


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: 4000 OPT 1ST FL THE BRIARWOOD WOB Project: PINE VALLEY & TESTON		
D. Declaration of Designer				
I <u>MICHAEL O'ROURKE</u> (print name) declare that (choose one as appropriate):				
<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.				
September 11, 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 BUILDER: GOLD PARK HOMES										THE BRIARWOOD WOB		DATE: Sep-16		WINTER NATURAL AIR CHANGE RATE 0.400		HEAT LOSS AT °F. 76		CSA-F200-11 SB-12 PACKAGE A1	
ROOM USE										TYPE: 4000 OPT 1 ST FL		GFA: 2820		LO# 78988		SUMMER NATURAL AIR CHANGE RATE 0.134		HEAT GAIN AT °F. 13	
EXP. WALL CLG. HT.		MBR		ENS		KTGR		LAUN		WIR		FOY		BATH		MEDIA			
FACTORS		LOSS		GAIN		LOSS		GAIN		LOSS		GAIN		LOSS		GAIN			
GRS.WALL AREA		418		143		900		377		78		1026		127		182			
GLAZING		LOSS		GAIN		LOSS		GAIN		LOSS		GAIN		LOSS		GAIN			
NORTH		21.3 15.6		0 0 21 447 328		0 0 0		21 447 328		0 0 0		0 0 0		9 192 141		0 0 0			
EAST		21.3 40.5		0 0 0 0 0		0 0 0		0 0 0		0 0 0		6 128 243		0 0 0		0 0 0			
SOUTH		21.3 24.3		0 0 0 0 0		58 1234 1409		0 0 0		0 0 0		0 0 0		0 0 0		8 170 194			
WEST		21.3 40.5		41 872 1659		100 2128 4047		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0			
SKYL.T.		37.2 101.5		0 0 0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0			
DOORS		26.2 4.3		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		4.5 0.8 377 1682 283 122 544 92		0 0 0 0 0		742 3311 558		20 505 85 0 40 1010 170		38 348 59 980 4373 737		10 282 43 20 605 86		276 1233 208 0 0		0 0 0			
NET EXPOSED BSMT WALL ABOVE GR		3.5 0.5 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		1.3 0.5 328 421 183 0 0 0 0		0 0 0 0 0		432 554 264		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 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 FLOOR		2.8 0.4 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			
BASEMENT/CRAWL HEAT LOSS		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			
SLAB ON GRADE HEAT LOSS		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			
SUBTOTAL HT LOSS		2578		991		7228		2451		348		6083		1804		533			
SUB TOTAL HT GAIN		2136		420		6267		666		59		1411		4869		2488			
LEVEL FACTOR / MUL TIPLIER		0.30 0.32		0.30 0.32		0.30 0.32		0.30 0.32		0.30 0.32		0.30 0.32		0.60 1.40		0.60 1.40			
AIR CHANGE HEAT LOSS		952		317		2312		764		111		1945		12478		12478			
AIR CHANGE HEAT GAIN		222		44		651		69		6		147		238		238			
DUCT LOSS		0		0		0		0		0		0		0		0			
DUCT GAIN		0		0		0		0		0		0		0		0			
HEAT GAIN PEOPLE		240		0		0		0		0		0		0		0			
HEAT GAIN APPLANCES/LIGHTS		744		0		0		0		0		0		0		0			
TOTAL HT LOSS BTU/H		3928		1308		8540		3235		459		8028		4694		17347			
TOTAL HT GAIN x 1.3 BTU/H		4855		602		9951		4922		84		2025		2345		1927			

