0.8	501	2177	412	726	3155	597	120	521	99	105	456	86	213	926	175	115	500	95	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	372	1303	247
EXPOSED CLG	1.2	0.6	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	2.7	1.3	0	0	0	38	102	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS					0			0						0			0						5742
SLAB ON GRADE HEAT LOSS					0			0						0			0						
SUBTOTAL HT LOSS			3607			5680			521			1563			1604			991			7951		
SUB TOTAL HT GAIN				2986				4826		99		296			415			188			928		
LEVEL FACTOR / MULTIPLIER		0.30	0.45			0.30	0.45		0.30	0.45		0.30	0.45		0.30	0.45					0.50	1.08	
AIR CHANGE HEAT LOSS			1607			2531			232			696			715						9635		
AIR CHANGE HEAT GAIN				259				419		9		26			36								97
DUCT LOSS			0			0			0			0			0						0		
DUCT GAIN				0				0		0		0			0								0
HEAT GAIN PEOPLE	240		0		0	0		0	0	0	0	0	0	0	0			0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS				683				683		0		0		0		683		0		0			0
TOTAL HT LOSS BTU/H			5214			8211			754			2259			2318			991			17586		
TOTAL HT GAIN x 1.3 BTU/H			5106			7706			139			418			1474			244			1332		

TOTAL HEAT GAIN BTU/H: 34825

TONS: 2.90

LOSS DUE TO VENTILATION LOAD BTU/H: 2777

STRUCTURAL HEAT LOSS: 52286

TOTAL COMBINED HEAT LOSS BTU/H: 55064

SITE NAME: OSTIENSE
BUILDER: GREENYORK HOMES

UNFIN BSMT
TYPE: AUBURN 7

DATE: Aug-17

GFA: 3188 LO# 75361

HEATING CFM 1030 COOLING CFM 1030
TOTAL HEAT LOSS 55,064 TOTAL HEAT GAIN 34,825
AIR FLOW RATE CFM 18.71 AIR FLOW RATE CFM 29.58

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure
for s/a & r/a 0.35

#CARRIER

AFUE = 96 %

59SP5A-60-12

INPUT (BTU/H) = 60,000

FAN SPEED 60

OUTPUT (BTU/H) = 58,000

LOW 0

MEDLOW 785

MEDIUM 845

MEDIUM HIGH 970

HIGH 1030

DESIGN CFM = 1030

CFM @ .6" E.S.P.

TEMPERATURE RISE 52 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	8	4
R/A	0	0	4	2	1

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

All S/A runs 5"Ø 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-2	ENS	BED-2	BED-3	BED-4		BED-4		MBR	ENS-4	LIV	LIV	KT/FM	KT/FM		BED-3	W/R	FOY	LAUN	BAS	BAS	BAS	BAS
RM LOSS MBH	1.49	1.08	1.21	1.25	2.26	1.76		1.76		1.49	1.49	2.61	2.61	2.74	2.74		2.26	0.75	2.26	2.32	4.64	4.64	4.64	4.64
CFM PER RUN HEAT	28	20	23	23	42	33		33		28	28	49	49	51	51		42	14	42	43	87	87	87	87
RM GAIN MBH	2.02	0.40	1.13	1.84	2.58	2.05		2.05		2.02	1.11	2.55	2.55	2.57	2.57		2.58	0.14	0.42	1.47	0.39	0.39	0.39	0.39
CFM PER RUN COOLING	60	12	33	55	76	61		61		60	33	76	76	76	76		76	4	12	44	12	12	12	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17		0.17		0.17	0.17	0.17	0.17	0.17	0.17		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	47	38	30	33	48	56		59		57	50	51	54	41	21		35	10	36	27	39	34	34	61
EQUIVALENT LENGTH	140	150	140	15	170	170		150		170	140	190	170	110	110		150	170	140	150	170	190	140	170
TOTAL EFFECTIVE LENGTH	187	188	170	48	218	226		209		227	190	241	224	151	131		185	180	176	177	209	224	174	231
ADJUSTED PRESSURE	0.09	0.09	0.1	0.36	0.08	0.08		0.08		0.08	0.09	0.07	0.08	0.11	0.13		0.09	0.1	0.1	0.1	0.08	0.08	0.1	0.07
ROUND DUCT SIZE	5	4	4	4	5	5		5		5	4	6	5	5	5		5	4	4	4	6	6	5	6
HEATING VELOCITY (ft/min)	206	229	264	264	308	242		242		206	321	250	360	374	374		308	161	482	493	444	444	639	444
COOLING VELOCITY (ft/min)	441	138	379	631	558	448		448		441	379	388	558	558	558		558	46	138	505	61	61	88	61
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10		3X10		3X10	3X10	4X10	3X10	3X10	3X10		3X10	3X10	3X10	3X10	4X10	4X10	3X10	4X10
TRUNK	A	E	A	E	C	B		B		A	C	B	B	A	A		C	E	B	E	A	E	C	B

