


## Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

<b>A. Project Information</b>			
Building number, street name		Unit no.	Lot/con.
Municipality VAUGHAN (WOODBIDGE)	Postal code	Plan number/ other description	
<b>B. Individual who reviews and takes responsibility for design activities</b>			
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 ( )	
<b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]</b>			
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> 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: 5001 - THE HILLSBOROUGH ELEVATION A - WOB Project: PINE VALLEY & TESTON	
<b>D. Declaration of Designer</b>			
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.			
October 5, 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  
BUILDER: GOLD PARK HOMES  
TYPE: 5001 - THE HILLSBOROUGH  
ELEVATION A - WOB  
DATE: Oct-18  
LO# 80237  
GFA: 3588  
WINTER NATURAL AIR CHANGE RATE 0.389  
HEAT LOSS AT "F" 76  
HEAT GAIN AT "F" 13  
CSA-F280-12  
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	LIB	KT/GT	DIN	LAUN	WIR	FOY	MUD	BATH	ENS-4	ENS-4
GRS. WALL AREA	410	21.3	480	650	200	117	50	310	286	63	54	54
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	0	0	0	0	0	0	0	0	0	0	0	0
EAST	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
WEST	0	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	410	21.3	480	650	200	117	50	310	286	63	54	54
NET EXPOSED BSMT WALL ABOVE GR	372	21.3	480	650	200	117	50	310	286	63	54	54
EXPOSED CLG	1.3	0.6	1.3	0.6	1.3	0.6	1.3	0.6	1.3	0.6	1.3	0.6
NO ATTIC EXPOSED CLG	2.7	1.3	2.7	1.3	2.7	1.3	2.7	1.3	2.7	1.3	2.7	1.3
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
SUBTOTAL HT LOSS	2805	1987	2805	1987	2805	1987	2805	1987	2805	1987	2805	1987
SUB TOTAL HT GAIN	0.20	0.39	0.20	0.39	0.20	0.39	0.20	0.39	0.20	0.39	0.20	0.39
LEVEL FACTOR / MULTIPLIER	1127	187	1127	187	1127	187	1127	187	1127	187	1127	187
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	2	480	2	480	2	480	2	480	2	480	2	480
HEAT GAIN APPLANCES/LIGHTS	671	671	671	671	671	671	671	671	671	671	671	671
TOTAL HT LOSS BTU/H	4032	4334	4032	4334	4032	4334	4032	4334	4032	4334	4032	4334
TOTAL HT GAIN x 1.3 BTU/H												

ROOM USE	EXP. WALL	CLG. HT.	LIB	KT/GT	DIN	LAUN	WIR	FOY	MUD	BATH	ENS-4	ENS-4
GRS. WALL AREA	480	21.3	480	650	200	117	50	310	286	63	54	54
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	0	0	0	0	0	0	0	0	0	0	0	0
EAST	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
WEST	0	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	480	21.3	480	650	200	117	50	310	286	63	54	54
NET EXPOSED BSMT WALL ABOVE GR	395	21.3	480	650	200	117	50	310	286	63	54	54
EXPOSED CLG	1.3	0.6	1.3	0.6	1.3	0.6	1.3	0.6	1.3	0.6	1.3	0.6
NO ATTIC EXPOSED CLG	2.7	1.3	2.7	1.3	2.7	1.3	2.7	1.3	2.7	1.3	2.7	1.3
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
SUBTOTAL HT LOSS	4072	3920	4072	3920	4072	3920	4072	3920	4072	3920	4072	3920
SUB TOTAL HT GAIN	0.30	0.51	0.30	0.51	0.30	0.51	0.30	0.51	0.30	0.51	0.30	0.51
LEVEL FACTOR / MULTIPLIER	2066	366	2066	366	2066	366	2066	366	2066	366	2066	366
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	0	240	0	240	0	240	0	240	0	240	0	240
HEAT GAIN APPLANCES/LIGHTS	671	671	671	671	671	671	671	671	671	671	671	671
TOTAL HT LOSS BTU/H	6138	6443	6138	6443	6138	6443	6138	6443	6138	6443	6138	6443
TOTAL HT GAIN x 1.3 BTU/H												