ROOM USE		FORM		KTGR		LAUN		WIR		FOY		WOB		BAS	
EXP. WALL CLG. HT.		EXP. WALL CLG. HT.		EXP. WALL CLG. HT.		EXP. WALL CLG. HT.		EXP. WALL CLG. HT.		EXP. WALL CLG. HT.		EXP. WALL CLG. HT.		EXP. WALL CLG. HT.	
FACTORS		FACTORS		FACTORS		FACTORS		FACTORS		FACTORS		FACTORS		FACTORS	
LOSS		LOSS		LOSS		LOSS		LOSS		LOSS		LOSS		LOSS	
GAIN		GAIN		GAIN		GAIN		GAIN		GAIN		GAIN		GAIN	
GRS.WALL AREA		480		900		377		78		1026		382		988	
GLAZING		LOSS		LOSS		LOSS		LOSS		LOSS		LOSS		LOSS	
NORTH		21.3 15.6		0 0 0		21 447 328		0 0 0		0 0 0		0 0 0		0 0 0	
EAST		21.3 40.5		0 0 0		0 0 0		0 0 0		6 128 243		0 0 0		3 64 47	
SOUTH		21.3 24.3		58 1234 1409		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
WEST		21.3 40.5		100 2128 4047		0 0 0		0 0 0		0 0 0		0 0 0		3 64 73	
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DOORS		26.2 4.3		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
NET EXPOSED WALL		4.5 0.8 422 1833 317		742 3311 558		20 505 85 0 40 1010 170		38 348 59 980 4373 737		10 282 43 20 605 86		276 1233 208 0 0		20 605 86	
NET EXPOSED BSMT WALL ABOVE GR		3.5 0.6 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		1.3 0.6 168 216 99		432 554 264		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 0 0 0		0 0 0		0 0 0		0 0 0		208 572 262		0 0 0		0 0 0	
EXPOSED FLOOR		2.8 0.4 0 0 0 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 0		0 0 0		0 0 0		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 0 0		0 0 0		0 0 0		0 0 0	
SUBTOTAL HT LOSS		3333		7228		2451		348		6083		4861		4869	
SUB TOTAL HT GAIN		1825		6267		666		59		1411		1804		499	
LEVEL FACTOR / MUL TIPLIER		0.30 0.32		0.30 0.32		0.30 0.32		0.30 0.32		0.30 0.32		0.60 1.40		0.60 1.40	
AIR CHANGE HEAT LOSS		1086		2312		764		111		1945		12478		12478	
AIR CHANGE HEAT GAIN		190		651		69		6		147		238		238	
DUCT LOSS		0		0		0		0		0		0		0	
DUCT GAIN		0		0		0		0		0		0		0	
HEAT GAIN PEOPLE		240		0		0		0		0		0		0	
HEAT GAIN APPLANCES/LIGHTS		744		0		0		0		0		0		0	
TOTAL HT LOSS BTU/H		4398		8540		3235		459		8028		4694		17347	
TOTAL HT GAIN x 1.3 BTU/H		3585		9951		4922		84		2025		2345		1927	

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 HEAT GAIN BTU/H:	37083	TONS: 3.09	LOSS DUE TO VENTILATION LOAD BTU/H: 3181	STRUCTURAL HEAT LOSS: 68064	TOTAL COMBINED HEAT LOSS BTU/H: 89235
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Michael O'Rourke

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

GFA: 2820 LO# 79968

EL296UH090XE48C
FAN SPEED

lenum pressure s/a	0.18
x s/a dif press. loss	0.02
101 s/a & 1/a	0.33

min adjusted pressure s/a 0.16

7	8	9	10
BATH	2.03	3.30	1.96
	34	55	33
	0.57	2.49	2.33
	17	75	30
	0.17	0.17	0.17
	27	49	52
	160	190	110
	187	239	242
	0.09	0.07	0.11
	4	5	5
	390	404	242
	195	551	220
	3X10	3X10	3X10
	C	C	C

VELOCITY (ft/min)	TRUNK CFM
466	TRUNK G 0
601	TRUNK H 0
764	TRUNK I 0
0	TRUNK J 0
672	TRUNK K 0
0	TRUNK L 0

	0	0	0	0	0	0
	0	0	0	0	0	0
	0.15	0.15	0.15	0.15	0.15	0.15
	1	1	1	1	1	1
	0	0	0	0	0	0
	0	0	0	0	0	0
	1	1	1	1	1	1
	14.80	14.80	14.80	14.80	14.80	14.80
	0	0	0	0	0	0
	0	0	0	0	0	0
	X	X	X	X	X	X
	0	0	0	0	0	0

TYPE: 4000 OPT 1ST FL
SITE NAME: PINE VALLEY & TESTON

LO # 79968
THE BRIARWOOD WOB

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	<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>5</u> @ 10.6 cfm <u>53</u> cfm	
Other Rooms	<u>4</u> @ 10.6 cfm <u>42.4</u> cfm	
Table 9.32.3.A.	TOTAL <u>159.0</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	63.6 cfm	

