

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]			
☐ 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: 4000 THE BRIARWOOD Project: PINE VALLEY & TESTON	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):	
☐ 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.			
January 23, 2018 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: PINE VALLEY & TESTON				THE BRIARWOOD		DATE: Jan-18		WINTER NATURAL AIR CHANGE RATE 0.341		HEAT LOSS AT °F. 76		CSA-F280-12	
BUILDER: GOLD PARK HOMES				TYPE: 4000		LO# 77455		SUMMER NATURAL AIR CHANGE RATE 0.121		HEAT GAIN AT °F. 15		SB-12 PACKAGE A1	
ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	GRS. WALL AREA	FACTORS	LOSS	GAIN	GRS. WALL AREA	FACTORS	LOSS	GAIN	GRS. WALL AREA	FACTORS
EXP. WALL	35	35	13	13	13	13	13	13	13	13	13	13	13
CLG. HT.	11	11	11	11	11	11	11	11	11	11	11	11	11
GRS. WALL AREA	385	385	143	143	143	143	143	143	143	143	143	143	143
GLAZING													
NORTH	21.3	16.5	0	0	0	0	0	0	0	0	0	0	0
EAST	21.3	42.1	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	25.5	0	0	0	0	0	0	0	0	0	0	0
WEST	21.3	42.1	0	0	0	0	0	0	0	0	0	0	0
SKYL.T.	37.2	102.5	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	4.9	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	344	1535	299	122	544	106	232	1035	202	92	411	80
NET EXPOSED BMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	328	421	204	32	41	0	0	0	0	0	0
NO A T T I C EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.5	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS													
SLAB ON GRADE HEAT LOSS													
SUB TOTAL HT LOSS													
SUB TOTAL HT GAIN													
LEVEL FACTOR / MUL TIPLIER													
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													

ROOM USE	EXP. WALL CLG. HT.	FORM	K TIGR	LAUN	WIR	FOY	BAS
EXP. WALL	24	24	52	8	0	57	204
CLG. HT.	20	20	18	13	13	18	9
GRS. WALL AREA	480	480	938	104	0	1028	1244
GLAZING							
NORTH	21.3	16.5	0	0	0	0	0
EAST	21.3	42.1	0	0	0	0	0
SOUTH	21.3	25.5	58	1234	1477	6	128
WEST	21.3	42.1	100	2128	4211	0	253
SKYL.T.	37.2	102.5	0	0	0	0	0
DOORS	25.2	4.9	0	0	0	0	0
NET EXPOSED WALL	4.5	344	1535	299	122	544	106
NET EXPOSED BMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0
EXPOSED CLG	1.3	0.6	328	421	204	32	41
NO A T T I C EXPOSED CLG	2.7	1.3	0	0	0	0	0
EXPOSED FLOOR	2.6	0.5	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS							
SLAB ON GRADE HEAT LOSS							
SUB TOTAL HT LOSS							
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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							

TOTAL HEAT GAIN BTU/H: 36992 TONS: 3.08 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 62488 TOTAL COMBINED HEAT LOSS BTU/H: 65649

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.

Michael O'Rourke

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

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

THE BRIARWOOD
TYPE: 4000 DATE: Jan-18
GFA: 2820 LO# 77455

HEATING CFM	1105	COOLING CFM	1105
TOTAL HEAT LOSS	62,468	TOTAL HEAT GAIN	36,372
AIR FLOW RATE CFM	17.69	AIR FLOW RATE CFM	30.38

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35
plenum pressure s/a 0.18
max s/a diff press. loss 0.02
min adjusted pressure s/a 0.16

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000
DESIGN CFM = 1105
CFM @ 6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	6	13	5
R/A	0	0	3	3	1

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A units 5'0" unless noted otherwise on layout.

