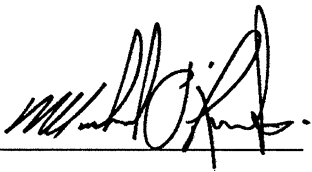


Schedule 1: Designer Information

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 VAUGHAN	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: 38-6 – OPT 5 BED Project: KLEINBURG GLEN	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</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.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.			
<u>January 29, 2016</u> Date		 Signature of Designer	

NOTE:

1. 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.
2. 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.

SITE NAME: KLEINBURG GLEN
BUILDER: GOLD PARK HOMES
DATE: Jan-16
LO# 67106
TYPE: 38-6 OPT 5 BED
GFA: 2896
WINTER NATURAL AIR CHANGE RATE 0.322
SUMMER NATURAL AIR CHANGE RATE 0.098
HEAT LOSS AT °F. 76
HEAT GAIN AT °F. 16
CSA-F280-12
SB-12 PACKAGE J

ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BATH-2	
GRS.WALL AREA	340	252	252	90	108	126	130	189	54	
GLAZING	0	0	0	0	0	0	0	0	0	
NORTH	24.1 17.5	0	0	0	16	385 279	0	0	7	
EAST	24.1 43.0	0	0	0	0	0	30	723 1291	0	
SOUTH	24.1 26.4	0	0	0	0	0	0	0	0	
WEST	24.1 43.0	24	578 1033	0	0	0	0	0	0	
SKYL.T.	24.1 88.1	0	0	0	0	0	0	0	0	
DOORS	25.2 5.3	0	0	0	0	0	0	0	0	
NET EXPOSED WALL	3.5 0.7	316	1092 230	65	92	318 67	110	380 80	100	
NET EXPOSED BSMT WALL ABOVE GR	6.3 1.3	0	0	0	0	0	0	0	0	
EXPOSED CLG	1.5 0.8	285	433 217	110	167	84	171	260 130	98	
NO ATTIC EXPOSED CLG	2.5 1.2	0	0	0	0	0	24	59 29	0	
EXPOSED FLOOR	2.5 0.5	0	0	0	0	0	185	478 101	98	
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0	0	0	0	
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0	0	
SUBTOTAL HT LOSS		2103	1683	478	954	1085	1865	1228	468	
SUB TOTAL HT GAIN		1479	1389	149	472	519	1624	643	225	
LEVEL FACTOR / MULTIPLIER		0.20	0.31	0.20	0.31	0.20	0.31	0.20	0.31	
AIR CHANGE HEAT LOSS		661	529	150	300	341	586	386	147	
AIR CHANGE HEAT GAIN		553	91	10	31	34	106	42	15	
DUCT LOSS		128	0	0	0	0	245	161	0	
HEAT GAIN PEOPLE	240	480	0	0	1	240	1	240	0	
HEAT GAIN APPLIANCES/LIGHTS		500	0	0	500	500	500	500	0	
TOTAL HT LOSS BTU/H		3317	2212	628	1254	1426	2696	1775	615	
TOTAL HT GAIN x 1.3 BTU/H		3489	1924	206	1615	1681	3532	1695	311	

ROOM USE	EXP. WALL CLG. HT.	BED-5	DIN	KIT/GT	DEN	PWD	FOY	LAUN	BAS
GRS.WALL AREA	117	110	110	710	110	66	890	231	1068
GLAZING	0	0	0	0	0	0	0	0	0
NORTH	24.1 17.5	0	0	0	22	530 384	0	0	6
EAST	24.1 43.0	0	0	0	0	0	34	819 1463	145
SOUTH	24.1 26.4	16	385 422	0	0	0	0	0	0
WEST	24.1 43.0	0	0	103	2482 4433	0	0	0	6
SKYL.T.	24.1 88.1	0	0	0	0	0	0	0	145
DOORS	25.2 5.3	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5 0.7	101	349 73	607	2097 441	58	200 42	856	2957
NET EXPOSED BSMT WALL ABOVE GR	6.3 1.3	0	0	0	0	0	0	0	623
EXPOSED CLG	1.5 0.8	195	296 148	0	0	0	198	301 150	0
NO ATTIC EXPOSED CLG	2.5 1.2	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5 0.5	140	343 72	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS		1374	937	4578	834	383	4077	1399	11763
SUBTOTAL HT GAIN		716	773	4875	448	182	2236	465	1081
LEVEL FACTOR / MULTIPLIER		0.20	0.31	0.30	0.43	0.30	0.43	0.30	0.43
AIR CHANGE HEAT LOSS		432	406	1985	362	170	1768	607	8830
AIR CHANGE HEAT GAIN		47	51	319	29	12	146	30	71
DUCT LOSS		181	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	150	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS		500	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H		1986	1344	6564	1196	564	5845	2006	20594
TOTAL HT GAIN x 1.3 BTU/H		2149	1720	7402	1270	252	3747	1294	1498