TOTAL HEAT GAIN BTU/H: 41748 TONS: 3.48 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 65512 TOTAL COMBINED HEAT LOSS BTU/H: 68692

*Michael O'Rourke*

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

**ELEVATION A - WOB**

TYPE: 5001 - THE HILLSBOROUGH DATE: Oct-18

CFA: 3588 LO# 80237

HEATING CFM 1255 COOLING CFM 1255  
TOTAL HEAT LOSS 65,512 TOTAL HEAT GAIN 41,212  
AIR FLOW RATE CFM 19.16 AIR FLOW RATE CFM 30.45

**EL296UH090XE48C**  
FAN SPEED LOW 0 MEDLOW 0 MEDIUM 1105 HIGH 1255  
AFUE = 96 %  
INPUT (BTU/H) = 88,000  
OUTPUT (BTU/H) = 85,000  
DESIGN CFM = 1255  
CFM @ 6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	9	6
R/A	0	0	4	2	1

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

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	WIC	BED-2	BED-3	BED-4	BATH	BED-3	BATH	MBR	ENS-4	LIB	LIB	KT/GT	KT/GT	DIN	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	2.02	2.33	0.77	1.44	2.44	2.63	0.67	2.44	0.67	2.02	0.73	3.07	3.07	2.76	2.76	2.21	1.00	0.34	3.65	2.55	3.86	3.86	3.86	3.86
CFM PER RUN HEAT	39	45	15	28	47	50	13	47	13	39	14	59	59	53	53	42	19	6	70	49	74	74	74	74
RM GAIN MBH	2.17	1.93	0.20	1.85	2.03	2.82	0.23	2.03	0.23	2.17	0.42	3.22	3.22	2.97	2.97	2.21	1.67	0.05	0.58	1.28	0.67	0.67	0.67	0.67
CFM PER RUN COOLING	66	59	6	56	62	86	7	62	7	66	13	98	98	90	90	87	51	2	18	39	20	20	20	20
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	64	49	31	31	49	48	30	45	26	75	48	50	45	50	37	29	45	5	31	11	40	28	44	47
EQUIVALENT LENGTH	205	165	110	135	125	180	145	105	165	205	220	120	120	120	120	190	195	100	150	170	120	190	170	160
TOTAL EFFECTIVE LENGTH	269	214	141	166	174	228	175	150	191	280	268	170	165	170	157	219	240	105	181	181	160	218	214	207
ADJUSTED PRESSURE	0.06	0.08	0.12	0.1	0.1	0.07	0.1	0.11	0.09	0.06	0.06	0.1	0.1	0.1	0.1	0.08	0.07	0.16	0.1	0.1	0.11	0.08	0.08	0.08
ROUND DUCT SIZE	5	5	4	5	5	6	4	5	4	5	4	6	6	5	5	5	5	4	5	4	5	5	5	5
HEATING VELOCITY (ft/min)	266	330	172	206	345	255	149	345	149	286	161	301	301	389	389	308	140	69	514	562	543	543	543	543
COOLING VELOCITY (ft/min)	485	433	69	411	455	438	80	455	80	485	149	500	500	661	661	492	374	23	132	447	147	147	147	147
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	D	C	D	D	A	D	D	D	A	A	B	B	A	A	B	B	C	B	D	A	A	D	B

RUN #	25	26	27
ROOM NAME	BAS	BAS	BAS
RM LOSS MBH	3.86	2.76	3.86
CFM PER RUN HEAT	74	53	74
RM GAIN MBH	0.67	2.97	0.67
CFM PER RUN COOLING	20	90	20
ADJUSTED PRESSURE	0.17	0.16	0.17
ACTUAL DUCT LGH	40	35	59
EQUIVALENT LENGTH	110	130	150
TOTAL EFFECTIVE LENGTH	150	165	209
ADJUSTED PRESSURE	0.11	0.1	0.08
ROUND DUCT SIZE	5	5	5
HEATING VELOCITY (ft/min)	543	389	543
COOLING VELOCITY (ft/min)	147	661	147
OUTLET GRILL SIZE	3X10	3X10	3X10
TRUNK	B	D	A

