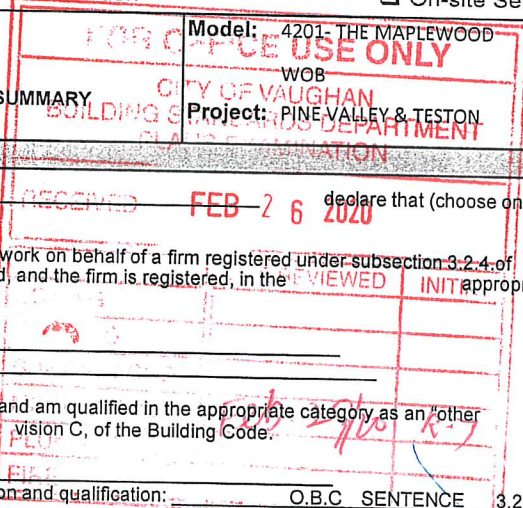
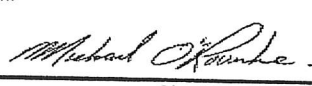


Schedule 1: Designer Information

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 M4647		
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@hvacdsgns.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: 4201- THE MAPLEWOOD WOB 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.				
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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

20-120004-GLD-DD-CM

SITE NAME: PINE VALLEY & TESTON				WOB		DATE: Oct-18		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F.		CSA-F280-12	
BUILDER: GOLD PARK HOMES				TYPE: 4201- THE MAPLEWOOD		LO# 80234		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F.		SB-12 PACKAGE A1	
ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	24.9	37	787	921	0	0	0	0	0	0	0	0
WEST	21.3	41.6	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	37.2	101.5	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	395	1763	297	193	861	145	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	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
EXPOSED FLOOR	2.6	0.4	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
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2550	1218	1436	1267	0.30	0.42	609	159	0	0	0	0	0
SUB TOTAL HT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0
LEVEL FACTOR / MULTIPLIER	0.30	0.42	0.30	0.42	0.30	0.42	0.30	0.42	0.30	0.42	0.30	0.42	0.30
AIR CHANGE HEAT LOSS	1082	153	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	0
DUCT LOSS	0	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	0
HEAT GAIN PEOPLE	240	480	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	938	938	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3632	3626	2045	1854	0.30	0.42	609	159	0	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H	0	0	0	0	0	0	0	0	0	0	0	0	0

ROOM USE				WOB		DATE: Oct-18		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F.		CSA-F280-12	
BUILDER: GOLD PARK HOMES				TYPE: 4201- THE MAPLEWOOD		LO# 80234		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F.		SB-12 PACKAGE A1	
ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	24.9	37	787	921	0	0	0	0	0	0	0	0
WEST	21.3	41.6	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	37.2	101.5	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	395	1763	297	193	861	145	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	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
EXPOSED FLOOR	2.6	0.4	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
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2550	1218	1436	1267	0.30	0.42	609	159	0	0	0	0	0
SUB TOTAL HT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0
LEVEL FACTOR / MULTIPLIER	0.30	0.42	0.30	0.42	0.30	0.42	0.30	0.42	0.30	0.42	0.30	0.42	0.30
AIR CHANGE HEAT LOSS	1082	153	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	0
DUCT LOSS	0	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	0
HEAT GAIN PEOPLE	240	480	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	938	938	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3632	3626	2045	1854	0.30	0.42	609	159	0	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H	0	0	0	0	0	0	0	0	0	0	0	0	0

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

WOB

TYPE: 4201- THE MAPLEWOOD

DATE: Oct-18

GFA: 2640 LO# 80234

HEATING CFM 1105 COOLING CFM 1105
TOTAL HEAT LOSS 65,080 TOTAL HEAT GAIN 35,561
AIR FLOW RATE CFM 16.98 AIR FLOW RATE CFM 31.07