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>159</u> cfm	
Less Principal Ventil. Capacity	<u>155</u> cfm	
Required Supplemental Capacity	<u>4.0</u> cfm	

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
<u>155.0</u> cfm	<u>3.0</u> 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	Sones
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
BATH	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
LAUN	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
PWD	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
<u>155</u> cfm high	<u>64</u> cfm low	
<u>75</u> % Sensible Efficiency	<input checked="" type="checkbox"/> 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:	September-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																										
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																										
LO#: 79968		Model: 4000 OPT 1ST FL		Builder: GOLD PARK HOMES		Date: 9/11/2018																																																																				
Volume Calculation						Air Change & Delta T Data																																																																				
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6.2.6 Sensible Gain due to Air Leakage																																																																										
$HG_{sdlb} = LR_{airb} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																																																										
0.400		x		361.26		x		1.2		=	413 W																																																															
										=	1411 Btu/h																																																															
6.2.7 Sensible heat Gain due to Ventilation																																																																										
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																																										
155 CFM		x		13 °F		x		1.08		x 0.25 = 536 Btu/h																																																																
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																																										
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{qgr} + HL_{bgr}) \div (HL_{agelevel} + HL_{bgelevel})\}$																																																																										
Level		Level Factor (LF)		HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)		Level Conductive Heat Loss: (HL _{clevel})		Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)																																																																		
1		0.5		24,956		8,930		1.397																																																																		
2		0.3				23,411		0.320																																																																		
3		0.2				7,174		0.696																																																																		
4		0				0		0.000																																																																		
5		0				0		0.000																																																																		
<p>*HLairbv = Air leakage heat loss + ventilation heat loss</p> <p>*For a balanced or supply only ventilation system HLairve = 0</p>																																																																										

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 4000 OPT 1ST FL	THE BRIARWOOD WOB	BUILDER: GOLD PARK HOMES
SFQT: 2820	LO# 79968	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):	45928.5	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:	6.1 ft
LENGTH: 70.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	162.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	42.0 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	29.80
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	-

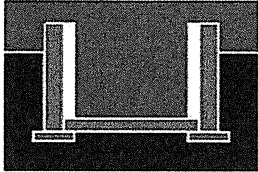
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

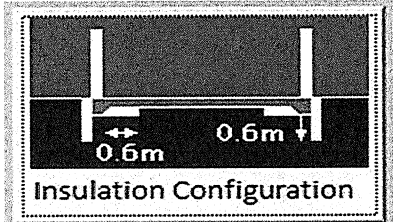
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	4.6	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	49.4	
Wall Height (m):	2.8	
Depth Below Grade (m):	1.56	
Window Area (m ²):	0.6	
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):		729

TYPE: 4000 OPT 1ST FL
LO# 79968

THE BRIARWOOD WOB

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		
Length (m):	1.5	 Insulation Configuration
Width (m):	9.8	
Exposed Perimeter (m):	12.8	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		156

