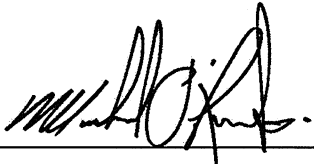


Schedule 1: Designer Information

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	☒ HVAC – House	☐ Building Structural	
☐ Small Buildings	☐ Building Services	☐ Plumbing – House	
☐ Large Buildings	☐ Detection, Lighting and Power	☐ Plumbing – All Buildings	
☐ Complex Buildings	☐ Fire Protection	☐ 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 – OPT GROUND – 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.

SITE NAME: HUNTINGTON + NASHVILLE BUILDER: GOLD PARK HOMES										CSA-F280-12 SB-12 PACKAGE J			
ROOM USE		MBR		ENS		OPT GROUND		DATE: Nov-16 LO# 70650		WINTER NATURAL AIR CHANGE RATE 0.322 SUMMER NATURAL AIR CHANGE RATE 0.098		HEAT LOSS AT °F. 76 HEAT GAIN AT °F. 16	
EXP. WALL CLG. HT.		33 10		22 9				GFA: 1769		BATH			
FACTORS		330		198				BED-2		BED-3			
GRS.WALL AREA		LOSS GAIN		LOSS GAIN				LOSS GAIN		LOSS GAIN			
NORTH		24.1	17.4	0	0	0	0	0	0	0	0	10	
EAST		24.1	43.0	24	578	1031	14	337	602	0	0	9	
SOUTH		24.1	26.3	0	0	0	0	0	0	0	0	0	
WEST		24.1	43.0	0	0	0	0	0	0	30	723	0	
SKYL.T.		37.5	103.1	0	0	0	0	0	0	0	0	0	
DOORS		26.2	6.2	0	0	0	0	0	0	0	0	0	
NET EXPOSED WALL		3.6	0.7	306	1057	220	184	636	132	283	978	203	65
NET EXPOSED BSMT WALL ABOVE GR		6.3	1.3	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG		1.6	0.8	252	383	191	112	170	86	200	304	161	83
NO A TTIC EXPOSED CLG		2.6	1.2	0	0	0	0	0	0	0	36	88	44
EXPOSED FLOOR		2.5	0.5	0	0	0	0	0	0	0	0	104	255
BASEMENT/CRAWL HEAT LOSS				0	0	0	0	0	0	0	0	54	11
SLAB ON GRADE HEAT LOSS				0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS				2018	1442		1143		1619		1377	532	159
SUB TOTAL HT GAIN				0.20	0.29		0.20	0.29	0.20	0.29	0.20	0.29	0.20
LEVEL FACTOR / MULTIPLIER				582	138		330		467		397	153	
AIR CHANGE HEAT LOSS												15	
AIR CHANGE HEAT GAIN												69	
DUCT LOSS												72	
DUCT GAIN												0	
HEAT GAIN PEOPLE		240		2	480	0	0	0	0	1	240	1	240
HEAT GAIN APPLIANCES/LIGHTS					541						541		541
TOTAL HT LOSS BTU/H				2600			1473		2086		1951	754	1023
TOTAL HT GAIN x 1.3 BTU/H				3381			1165		2045		3437		