SITE NAME: KLEINBURG GLEN
BUILDING: GOLD PARK HOMES

TYPE: 38-6 OPT 5 BED
DATE: Jan-16
GFA: 2896 LO# 67106

HEATING CFM 1100 COOLING CFM 1100
TOTAL HEAT LOSS 54,021 TOTAL HEAT GAIN 33,786
AIR FLOW RATE CFM 20.36 AIR FLOW RATE CFM 32.56

LENNOX
EL195UH070XE36B 70
FAN SPEED LOW 0
MEDIUM 995
HIGH 1100
DESIGN CFM = 1100
CFM @ .6" E.S.P.

AFUE = 95.0 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 63,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	9	4
R/A	0	0	4	3	1

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

All S/A runs 5/8" 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	BATH-2	BED-4	BED-5	BATH	MBR	BED-3	ENS	BED-2	BATH	DIN	KIT/GT	KIT/GT	KIT/GT	DEN	PWD	FOY	FOY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.66	1.11	0.63	0.61	2.70	1.99	0.89	1.66	1.43	1.11	1.25	0.89	1.34	2.19	2.19	2.19	1.20	0.56	2.92	2.92	5.15	5.15	5.15	5.15
CFM PER RUN HEAT	34	23	13	13	55	40	18	34	29	23	26	18	27	45	45	45	24	11	60	60	105	105	105	105
RM GAIN MBH	1.74	0.96	0.21	0.31	3.53	2.15	0.85	1.74	1.68	0.96	1.61	0.85	1.72	2.47	2.47	2.47	1.27	0.25	1.87	1.87	0.37	0.37	0.37	0.37
CFM PER RUN COOLING	57	31	7	10	115	70	28	57	55	31	53	28	56	80	80	80	41	8	61	61	12	12	12	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.15	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	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	130	210	150	170	120	160	170	170	180	200	150	180	120	140	120	130	140	100	120	120	160	150	120	120
TOTAL EFFECTIVE LENGTH	182	276	201	202	162	196	206	228	215	263	197	227	151	187	162	179	167	114	157	151	200	195	144	149
ADJUSTED PRESSURE	0.09	0.06	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.09	0.08	0.08	0.09	0.11	0.11	0.11	0.15	0.11	0.11	0.08	0.08	0.11	0.11
ROUND DUCT SIZE	5	4	4	4	6	5	4	5	5	4	5	4	4	5	5	5	4	4	5	5	6	6	6	6
HEATING VELOCITY (ft/min)	250	264	149	149	280	294	207	250	213	264	191	207	310	330	330	330	275	126	441	441	535	535	535	535
COOLING VELOCITY (ft/min)	419	356	80	115	586	514	321	419	404	356	389	321	642	587	587	587	470	92	448	448	61	61	61	61
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	A	A	B	B	D	D	D	A	D	A	B	D	B	A	A	A	B	D	C	C	A	A	B	C

