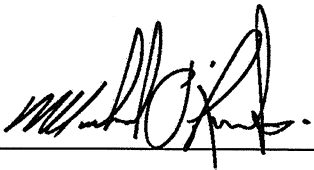


Schedule 1: Designer Information

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 KLEINBURG	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: 25-9 – WOB Project: HUNTINGTON & NASHVILLE	
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>November 3, 2016</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.

TOTAL HEAT GAIN BTU/H: 24342 TONS: 2.03 LOSS DUE TO VENTILATION LOAD BTU/H: 2612 STRUCTURAL HEAT LOSS: 36426 TOTAL COMBINED HEAT LOSS BTU/H: 39038

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
 INDIVIDUAL BCIN: 19669

TYPE: 25-9 WOB

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

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	BED-2	BED-3	BATH	LAUN	W/R	FOY	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	2.60	1.47	2.09	1.91	2.09	2.31	2.31	1.54	2.98	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
CFM PER RUN HEAT	50	28	40	37	15	14	30	57	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
RM GAIN MBH	3.38	1.17	2.05	3.43	1.02	2.45	2.45	0.33	0.97	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
CFM PER RUN COOLING	99	34	60	101	30	72	72	28	10	28	23	23	23	23	23	23	23	23	23	23	23	23	23	23
ADJUSTED PRESSURE	0.16	0.17	0.17	0.16	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	50	28	57	72	38	16	33	24	25	30	39	32	13	36	40	40	40	40	40	40	40	40	40	40
EQUIVALENT LENGTH	130	150	170	160	150	170	140	130	190	160	140	140	170	150	150	150	150	150	150	150	150	150	150	150
TOTAL EFFECTIVE LENGTH	180	178	227	232	188	186	173	154	215	190	179	172	183	186	190	190	186	186	190	190	183	186	190	190
ADJUSTED PRESSURE	0.09	0.1	0.08	0.07	0.09	0.09	0.1	0.11	0.08	0.09	0.1	0.1	0.09	0.09	0.1	0.1	0.09	0.09	0.09	0.1	0.09	0.09	0.09	0.09
ROUND DUCT SIZE	6	4	5	6	4	5	5	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	255	321	294	189	172	323	323	344	419	543	543	543	543	543	543	543	543	543	543	543	543	543	543	543
COOLING VELOCITY (ft/min)	505	390	441	515	344	529	529	206	206	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	B	B	B	A	A	B	B	A	A	A	A	A	A	A	A	A	B	A	A	B	B	A

[illegible]

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE																																																																																				
TRUNK					ROUND					RECT					VELOCITY (ft/min)					TRUNK					ROUND					RECT					VELOCITY (ft/min)																																																											
CFM					PRESS.					DUCT					DUCT					DUCT					CFM					PRESS.					DUCT					DUCT																																																						
TRUNK A					9.9					12					8					648					TRUNK G					0					0.00					0					0					TRUNK O					0					0.05					0					0					X					8					0									
TRUNK B					0.07					8.8					10					8					481					TRUNK H					0					0.00					0					0					TRUNK P					0					0.05					0					0					X					8					0				
TRUNK C					0					0					0					8					0					TRUNK I					0					0.00					0					0					TRUNK Q					0					0.05					0					0					X					8					0				
TRUNK D					0					0					0					8					0					TRUNK J					0					0.00					0					0					TRUNK R					0					0.05					0					0					X					8					0				
TRUNK E					0					0					0					8					0					TRUNK K					0					0.00					0					0					TRUNK S					0					0.05					0					0					X					8					0				
TRUNK F					0					0					0					8					0					TRUNK L					0					0.00					0					0					TRUNK T					0					0.05					0					0					X					8					0				

[illegible]

TYPE: 25-9 WOB
SITE NAME: HUNTINGTON + NASHVILLE

LO # 70649

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>2</u> @ 10.6 cfm <u>21.2</u> cfm	
Kitchen & Bathrooms	<u>4</u> @ 10.6 cfm <u>42.4</u> cfm	
Other Rooms	<u>2</u> @ 10.6 cfm <u>21.2</u> cfm	
Table 9.32.3.A.	TOTAL <u>127.2</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 63.6 cfm	

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>127.2</u> cfm	
Less Principal Ventil. Capacity	<u>86</u> cfm	
Required Supplemental Capacity	<u>41.2</u> cfm	