ROOM USE	FACTORS				FOY				WOB				BAS			
EXP. WALL	LOSS GAIN				LOSS GAIN				LOSS GAIN				LOSS GAIN			
CLG. HT.	LOSS GAIN				LOSS GAIN				LOSS GAIN				LOSS GAIN			
GLAZING	24.1 17.4				340				261				903			
NORTH	84				0 0 0				79				0 0 0			
EAST	2024 3510				0 0 0				1903 1375				0 0 0			
SOUTH	24.1 26.3				0 0 0				0 0 0				0 0 0			
WEST	24.1 43.0				0 0 0				0 0 0				0 0 0			
SKYLT.	37.5 103.1				6 145 268				0 0 0				6 145 158			
DOORS	25.2 5.2				0 0 0				0 0 0				0 0 0			
NET EXPOSED WALL	3.6 0.7				40 1010 210				8 202 42				20 505 105			
NET EXPOSED BSMT WALL ABOVE GR	6.3 1.3				294 1016 211				174 601 126				0 0 0			
EXPOSED CLG	1.5 0.8				0 0 0				0 0 0				0 321 2033			
NO A TTIC EXPOSED CLG	2.6 1.2				0 0 0				0 0 0				0 0 0			
EXPOSED FLOOR	2.6 0.5				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			
SUB TOTAL HT LOSS	5117				2170				208				4406			
LEVEL FACTOR / MUL TIPLIER	0.30 0.37				0.30 0.37				2916				7089			
AIR CHANGE HEAT LOSS	1904				808				1541				686			
AIR CHANGE HEAT GAIN	447				65								5215			
DUCT LOSS	0				0								213			
DUCT GAIN	0				0								0			
HEAT GAIN PEOPLE	240				0				0				0			
HEAT GAIN APPLIANCES/LIGHTS	7022				541				0				0			
TOTAL HT LOSS BTU/H	7368				937				3123				12304			
TOTAL HT GAIN x 1.3 BTU/H					967				2004				1168			

TOTAL HEAT GAIN BTU/H:

TONS: 2.03

LOSS DUE TO VENTILATION LOAD BTU/H: 2612

STRUCTURAL HEAT LOSS: 36530

TOTAL COMBINED HEAT LOSS BTU/H: 39142

SITE NAME: HUNTINGTON + NASHVILLE
BUILDUP: GOLD PARK HOMES

OPT GROUND
TYPE: 25-9 WOB

DATE: Nov-16

GFA: 1759 LCH 70650

HEATING CFM	700	COOLING CFM	700		
TOTAL HEAT LOSS	36,530	TOTAL HEAT GAIN	23,827		
AIR FLOW RATE CFM	19.16	AIR FLOW RATE CFM	29.38		
RUN COUNT		3rd	2nd	1st	Bas
S/A	0	0	6	5	4
R/A	0	0	3	2	1

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

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

ROOM NAME	1	2	4	5	7	14	15	16	17	18	19	21	22	23	24
RM LOSS MBH	2.60	1.47	2.09	1.95	0.75	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
CFM PER RUN HEAT	50	28	40	37	14	45	45	45	45	45	45	45	45	45	45
RM GAIN MBH	3.38	1.17	2.05	3.44	1.02	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46
CFM PER RUN COOLING	99	34	60	101	30	72	72	72	72	72	72	72	72	72	72
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
EQUIVALENT LENGTH	130	150	170	160	150	190	140	130	190	160	140	140	170	150	150
TOTAL EFFECTIVE LENGTH	180	178	227	232	188	214	173	154	215	190	179	172	183	186	190
ADJUSTED PRESSURE	0.09	0.1	0.08	0.07	0.09	0.08	0.1	0.11	0.08	0.09	0.1	0.1	0.09	0.09	0.09
ROUND DUCT SIZE	6	4	5	6	4	5	5	5	4	4	5	5	5	5	5
HEATING VELOCITY (ft/min)	255	321	294	189	161	330	330	330	330	333	419	543	543	543	543
COOLING VELOCITY (ft/min)	505	390	441	515	344	529	529	529	529	321	115	206	169	169	169
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	B	B	B	B	A	A	A	B	B	A	A	B	A