25	LAUN	2.01	41	1.29	42	0.17	20	170	190	0.09	0.09	4	5	4	5	5	4	4	5	5	5	6	6	6
ROOM NAME	LAUN	2.01	41	1.29	42	0.17	20	170	190	0.09	0.09	4	5	4	5	5	4	4	5	5	5	6	6	6
RM LOSS MBH	2.01	41	1.29	42	0.17	20	170	190	0.09	0.09	4	5	4	5	5	4	4	5	5	5	6	6	6	6
CFM PER RUN HEAT	41	1.29	42	0.17	20	170	190	0.09	0.09	4	5	4	5	5	4	4	5	5	5	5	6	6	6	6
CFM PER RUN COOLING	42	0.17	20	170	190	0.09	0.09	4	5	4	5	4	5	5	4	4	5	5	5	5	6	6	6	6
ADJUSTED PRESSURE	0.17	20	170	190	0.09	0.09	4	5	4	5	4	5	5	4	4	5	5	5	5	5	6	6	6	6
EQUIVALENT LENGTH	170	190	0.09	0.09	4	5	4	5	4	5	4	5	5	4	4	5	5	5	5	5	6	6	6	6
TOTAL EFFECTIVE LENGTH	190	0.09	4	5	4	5	4	5	4	5	4	5	5	4	4	5	5	5	5	5	6	6	6	6
ADJUSTED PRESSURE	0.09	4	5	4	5	4	5	4	5	4	5	5	4	4	5	5	5	5	5	5	6	6	6	6
ROUND DUCT SIZE	4	5	4	5	4	5	4	5	4	5	4	5	5	4	4	5	5	5	5	5	6	6	6	6
HEATING VELOCITY (ft/min)	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470
COOLING VELOCITY (ft/min)	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	B	C

SUPPLY AIR TRUNK SIZE	TRUNK	CFM	RECT	ROUND	STATIC	PRESS.	VELOCITY	TRUNK	STATIC	PRESS.	ROUND	RECT	VELOCITY	TRUNK	CFM	TRUNK	STATIC	PRESS.	ROUND	RECT	VELOCITY
TRUNK A	459	11.3	14	0.06	0.06	0.06	590	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK B	667	12.9	20	0.06	0.06	0.06	600	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK C	225	7.4	6	0.11	0.11	0.11	675	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK D	437	10.3	12	0.08	0.08	0.08	656	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK E	1104	15.6	28	0.06	0.06	0.06	710	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK F	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0

RETURN AIR #	TRUNK	CFM	RECT	ROUND	STATIC	PRESS.	VELOCITY	TRUNK	STATIC	PRESS.	ROUND	RECT	VELOCITY	TRUNK	CFM	TRUNK	STATIC	PRESS.	ROUND	RECT	VELOCITY
TRUNK A	459	11.3	14	0.06	0.06	0.06	590	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK B	667	12.9	20	0.06	0.06	0.06	600	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK C	225	7.4	6	0.11	0.11	0.11	675	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK D	437	10.3	12	0.08	0.08	0.08	656	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK E	1104	15.6	28	0.06	0.06	0.06	710	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0
TRUNK F	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0	8	0	0	0	0.00	0.00	0	0	0

TYPE: 38-6 OPT 5 BED
SITE NAME: KLEINBURG GLEN

LO # 67106

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>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Kitchen & Bathrooms	<u>5</u> @ 10.6 cfm	<u>53</u> cfm
Other Rooms	<u>5</u> @ 10.6 cfm	<u>53.0</u> cfm
Table 9.32.3.A.	TOTAL	<u>190.8</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
More than 5 - Part 6	TOTAL	<u>95.4</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>190.8</u>	cfm
Less Principal Ventil. Capacity	<u>98</u>	cfm
Required Supplemental Capacity	<u>92.8</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 60H	Location: BSMT
<u>98.0</u> cfm	<u>3.0</u> sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
98.0 CFM	X 76 F	X 1.08	X 0.35

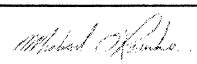
SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
BATH-2	QTXEN050C	50	☒
PWD	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 60H		
<u>98</u> cfm high	<u>50</u> cfm low	
<u>65</u> % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

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

BUILDER:	
GOLD PARK 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:	
HRAI #	001820
Date:	January-16

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 38-6 OPT 5 BED**BUILDER:** GOLD PARK HOMES**SFQT:** 2896**LO#** 67106**SITE:** KLEINBURG GLEN**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