TYPE: 4000 OPT 1ST FL
LO# 79968

THE BRIARWOOD WOB

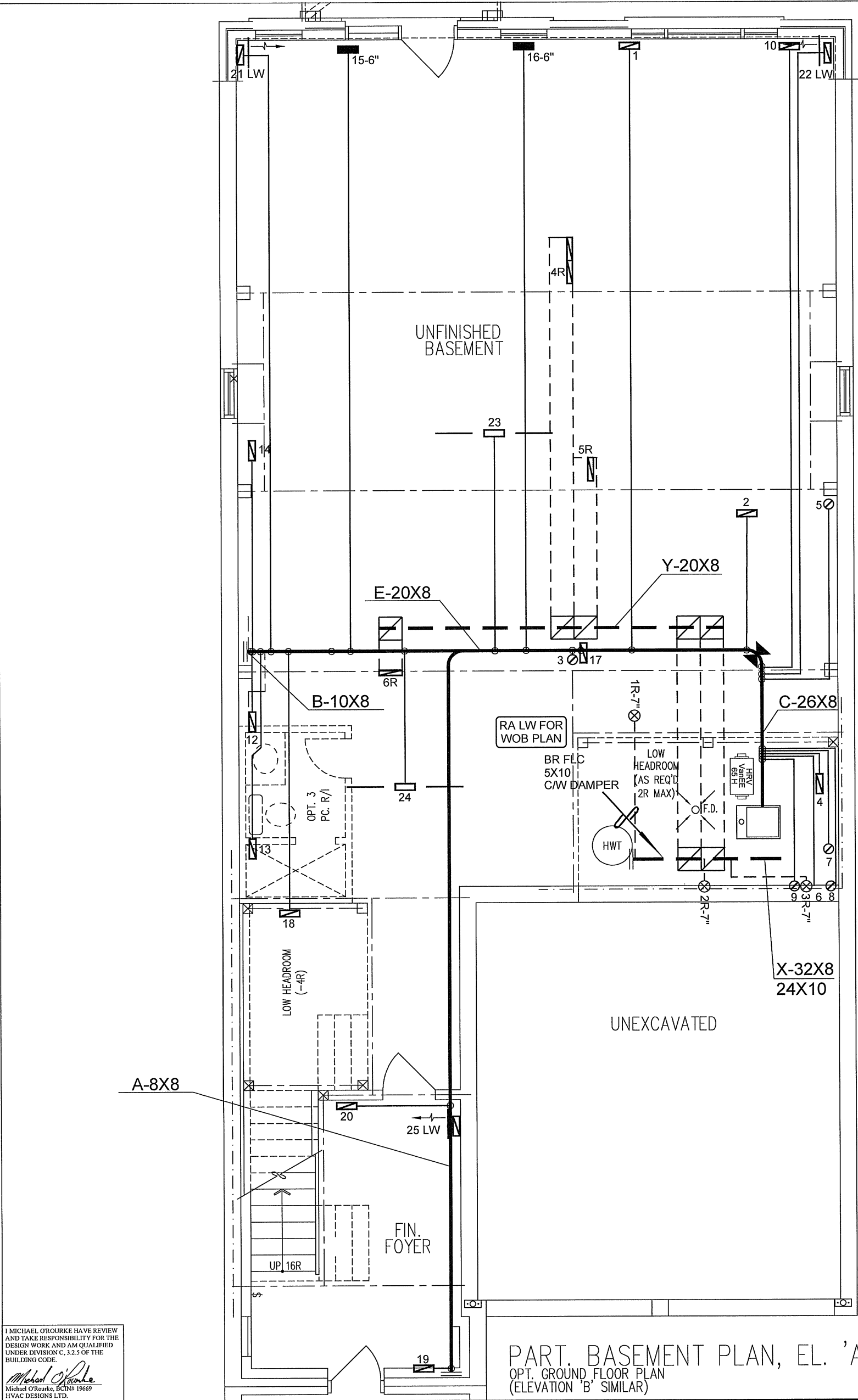
Air Infiltration Residential Load Calculator

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):	8.90			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1300.6			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1733.7 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	73.2	73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.400			
Cooling Air Leakage Rate (ACH/H):	0.134			