PRINCIPAL EXHAUST FAN CAPACITY			
Model: VANEE 40H+	Location: BSMT		
<u>86.0</u> cfm	<u>3.0</u> sones ☒ HVI Approved		
PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
86.0 CFM	X 76 F	X 1.08	X 0.37

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

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 40H+		
<u>86</u> cfm high	<u>37</u> cfm low	
<u>63</u> % Sensible Efficiency @ 32 deg F (0 deg C)	☒ HVI Approved	

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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	November-16

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 25-9 WOB**BUILDER:** GOLD PARK HOMES**SFQT:** 1759**LO#** 70649**SITE:** HUNTINGTON + NASHVILLE**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 (ft³):	23820.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 49.0 ft	WIDTH: 19.0 ft	EXPOSED PERIMETER:	107.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	29.0 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



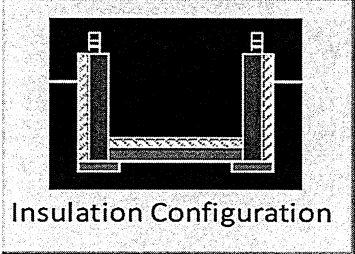
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
Weather Station Location:	Open flat terrain, grass			
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):	674.5			
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	#4
Diameter (mm):	0	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):	14.9	 Insulation Configuration
Floor Width (m):	5.8	
Exposed Perimeter (m):	32.6	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	8.6	
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):	1291	

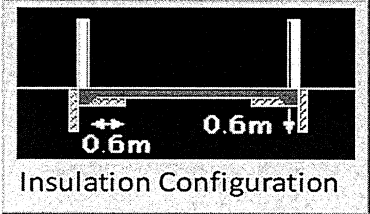
41.4

2.6 103.18

109.88

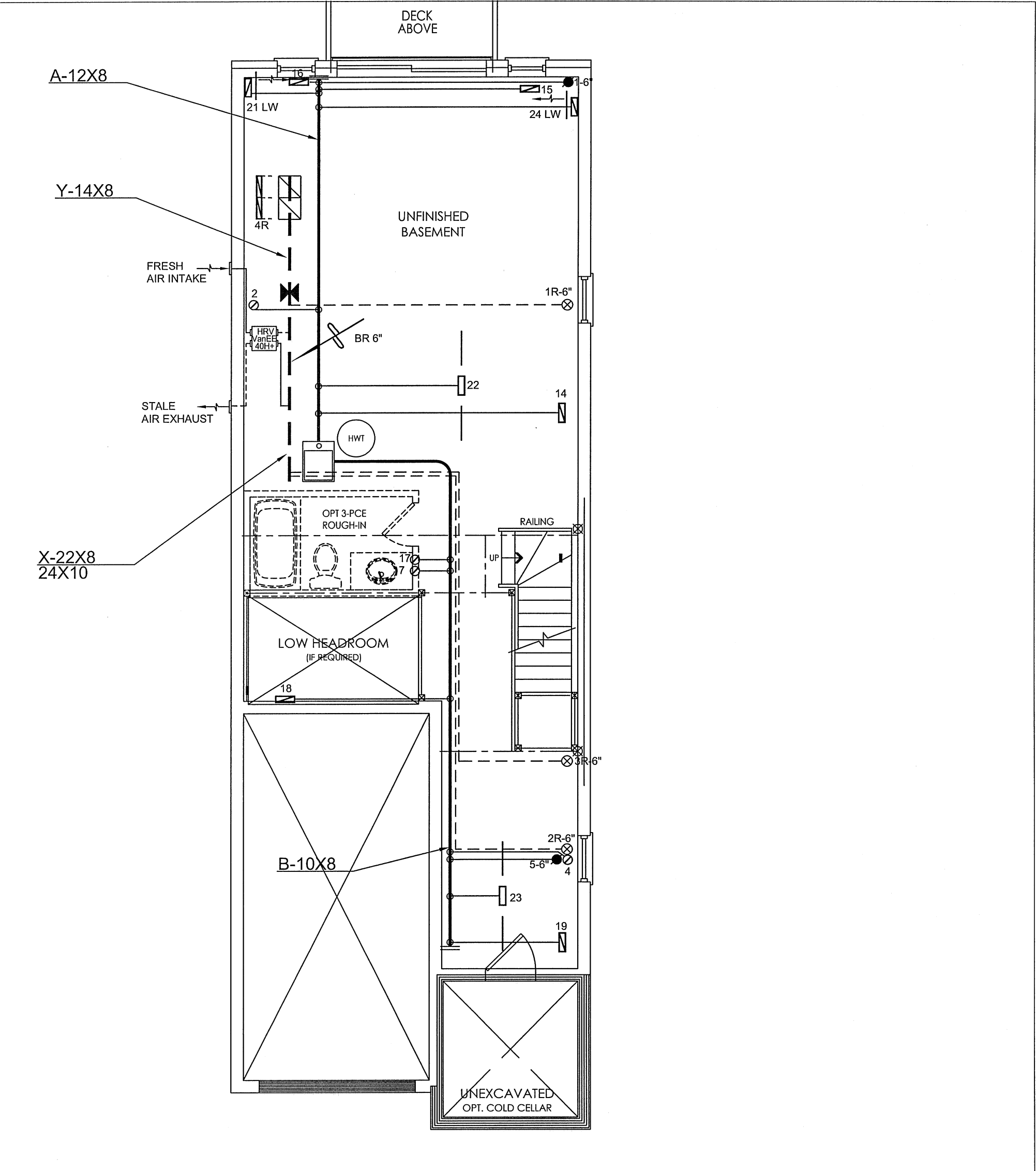
Residential Slab on Grade Thermal Load Calculator