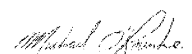
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft ³):	40335.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 60.0 ft	WIDTH: 29.0 ft	EXPOSED PERIMETER:	178.0 ft

2012 OBC - COMPLIANCE PACKAGE

Component	Compliance Package
	J
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	22
Basement Walls Minimum RSI (R)-Value	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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
Windows and Sliding Glass Doors Maximum U-Value	1.8
Skylights Maximum U-Value	2.8
Space Heating Equipment Minimum AFUE	0.94
HRV Minimum Efficiency	60%
Domestic Hot Water Heater Minimum EF	0.67

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



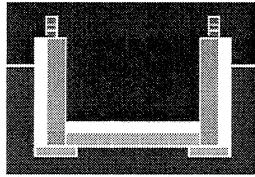
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description			
Province:	Ontario ▼		
Region:	Vaughan (Woodbridge) ▼		
Weather Station Location:	Open flat roof, glass ▼		
Anemometer height (m):	10		
Local Shielding			
Building Site:	Suburban, forest ▼		
Walls:	Heavy ▼		
Flue:	Heavy ▼		
Highest Ceiling Height (m):	6.71		
Building Configuration			
Type:	Detached ▼		
Number of Stories:	Two ▼		
Foundation:	Full ▼		
House Volume (m ³):	1142.2		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (ACH=3.57) ▼		
Custom BDT Data:	ELA @ 10 Pa ▼ 716.42 cm ² 3.57 ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply:	Total Exhaust:	
	0	0	
Flue Size			
Flue #:	#1	#2	#3
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Change Rate (ACH/H):	0.322		
Cooling Air Change Rate (ACH/H):	0.098		

Residential Foundation Thermal Load Calculator

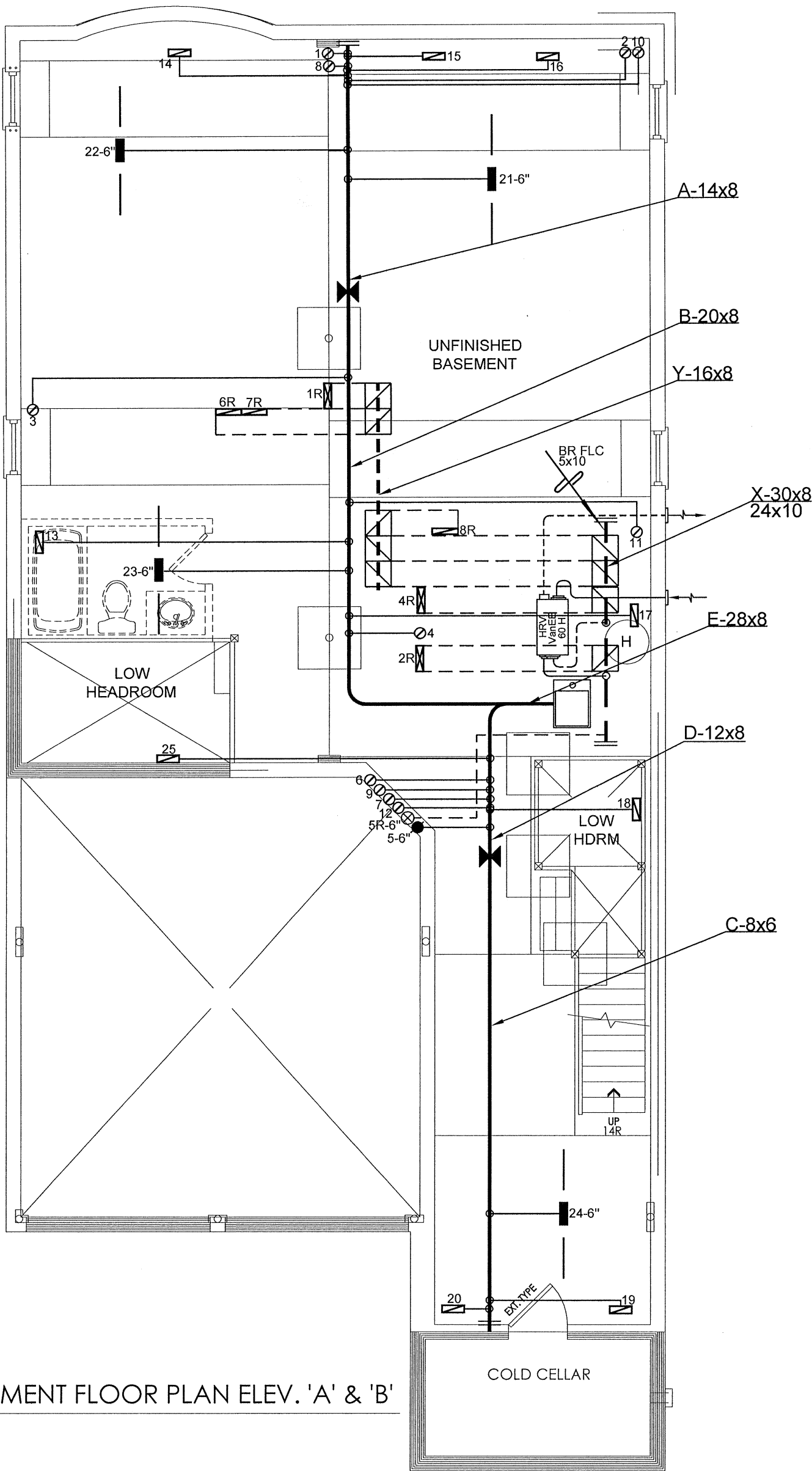
Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	▼
Region:	Vaughan (Woodbridge)	▼
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	▼
Water Table:	Normal (7-10 m, 23-33 Ft)	▼
Foundation Dimensions		
Floor Length (m):	18.5	 Insulation Configuration
Floor Width (m):	8.8	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	1.1	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	2223	

