


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 (WOODBIDGE)	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]				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings </div> <div style="width: 30%;"> <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection </div> <div style="width: 30%;"> <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> On-site Sewage Systems </div> </div>				
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 5005 - KNIGHTSWOOD CORNER Project: PINE VALLEY & TESTON		
D. Declaration of Designer				
I, <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)				
<input type="checkbox"/> 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: _____				
<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 and qualification: <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.				
October 1, 2018		 Signature of Designer		
Date				

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: PINE VALLEY & TESTON

BUILDING: GOLD PARK HOMES

CORNER

ROOM USE

EXP. WALL

CLG. HT.

FACTORS

LOSSES

GRS.WALL AREA

GLAZING

NORTH

EAST

SOUTH

WEST

SKYL.T.

DOORS

NET EXPOSED WALL

NET EXPOSED BSMT WALL ABOVE GR

EXPOSED CLG

NO ATTIC EXPOSED CLG

EXPOSED FLOOR

BASEMENT/CRAWL HEAT LOSS

SLAB ON GRADE HEAT LOSS

SUBTOTAL HT LOSS

SUB TOTAL HT GAIN

LEVEL FACTOR / MULTIPLIER

AIR CHANGE HEAT LOSS

AIR CHANGE HEAT GAIN

DUCT LOSS

DUCT GAIN

HEAT GAIN PEOPLE

HEAT GAIN APPLIANCES/LIGHTS

TOTAL HT LOSS BTU/H

TOTAL HT GAIN x 1.3 BTU/H

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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.

TOTAL COMBINED HEAT LOSS BTU/H- 92576

INDIVIDUAL BCIN: 19669

MICHAEL O'DOUBRE

**SITE NAME: PINE VALLEY & TESTON
BUILDER: GOLD PARK HOMES**

CORNER
TYPE: 5005 - KN

DATE: Oct-18

GFA: 4478

80168

	HEATING CFM	1955	COOLING CFM	1955
TOTAL HEAT LOSS	89,396		TOTAL HEAT GAIN	60,409
AIR FLOW RATE CFM	21.87		AIR FLOW RATE CFM	32.36

furnace pressure	0.6
furnace filter	0.08
a/c coil pressure	0.2
available pressure for s/a & r/a	0.32

EL296UH110XE60C 110
FAN SPEED
^LENNOX
INPUT (BTU/H) = 110.0
OUTPUT (BTU/H) = 106.0
AFUE = 96 %

$$\begin{aligned} \text{AFUE} &= 96 \% \\ \text{INPUT (BTU/H)} &= 110,000 \\ \text{OUTPUT (BTU/H)} &= 106,000 \end{aligned}$$

	S/A	0	0	19
	R/A	0	0	5

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

plenum pressure s/a	0.17
max s/a dif press. loss	0.02
adjusted pressure s/a	0.15

pressure	0.15
Loss	0.02

All S/A all users 4 x 10" 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	ENS-2	WIC-2	ENS-3	MBR	ENS-4	LIB	DIN	KIT	KIT	FAM	LAUN	PWD	FOY	MUD	BAS	BAS	BAS	BAS
Rm Loss MBH	1.82	2.72	2.00	2.71	2.54	1.29	0.91	0.84	0.60	1.82	0.76	1.91	3.35	2.61	2.61	2.70	0.39	0.73	4.47	1.98	4.09	4.09	4.09	4.09
CFM per Run Heat	40	59	44	59	56	28	10	18	13	40	17	42	73	57	57	59	9	16	98	43	89	89	89	89
Rm Gain MBH	2.07	2.22	1.53	3.09	2.85	1.54	0.35	0.18	0.19	2.07	0.43	2.21	2.39	2.49	2.49	2.49	1.04	0.32	0.78	1.16	0.63	0.63	0.63	
CFM per Run Cooling	67	72	49	100	92	50	11	6	6	67	14	71	77	81	81	95	34	10	25	37	20	20	20	
Adjusted Pressure	0.16	0.16	0.16	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.16	0.16	0.15	0.16	0.15	0.15	0.15	
Actual Duct Lgh	70	70	53	49	75	48	47	48	53	64	59	57	29	52	44	54	36	73	40	47	67	60	54	38
Equivalent Length	190	200	170	160	200	160	200	150	170	170	150	140	130	130	140	110	200	170	210	160	150	150	103	90
Total Effective Length	260	270	223	209	245	208	247	198	223	234	209	197	159	182	184	164	236	243	250	207	217	210	157	128
Adjusted Pressure	0.06	0.06	0.07	0.07	0.06	0.08	0.06	0.08	0.07	0.07	0.07	0.08	0.1	0.08	0.08	0.09	0.07	0.06	0.06	0.08	0.07	0.07	0.09	0.11
Round Duct Size	5	6	5	6	6	5	4	4	4	5	4	5	5	5	5	6	4	4	6	4	6	6	6	5
Heating Velocity (ft/min)	294	301	323	301	286	206	229	207	149	294	195	308	536	419	419	301	103	184	500	493	454	454	454	653
Cooling Velocity (ft/min)	492	367	360	510	469	367	126	69	69	492	161	521	585	595	595	484	390	115	127	424	102	102	102	147
Outlet Grill Size	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10	3X10
Trunks	D	C	E	G	F	E	E	G	G	D	E	F	E	D	D	C	G	A	F	C	A	C	D	F