ROOM #	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	MEDIA	BED-2	BED-3	BED-4	BATH	BED-4	MEDIA	MBR	KT/GR	KT/GR	FORM	KT/GR	KT/GR	KT/GR	LAUN	W/R	FOY	FOY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.81	1.32	1.38	1.89	1.55	3.10	1.91	3.10	1.38	1.81	3.15	3.15	2.13	3.15	3.15	3.15	1.12	0.00	3.89	3.89	4.13	4.13	4.13	4.13
CFM PER RUN HEAT	32	23	24	33	27	55	34	55	24	32	56	56	38	56	56	56	20	0	69	69	73	73	73	73
RM GAIN MBH	2.36	0.69	0.98	1.97	1.84	2.56	0.62	2.56	0.98	2.36	3.49	3.49	1.84	3.49	3.49	3.49	1.11	0.00	1.14	1.14	0.38	0.38	0.38	0.38
CFM PER RUN COOLING	72	21	30	60	56	78	19	78	30	72	106	106	56	106	106	106	34	0	35	35	12	12	12	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	47	21	49	6	24	60	33	58	60	42	61	52	46	45	61	52	33	46	55	53	57	36	34	34
EQUIVALENT LENGTH	170	190	150	150	160	210	130	220	200	110	120	110	130	120	110	120	170	120	130	130	110	180	90	130
TOTAL EFFECTIVE LENGTH	217	211	199	156	184	270	163	278	260	152	162	162	166	145	181	162	193	216	175	183	167	216	124	164
ADJUSTED PRESSURE	0.08	0.08	0.09	0.11	0.09	0.06	0.11	0.06	0.07	0.11	0.09	0.09	0.1	0.11	0.09	0.09	0.09	0.08	0.1	0.09	0.1	0.08	0.14	0.1
ROUND DUCT SIZE	5	4	4	5	5	6	4	6	4	5	6	6	5	6	6	6	4	4	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	235	264	275	242	198	280	390	279	275	235	286	286	279	286	286	286	229	0	507	507	536	536	536	536
COOLING VELOCITY (ft/min)	529	241	344	441	411	398	218	398	344	529	540	540	411	540	540	540	390	0	257	257	88	88	88	88
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	4X10	4X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	C	E	C	C	C	C	C	E	C	E	E	B	B	B	E	E	B	A	A	B	C	E	B

RUN #	25
ROOM NAME	BAS
RM LOSS MBH	4.13
CFM PER RUN HEAT	73
RM GAIN MBH	0.38
CFM PER RUN COOLING	12
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH	58
EQUIVALENT LENGTH	130
TOTAL EFFECTIVE LENGTH	188
ADJUSTED PRESSURE	0.09
ROUND DUCT SIZE	5
HEATING VELOCITY (ft/min)	536
COOLING VELOCITY (ft/min)	88
OUTLET GRILL SIZE	3X10
TRUNK	A

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	211	0.09	7.6	8	8	TRUNK G	0	0.00	0	0	0
TRUNK B	334	0.08	9.3	10	8	TRUNK H	0	0.00	0	0	0
TRUNK C	1106	0.06	15.6	28	8	TRUNK I	0	0.00	0	0	0
TRUNK D	0	0.00	0	0	8	TRUNK J	0	0.00	0	0	0
TRUNK E	797	0.06	13.8	22	8	TRUNK K	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	0	TRUNK L	0	0.00	0	0	0

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	211	0.09	7.6	8	8	TRUNK G	0	0.00	0	0	0
TRUNK B	334	0.08	9.3	10	8	TRUNK H	0	0.00	0	0	0
TRUNK C	1106	0.06	15.6	28	8	TRUNK I	0	0.00	0	0	0
TRUNK D	0	0.00	0	0	8	TRUNK J	0	0.00	0	0	0
TRUNK E	797	0.06	13.8	22	8	TRUNK K	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	0	TRUNK L	0	0.00	0	0	0

TYPE: 4000
SITE NAME: PINE VALLEY & TESTON

LO # 77455
THE BRIARWOOD

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>3</u> @ 10.6 cfm	<u>31.8</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>169.6</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	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>169.6</u>	cfm
Less Principal Ventil. Capacity	<u>155</u>	cfm
Required Supplemental Capacity	<u>14.6</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
<u>155.0</u> cfm	<u>3.0</u> sones
☒ HVI Approved	