ROOM NAME	1	2	4	5	7	14	15	16	17	18	19	21	22	23	24
RM LOSS MBH	2.60	1.47	2.09	1.95	0.75	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
CFM PER RUN HEAT	50	28	40	37	14	45	45	45	45	45	45	45	45	45	45
RM GAIN MBH	3.38	1.17	2.05	3.44	1.02	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46
CFM PER RUN COOLING	99	34	60	101	30	72	72	72	72	72	72	72	72	72	72
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
EQUIVALENT LENGTH	130	150	170	160	150	190	140	130	190	160	140	140	170	150	150
TOTAL EFFECTIVE LENGTH	180	178	227	232	188	214	173	154	215	190	179	172	183	186	190
ADJUSTED PRESSURE	0.09	0.1	0.08	0.07	0.09	0.08	0.1	0.11	0.08	0.09	0.1	0.1	0.09	0.09	0.09
ROUND DUCT SIZE	6	4	5	6	4	5	5	5	4	4	5	5	5	5	5
HEATING VELOCITY (ft/min)	255	321	294	189	161	330	330	330	330	333	419	543	543	543	543
COOLING VELOCITY (ft/min)	505	390	441	515	344	529	529	529	529	321	115	206	169	169	169
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	B	B	B	B	A	A	A	B	B	A	A	B	A

TRUNK A	390	0.09	9.6	10	10	10	10	10	10	10	10	10	10	10	10
TRUNK B	309	0.07	9.3	10	10	10	10	10	10	10	10	10	10	10	10
TRUNK C	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK D	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK E	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK F	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUNK A	390	0.09	9.6	10	10	10	10	10	10	10	10	10	10	10	10
TRUNK B	309	0.07	9.3	10	10	10	10	10	10	10	10	10	10	10	10
TRUNK C	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK D	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK E	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK F	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0

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

LO # 70650
OPT GROUND

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	2 @ 10.6 cfm	21.2 cfm
Kitchen & Bathrooms	4 @ 10.6 cfm	42.4 cfm
Other Rooms	3 @ 10.6 cfm	31.8 cfm
Table 9.32.3.A.	TOTAL	137.8 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	137.8	cfm
Less Principal Ventil. Capacity	86	cfm
Required Supplemental Capacity	51.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY			
Model: VANEE 40H+	Location: BSMT		
86.0 cfm	3.0 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	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
W/R	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 40H+		
86 cfm high	37 cfm low	
63 % 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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	November-16

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

MICHAEL O'ROURKE

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 25-9 WOB	OPT GROUND	BUILDER: GOLD PARK HOMES
SFQT: 1759	LO# 70650	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

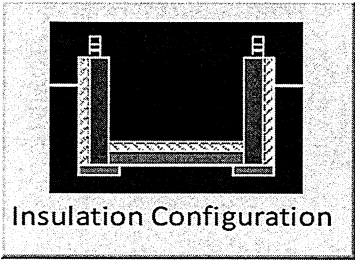
Component	Compliance Package
	J
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	22
Basement Walls Minimum RSI (R)-Value	12
Below Grade Slab Entire surface > 600 mm below 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



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

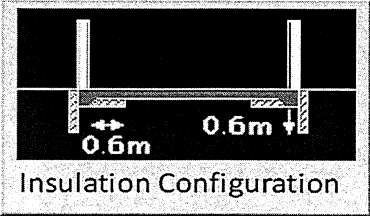
Air Infiltration Residential Load Calculator