TYPE: 4000 OPT 1ST FL
LO# 79968

THE BRIARWOOD WOB




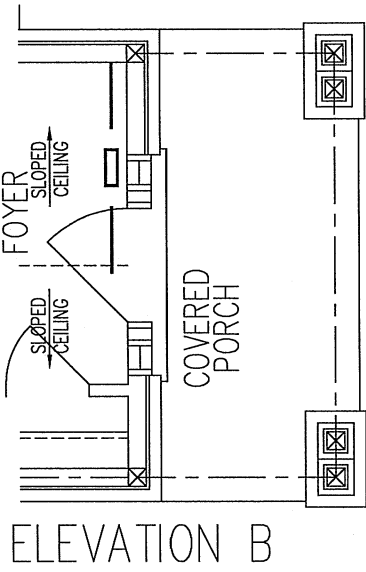
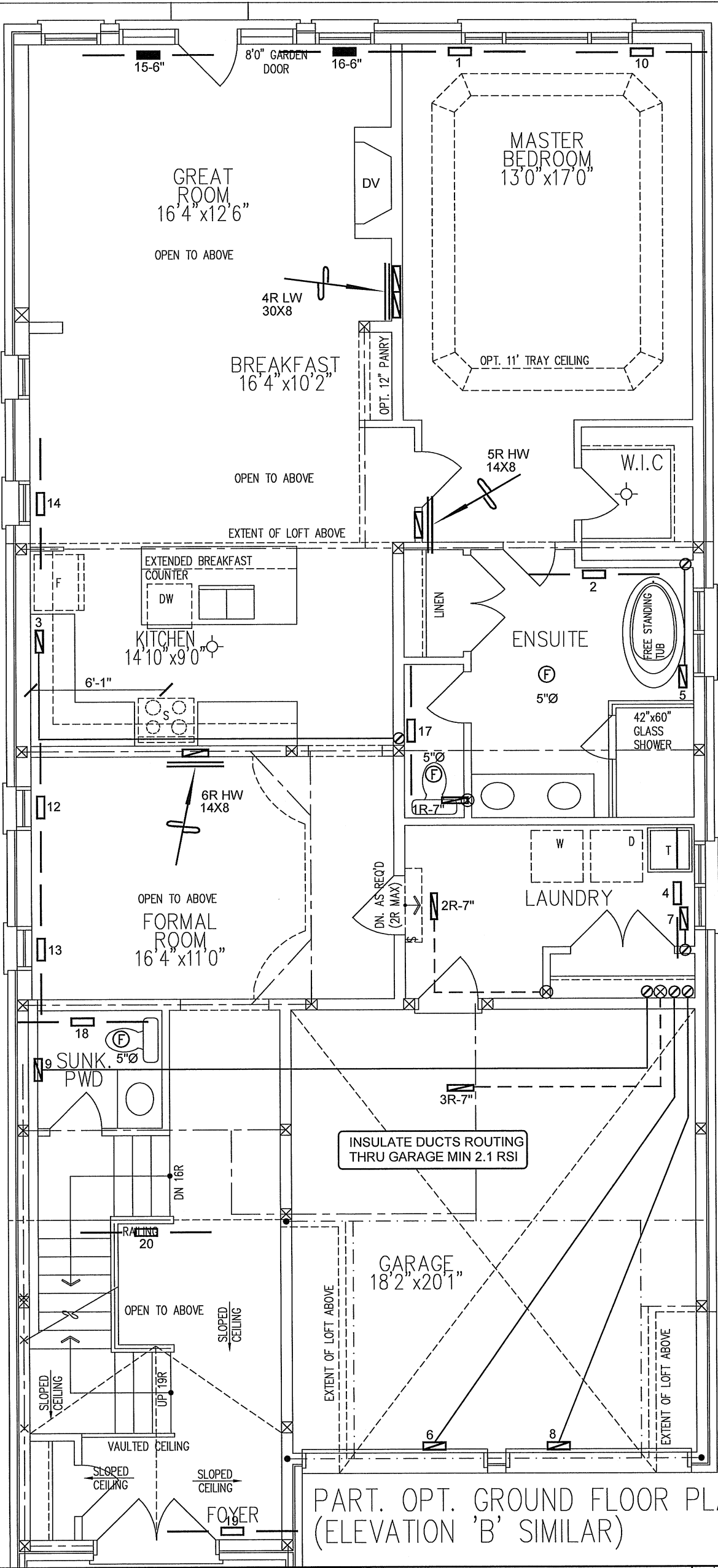
I MICHAEL O'ROURKE HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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

PART. BASEMENT PLAN, EL. 'A'
OPT. GROUND FLOOR PLAN
(ELEVATION 'B' SIMILAR)

WOB
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				
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><p>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</p><p>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.</p></div>				HEAT LOSS 69235 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GOLD PARK HOMES						MAKE	LENNOX	3RD FLOOR				BASEMENT HEATING LAYOUT
						MODEL	EL296UH090XE48C	2ND FLOOR	6	3	1	
						INPUT	88 MBTU/H	1ST FLOOR	13	3	5	
						OUTPUT	85 MBTU/H	BASEMENT	5	1	0	
						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			Date	
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO						FAN SPEED	1105 cfm @ 0.6" w.c.				Scale	3/16" = 1'-0"
												BCIN# 19669
								LO#	79968			
THE BRIARWOOD - WOB 4000 OPT 1ST FL 2820 sqft												