TRUNK	CFM	RECT	ROUND	STATIC PRESS.	VELOCITY (ft/min)	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	470	0.06	11.4	0.06	8	TRUNK G	0	0.00	0	0	0
TRUNK B	397	0.07	10.3	0.07	8	TRUNK H	0	0.00	0	0	0
TRUNK C	888	0.06	14.4	0.06	8	TRUNK I	0	0.00	0	0	0
TRUNK D	369	0.08	9.7	0.08	8	TRUNK J	0	0.00	0	0	0
TRUNK E	0	0.00	0	0.00	0	TRUNK K	0	0.00	0	0	0
TRUNK F	0	0.00	0	0.00	0	TRUNK L	0	0.00	0	0	0

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	110	155	155	110	340	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH	47	36	37	59	20	28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	205	190	185	160	135	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LENGTH	252	226	222	219	155	198	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.07	0.07	0.07	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
ROUND DUCT SIZE	6.6	7.2	7.2	6.3	8.9	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Michael O'Rourke*

TYPE: 5001 - THE HILLSBOROUGH  
SITE NAME: PINE VALLEY & TESTON

LO # 80237  
ELEVATION A - 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	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	190.8 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
TOTAL	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	35.8	cfm

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

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	$\Delta T$ °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
ENS-4	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
W/R	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 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

## Specializing in Residential Mechanical Design Services

**HEAT LOSS AND GAIN SUMMARY SHEET**

<b>MODEL:</b> 5001 - THE HILLSBOROUGH	<b>ELEVATION A - WOB</b>	<b>BUILDER:</b> GOLD PARK HOMES
<b>SFQT:</b> 3588	<b>LO#</b> 80237	<b>SITE:</b> 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):	49222.0	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:	6.0 ft
LENGTH: 56.0 ft	WIDTH: 42.0 ft	EXPOSED PERIMETER:	141.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	55.0 ft

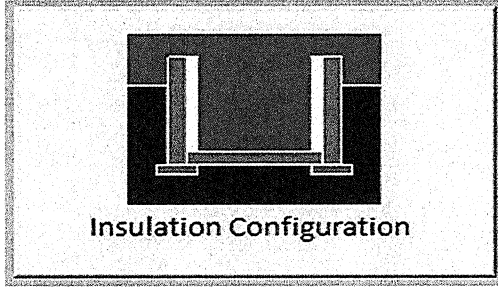
2012 OBC - COMPLIANCE PACKAGE		Compliance Package A1	
Component		Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value		60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value		31	27.65
Exposed Floor Minimum RSI (R)-Value		31	29.80
Walls Above Grade Minimum RSI (R)-Value		22	17.03
Basement 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

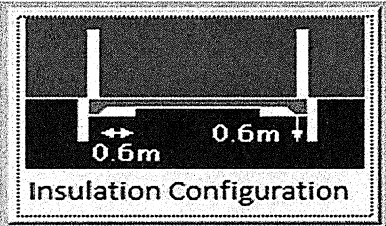
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	4.6	 Insulation Configuration
Floor Width (m):	12.8	
Exposed Perimeter (m):	43.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.58	
Window Area (m <sup>2</sup> ):	0.6	
Door Area (m <sup>2</sup> ):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		804

TYPE: 5001 - THE HILLSBOROUGH  
LO# 80237

ELEVATION A - 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):	13.7	
Exposed Perimeter (m):	16.8	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		237