[illegible]

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE									
TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)					
TRUNK A 258	0.06	9.1	10	8	TRUNK G 1953	0.06	12.9	20	8	TRUNK O 585	0.05	0	0	8					
TRUNK B 0	0.00	0	x	8	TRUNK H 0	0.00	0	34	10	TRUNK P 827	0.05	0	0	x					
TRUNK C 581	0.06	12.3	x	8	TRUNK I 0	0.00	0	x	8	TRUNK Q 0	0.05	0	0	x					
TRUNK D 283	0.06	9.4	10	8	TRUNK J 0	0.00	0	0	8	TRUNK R 0	0.05	0	0	8					
TRUNK E 1264	0.06	16.5	26	10	TRUNK K 0	0.00	0	x	8	TRUNK S 0	0.05	0	0	x					
TRUNK F 414	0.06	10.3	x	8					8					x					

[illegible]

TYPE: 5005 - KNIGHTSWOOD
SITE NAME: PINE VALLEY & TESTON

LO # 80168
CORNER

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	<input checked="" type="checkbox"/> Direct vent (sealed combustion) only	
b)	<input type="checkbox"/> Positive venting induced draft (except fireplaces)	
c)	<input type="checkbox"/> Natural draft, B-vent or induced draft gas fireplace	
d)	<input type="checkbox"/> Solid Fuel (including fireplaces)	
e)	<input type="checkbox"/> No Combustion Appliances	

HEATING SYSTEM	
<input checked="" type="checkbox"/> Forced Air	<input type="checkbox"/> Non Forced Air
<input type="checkbox"/> Electric Space Heat	

HOUSE TYPE		9.32.1(2)
<input checked="" type="checkbox"/> I	Type a) or b) appliance only, no solid fuel	
<input type="checkbox"/> II	Type I except with solid fuel (including fireplaces)	
<input type="checkbox"/> III	Any Type c) appliance	
<input type="checkbox"/> IV	Type I, or II with electric space heat	
<input type="checkbox"/>	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
<input type="checkbox"/> 1	Exhaust only/Forced Air System	
<input type="checkbox"/> 2	HRV with Ducting/Forced Air System	
<input checked="" type="checkbox"/> 3	HRV Simplified/connected to forced air system	
<input type="checkbox"/> 4	HRV with Ducting/non forced air system	
<input type="checkbox"/>	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	7 @ 10.6 cfm	74.2 cfm
Other Rooms	8 @ 10.6 cfm	84.8 cfm
Table 9.32.3.A.	TOTAL	233.2 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	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	233.2	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	78.2	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANE 65H	Location: BSMT
155.0 cfm	3.0 sones
<input checked="" type="checkbox"/> HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
155.0 CFM	X 76 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-4	QTXEN050C	50	<input checked="" type="checkbox"/>
PWD	QTXEN050C	50	<input checked="" type="checkbox"/>

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 65H		
155 cfm high	64 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:	
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:	October-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																													
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																													
LO#: 80168	Model: 5005 - KNIGHTSWOOD	Builder: GOLD PARK HOMES	Date: 10/1/2018																																																										
Volume Calculation		Air Change & Delta T Data																																																											
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5.2.3.1 Heat Loss due to Air Leakage																																																													
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$																																																													
0.350	x	532.07	x																																																										
		42 °C	x																																																										
			1.2																																																										
			= 9437 W																																																										
			= 32200 Btu/h																																																										
5.2.3.2 Heat Loss due to Mechanical Ventilation																																																													
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																													
155 CFM	x	76 °F	x																																																										
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			= 3181 Btu/h																																																										
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																													
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<p>*HLairbv = Air leakage heat loss + ventilation heat loss</p> <p>*For a balanced or supply only ventilation system HLairv = 0</p>																																																													