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	4	12	5
R/A	0	0	2	3	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	3	4	5	6	7	8	10	14	15	16	17	18	19	20	21	22	23	24
MBR	1.82	1.02	1.02	1.02	3.50	3.58	1.38	3.58	1.82	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51
RM LOSS MBH	31	17	17	17	59	61	24	61	31	60	60	60	60	60	60	60	60	60	60	60
CFM PER RUN HEAT	1.81	0.93	0.93	0.93	3.12	3.12	1.78	3.12	1.81	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
RM GAIN MBH	56	29	29	29	97	55	6	55	56	89	89	89	89	89	89	89	89	89	89	89
CFM PER RUN COOLING	0.17	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	56	19	18	10	50	46	21	49	51	62	55	60	26	28	33	12	64	65	12	47
EQUIVALENT LENGTH	120	120	130	180	180	140	140	150	110	170	150	120	140	130	90	140	150	130	130	130
TOTAL EFFECTIVE LENGTH	176	139	148	190	210	186	161	199	161	232	205	180	166	158	123	152	214	195	142	177
ADJUSTED PRESSURE	0.1	0.12	0.12	0.09	0.08	0.09	0.11	0.09	0.11	0.07	0.08	0.09	0.1	0.11	0.13	0.11	0.08	0.08	0.11	0.09
ROUND DUCT SIZE	5	4	4	6	6	5	4	5	4	6	6	6	5	4	5	4	5	5	5	5
HEATING VELOCITY (f/min)	228	195	195	189	301	448	275	448	356	306	306	306	306	306	306	306	306	306	306	306
COOLING VELOCITY (f/min)	411	333	333	479	495	404	69	404	642	454	454	454	454	454	454	454	454	454	454	454
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	B	E	E	C	C	D	C	A	A	A	B	D	C	C	D	A	B	D	C

VAUGHAN
CITY OF VAUGHAN
BUILDING PERMIT DRAWINGS
ALL CONSTRUCTION SHALL
COMPLY WITH THE APPLICABLE
REQUIREMENTS OF ONTARIO
REGULATION 332/12, (AS AMENDED)
DATE: 2012 BUILDING CODE, MADE
BY THE BUILDING CODE

ROOM NAME	1	2	3	4	5	6	7	8	10	14	15	16	17	18	19	20	21	22	23	24
TRUNK A	264	0.07	8.8	10	x	8	475	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK B	505	0.07	11.2	14	x	8	649	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK C	364	0.08	9.6	10	x	8	655	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK D	548	0.08	11.2	14	x	8	705	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK E	1107	0.07	15.1	26	x	8	766	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK F	0	0.00	0	0	x	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK J	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK X	1105	0.05	16.4	32	x	8	622	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK Y	525	0.05	12.4	18	x	8	525	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK Z	400	0.05	11.2	14	x	8	514	0	0	0	0	0	0	0	0	0	0	0	0	0
DROP	1105	0.05	16.4	24	x	10	663	0	0	0	0	0	0	0	0	0	0	0	0	0

Michael O'Rourke

TYPE: 4201- THE MAPLEWOOD
SITE NAME: PINE VALLEY & TESTON

LO # 80234
WOB

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	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	3 @ 10.6 cfm	31.8 cfm
Table 9.32.3.A.	TOTAL	159.0 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	159	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	4.0	cfm

PRINCIPAL EXHAUST FAN CAPACITY			
Model: VANEE 65H	Location: BSMT		
155.0 cfm	3.0 sones ☒ HVI Approved		
PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	$\Delta T \cdot F$	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	☒ 0.3
L-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		
155	cfm high	64 cfm low
75	% Sensible Efficiency @ 32 deg F (0 deg C)	☒ HVI Approved

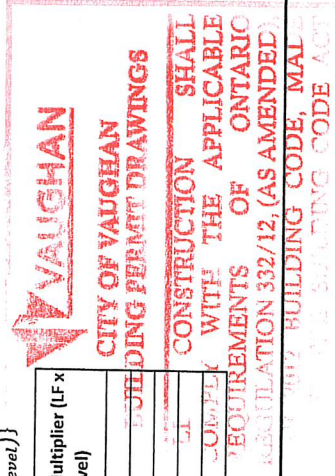
LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address:	
Roll #	Building Permit #

