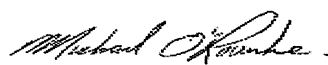


Schedule 1: Designer Information

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: 3104 CNR Project: PINE VALLEY DRIVE	
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.			
May 4, 2021			
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

SITE NAME: PINE VALLEY DRIVE										CNR		DATE: May-21		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F		CSA-F280-12	
BUILDER: GOLD PARK HOMES										TYPE: 3104		LO# 90635		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F		SB-12 PACKAGE A1	
ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	BED-2	BED-3	BATH	LOFT	B-BrTH										
GRS.WALL AREA	FACTORS	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN										
GLAZING		15	11	11	29	12	14	0	6										
NORTH	21.3 16.0	0	0	0	0	0	0	0	9										
EAST	21.3 41.6	0	0	0	0	0	0	0	9										
SOUTH	21.3 24.9	0	0	0	0	28	596	0	9										
WEST	21.3 41.6	52	1107	2161	0	0	23	489	9										
SKYLT.	37.2 101.5	0	0	0	20	426	831	0	9										
DOORS	25.2 4.3	0	0	0	0	0	0	0	9										
NET EXPOSED WALL	4.5 0.8	113	504	85	241	1076	181	80	45										
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.6	0	0	0	0	0	0	0	9										
EXPOSED CLG	1.3 0.6	64	82	38	252	323	148	192	45										
NO ATTIC EXPOSED CLG	2.7 1.3	0	0	0	0	0	0	0	9										
EXPOSED FLOOR	2.6 0.4	0	0	0	44	112	19	176	32										
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0	0	0	0										
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0	0										
SUBTOTAL HT LOSS		1693	540	1937	1179	1648	1412	246	196										
SUB TOTAL HT GAIN		0.30	0.31	0.30	0.38	0.20	0.38	0.20	0.50										
LEVEL FACTOR / MULTIPLIER		524	167	6	738	628	94	94	1.35										
AIR CHANGE HEAT LOSS		151	0	0	78	228	47	7	264										
AIR CHANGE HEAT GAIN		0	0	0	267	191	149	0	0										
DUCT LOSS		0	0	0	1	240	0	0	0										
DUCT GAIN	240	2	480	0	2942	416	416	416	0										
HEAT GAIN PEOPLE		2217	707	416	2504	3091	1641	340	460										
HEAT GAIN APPLIANCES/LIGHTS		4330	687	2736	2504	3091	1671	697	8										
TOTAL HT LOSS BTU/H																			
TOTAL HT GAIN x 1.3 BTU/H																			

ROOM USE	EXP. WALL	CLG. HT.	GREAT	KIT	LAUN	WIR	FOY	UP-FY	BAS
GRS.WALL AREA	FACTORS	LOSS	GAIN	LOSS	GAIN	LOSS	LOSS	LOSS	LOSS
GLAZING		646	286	88	169	319	315	315	953
NORTH	21.3 16.0	0	0	0	0	0	0	0	0
EAST	21.3 41.6	0	0	0	0	0	0	0	0
SOUTH	21.3 24.9	40	851	0	0	5	106	38	0
WEST	21.3 41.6	76	1617	0	0	0	0	809	0
SKYLT.	37.2 101.5	0	0	0	0	0	0	1579	8
DOORS	25.2 4.3	0	0	0	0	0	0	0	170
NET EXPOSED WALL	4.5 0.8	530	2365	0	0	63	1591	268	4
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.6	0	0	0	0	0	0	0	85
EXPOSED CLG	1.3 0.6	289	371	0	0	127	1120	277	20
NO ATTIC EXPOSED CLG	2.7 1.3	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6 0.4	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS		5205	1596	465	808	152	3029	2303	4912
SUB TOTAL HT GAIN		0.30	0.31	0.30	0.31	0.30	0.31	0.20	0.50
LEVEL FACTOR / MULTIPLIER		1610	494	144	250	937	937	878	1.35
AIR CHANGE HEAT LOSS		313	45	7	10	50	50	125	6610
AIR CHANGE HEAT GAIN		0	0	0	0	0	0	0	38
DUCT LOSS		0	0	0	0	0	0	0	0
DUCT GAIN	240	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE		5814	2089	608	1058	416	3986	3181	416
HEAT GAIN APPLIANCES/LIGHTS		7087	1475	678	751	1596	416	416	0
TOTAL HT LOSS BTU/H									0
TOTAL HT GAIN x 1.3 BTU/H									416