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		

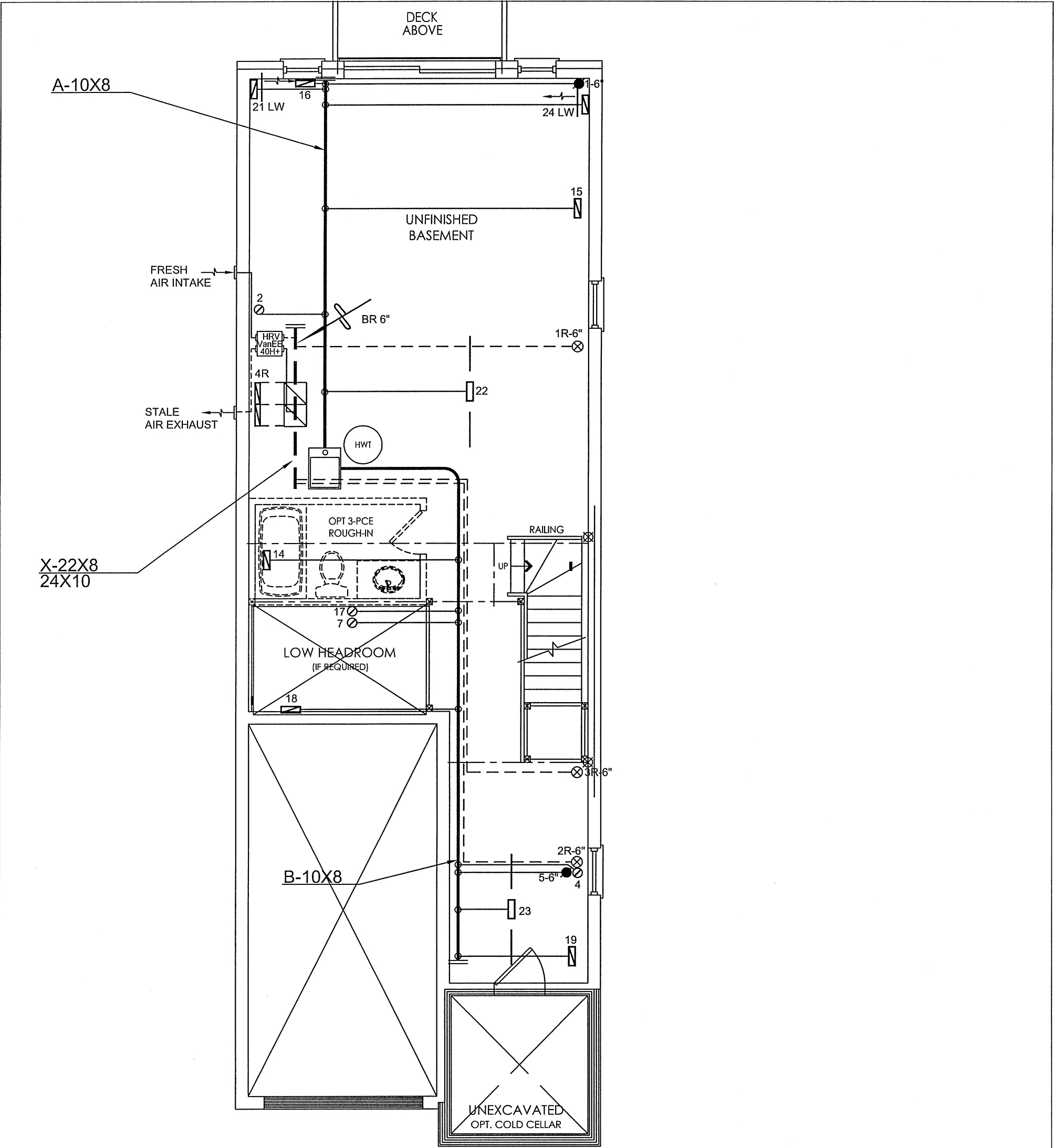
Residential Slab on Grade Thermal Load Calculator

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#: 70650		Model: 25-9 WOB		Builder: GOLD PARK HOMES		OPT GROUND		Date: 11/3/2016																																																																																				
Volume Calculation				Air Change & Delta T Data																																																																																								
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5.2.3.1 Heat Loss due to Air Leakage																																																																																												
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$0.322 \times 187.36 \times 42^\circ\text{C} \times 1.2 = 3057 \text{ W}$																																																																																												
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$HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																																																												
$86 \text{ CFM} \times 76^\circ\text{F} \times 1.08 \times 0.37 = 2612 \text{ Btu/h}$																																																																																												
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*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairve = 0																																																																																												



BASEMENT PLAN ELEV. 'A' & '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.