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	KT/FM	ENS-3		WIC																				
RM LOSS MBH	2.74	1.27		0.38																				
CFM PER RUN HEAT	51	24		7																				
RM GAIN MBH	2.57	0.50		0.11																				
CFM PER RUN COOLING	76	15		3																				
ADJUSTED PRESSURE	0.17	0.17		0.17																				
ACTUAL DUCT LGH	16	39		38																				
EQUIVALENT LENGTH	150	190		190																				
TOTAL EFFECTIVE LENGTH	166	229		228																				
ADJUSTED PRESSURE	0.1	0.08		0.08																				
ROUND DUCT SIZE	5	4		4																				
HEATING VELOCITY (ft/min)	374	275		80																				
COOLING VELOCITY (ft/min)	558	172		34																				
OUTLET GRILL SIZE	3X10	3X10		3X10																				
TRUNK	E	C		C																				

SUPPLY AIR TRUNK SIZE

	TRUNK	STATIC	ROUND	RECT			VELOCITY		TRUNK	STATIC	ROUND	RECT			VELOCITY
	CFM	PRESS.	DUCT	DUCT			(ft/min)		CFM	PRESS.	DUCT	DUCT			(ft/min)
TRUNK A	268	0.08	8.6	8	x	8	603	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	293	0.07	9.2	10	x	8	527	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	523	0.07	11.4	15	x	8	628	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	791	0.07	13.3	20	x	8	712	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	238	0.08	8.2	8	x	8	536	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)	
TRUNK O	0	0.05	0	0	x	8	0
TRUNK P	0	0.05	0	0	x	8	0
TRUNK Q	0	0.05	0	0	x	8	0
TRUNK R	0	0.05	0	0	x	8	0
TRUNK S	0	0.05	0	0	x	8	0
TRUNK T	0	0.05	0	0	x	8	0
TRUNK U	0	0.05	0	0	x	8	0
TRUNK V	0	0.05	0	0	x	8	0
TRUNK W	0	0.05	0	0	x	8	0
TRUNK X	1030	0.05	16	29	x	8	639
TRUNK Y	585	0.05	12.9	19	x	8	554
TRUNK Z	445	0.05	11.6	15	x	8	534
DROP	1030	0.05	16	24	x	10	618

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	BR
AIR VOLUME	145	145	85	85	300	135	0	0	0	0	0	0	0	0	0	135
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH	43	45	55	62	46	56	1	1	1	1	1	1	1	1	1	20
EQUIVALENT LENGTH	185	190	190	185	185	230	0	0	0	0	0	0	0	0	0	150
TOTAL EFFECTIVE LH	228	235	245	247	231	286	1	1	1	1	1	1	1	1	1	170
ADJUSTED PRESSURE	0.06	0.06	0.06	0.06	0.06	0.05	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.09
ROUND DUCT SIZE	7.3	7.3	6	6	9.6	7.5	0	0	0	0	0	0	0	0	0	6.4
INLET GRILL SIZE	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	14	0	0	0	0	0	0	0	0	0	14