SITE NAME: PINE VALLEY DRIVE
BUILDER: GOLD PARK HOMES

CNR

TYPE: 3104

DATE: May-21

GFA: 1845

LO# 90835

HEATING CFM 980 COOLING CFM 980
TOTAL HEAT LOSS 40,050 TOTAL HEAT GAIN 29,296
AIR FLOW RATE CFM 24.47 AIR FLOW RATE CFM 33.45

ML196UH045XE36B \$LENNOX 45

AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = 42,800FAN SPEED
LOW 620
MEDIUM 685
HIGH 980DESIGN CFM = 980
CFM @ .6" E.S.P. =

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	6	10	5
R/A	0	0	3	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	10	12	13	14	15	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	BED-2	BED-3	BED-3	BED-3	BATH	LOFT	MBR	GREAT	GREAT	GREAT	KIT	LAUN	W/R	FOY	UP-FY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.11	0.71	2.94	1.25	1.25	1.25	1.64	0.34	1.11	2.27	2.27	2.27	2.09	0.61	1.06	3.97	3.18	2.88	2.88	2.88	2.88
CFM PER RUN HEAT	27	17	72	31	31	31	40	8	27	56	56	56	51	15	26	97	78	70	70	70	70
RM GAIN MBH	2.17	0.67	2.74	1.55	1.55	1.55	1.67	0.70	2.17	2.36	2.36	2.36	1.47	0.68	0.75	1.60	3.18	0.33	0.33	0.33	0.33
CFM PER RUN COOLING	72	22	92	52	52	52	56	23	72	79	79	79	49	23	25	53	106	11	11	11	11
ADJUSTED PRESSURE	0.17	0.17	0.16	0.17	0.17	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	0.17	0.17	0.17
ACTUAL DUCT LGH.	40	35	67	41	47	47	26	29	48	24	28	30	10	10	17	32	48	57	57	17	32
EQUIVALENT LENGTH	140	130	140	140	140	140	165	180	120	160	140	100	180	100	100	110	150	150	140	90	160
TOTAL EFFECTIVE LENGTH	180	165	207	181	187	187	191	209	168	184	168	130	190	110	117	142	198	207	197	107	192
ADJUSTED PRESSURE	0.1	0.1	0.08	0.1	0.09	0.09	0.09	0.08	0.1	0.09	0.1	0.13	0.09	0.16	0.15	0.11	0.08	0.08	0.09	0.16	0.09
ROUND DUCT SIZE	5	4	6	5	5	5	5	4	5	5	5	5	5	4	4	6	6	6	5	5	5
HEATING VELOCITY (ft/min)	198	195	367	228	228	228	294	92	198	411	411	411	374	172	298	495	398	357	514	514	514
COOLING VELOCITY (ft/min)	529	252	382	382	382	382	411	264	529	580	580	580	360	264	287	270	540	56	81	81	81
OUTLET GRILL SIZE	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10
TRUNK	A	A	A	C	C	C	D	B	A	B	B	B	B	D	D	C	C	B	A	D	C

RUN #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
ROOM NAME	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH	B-BTH
RM LOSS MBH	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
CFM PER RUN HEAT	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
RM GAIN MBH	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CFM PER RUN COOLING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
EQUIVALENT LENGTH	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
TOTAL EFFECTIVE LENGTH	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169
ADJUSTED PRESSURE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ROUND DUCT SIZE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
HEATING VELOCITY (ft/min)	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
COOLING VELOCITY (ft/min)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