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)	▼
	Floor Dimensions		
?	Length (m):	1.5	
	Width (m):	5.8	
	Exposed Perimeter (m):	8.8	
	Radiant Slab		
?	Heated Fraction of the Slab:	0	
	Fluid Temperature (°C):	33	
	Design Month		
	Heating Month	1	
	Results		
?	Heating Load (Watts):		61

14.6

CSA F280-12 Residential Heat Loss and Heat Gain Calculations									
Formula Sheet (For Air Leakage / Ventilation Calculation)									
LO#: 70649			Model: 25-9 WOB			Builder: GOLD PARK HOMES			Date: 11/3/2016
Air Change & Delta T Data									
House Volume					Design Temperature Difference				
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Winter DTDh		Summer DTDc		Winter DTDh	
Bsmt	798	9	7182	First		9		22	
Second	962	9	8658	Third		0		22	
Fourth	0	9	0	Total:		23,820.0 ft³		674.5 m³	
				Total:		674.5 m³			
5.2.3.1 Heat Loss due to Air Leakage									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$									
$0.322 \times 187.36 \times 42^\circ\text{C} \times 1.2 = 3057 \text{ W}$									
$= 10430 \text{ Btu/h}$									
5.2.3.2 Heat Loss due to Mechanical Ventilation									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$									
$86 \text{ CFM} \times 76^\circ\text{F} \times 1.08 \times 0.37 = 2612 \text{ Btu/h}$									
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)									
$HL_{airr} = \text{Level Factor} \times HL_{airbv} \times \{(HL_{ager} + HL_{bgcr}) \div (HL_{agclever} + HL_{bgclever})\}$									
Level	Level Factor (LF)	HLairv Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{level})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)					
1	0.5	10,430	10,003	0.521					
2	0.3		8,338	0.375					
3	0.2		7,204	0.290					
4	0		0	0.000					
5	0		0	0.000					
*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairv = 0									



BASEMENT PLAN ELEV. 'A' & 'B'

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.