BUILDER:	
Name:	GOLD PARK HOMES
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#: 80234		Model: 4201- THE MAPLEWOOD		Builder: GOLD PARK HOMES		Date: 10/5/2018			
Volume Calculation									
House Volume		Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Air Change & Delta T Data			
		Bsmt	1791	10	17910	WINTER NATURAL AIR CHANGE RATE		0.407	
		First	1791	11	19701	SUMMER NATURAL AIR CHANGE RATE		0.137	
		Second	1589	9	14301				
		Third	0	9	0				
		Fourth	0	9	0				
		Total:			51,912.0 ft³				
		Total:			1470.0 m³				
5.2.3.1 Heat Loss due to Air Leakage									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$									
0.407	x	408.33	x	42 °C	x	1.2	=	8418 W	
								=	28721 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	1.08	x	0.25	=	3181 Btu/h	
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)									
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$									
		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	28,721	9,213	1.559			
		2	0.3		20,302	0.424			
		3	0.2		5,642	1.018			
		4	0		0	0.000			
		5	0	0	0	0.000			
*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairbv = 0									



HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 4201- THE MAPLEWOOD	WOB	BUILDER: GOLD PARK HOMES
SFQT: 2640	LO# 80234	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:	NORTH	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):	51912.0	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: 68.0 ft	WIDTH: 33.0 ft	EXPOSED PERIMETER:	159.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	43.0 ft

2012 OBC - COMPLIANCE PACKAGE

Component

Ceiling with Attic Space Minimum RSI (R)-Value
Ceiling Without Attic Space Minimum RSI (R)-Value
Exposed Floor Minimum RSI (R)-Value
Walls Above Grade Minimum RSI (R)-Value
Basement Walls Minimum RSI (R)-Value
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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value
Windows and Sliding Glass Doors Maximum U-Value
Skylights Maximum U-Value
Space Heating Equipment Minimum AFUE
HRV Minimum Efficiency
Domestic Hot Water Heater Minimum EF

CITY OF VAUGHAN
BUILDING PERMIT DRAWINGS
ALL CONSTRUCTION SHALL
COMPLY WITH THE APPLICABLE
REQUIREMENTS OF ONTARIO
REGULATION 332/12, (AS AMENDED)
THE 2012 BUILDING CODE, MADE
UNDER THE BUILDING CODE ACT

Compliance Package A1

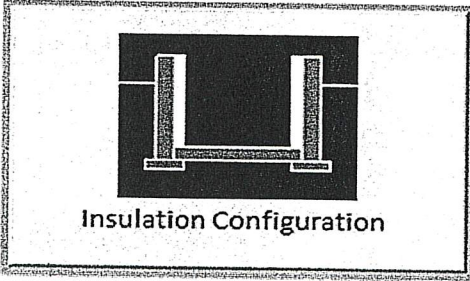
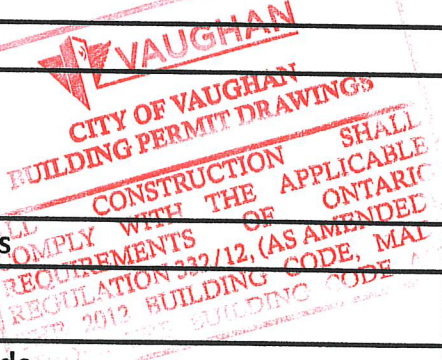
Nominal	Min. Eff.
60	59.22
31	27.65
31	29.80
22	17.03
20 ci	21.12
-	-
10	10
10	11.13
0.28	-
0.49	-
0.96	-
75%	-
0.8	-

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

Michael O'Rourke

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

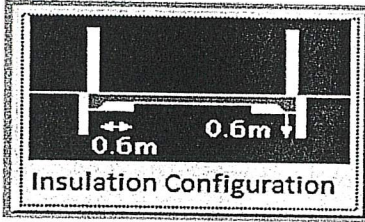
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	4.6	
Floor Width (m):	10.1	
Exposed Perimeter (m):	48.5	
Wall Height (m):	3.0	
Depth Below Grade (m):	1.79	
Window Area (m ²):	0.7	
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):	739	

TYPE: 4201- THE MAPLEWOOD
LO# 80234

WOB

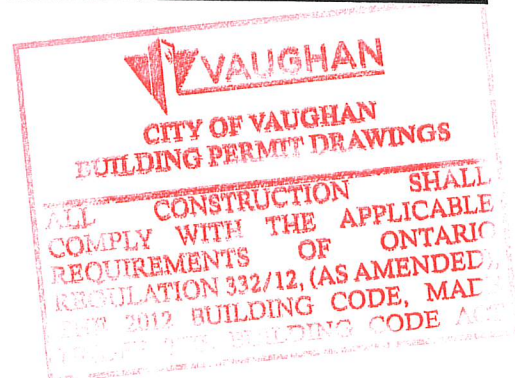
Residential Foundation Thermal Load Calculator