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5005 - KNIGHTSWOOD	CORNER	BUILDER: GOLD PARK HOMES
SFQT: 4478	LO# 80168	SITE: PINE VALLEY & TESTON

DESIGN ASSUMPTIONS

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

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):	67644.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 75.0 ft	WIDTH: 45.0 ft	EXPOSED PERIMETER:	240.0 ft

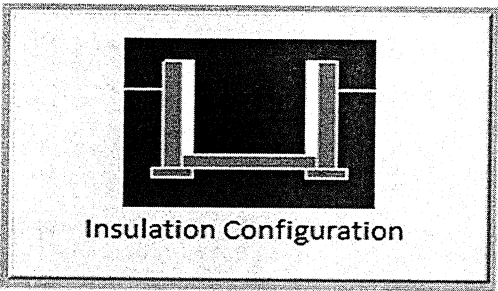
2012 OBC - COMPLIANCE PACKAGE		Compliance Package A1	
Component		Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value		60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value		31	27.65
Exposed Floor Minimum RSI (R)-Value		31	29.80
Walls Above Grade Minimum RSI (R)-Value		22	17.03
Basement 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:	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):	22.9	 Insulation Configuration
Floor Width (m):	13.7	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	5.6	
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):		2441

TYPE: 5005 - KNIGHTSWOOD
LO# 80168

CORNER

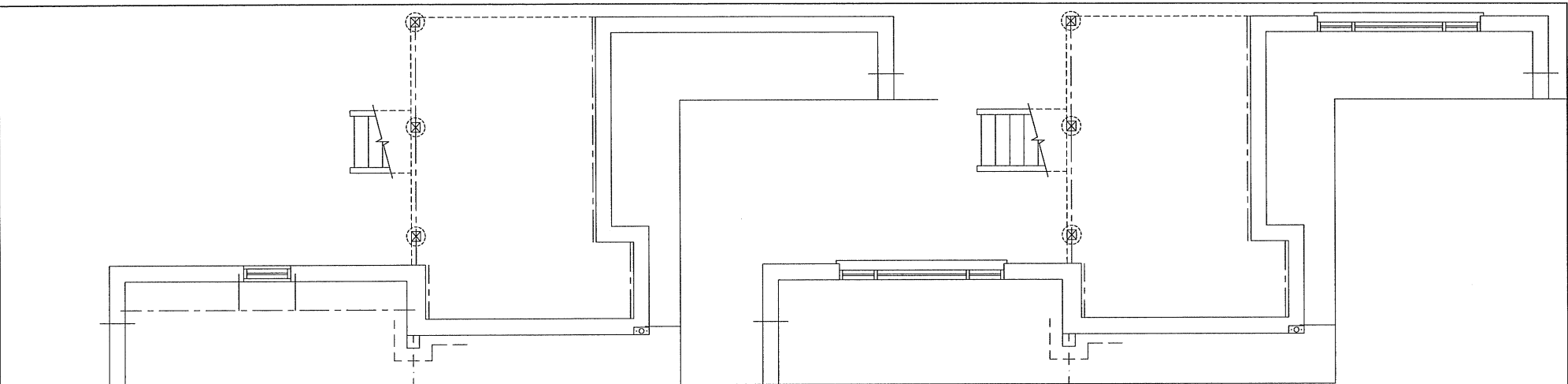
Air Infiltration Residential Load Calculator

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):	7.32			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1915.5			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa. 3.57	2553.4 cm ² ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply 73.2	Total Exhaust 73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.350			
Cooling Air Leakage Rate (ACH/H):	0.118			