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

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	Sones
ENS	QTXEN050C	50	✓ 0.3
BATH	QTXEN050C	50	✓ 0.3
LAUN	QTXEN050C	50	✓ 0.3
PWD	QTXEN050C	50	✓ 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	☒ 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:	January-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																					
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																					
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6.2.6 Sensible Gain due to Air Leakage																																																																					
$HG_{salb} = LR_{aire} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																																																					
$= 0.121 \times 361.26 \times 8^\circ\text{C} \times 1.2 = 432 \text{ W}$																																																																					
$= 21300 \text{ Btu/h}$																																																																					
6.2.7 Sensible heat Gain due to Ventilation																																																																					
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																																					
$155 \text{ CFM} \times 15^\circ\text{F} \times 1.08 \times 0.25 = 619 \text{ Btu/h}$																																																																					
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																																					
$HL_{airr} = \text{Level Factor} \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agcleve} + HL_{bgcleve})\}$																																																																					
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*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairv = 0																																																																					

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 4000	THE BRIARWOOD	BUILDER: GOLD PARK HOMES
SFQT: 2820	LO# 77455	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)	73

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:	5
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:	204.0 ft

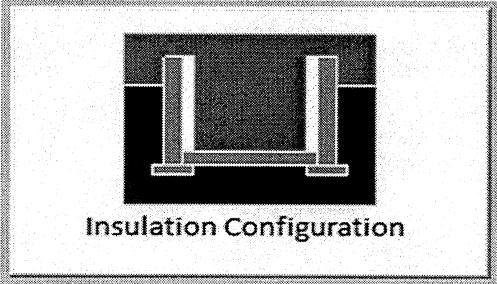
2012 OBC - COMPLIANCE PACKAGE		
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement 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):	21.3	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.8	
Depth Below Grade (m):	1.86	
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):		2056

