

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 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.

SITE NAME: PINE VALLEY DRIVE BUILDER: GOLD PARK HOMES										DATE: May-21 LO# 90634	WINTER NATURAL AIR CHANGE RATE 0.336 HEAT LOSS AT °F. 76		CSA-F280-12 SB-12 PACKAGE A1									
TYPE: 3104										GFA: 1839	SUMMER NATURAL AIR CHANGE RATE 0.109 HEAT GAIN AT °F. 13											
ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS LOSS GAIN	NET EXPOSED BSMT WALL ABOVE GR	NET EXPOSED BSMT WALL ABOVE GR	NO ATTIC EXPOSED CLG	EXPOSED FLOOR	BASEMENT/CRAWL HEAT LOSS	SLAB ON GRADE HEAT LOSS	SUBTOTAL HT LOSS	SUB TOTAL HT GAIN	LEVEL FACTOR / MULTIPLIER	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
EXP. WALL	15	11	11	165	121	152	152	82	2.7	0	0	0	0	0	0	0	0	0	0	0	0	0
GRS.WALL AREA	21.3	14.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GLAZING	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST	21.3	38.4	0	0	0	0	0	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
DOORS	25.2	4.3	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	117	522	88	121	540	91	2.7	1.3	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	64	82	38	0	0	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
EXPOSED FLOOR	2.6	0.4	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
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
SUBTOTAL HT LOSS	1626	1968	540	91	1920	1078	1078	1323	2957	2469	2538	2846	2846	2846	2846	2846	2846	2846	2846	2846	2846	2846
SUB TOTAL HT GAIN	0.30	0.31	0.30	0.31	0.30	0.31	0.31	0.31	0.30	0.31	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
LEVEL FACTOR / MULTIPLIER	503	503	167	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	2	480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
TOTAL HT LOSS BTU/H	2129	3801	707	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552
TOTAL HT GAIN x 1.3 BTU/H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: 3104										GFA: 1839	WINTER NATURAL AIR CHANGE RATE 0.336 HEAT LOSS AT °F. 76		CSA-F280-12 SB-12 PACKAGE A1									
TYPE: 3104										GFA: 1839	SUMMER NATURAL AIR CHANGE RATE 0.109 HEAT GAIN AT °F. 13											
ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	GRS.WALL AREA GLAZING	FACTORS LOSS GAIN	NET EXPOSED BSMT WALL ABOVE GR	NET EXPOSED BSMT WALL ABOVE GR	NO ATTIC EXPOSED CLG	EXPOSED FLOOR	BASEMENT/CRAWL HEAT LOSS	SLAB ON GRADE HEAT LOSS	SUBTOTAL HT LOSS	SUB TOTAL HT GAIN	LEVEL FACTOR / MULTIPLIER	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
EXP. WALL	15	11	11	165	121	152	152	82	2.7	0	0	0	0	0	0	0	0	0	0	0	0	0
GRS.WALL AREA	21.3	14.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GLAZING	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST	21.3	38.4	0	0	0	0	0	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
DOORS	25.2	4.3	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	117	522	88	121	540	91	2.7	1.3	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	64	82	38	0	0	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
EXPOSED FLOOR	2.6	0.4	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
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
SUBTOTAL HT LOSS	1626	1968	540	91	1920	1078	1078	1323	2957	2469	2538	2846	2846	2846	2846	2846	2846	2846	2846	2846	2846	2846
SUB TOTAL HT GAIN	0.30	0.31	0.30	0.31	0.30	0.31	0.31	0.31	0.30	0.31	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
LEVEL FACTOR / MULTIPLIER	503	503	167	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	2	480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
TOTAL HT LOSS BTU/H	2129	3801	707	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552
TOTAL HT GAIN x 1.3 BTU/H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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GLAZING	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	38.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST	21.3	38.4	0	0	0	0	0	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
DOORS	25.2	4.3	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	117	522	88	121	540	91	2.7	1.3	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	64	82	38	0	0	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
EXPOSED FLOOR	2.6	0.4	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
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
SUBTOTAL HT LOSS	1626	1968	540	91	1920	1078	1078	1323	2957	2469	2538	2846	2846									