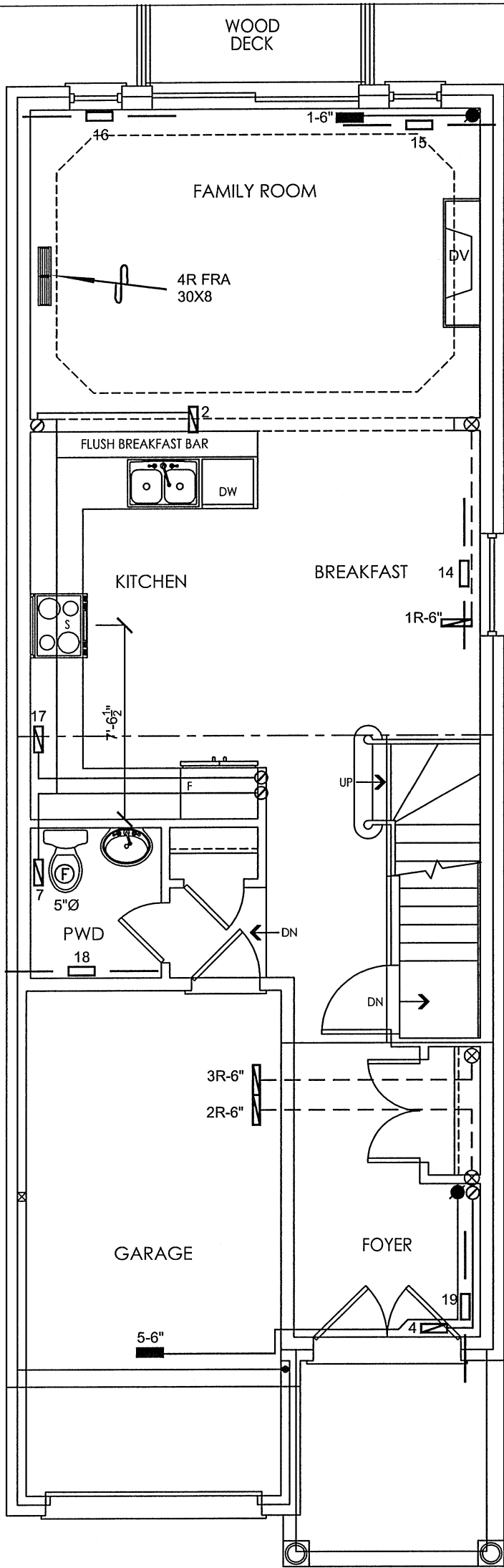
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

WOB
CSA-F280-12
PACKAGE J

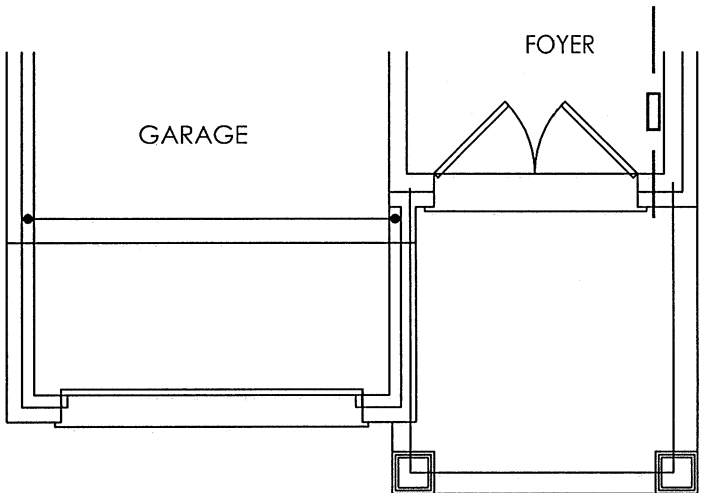
HVAC LEGEND						3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN 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		 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 39038 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 HUNTINGTON & NASHVILLE KLEINBURG, ONTARIO			MODEL EL195UH045XE24B-45		2ND FLOOR		6	3	3			
			INPUT 44 MBTU/H		1ST FLOOR		5	2	2			
			OUTPUT 42 MBTU/H		BASEMENT		4	1	0	Date NOV/2016		
			COOLING 2.0 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						Scale 3/16" = 1'-0"	
			FAN SPEED 700 cfm @ 0.6" w.c.								BCIN# 19669	
25-9 WOB											LO#	70649
1759 sqft												



GROUND FLOOR PLAN ELEV. 'A'



PART. GROUND FLOOR PLAN ELEV. 'B'

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.