TYPE: 4000
LO# 77455

THE BRIARWOOD

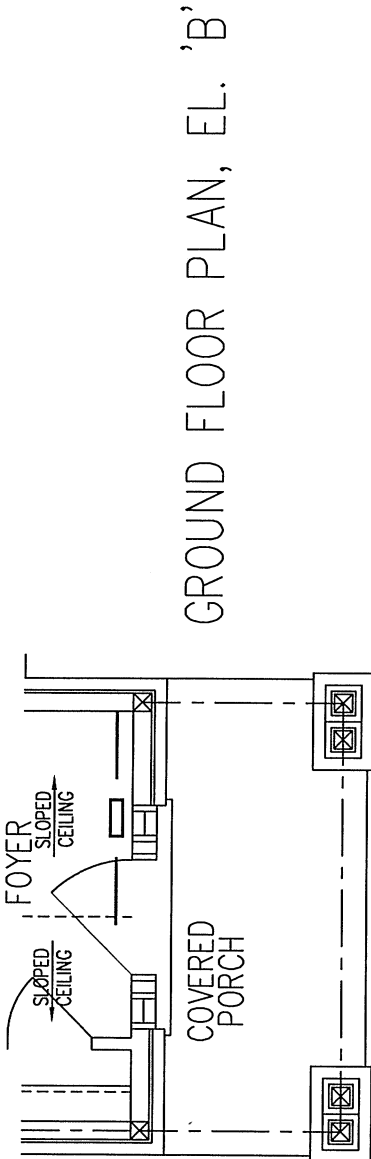
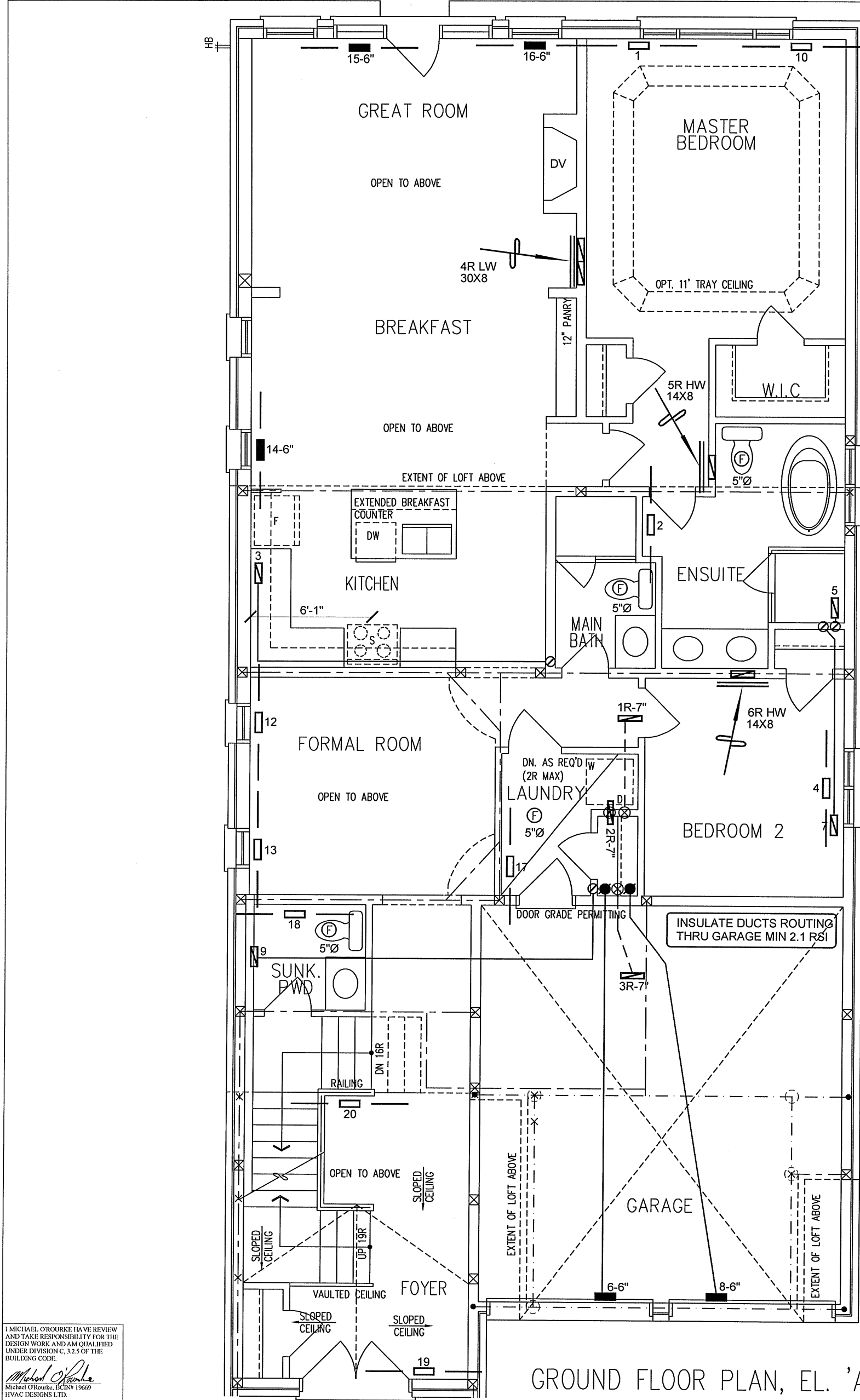
Air Infiltration Residential Load Calculator

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):	7.04		
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):	0.341		
Cooling Air Leakage Rate (ACH/H):	0.121		

TYPE: 4000
LO# 77455

THE BRIARWOOD



GROUND FLOOR PLAN, EL. 'B'