TYPE: AUBURN 7
SITE NAME: OSTIENSE

LO # 75361
UNFIN BSMT

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	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Kitchen & Bathrooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Other Rooms	<u>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Table 9.32.3.A.	TOTAL	<u>169.6</u> cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED		9.32.3.4.(1)
1 Bedroom	31.8	cfm
2 Bedroom	47.7	cfm
3 Bedroom	63.6	cfm
4 Bedroom	79.5	cfm
5 Bedroom	95.4	cfm
TOTAL		<u>79.5</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>169.6</u>	cfm
Less Principal Ventil. Capacity	<u>139</u>	cfm
Required Supplemental Capacity	<u>30.6</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY			
Model:	VANEE 60H-V+ Location: BSMT		
<u>139.0</u> cfm	<u>3.0</u> sones ☒ HVI Approved		
PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
139.0 CFM	X 74 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
ENS-3	QTXEN050C	50	☒	0.3
ENS-4	QTXEN050C	50	☒	0.3
W/R	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 60H-V+	
<u>139</u> cfm high	<u>50</u> cfm low	
<u>75</u> % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

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

BUILDER:	
GREENYORK HOMES	
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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	August-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: AUBURN 7	UNFIN BSMT	BUILDER: GREENYORK HOMES
SFQT: 3188	LO# 75361	SITE: OSTIENSE

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	43340.5	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 54.0 ft	WIDTH: 39.0 ft	EXPOSED PERIMETER:	0.0 ft

2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
A1****Nominal Min. Eff.**

Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.8
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	21.12
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	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

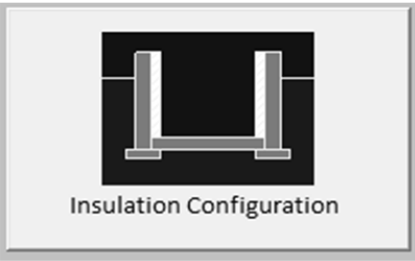
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	16.5	 Insulation Configuration
Floor Width (m):	11.9	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	2.1	
Window Area (m ²):	1.9	
Door Area (m ²):	3.7	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1682

TYPE: AUBURN 7
LO# 75361

UNFIN BSMT

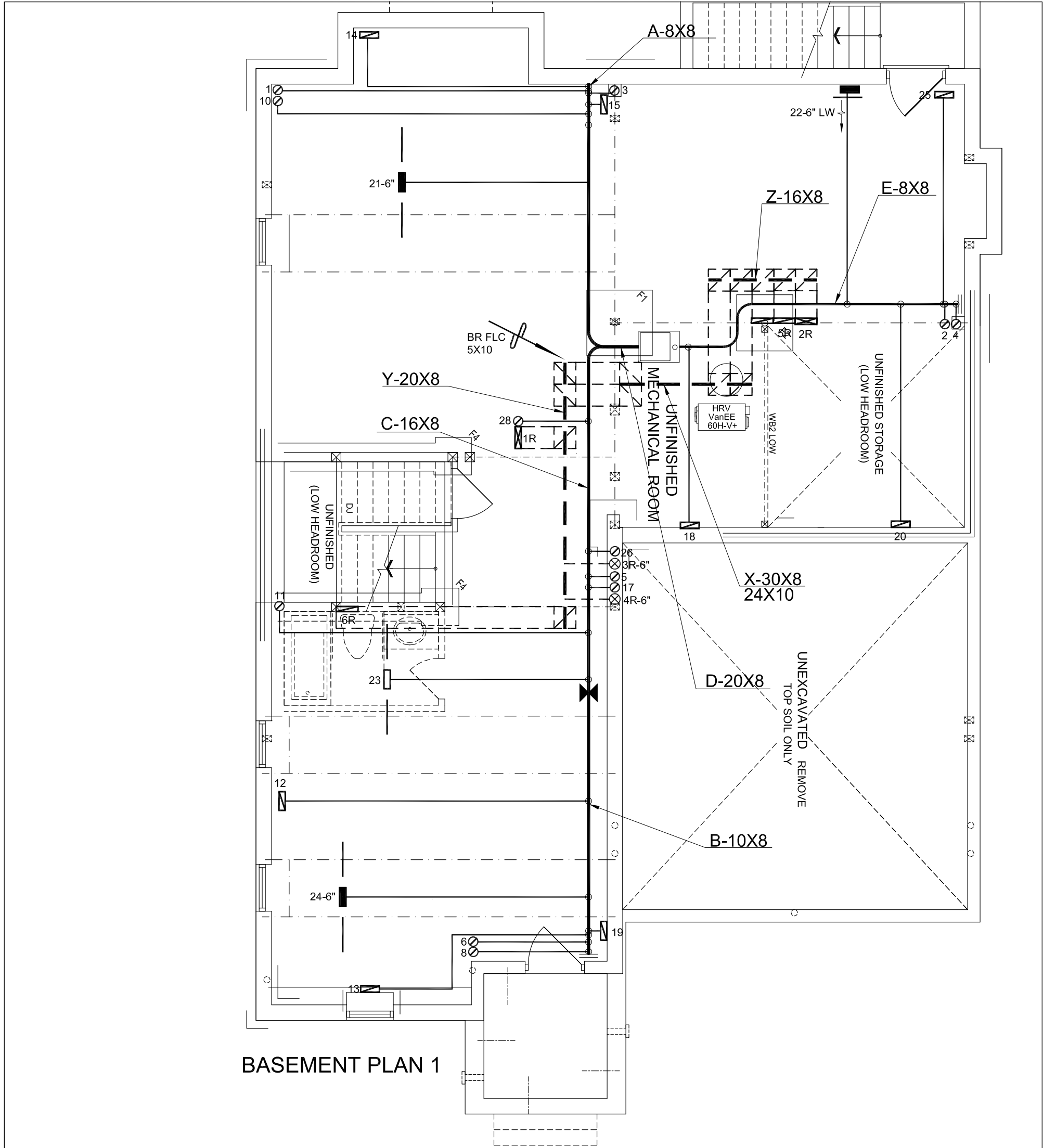
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Brampton			
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):	5.64			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1227.3			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1636.0 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	65.6	65.6		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):		0.287		
Cooling Air Leakage Rate (ACH/H):		0.102		