SITE NAME: PINE VALLEY DRIVE
BUILDER: GOLD PARK HOMES

TYPE: 3104

DATE: May-21

GFA: 1839

LO# 90634

HEATING CFM 980 COOLING CFM 980
TOTAL HEAT LOSS 39,489 TOTAL HEAT GAIN 24,773
AIR FLOW RATE CFM 24.82 AIR FLOW RATE CFM 39.56ML196UH045XE36B \$LENNOX 45
FAN SPEED LOW 620
MEDIUM 685
HIGH 980AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = 42,800
DESIGN CFM = 980
CFM @ .8" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	7	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	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	BED-2	BED-3	BED-3	BED-3	BATH	LOFT	BATH	MBR	GREAT	GREAT	GREAT	GREAT	KIT	LAUN	WIR	FOY	UP-FY	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.06	0.71	2.96	1.27	1.27	1.27	0.52	0.35	0.52	1.06	2.29	2.29	2.29	2.29	2.09	0.61	1.06	3.97	3.23	2.88	2.88	2.88	2.88	2.88
CFM PER RUN HEAT	26	18	73	32	32	32	13	9	13	26	57	57	57	57	52	15	26	98	80	71	71	71	71	71
RM GAIN MBH	1.90	0.55	2.47	1.42	1.42	1.42	0.44	0.58	0.44	1.90	1.99	1.99	1.99	1.99	1.32	0.56	0.64	1.04	2.92	0.29	0.29	0.29	0.29	0.29
CFM PER RUN COOLING	75	22	98	56	56	56	18	23	18	75	79	79	79	79	52	22	25	41	116	12	12	12	12	12
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	0.17	0.17	0.16	0.15	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	40	35	67	41	47	47	26	29	28	48	24	28	30	30	10	10	17	32	48	57	57	57	57	57
EQUIVALENT LENGTH	140	130	140	140	140	140	165	180	160	120	160	140	100	180	180	100	100	110	150	150	140	140	140	140
TOTAL EFFECTIVE LENGTH	180	165	207	181	187	187	191	209	188	168	184	168	130	190	190	110	117	142	198	207	197	107	192	192
ADJUSTED PRESSURE	0.1	0.1	0.08	0.1	0.09	0.09	0.09	0.08	0.09	0.1	0.09	0.1	0.13	0.09	0.09	0.16	0.15	0.11	0.08	0.08	0.08	0.09	0.16	0.09
ROUND DUCT SIZE	5	4	6	5	5	5	4	4	4	5	5	5	5	5	5	4	4	6	6	6	6	5	5	5
HEATING VELOCITY (ft/min)	191	207	372	235	235	235	149	103	149	191	419	419	419	419	382	172	298	500	408	591	362	521	521	521
COOLING VELOCITY (ft/min)	551	552	500	411	411	411	207	264	207	551	580	580	580	580	382	252	287	209	591	61	88	88	88	88
OUTLET GRILL SIZE	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10
TRUNK	A	A	A	C	C	C	D	B	B	A	B	B	B	B	B	D	D	C	C	C	B	A	D	C

25	ROOM NAME	B-BTH
0.46	RM LOSS MBH	
11	CFM PER RUN HEAT	
0.01	RM GAIN MBH	
0	CFM PER RUN COOLING	
0.17	ADJUSTED PRESSURE	
9	ACTUAL DUCT LGH	
160	EQUIVALENT LENGTH	
169	TOTAL EFFECTIVE LENGTH	
0.1	ADJUSTED PRESSURE	
4	ROUND DUCT SIZE	
126	HEATING VELOCITY (ft/min)	
0	COOLING VELOCITY (ft/min)	
3X10	OUTLET GRILL SIZE	
B	TRUNK	

TYPE: 3104
SITE NAME: PINE VALLEY DRIVE

LO # 90634

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: VANE V150H	Location: BSMT
<u>63.6</u> cfm	☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	$\Delta T \cdot F$
63.6 CFM	X 76 F
X	X
1.08	X
	0.25

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

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE V150H		
<u>150</u> cfm high	<u>35</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:	May-21

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																																			
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																																			
LO#: 90634	Model: 3104	Builder: GOLD PARK HOMES	Date: 5/4/2021																																																																																
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6.2.6 Sensible Gain due to Air Leakage																																																																																			
$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ $= 0.109 \times 236.08 \times 7^\circ\text{C} \times 1.2 = 220 \text{ W}$ $= 13724 \text{ Btu/h} = 752 \text{ Btu/h}$																																																																																			
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5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																																																			
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HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 3104**SFQT:** 1839**LO#** 90634**BUILDER:** GOLD PARK HOMES**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):	30013.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	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	-

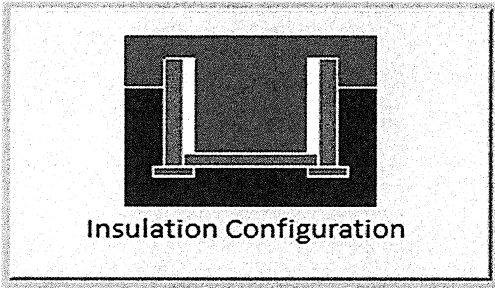
INDIVIDUAL BCIN: 19669

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# 90634

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):	849.9			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1132.9 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# 90634

[illegible]

CSA-F280-12
PACKAGE A1

SYMBOL	DESCRIPTION	SYMBOL
	SUPPLY AIR GRILLE	
	SUPPLY AIR GRILLE 6" BOOT	
	SUPPLY AIR BOOT ABOVE	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE TO BE USED FOR THE USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATE OF ISSUANCE OF THESE DRAWINGS. THIS DRAWING IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF THE DESIGNER. ONTARIO BUILDING CODE.