SUPPLY AIR TRUNK SIZE													RETURN AIR TRUNK SIZE												
	TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY								
	CFM	PRESS.	DUCT	DUCT	(ft/min)		CFM	PRESS.	DUCT	DUCT	(ft/min)		CFM	PRESS.	DUCT	DUCT	(ft/min)								
TRUNK A	213	0.08	7.9	8	8	X	TRUNK G	0	0.00	0	0	X	TRUNK O	0	0.05	0	0	8							
TRUNK B	521	0.08	11	14	8	X	TRUNK H	0	0.00	0	0	X	TRUNK P	0	0.05	0	0	8							
TRUNK C	307	0.08	9	10	8	X	TRUNK I	0	0.00	0	0	X	TRUNK Q	0	0.05	0	0	8							
TRUNK D	151	0.09	6.7	8	8	X	TRUNK J	0	0.00	0	0	X	TRUNK R	0	0.05	0	0	8							
TRUNK E	0	0.00	0	0	8	X	TRUNK K	0	0.00	0	0	X	TRUNK S	0	0.05	0	0	8							
TRUNK F	0	0.00	0	0	8	X	TRUNK L	0	0.00	0	0	X	TRUNK T	0	0.05	0	0	8							
													TRUNK U	0	0.05	0	0	8							
													TRUNK V	0	0.05	0	0	8							
													TRUNK W	0	0.05	0	0	8							
RETURN AIR #	1	2	3	4	5						BR		TRUNK X	980	0.05	15.7	28	8							
AIR VOLUME	0	0	0	0	350		0	0	0	0	0	0	TRUNK Y	505	0.05	12.2	18	8							
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15		0	0.15	0.15	0.15	0.15	0.15	TRUNK Z	0	0.05	0	0	8							
ACTUAL DUCT LGH.	50	49	46	45	41		0	1	1	1	1	1	DROP	980	0.05	15.7	24	10							
EQUIVALENT LENGTH	235	195	155	190	185		0	0	0	0	0	0													
TOTAL EFFECTIVE LH	285	244	201	235	226		1	1	1	1	1	1													
ADJUSTED PRESSURE	0.05	0.06	0.07	0.06	0.07		1	1	1	1	1	1													
ROUND DUCT SIZE	6	7.8	5.8	7.5	9.8		14.80	14.80	14.80	14.80	14.80	14.80													
INLET GRILL SIZE	8	8	8	8	8		0	0	0	0	0	0													
	X	X	X	X	X		X	X	X	X	X	X													
INLET GRILL SIZE	14	24	14	14	30		0	0	0	0	0	0													

Michael O'Rourke

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

TYPE: 3104
SITE NAME: PINE VALLEY DRIVE

LO # 90635
CNR

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>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>5</u> @ 10.6 cfm	<u>53.0</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		<u>63.6</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>169.6</u>	cfm
Less Principal Ventil. Capacity	<u>63.6</u>	cfm
Required Supplemental Capacity	<u>106.0</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE V150H	Location: BSMT
63.6 cfm	☒ HVI Approved

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

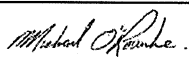
SUPPLEMENTAL FANS		BY INSTALLING CONTRACTOR		
Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	☒	3.5
BATH	BY INSTALLING CONTRACTOR	50	☒	3.5
W/R	BY INSTALLING CONTRACTOR	50	☒	3.5

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE V150H		
150 cfm high	35 cfm low	
75 % 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:	
HRAI #	001820
Date:	May-21

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																					
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																					
LO#: 90635	Model: 3104	Builder: GOLD PARK HOMES	Date: 5/4/2021																																																																		
Volume Calculation		Air Change & Delta T Data																																																																			
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$HL_{air-b} = LR_{air-b} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$																																																																					
0.336	x	236.50	x																																																																		
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		13749 Btu/h																																																																			
5.2.3.2 Heat Loss due to Mechanical Ventilation																																																																					
$HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																																					
64 CFM	x	76 °F	x																																																																		
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		1305 Btu/h																																																																			
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																																					
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*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairve = 0																																																																					

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 3104	CNR	BUILDER: GOLD PARK HOMES
SFQT: 1845	LO# 90635	SITE: PINE VALLEY DRIVE

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:	ATTACHED	# 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 (ft ³):	30067.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.5 ft
LENGTH: 44.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	133.0 ft

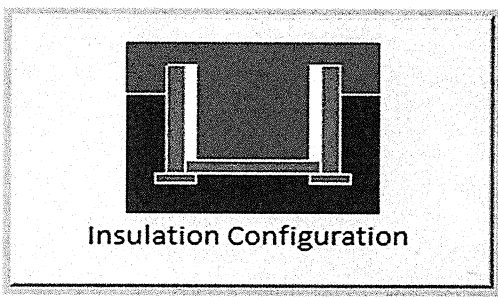
2012 OBC - COMPLIANCE PACKAGE		
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement 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	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):	13.4	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	40.5	
Wall Height (m):	2.7	
Depth Below Grade (m):	2.29	
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):		1063