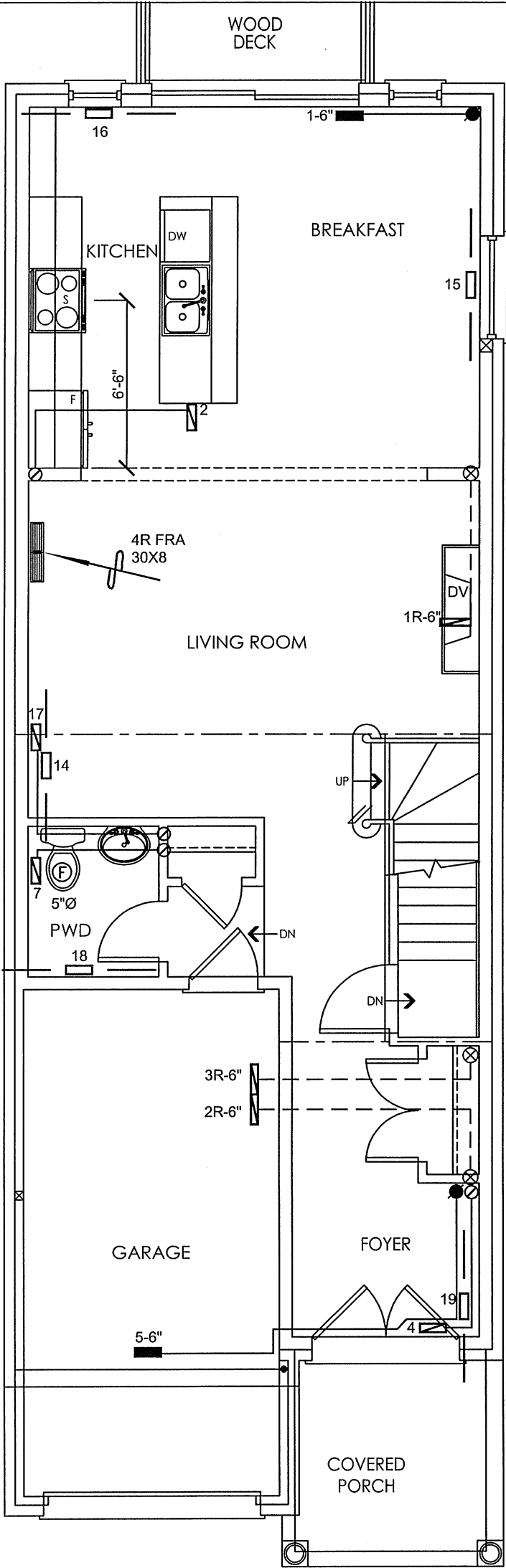
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

WOB
CSA-F280-12
PACKAGE J

HVAC LEGEND						3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
	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		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 39142 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GOLD PARK HOMES			MAKE LENNOX					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 5Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A				Scale	3/16" = 1'-0"	
OPT GROUND 25-9 WOB		FAN SPEED 700 cfm @ 0.6" w.c.					BCIN# 19669		
1759 sqft							LO#	70650	