Client _____

GOLD PARK HOMES

Project Name _____

PINE VALLEY DRIVE
VAUGHAN, ONTARIO

3104 1839 sqft

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE
	SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE
	6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE

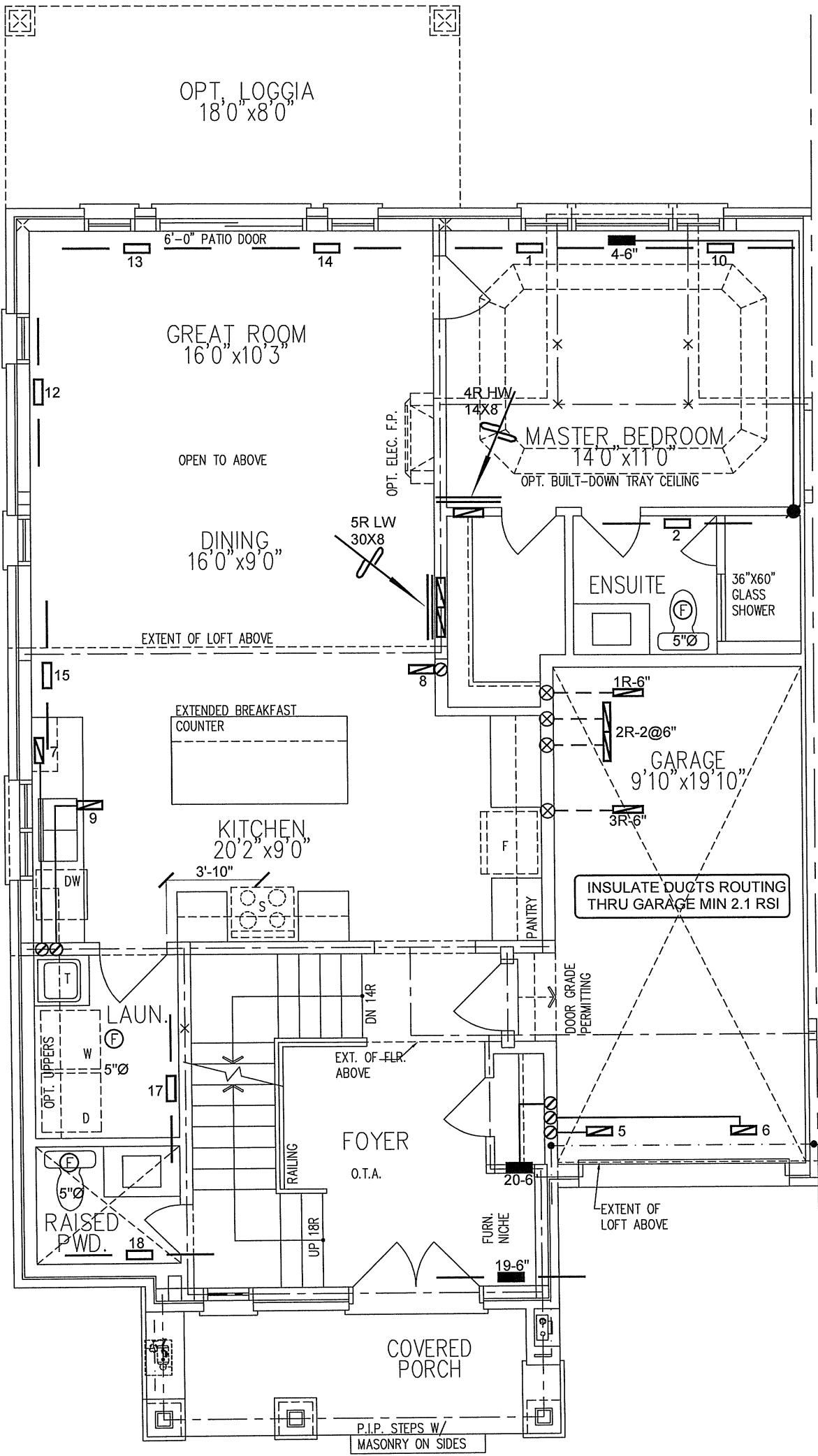
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375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdsgns.ca
Web: www.hvacdsgns.ca
Specializing in Residential Mechanical Design Services

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.