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):	10.1	
Exposed Perimeter (m):	13.1	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):	162	

TYPE: 4201- THE MAPLEWOOD
LO# 80234

WOB

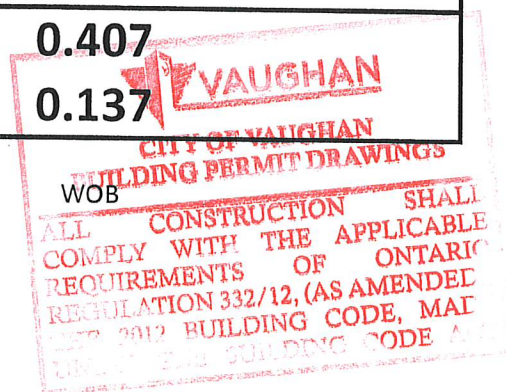


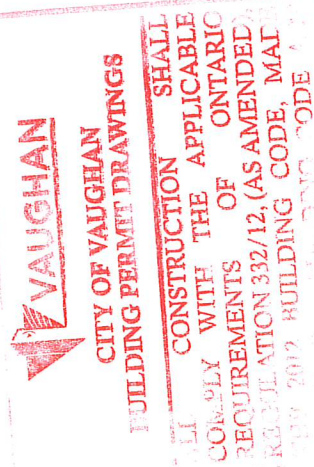
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

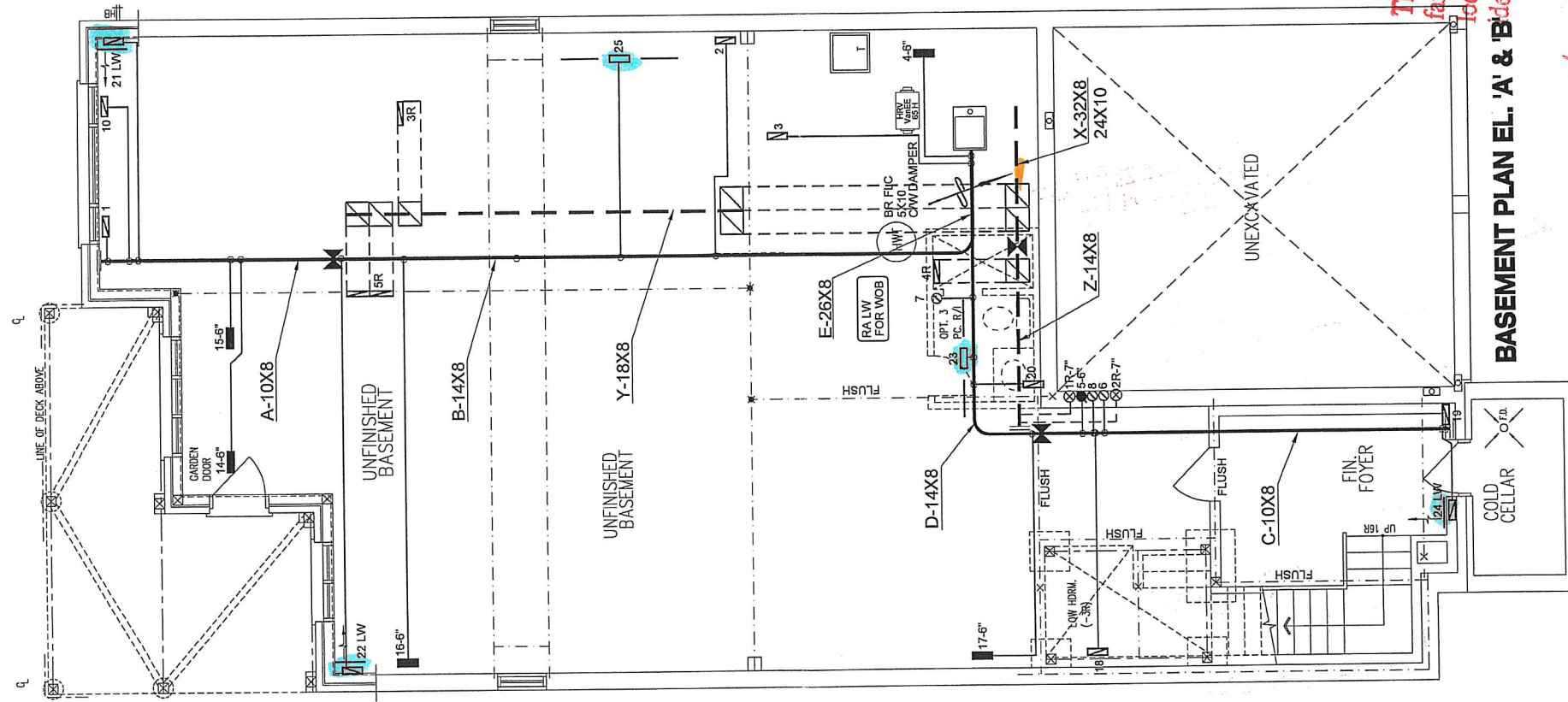
Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	9.14			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1470.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.		1959.5 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):	0.407			
Cooling Air Leakage Rate (ACH/H):	0.137			