TYPE: 5001 - THE HILLSBOROUGH  
LO# 80237

ELEVATION A - WOB



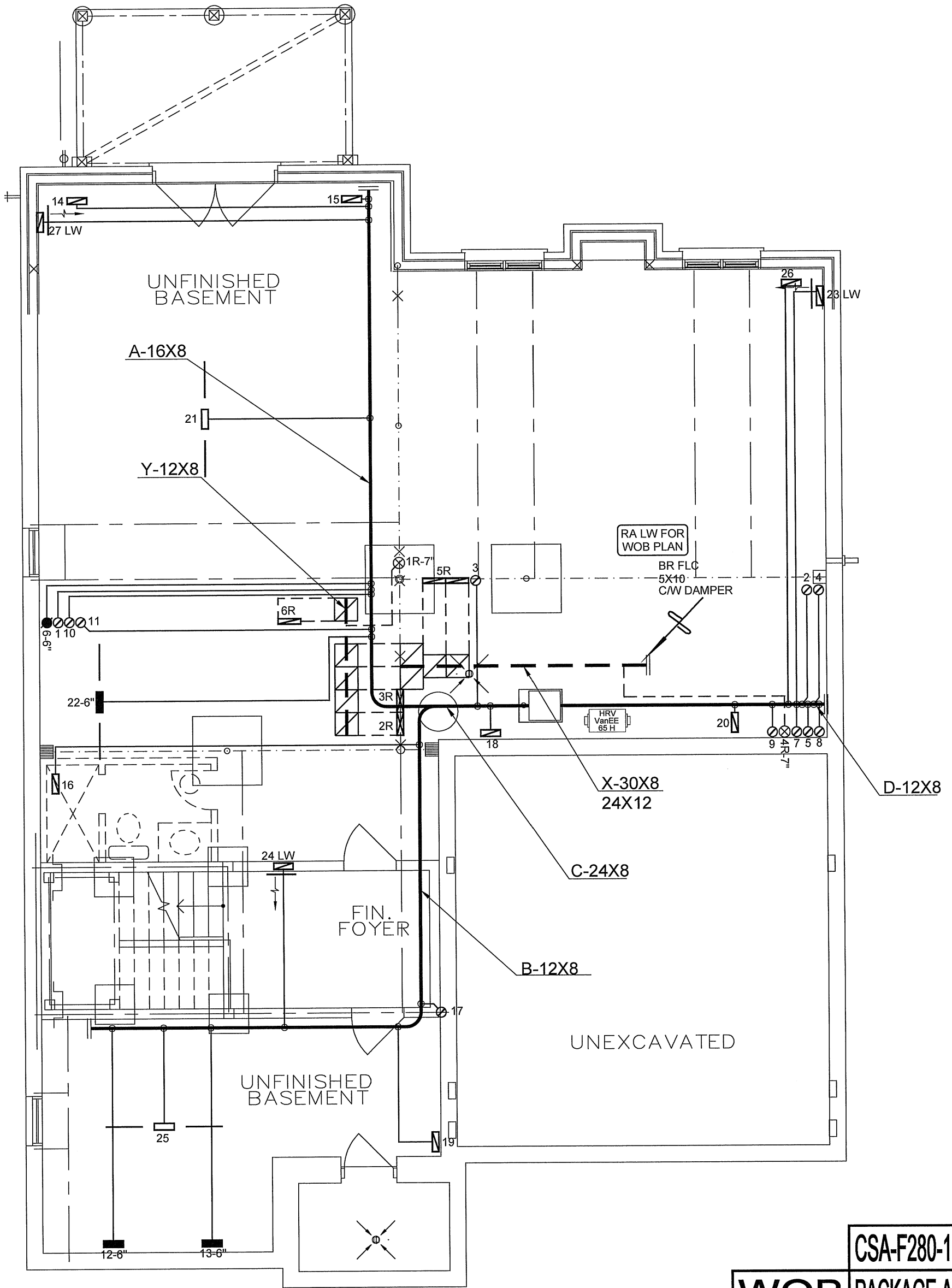
# Air Infiltration Residential Load Calculator

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):	8.53			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m <sup>3</sup> ):	1393.8			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1858.0 cm <sup>2</sup>		
	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):	0.389			
Cooling Air Leakage Rate (ACH/H):	0.130			

TYPE: 5001 - THE HILLSBOROUGH  
LO# 80237

ELEVATION A - 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.