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

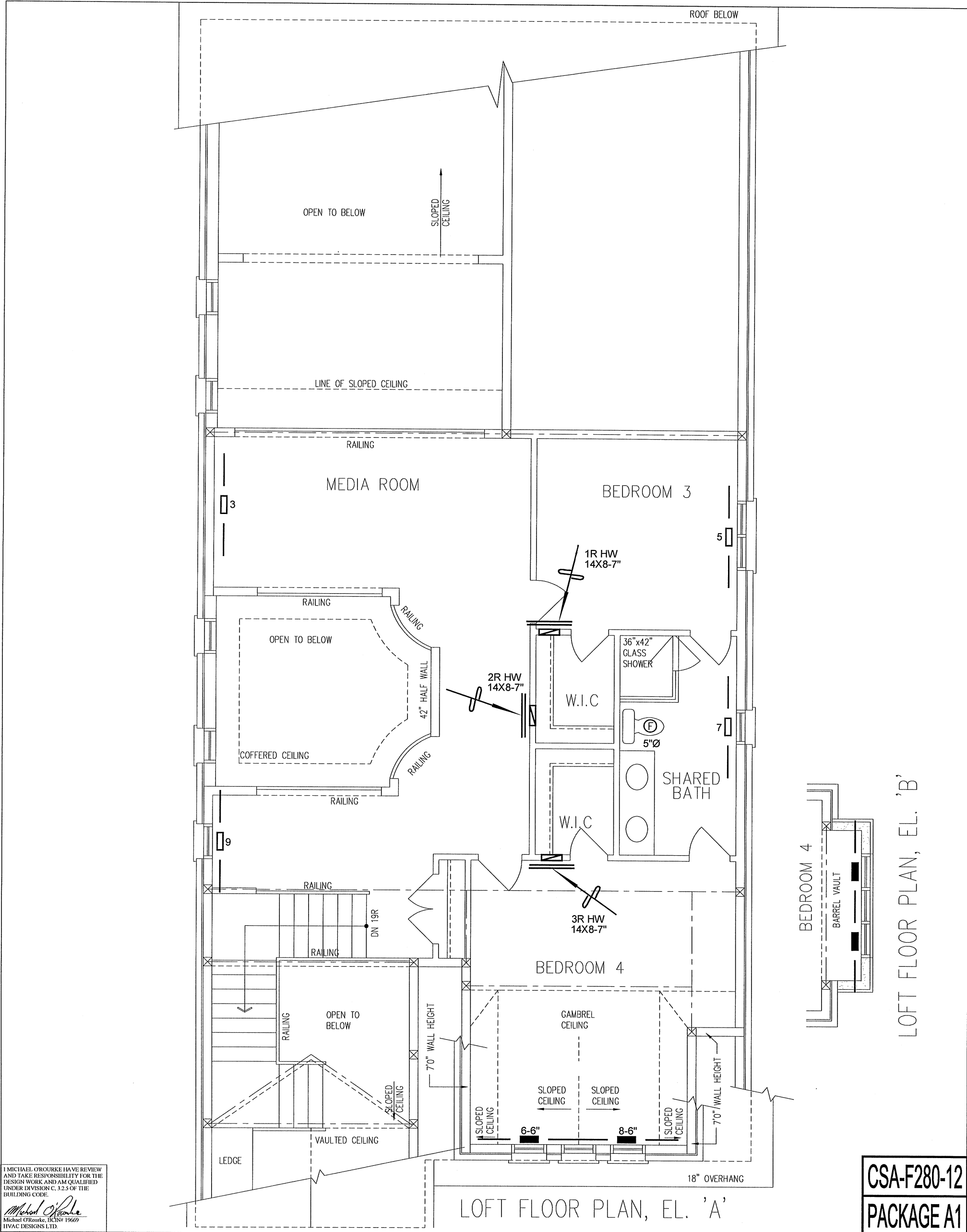
GROUND FLOOR PLAN, EL. 'A'

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		 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/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE BRIARWOOD 4000			BCIN# 19669	
2820 sqft			LO#	77455



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
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HVAC DESIGNS LTD.

CSA-F280-12
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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE BRIARWOOD 4000			BCIN# 19669	
2820 sqft			LO#	77455