TYPE: 4201- THE MAPLEWOOD
LO# 80234





HVAC LEGEND							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	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



☒ TYPE I
☐ TYPE II
☐ TYPE III
☐ TYPE IV
☐ COUPLED
FORCED AIR

HEATING, VENTILATING AND AIR-
CONDITIONING SYSTEMS SHALL
BE DESIGNED, CONSTRUCTED AND
INSTALLED IN ACCORDANCE WITH
THE PROVISIONS OF DIVISION B -
SECTION 6.2. OF THE 2012 BUILDING
CODE COMPENDIUM

The forced air heating system circulation fan shall be controlled by a manual switch located adjacent to the ventilation fan switch and identified by the words "Circulation Fan."

PLEASE SEE BACKSIDE
FOR NOTES

CSA-F280-12

WOB PACKAGE A1

Client

ONTARIO BUILDING CODE.

GOLD PARK HOMES

Project Name
PINE VALLEY & TESTON
VAUGHAN, ONTARIO

THE MAPLEWOOD - WOB
4201 2640 S

HVA DESIGNS LTD.

375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdsgns.ca
Web: www.hvacdsgns.ca

Specializing in Residential Mechanical Design Services
web: www.rivacdesigns.ca

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 68261 BTU/H		UNIT DATA		# OF RUNS		S/A	R/A	FANS	Sheet Title BASEMENT HEATING LAYOUT
MAKE	LENNOX			3RD FLOOR					
MODEL	EL296UH09XE48C-90			2ND FLOOR	4	2	1		
INPUT	88 MBTU/H			1ST FLOOR	12	3	6		
OUTPUT	85 MBTU/H			BASEMENT		5	1	0	Date OCT/2018
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					
FAN SPEED		1105 cfm @ 0.6" w.c.		Scale 1/8" = 1'-0"					
				LO#		80234			