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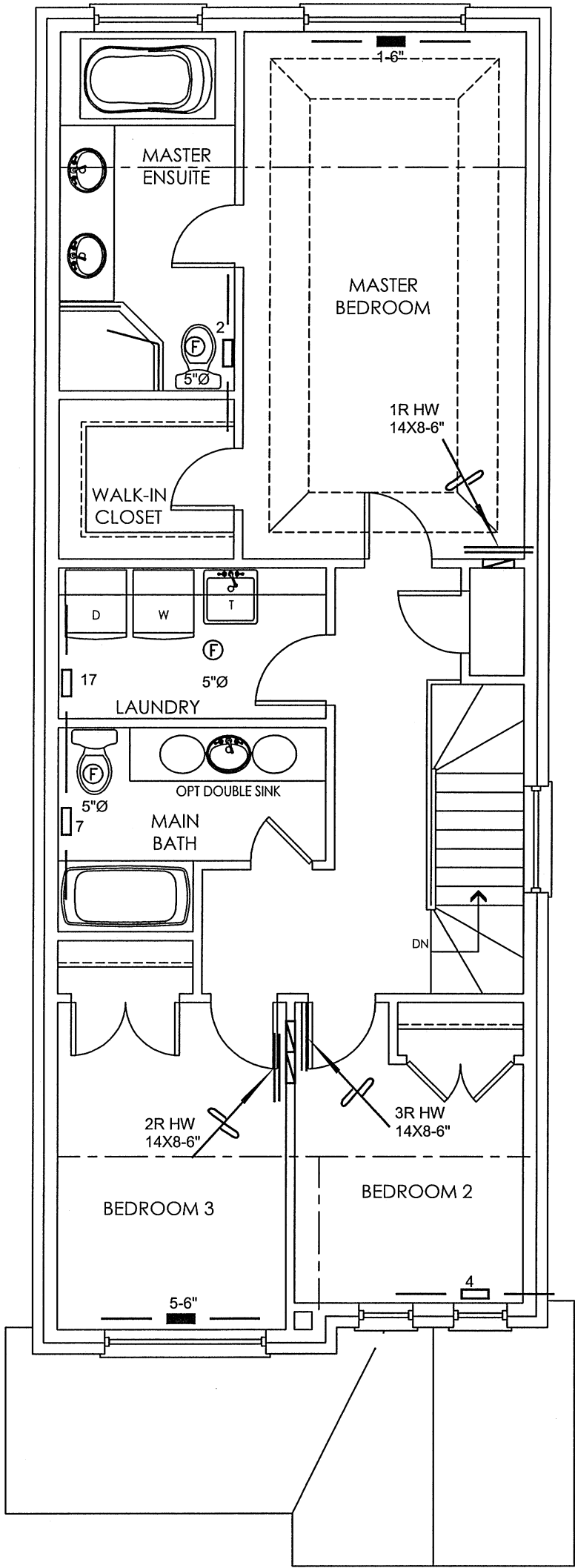
OPT GROUND FLOOR PLAN ELEV. 'A'

WOB
CSA-F280-12
PACKAGE J

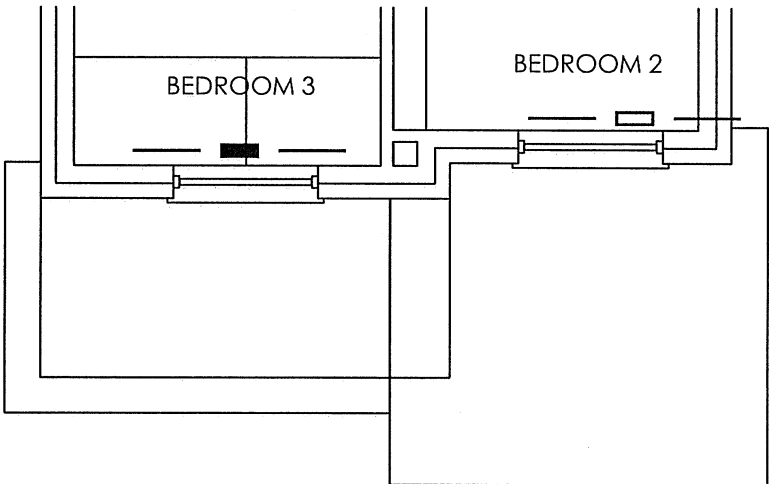
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Client GOLD PARK HOMES		 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services Installation to comply 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	
Project Name HUNTINGTON & NASHVILLE KLEINBURG, ONTARIO			Date NOV/2016	
OPT GROUND 25-9 WOB			Scale 3/16" = 1'-0"	
1759 sqft			BCIN# 19669	
			LO#	70650



SECOND FLOOR PLAN ELEV. 'A'



PART. SECOND FLOOR PLAN ELEV. 'B'

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Project Name			Date	NOV/2016
HUNTINGTON & NASHVILLE KLEINBURG, ONTARIO			Scale	3/16" = 1'-0"
OPT GROUND 25-9 WOB			BCIN# 19669	
1759 sqft		LO#	70650	