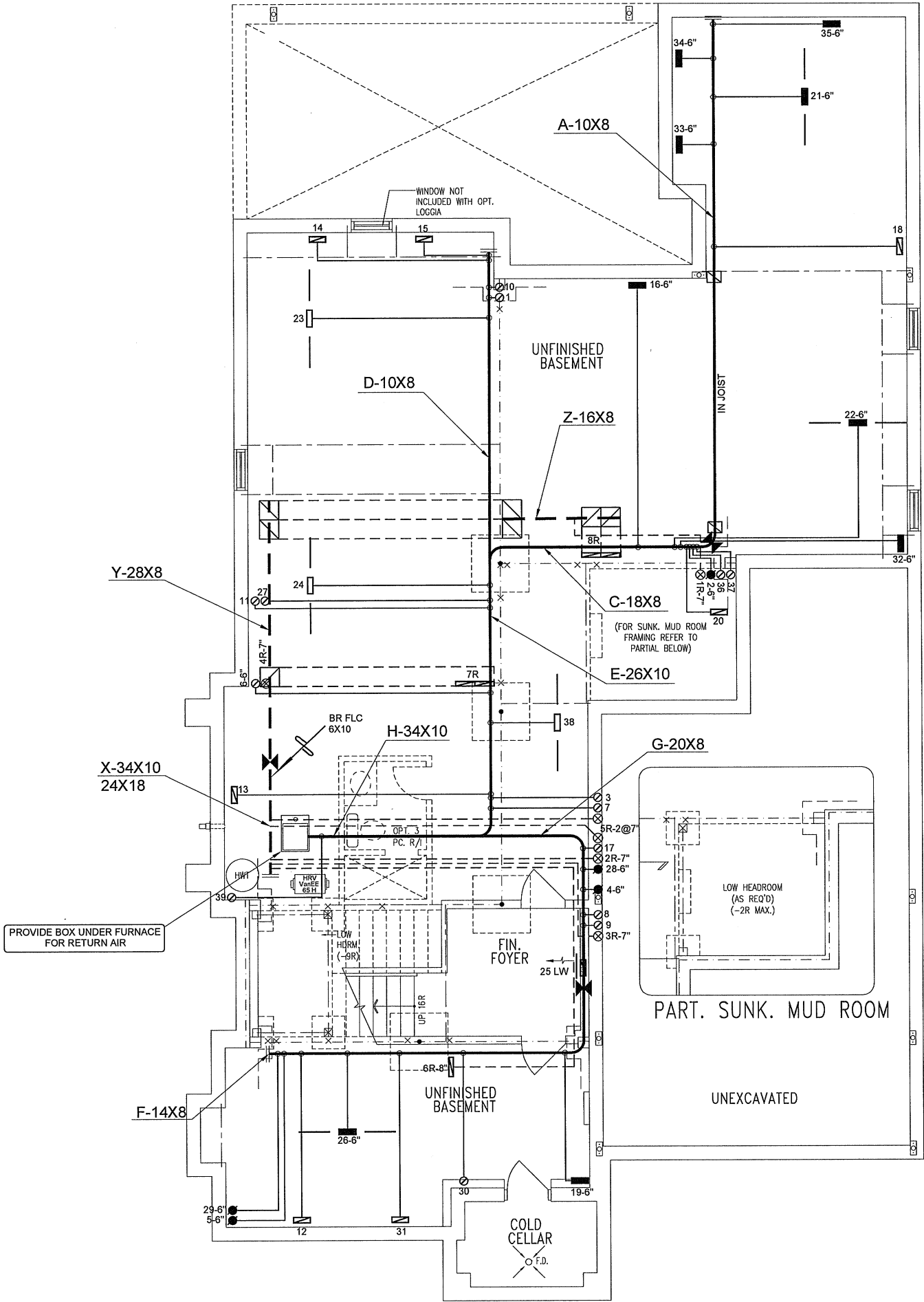
TYPE: 5005 - KNIGHTSWOOD
LO# 80168

CORNER



PART. BASEMENT PLAN ELEV. 'B' - W.O.D. COND.

PART. BASEMENT PLAN ELEV. 'B' - L.O.D. COND.



BASEMENT PLAN, EL. 'B'