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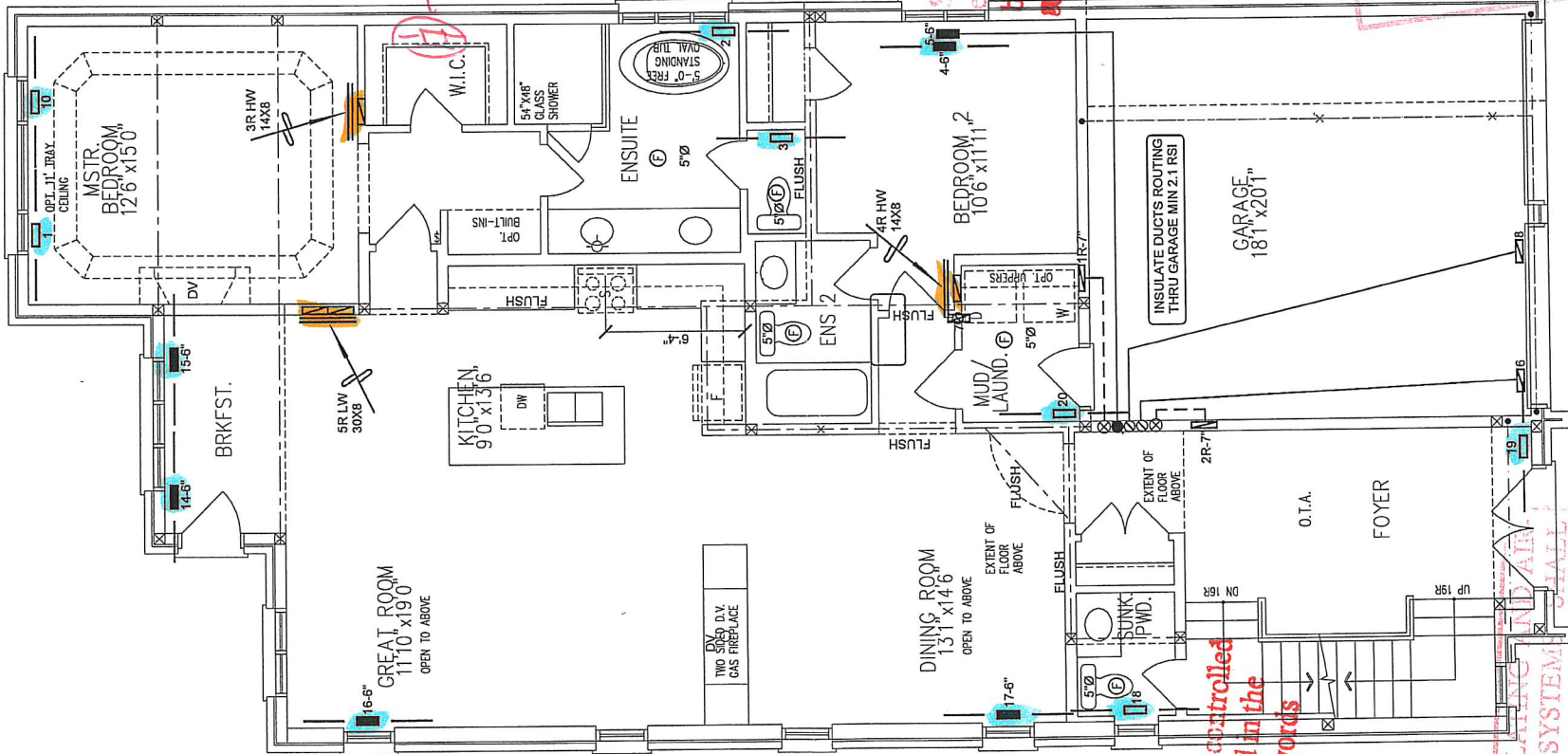
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke

Michael O'Rourke, BCIN# 19669
MAC DESIGN, LTD.

HVAC LEGEND							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	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

REVISIONS	
No.	Description
3.	
2.	
1.	



GROUND FLOOR PLAN EL. 'A'

I, MICHAEL OROURKE 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 OROURKE, JUNE 1960
HVAC DESIGNS LTD.

The Principal Exhaust Fan shall be controlled by a manual switch centrally located in the dwelling unit and identified by the words "Ventilation Fan."

HEATING, VENTILATING AND AIR-CONDITIONING SYSTEM SHALL BE DESIGNED, CONSTRUCTED AND BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF DIVISION B - SECTION 6.2. OF THE 2012 BUILDING CODE COMPENDIUM

VAUGHAN
CITY OF VAUGHAN
BUILDING PERMIT DRAWINGS
ALL CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF ONTARIO REGULATION 332/12, (AS AMENDED 2012) BUILDING CODE

Supply or Return Air Duct exposed to an unheated space shall be insulated to provide a thermal resistance of not less than RSI 2.1 (R12).

see note #17

CSA-F280-12
WOB PACKAGE A1

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GOLD PARK HOMES

Project Name
PINE VALLEY & TESTON
VAUGHAN, ONTARIO

THE MAPLEWOOD - WOB
4201

2640 sqft

HVAC DESIGNS LTD.
375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdsgns.ca
Web: www.hvacdsgns.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**