WOB

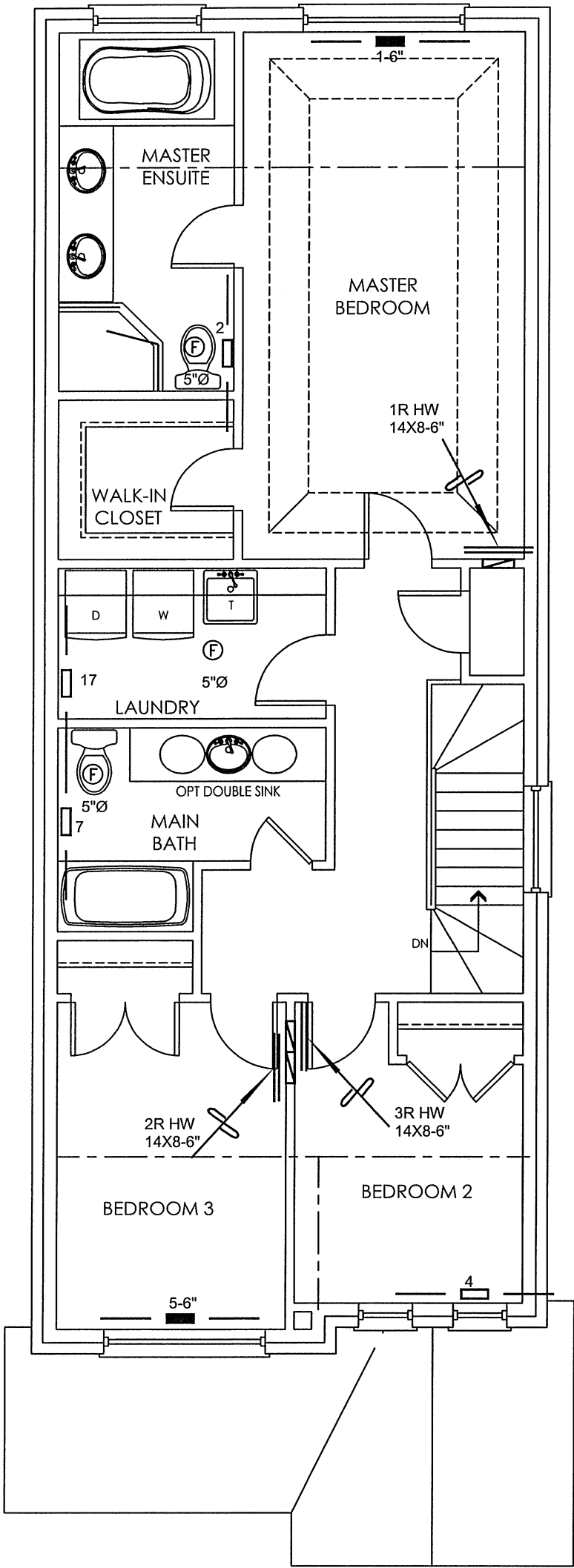
CSA-F280-12

PACKAGE J

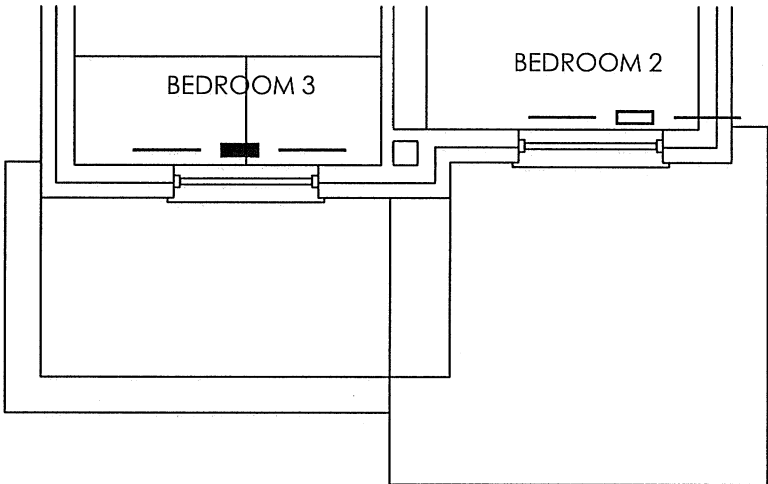
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		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		 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	NOV/2016
HUNTINGTON & NASHVILLE KLEINBURG, ONTARIO			Scale	3/16" = 1'-0"
25-9 WOB			BCIN# 19669	
1759 sqft			LO#	70649



SECOND FLOOR PLAN ELEV. 'A'



PART. SECOND FLOOR PLAN ELEV. 'B'

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.

WOB
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		 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			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	NOV/2016
HUNTINGTON & NASHVILLE KLEINBURG, ONTARIO			Scale	3/16" = 1'-0"
25-9 WOB			BCIN# 19669	
1759 sqft			LO#	70649