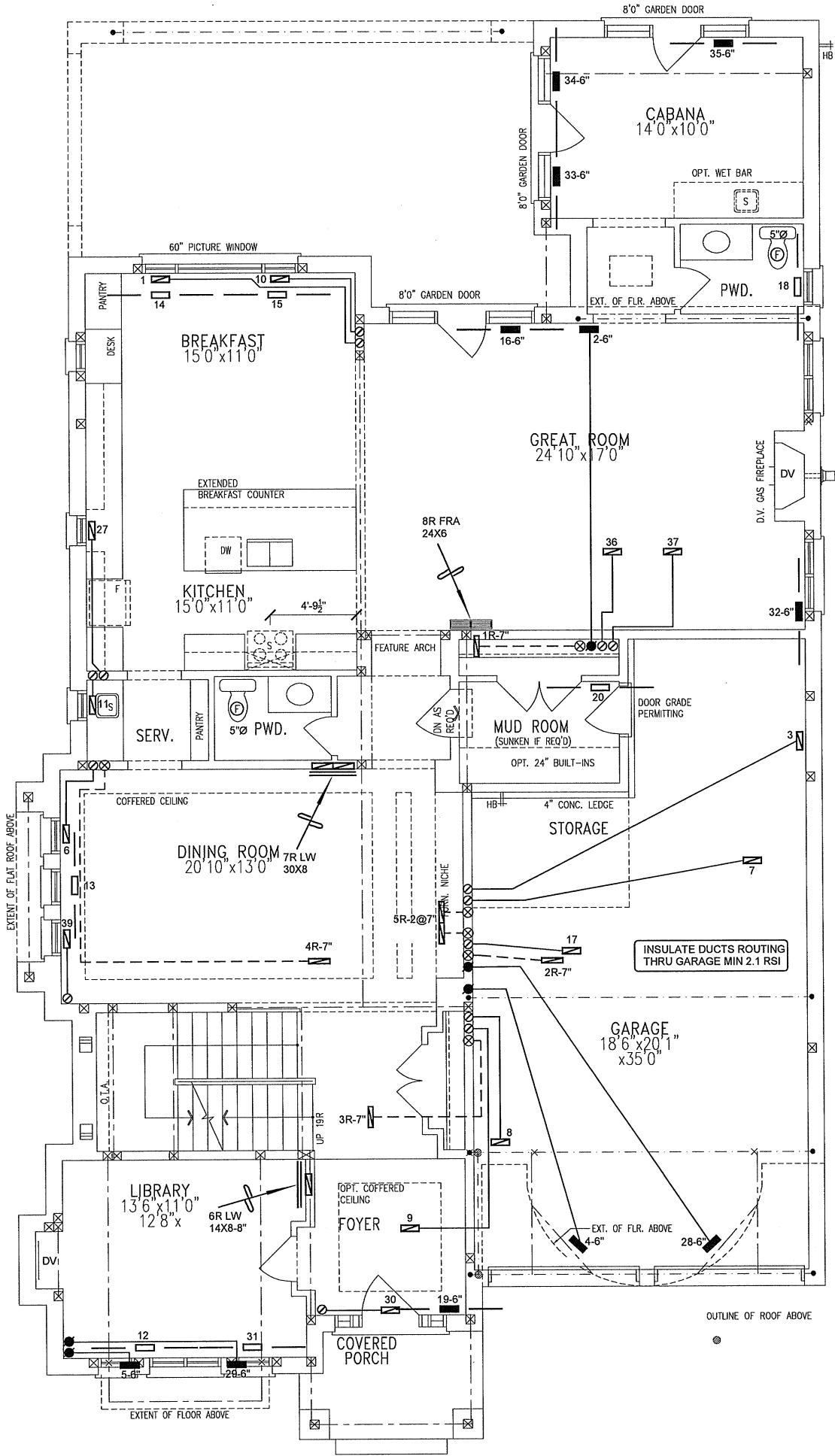
WOD/LOD
CSA-F280-12
PACKAGE A1

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		<div><div>HVACDESIGNS LTD.</div><div>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</div></div>	HEAT LOSS 92576 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GOLDPARK HOMES			MAKE LENNOX		3RD FLOOR			BASEMENT HEATING LAYOUT	
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO			MODEL EL296UH110XE60C		2ND FLOOR 19 5 7			Date OCT/2018	
			INPUT 110 MBTU/H		1ST FLOOR 13 3 3			Scale 1/8" = 1'-0"	
			OUTPUT 106 MBTU/H		BASEMENT 7 1 0			BCIN# 19669	
		COOLING 5.0 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			LO#		
KNIGHTSWOOD 5005 CORNER 4478 sqft		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.		FAN SPEED 1955 cfm @ 0.6" w.c.			80168		



GROUND FLOOR PLAN, EL. 'B'