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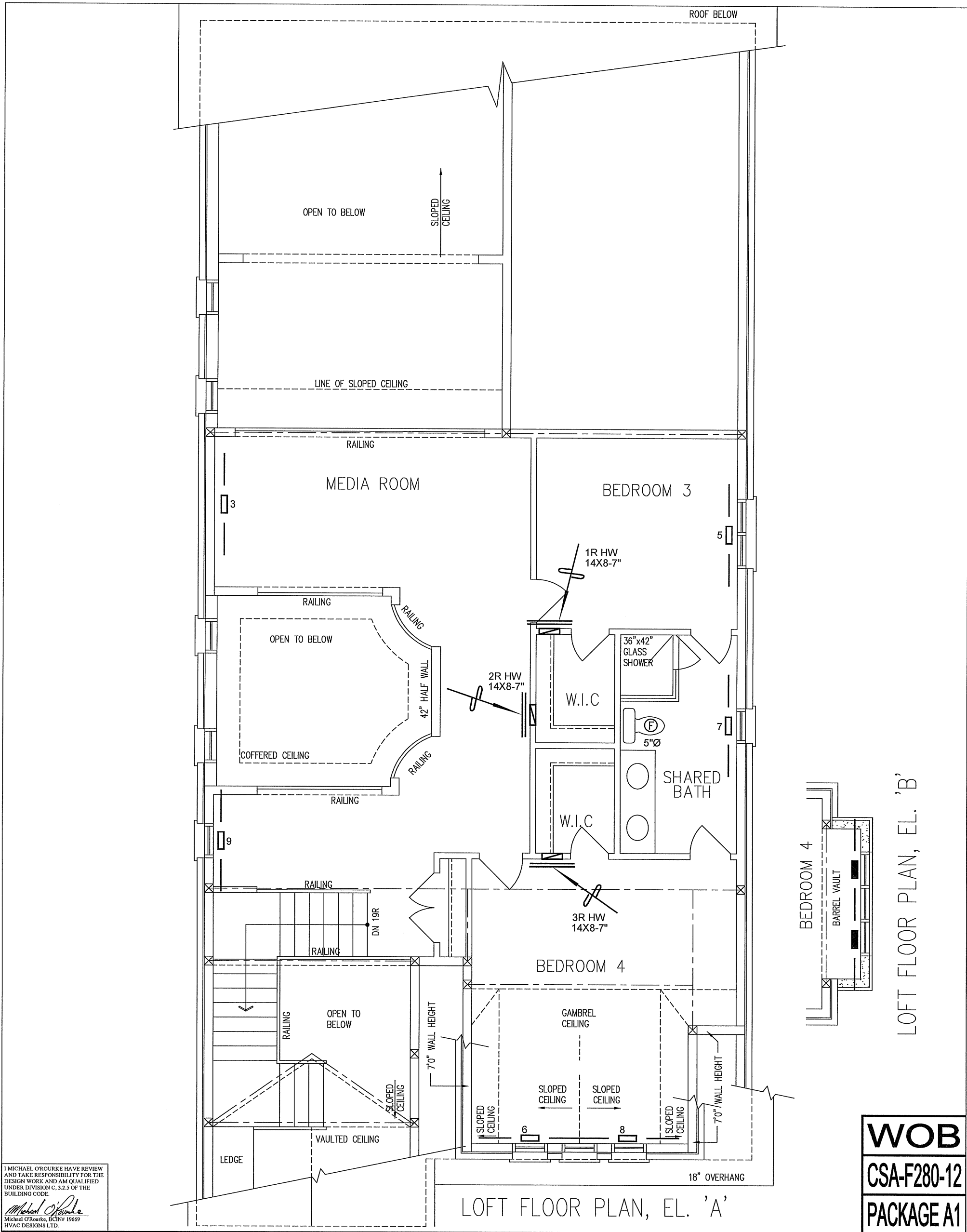
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

WOB
CSA-F280-12
PACKAGE A1

HVAC LEGEND						REVISIONS		
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	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	
						No.	Description	Date

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Client		<div></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>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.</div>	Sheet Title	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	SEPT/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE BRIARWOOD - WOB 4000 OPT 1ST FL 2820 sqft			BCIN# 19669	
		LO#	79968	



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

WOB
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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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO			Date	SEPT/2018
			Scale	3/16" = 1'-0"
			BCIN# 19669	
THE BRIARWOOD - WOB 4000 OPT 1ST FL 2820 sqft			LO#	79968