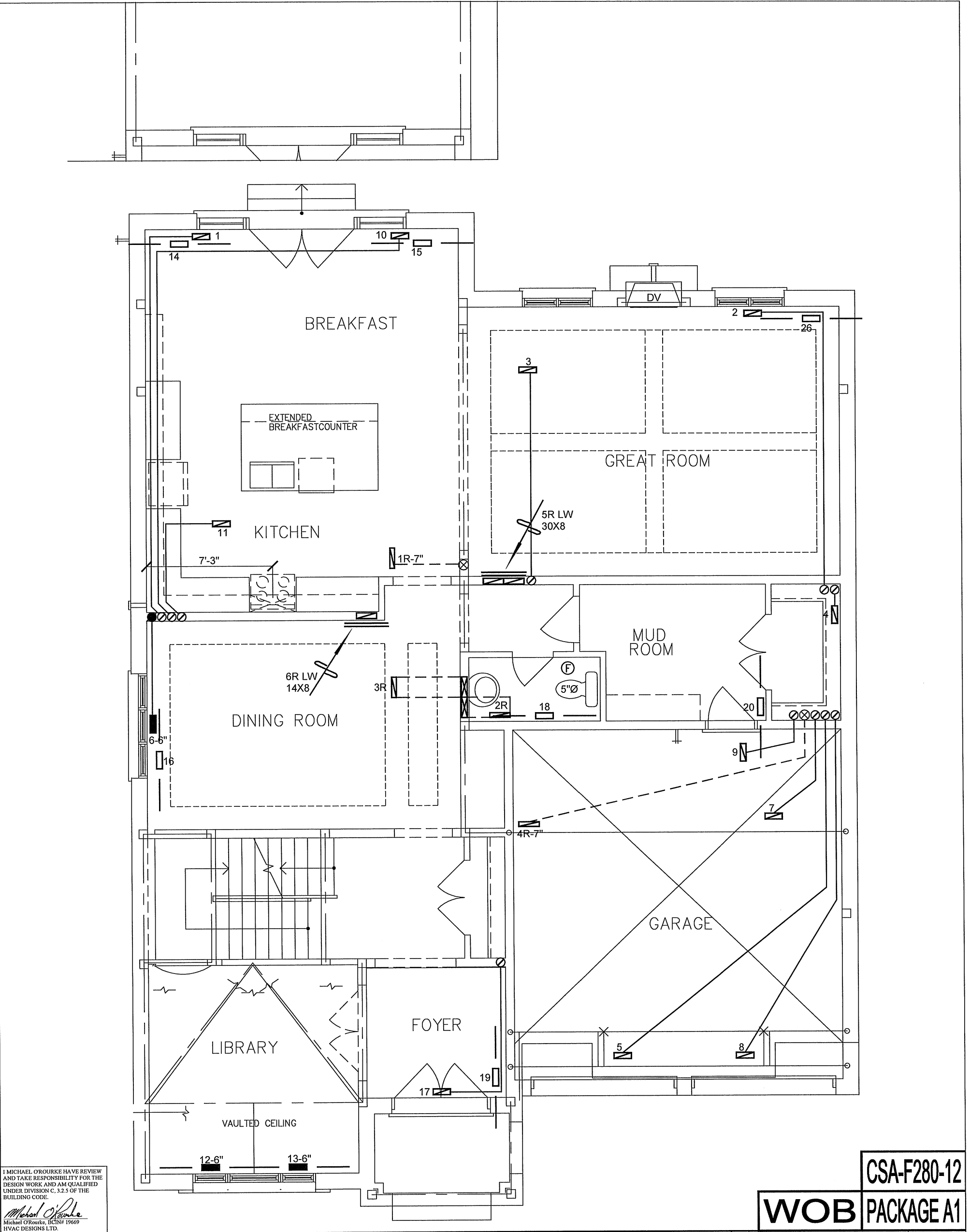
CSA-F280-12

**WOB** PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	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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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>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></div>	HEAT LOSS 68692 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 PINE VALLEY & TESTON VAUGHAN, ONTARIO ELEVATION A - WOB THE HILLSBOROUGH 5001		MODEL EL296UH090XE48C	2ND FLOOR	12	4	3	Date OCT/2018		
		INPUT 88 MBTU/H	1ST FLOOR	9	2	2	Scale 3/16" = 1'-0"		
		OUTPUT 85 MBTU/H	BASEMENT	6	1	0	BCIN# 19669		
		COOLING 3.5 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#	80237
		FAN SPEED 1255 cfm @ 0.6" w.c.							
3588 sqft									