54.6

2.6 146.32

145.52



BASEMENT FLOOR PLAN ELEV. 'A' & 'B'

CSA-F280-12
PACKAGE J

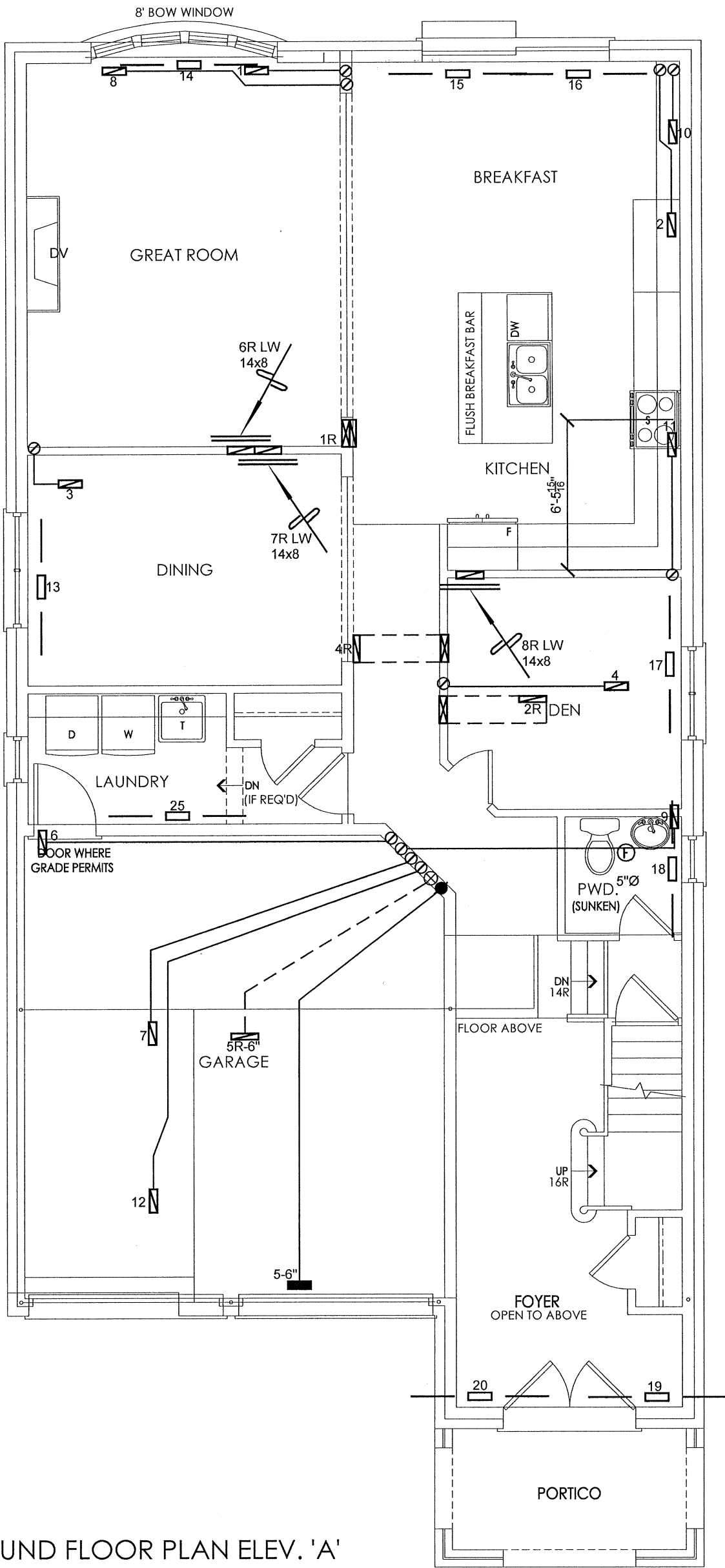
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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