WOD/LOD
CSA-F280-12
PACKAGE A1

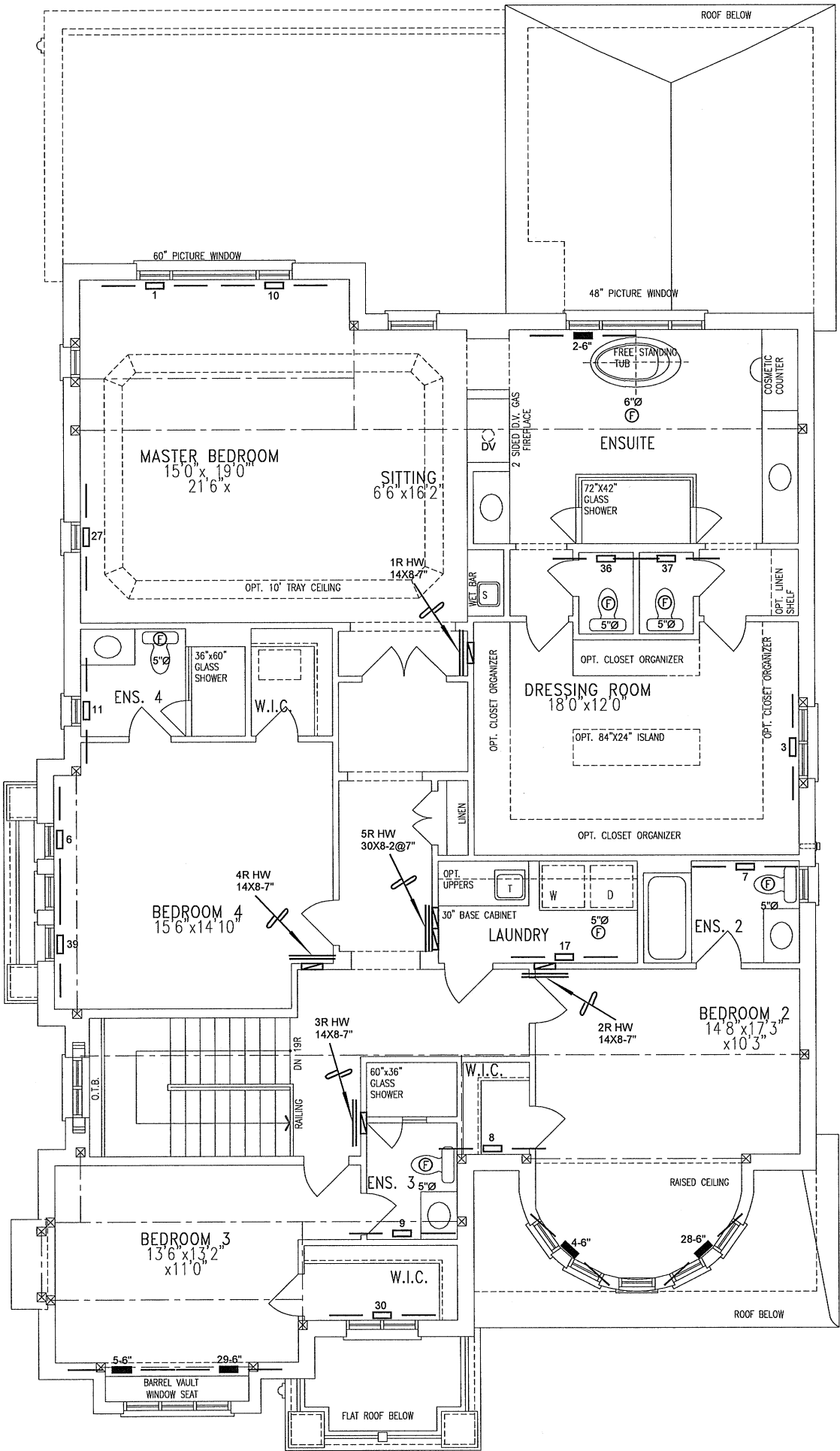
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Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND							3.		
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Client		<div><div>HVACDESIGNS LTD.</div><div>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</div></div>	Sheet Title		FIRST FLOOR HEATING LAYOUT	
Project Name			Date		OCT/2018	
PINE VALLEY & TESTON VAUGHAN, ONTARIO		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.	Scale		1/8" = 1'-0"	
KNIGHTSWOOD 5005 CORNER 4478 sqft			BCIN# 19669			
			LO#	80168		



SECOND FLOOR PLAN, EL.'B'

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.3.2.3 OF THE BUILDING CODE.

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

WOD/LOD
CSA-F280-12
PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
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	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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GOLDPARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	OCT/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	1/8" = 1'-0"
KNIGHTSWOOD			BCIN# 19669	
5005 CORNER			LO#	80168
4478 sqft				