TYPE: AUBURN 7
LO# 75361

UNFIN BSMT



BASEMENT PLAN 1

I MICHAEL O'ROURKE HAVE REVIEW 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.

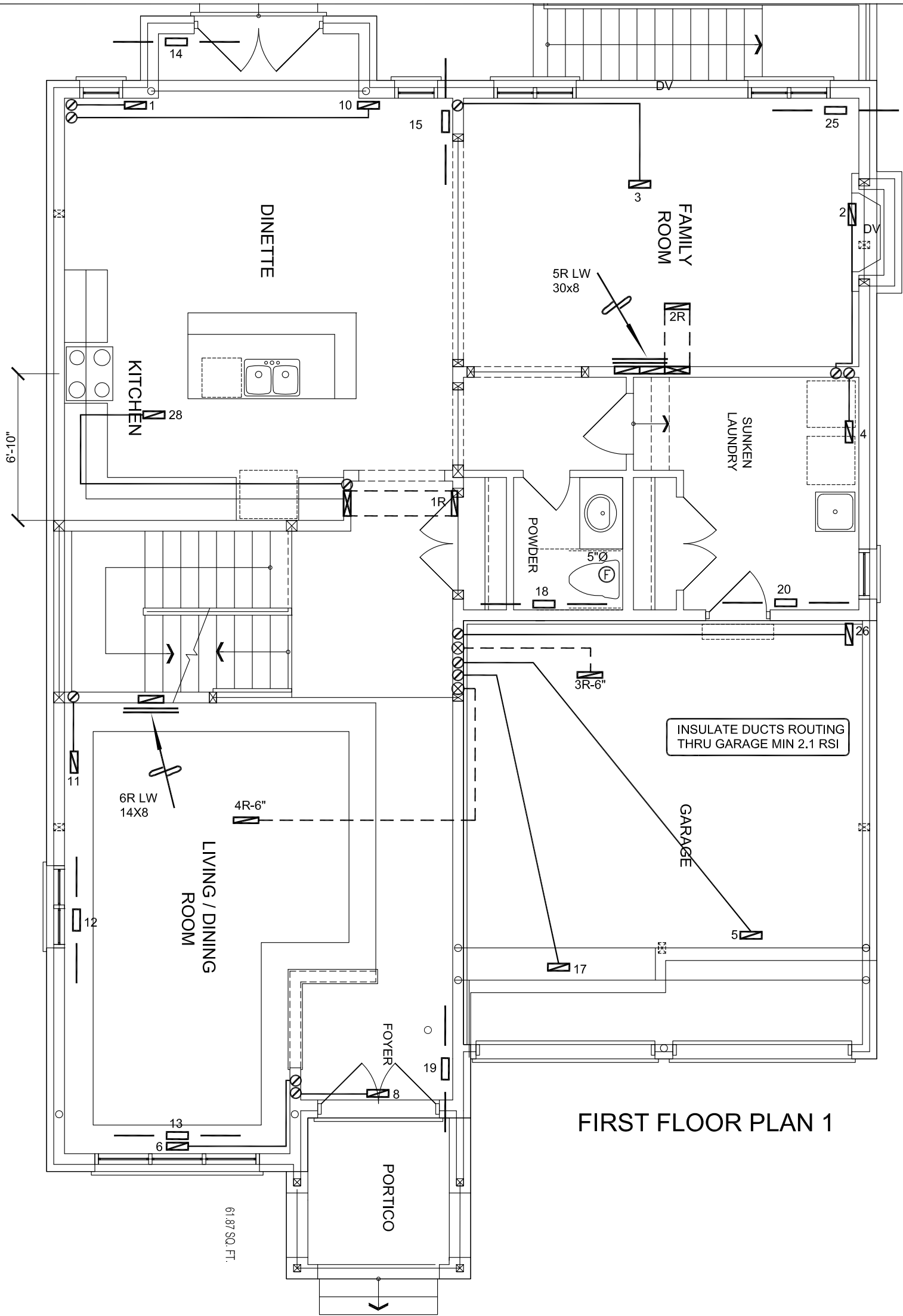
CSA-F280-12

PACKAGE A1

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		 375 Finley Ave, Suite 202 - Ajax, Ontario L1S 2E2 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	HEAT LOSS 55064 BTU/H		# OF RUNS			S/A			R/A			FANS			Sheet Title		
ARIA COMFORT SYSTEMS			UNIT DATA		3RD FLOOR									BASEMENT					
Project Name			MAKE		2ND FLOOR			12			4			4			HEATING		
GREENYORK HOMES			MODEL		1ST FLOOR			8			2			2			LAYOUT		
OSTIENSE			INPUT		BASEMENT			4			1			0			Date		
BRAMPTON, ONTARIO			60 MBTU/H		AUG/2017												Scale		
UNFIN BSMT		OUTPUT		58 MBTU/H			ALL S/A DIFFUSERS 4 "x10"									3/16" = 1'-0"			
AUBURN 7		COOLING		3.0 TONS			UNLESS NOTED OTHERWISE									BCIN# 19669			
3188 sqft		FAN SPEED		1030 cfm @ 0.5" w.c.			UNLESS NOTED OTHERWISE									LO#			
							DOORS 1" min. FOR R/A									75361			



FIRST FLOOR PLAN 1

I MICHAEL O'ROURKE HAVE REVIEW
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.