TYPE: 3104
LO# 90635

CNR

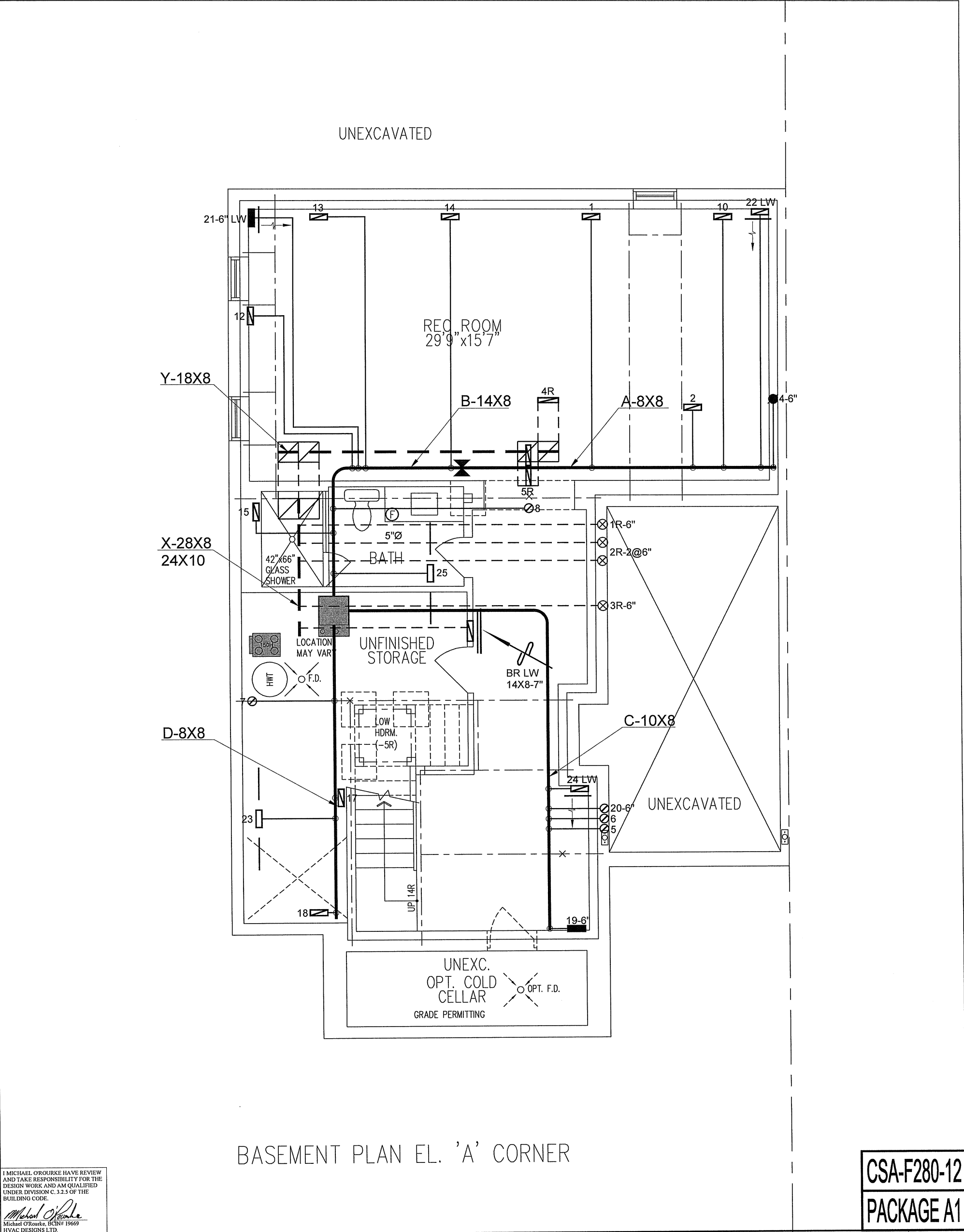
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