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

CSA-F280-12

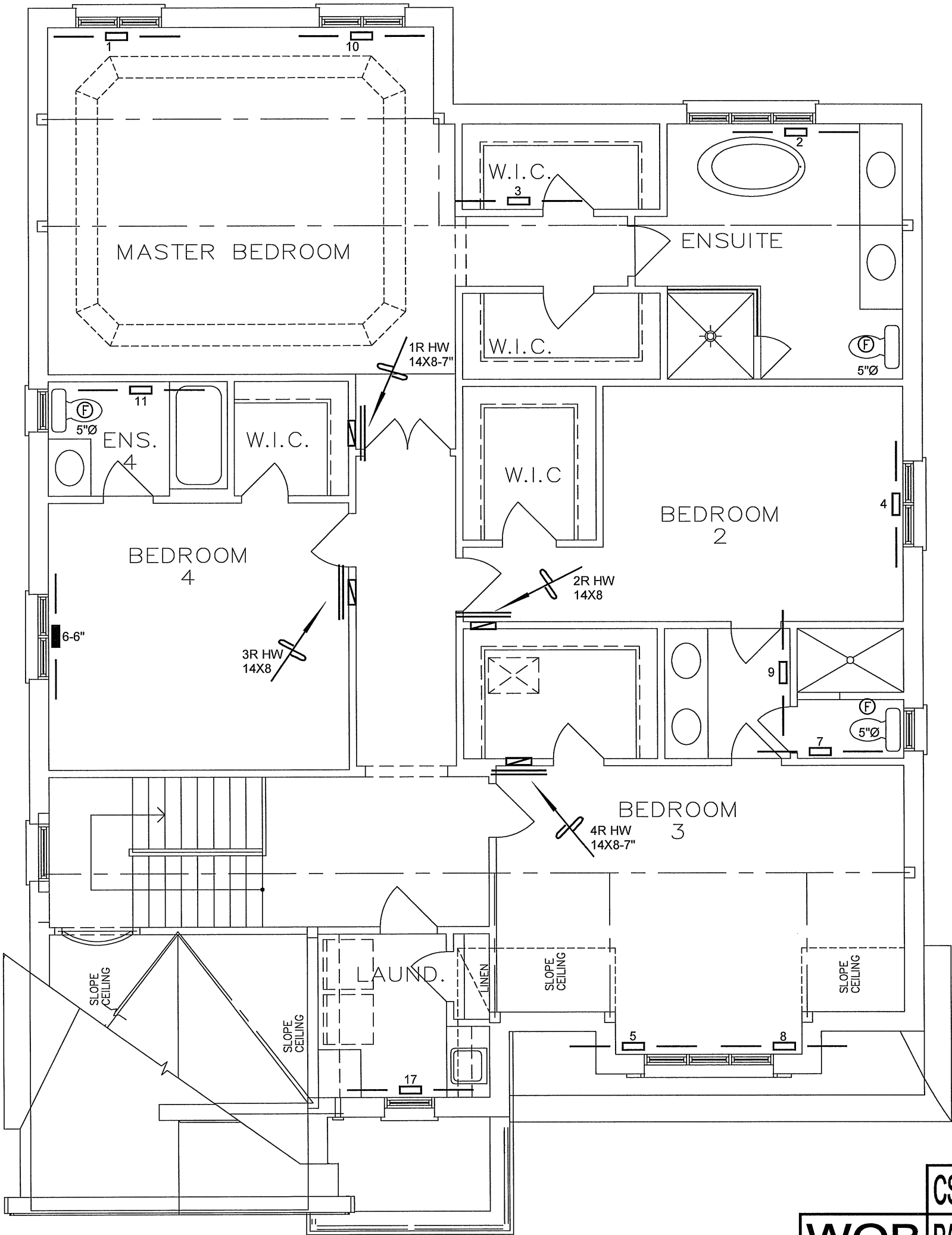
WOB

PACKAGE A1

HVAC LEGEND								3.		
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	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			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	OCT/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
ELEVATION A - WOB			BCIN# 19669	
THE HILLSBOROUGH			LO#	80237
5001	3588 sqft			



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.

CSA-F280-12

**WOB** PACKAGE A1

HVAC LEGEND						3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
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	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.
	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			Date	OCT/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
ELEVATION A - WOB			BCIN# 19669	
THE HILLSBOROUGH			LO#	80237
5001	3588 sqft			