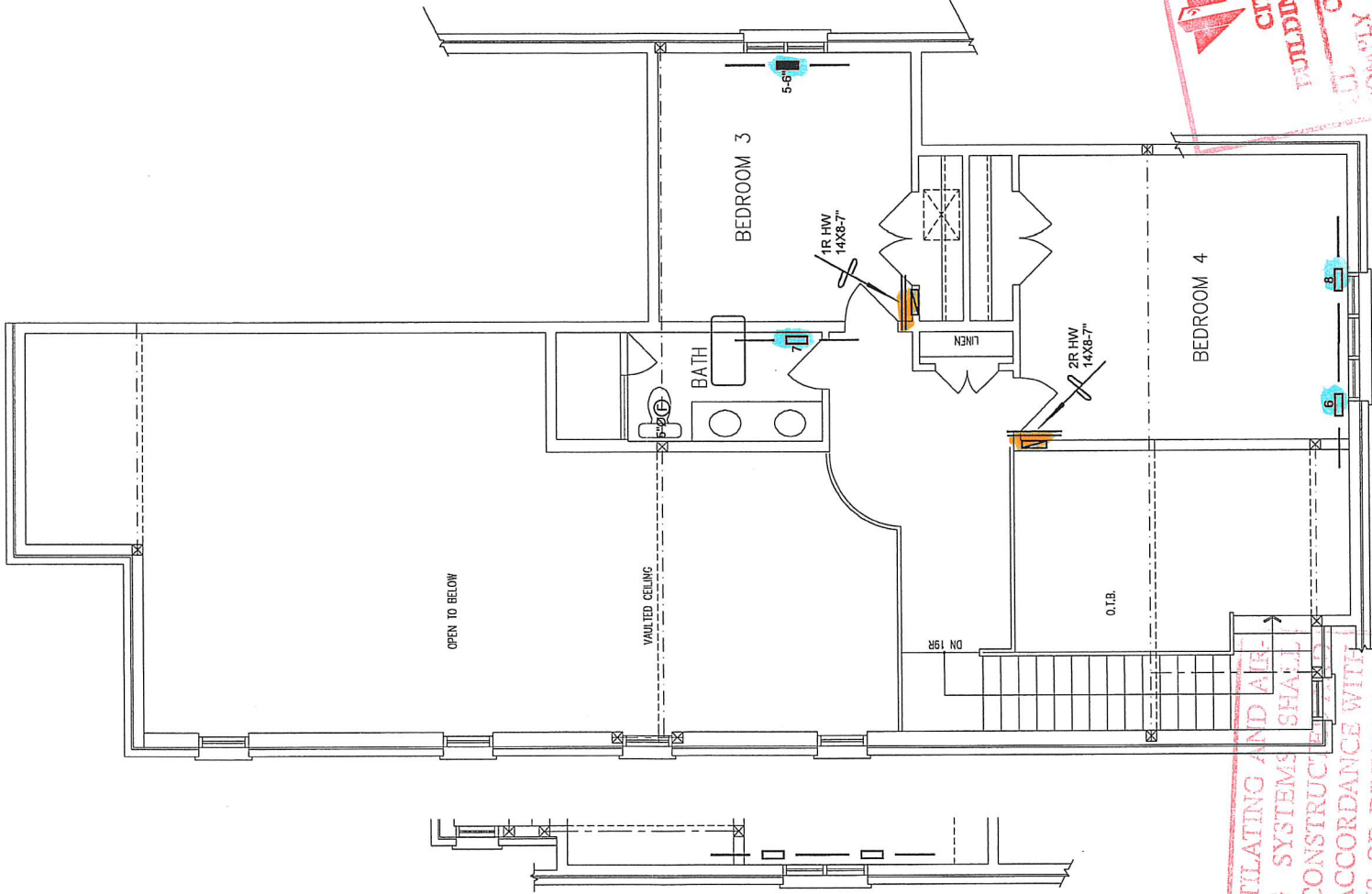
Date
OCT/2018

Scale
1/8" = 1'-0"

BCIN# 19669

LO# **80234**

HVAC LEGEND							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	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



PART LOFT FLOOR PLAN EL. 'B'

LOFT FLOOR PLAN EL. 'A'

I, MICHAEL OROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED TO SIGN THESE DRAWINGS IN ACCORDANCE WITH THE PROVISIONS OF DIVISION B - SECTION 6.2. OF THE 2012 BUILDING CODE COMPENDIUM

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

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Client
GOLD PARK HOMES

Project Name
PINE VALLEY & TESTON
VAUGHAN, ONTARIO

THE MAPLEWOOD - WOB
4201

2640 sqft

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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

SECOND FLOOR
HEATING
LAYOUT

Date OCT/2018

Scale 1/8" = 1'-0"

BCIN# 19669

LO# 80234

CSA-F280-12

WOB PACKAGE A1