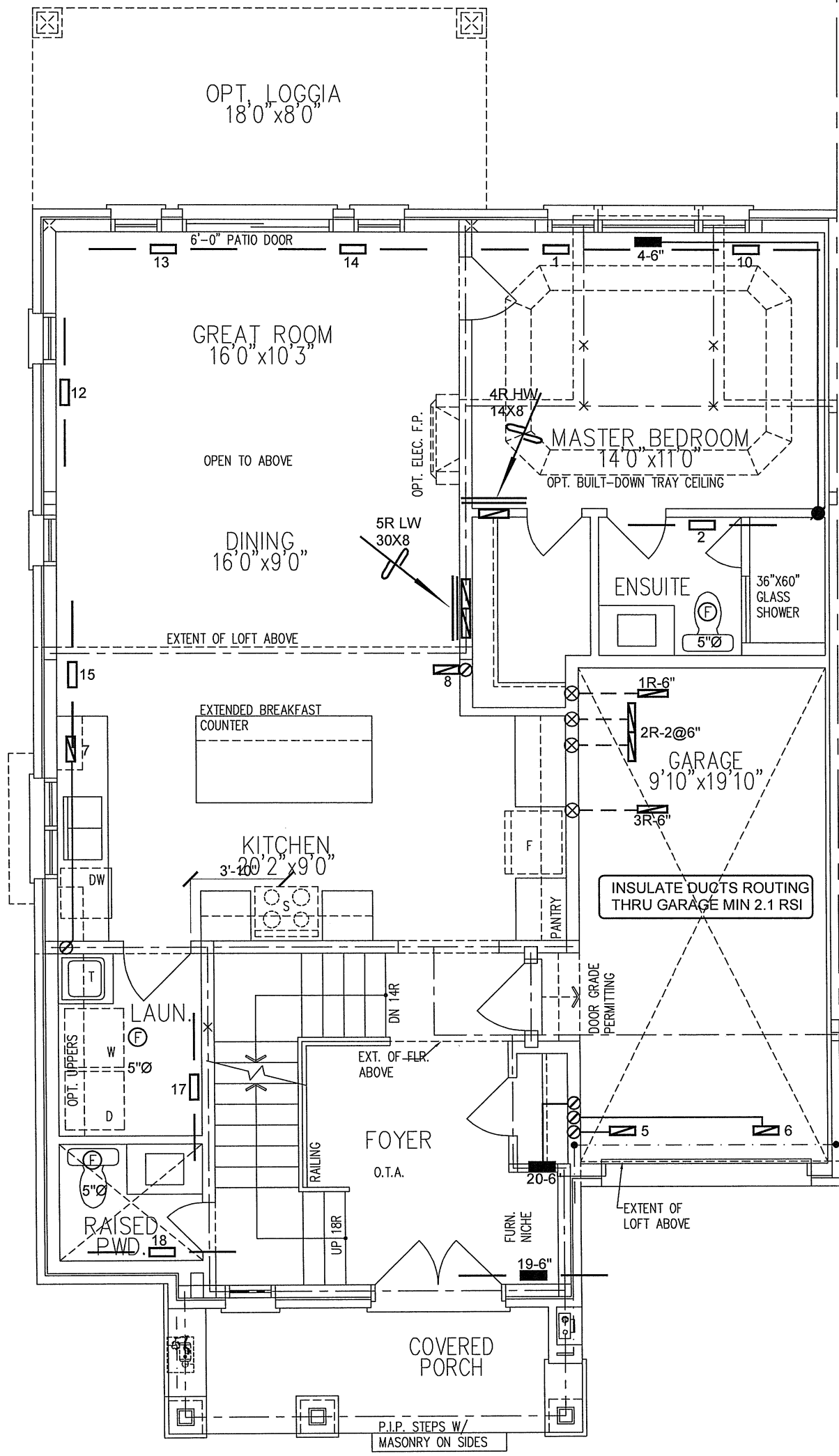
Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	6.55			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	851.4			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1134.9 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	30.0	30.0		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.336			
Cooling Air Leakage Rate (ACH/H):	0.109			

TYPE: 3104
LO# 90635

CNR



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		HVACDESIGNS LTD. 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.				HEAT LOSS 41355 BTU/H		# OF RUNS		S/A	R/A	FANS	Sheet Title	
GOLD PARK HOMES Project Name PINE VALLEY DRIVE VAUGHAN, ONTARIO 3104 - CNR1845 sqft						UNIT DATA		3RD FLOOR					BASEMENT HEATING LAYOUT	
						MAKE LENNOX		2ND FLOOR		6	3	1	Date APR/2021	
						MODEL ML196UH045XE36B		1ST FLOOR		10	2	4	Scale 3/16" = 1'-0"	
						INPUT 44 MBTU/H		BASEMENT		5	1	1	BCIN# 19669	
						OUTPUT 42.8 MBTU/H		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						
						COOLING 2.5 TONS								
FAN SPEED 980 cfm @ 0.6" w.c.														