		3.			
SYMBOL		DESCRIPTION	4.		
		RETURN AIR STACK ABOVE	5.		
		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
		REDUCER	REVISIONS		
MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USED PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE					
HEAT LOSS 40794 BTU/H		# OF RUNS	S/A	R/A	FANS
UNIT DATA		3RD FLOOR			
MAKE		2ND FLOOR	7	3	1
MODEL		1ST FLOOR	10	2	4
ML196UH045XE36B		BASEMENT	5	1	1
INPUT		Date			
44 MBTU/H		APR/2021			
OUTPUT		Scale			
42.8 MBTU/H		3/16" = 1'-0"			
COOLING		BCIN# 19669			
2.0 TONS		LO#			
FAN SPEED		90634			
980 cfm @ 0.6" w.c.		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			



GROUND FLOOR PLAN, EL. 'A'

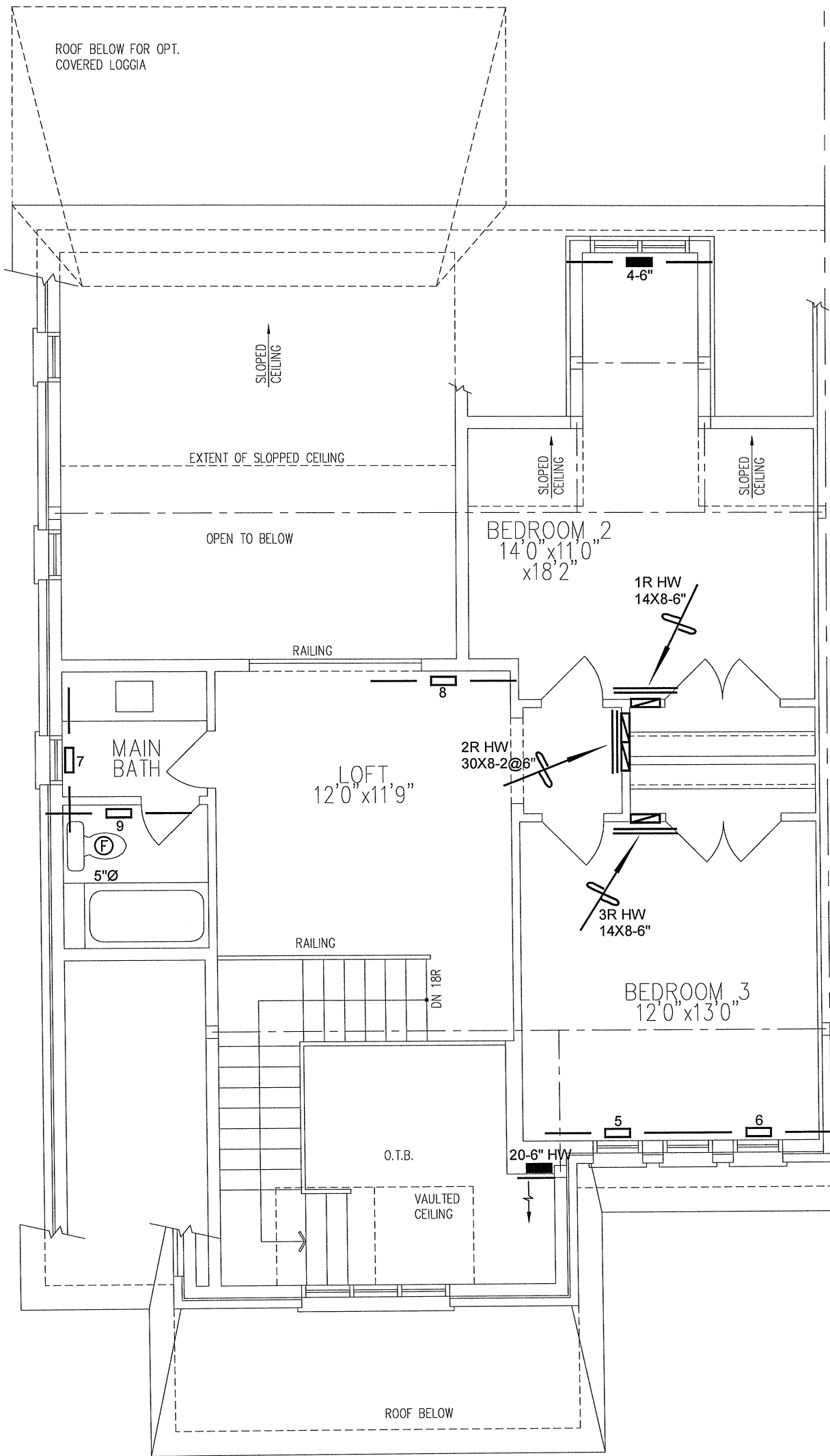
CSA-F280-12
PACKAGE A1

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.

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.	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS	
								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			BCIN# 19669	
1839 sqft			LO#	90634



LOFT FLOOR PLAN, EL. 'A'

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
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.		
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		
									Description	Date

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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			BCIN# 19669	
1839 sqft			LO#	90634