CSA-F280-12
PACKAGE A1

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
ARIA COMFORT SYSTEMS

Project Name
**GREENYORK HOMES
OSTIENSE
BRAMPTON, ONTARIO
UNFIN BSMT
AUBURN 7**

3188 sqft

375 Finley Ave, Suite 202 - Ajax, Ontario
L1S 2E2 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.

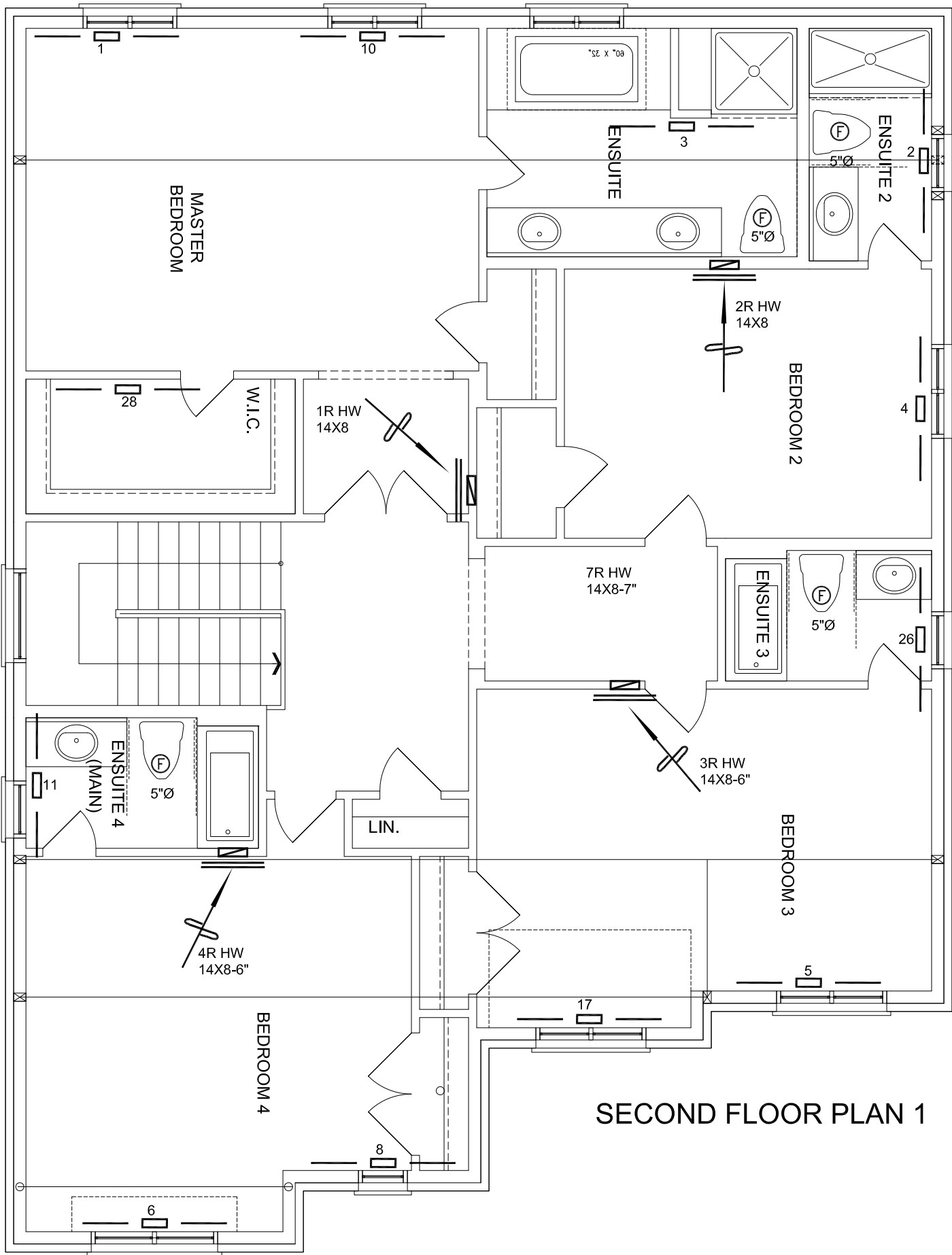
Sheet Title
**FIRST FLOOR
HEATING
LAYOUT**

Date
AUG/2017

Scale
3/16" = 1'-0"

BCIN# 19669

LO# 75361



SECOND FLOOR PLAN 1

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.

CSA-F280-12
PACKAGE A1

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		 375 Finley Ave, Suite 202 - Ajax, Ontario L1S 2E2 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.	Sheet Title	
ARIA COMFORT SYSTEMS			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	AUG/2017
GREENYORK HOMES OSTIENSE BRAMPTON, ONTARIO UNFIN BSMT AUBURN 7			Scale	3/16" = 1'-0"
3188 sqft			BCIN# 19669	
			LO#	75361