GROUND FLOOR PLAN, EL. 'A' CORNER

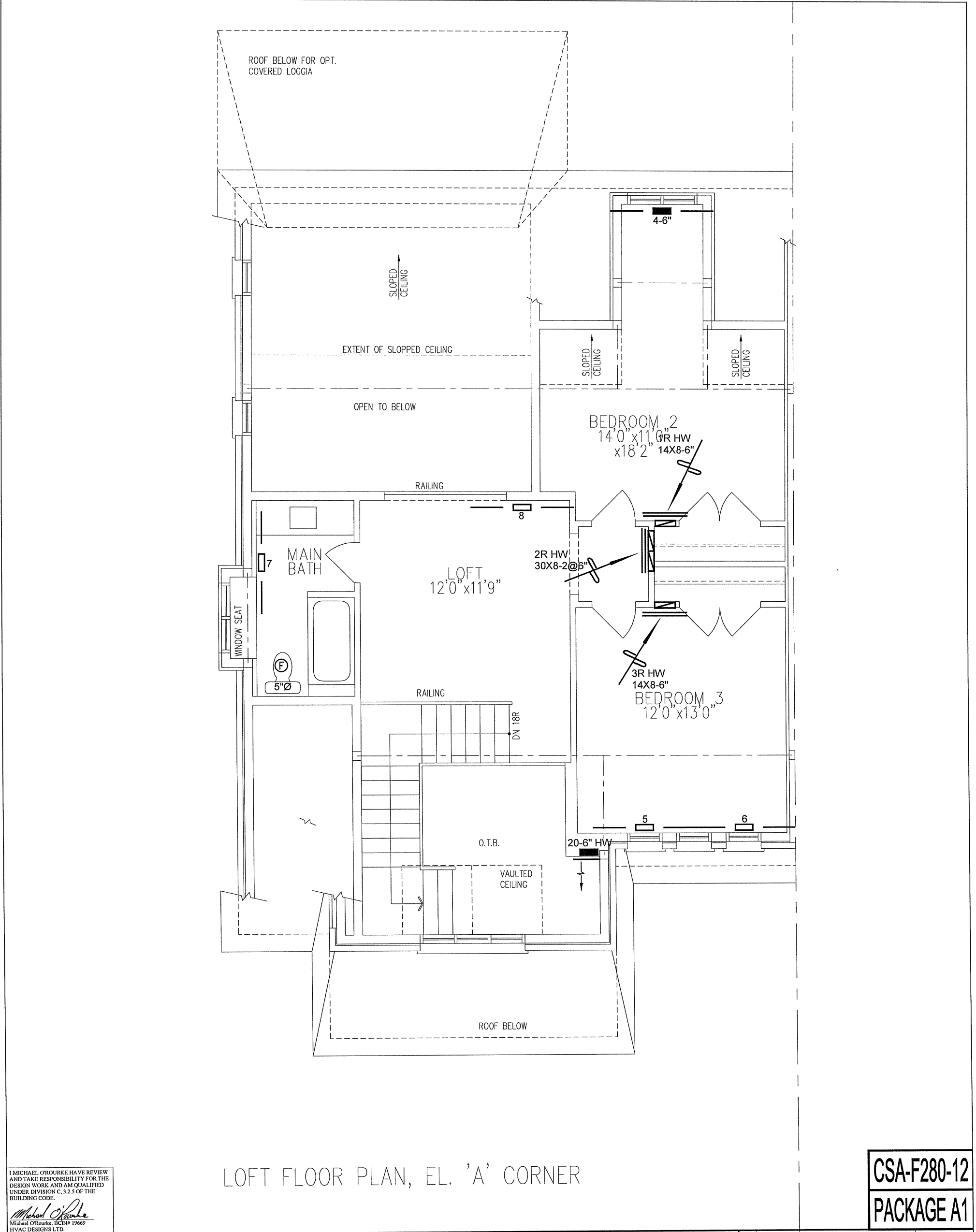
CSA-F280-12
PACKAGE A1

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.

HVAC LEGEND								3.		
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								Description	Date	

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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	APR/2021
PINE VALLEY DRIVE VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
3104 - CNR			BCIN# 19669	
1845 sqft			LO#	90635



LOFT FLOOR PLAN, EL. 'A' CORNER

CSA-F280-12
PACKAGE A1

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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	APR/2021
PINE VALLEY DRIVE VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
3104 - CNR			BCIN# 19669	
1845 sqft			LO#	90635