HVAC LEGEND							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	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client		HVACDESIGNS LTD. 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.	HEAT LOSS 56836 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GOLD PARK HOMES			MAKE LENNOX	3RD FLOOR				BASEMENT HEATING LAYOUT	
Project Name KLEINBURG GLEN VAUGHAN, ONTARIO			MODEL EL195UH070XE36B	2ND FLOOR	12	4	4	Date	
			INPUT 66 MBTU/H	1ST FLOOR	9	3	2	JAN/2016	
			OUTPUT 63 MBTU/H	BASEMENT	4	1	0	Scale	
			COOLING 3.0 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"	
			FAN SPEED 1100 cfm @ 0.6" w.c.					BCIN# 19669	
38-6 OPT 5 BED 2896 sqft								LO#	67106



GROUND FLOOR PLAN ELEV. 'A'

CSA-F280-12
PACKAGE J

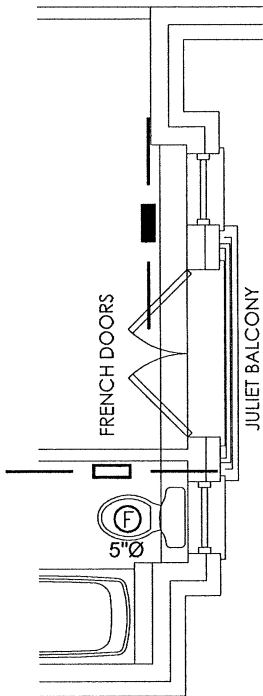
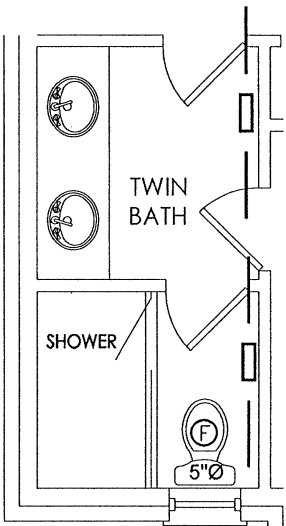
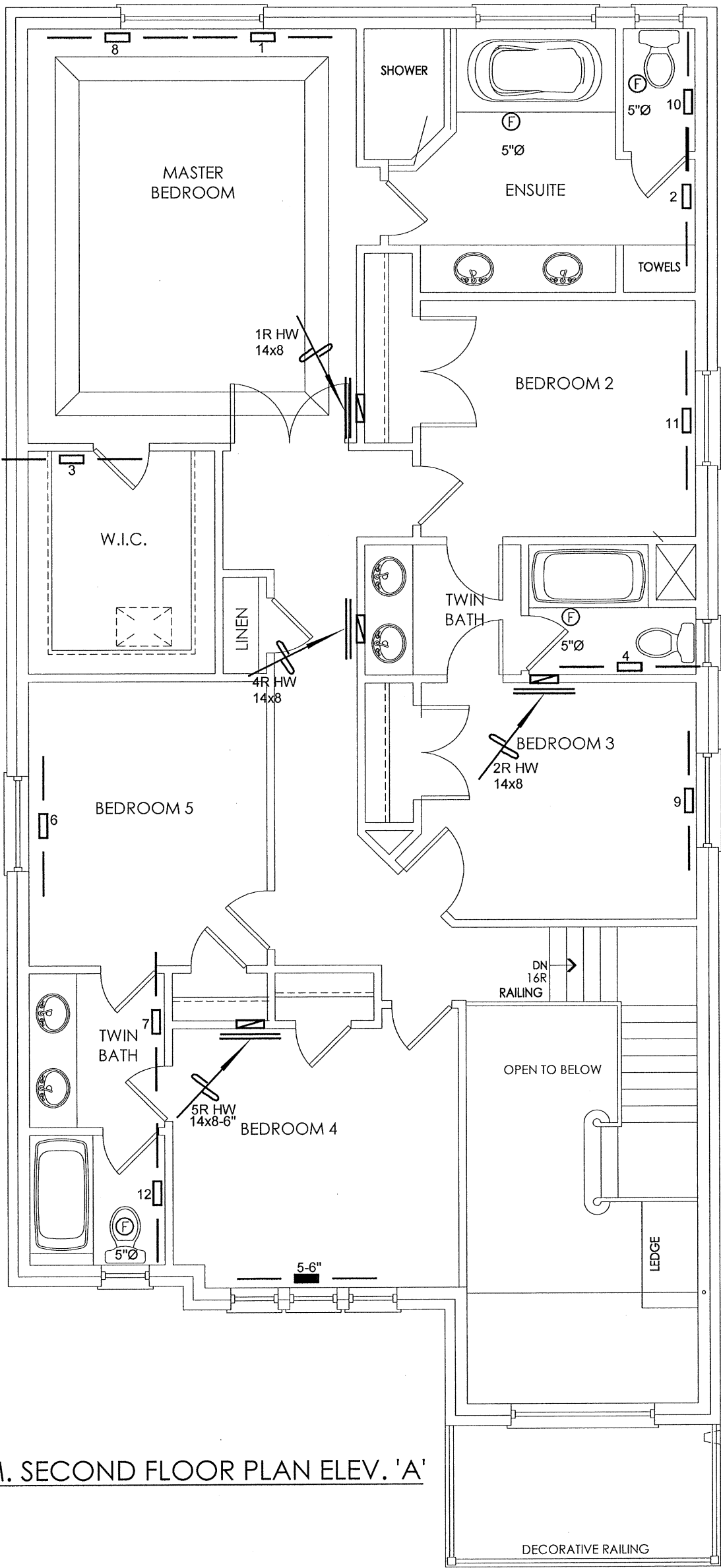
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND							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	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client		HVAC DESIGNS LTD. 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	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
			BCIN# 19669	
38-6 OPT 5 BED 2896 sqft		LO#	67106	

PART. SEC. FLR. PLAN W/ TWIN
BATH/OPT. SHOWER EL.'A'



PART. OPT. 5 BEDRM. SECOND FLOOR PLAN ELEV. 'B'

OPT. 5 BEDRM. SECOND FLOOR PLAN ELEV. 'A'

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 J

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	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client GOLD PARK HOMES		 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	Sheet Title SECOND FLOOR HEATING LAYOUT	
Project Name KLEINBURG GLEN VAUGHAN, ONTARIO			Date JAN/2016	
			Scale 3/16" = 1'-0"	
			BCIN# 19669	
38-6 OPT 5 BED 2896 sqft			LO#	67106
		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.		