

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@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: 5013 - ELEV B - RIVERVIEW Project: PINE VALLEY PH 2	
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 5, 2022 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 PH 2										DATE May-22		WINTER NATURAL AIR CHANGE RATE 0.340		HEAT LOSS AT °F. 76		CSA-F280-12	
BUILDER: GOLD PARK HOMES										LO# 5629		SUMMER NATURAL AIR CHANGE RATE 0.114		HEAT GAIN AT °F. 13		SB-12 PACKAGE A1	
TYPE: 5013 - ELEV B - RIVERVIEW										GFA: 4501		ENS-2		ENS-3		ENS-4	
ROOM USE										BED-2		BED-3		BED-4		LOFT	
EXP. WALL CLG. HT.										WIC		ENS		ENS-2		ENS-3	
FACTORS										10		12		47		11	
GRS.WALL AREA										90		108		423		99	
GLAZING										LOSS		LOSS		LOSS		LOSS	
NORTH										0		0		0		0	
EAST										0		0		0		0	
SOUTH										0		0		0		0	
WEST										0		0		0		0	
SKYLT.										0		0		0		0	
DOORS										0		0		0		0	
NET EXPOSED WALL										0		0		0		0	
NET EXPOSED BSMT WALL ABOVE GR										0		0		0		0	
EXPOSED CLG										0		0		0		0	
NO ATTIC EXPOSED CLG										0		0		0		0	
EXPOSED FLOOR										0		0		0		0	
BASEMENT/CRAWL HEAT LOSS										0		0		0		0	
SLAB ON GRADE HEAT LOSS										0		0		0		0	
SUBTOTAL HT LOSS										2696		2327		4092		1282	
SUB TOTAL HT GAIN										0.20		0.20		0.20		0.20	
LEVEL FACTOR / MULTIPLIER										0.36		0.36		0.36		0.36	
AIR CHANGE HEAT LOSS										975		534		1480		464	
AIR CHANGE HEAT GAIN										161		68		245		30	
DUCT LOSS										0		0		0		0	
DUCT GAIN										0		0		0		0	
HEAT GAIN PEOPLE										240		0		0		0	
HEAT GAIN APPLIANCES/LIGHTS										480		0		0		0	
TOTAL HT LOSS BTU/H										811		811		5573		811	
TOTAL HT GAIN x 1.3 BTU/H										3671		2009		1058		1920	
TOTAL HT GAIN x 1.3 BTU/H										1366		6720		5301		1824	
TOTAL HEAT GAIN BTU/H:										6086		6155		84473		90629	

Michael O'Rourke

SITE NAME: PINE VALLEY PH 2
BUILDER: GOLD PARK HOMES

TYPE: 5013 - ELEV B - RIVERVIEW DATE: May-22 GFA: 4501 LO# 96629 FURNACE 1

HEATING CFM 985 COOLING CFM 985
TOTAL HEAT LOSS 59,197 TOTAL HEAT GAIN 32,963
AIR FLOW RATE CFM 16.64 AIR FLOW RATE CFM 29.88

FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 62275 BTUH

ML196UH070XE36B
FAN SPEED 70
FURNACE HEAT LOSS = 66,000
OUTPUT (BTUH) = 63,900

AFUE = 96 %
INPUT (BTUH) = 66,000
OUTPUT (BTUH) = 63,900

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	12	6
R/A	0	0	0	2	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	25	26	27	28	29	30	31	32	33	34	35	36
ROOM NAME	25	26	27	28	29	30	31	32	33	34	35	36
RM LOSS MBH	2.59	2.59	2.59	1.69	1.69	3.08	4.90	4.90	4.90	4.90	4.90	4.90
CFM PER RUN HEAT	43	43	43	28	28	51	81	81	81	81	81	81
RM GAIN MBH	2.93	2.93	2.93	2.06	2.06	0.42	0.42	0.42	0.42	0.42	0.42	0.42
CFM PER RUN COOLING	88	88	88	62	62	15	12	12	12	12	12	12
ADJUSTED PRESSURE	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	34	39	31	65	60	21	51	37	32	16	15	49
EQUIVALENT LENGTH	100	140	170	130	120	140	130	130	130	130	130	130
TOTAL EFFECTIVE LENGTH	134	179	201	195	180	161	161	177	162	146	145	179
ADJUSTED PRESSURE	0.12	0.09	0.08	0.09	0.1	0.11	0.1	0.09	0.1	0.11	0.09	0.11
ROUND DUCT SIZE	6	6	6	5	5	5	5	5	5	6	6	5
HEATING VELOCITY (ft/min)	219	219	219	206	206	585	595	595	595	413	413	595
COOLING VELOCITY (ft/min)	449	449	449	455	455	172	88	88	88	61	61	88
OUTLET GRILL SIZE	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10
TRUNK	E	E	E	F	F	F	D	D	E	E	F	F

ROOM NAME	19	20	21	22	23	24
ROOM NAME	19	20	21	22	23	24
RM LOSS MBH	3.07	2.38	2.38	2.38	2.38	3.02
CFM PER RUN HEAT	51	40	40	40	40	50
RM GAIN MBH	1.80	3.22	3.22	3.22	3.22	2.36
CFM PER RUN COOLING	54	96	96	96	96	71
ADJUSTED PRESSURE	0.17	0.16	0.16	0.16	0.16	0.17
ACTUAL DUCT LGH.	47	56	49	45	38	27
EQUIVALENT LENGTH	100	110	150	130	150	140
TOTAL EFFECTIVE LENGTH	147	166	199	175	188	167
ADJUSTED PRESSURE	0.12	0.1	0.08	0.09	0.09	0.1
ROUND DUCT SIZE	4	6	6	6	6	5
HEATING VELOCITY (ft/min)	585	204	204	204	204	367
COOLING VELOCITY (ft/min)	620	489	489	489	489	521
OUTLET GRILL SIZE	3X10	4X10	4X10	4X10	4X10	3X10
TRUNK	F	D	D	D	D	F

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	0	0.00	0	0	8
TRUNK B	0	0.00	0	0	8
TRUNK C	0	0.00	0	0	8
TRUNK D	322	0.08	9.2	14	8
TRUNK E	613	0.08	11.7	18	8
TRUNK F	370	0.09	9.4	10	8

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK G	0	0.00	0	0	8
TRUNK H	0	0.00	0	0	8
TRUNK I	0	0.00	0	0	8
TRUNK J	0	0.00	0	0	8
TRUNK K	0	0.00	0	0	8
TRUNK L	0	0.00	0	0	8

SITE NAME: PINE VALLEY PH 2
BUILDER: GOLD PARK HOMES

TYPE: 5013 - ELEV B - RIVERVIEW

DATE: May-22

GFA: 4501

LO# 96629

FURNACE 2

HEATING CFM 980 COOLING CFM 980
TOTAL HEAT LOSS 25,276 TOTAL HEAT GAIN 27,485
AIR FLOW RATE CFM 38.77 AIR FLOW RATE CFM 35.66FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 28354 BTUHML196UH045XE36B 45
FAN SPEED LOW 620
MEDIUM 980
HIGH 1110AFUE = 96 %
INPUT (BTUH) = 44,000
OUTPUT (BTUH) = 42,800
DESIGN CFM = 980
CFM @ 6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	20	0	0
R/A	0	0	6	0	0

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
ROOM NAME	PBR	PBR	ENS	ENS	WIC	WIC-E	BED-2	BED-2	ENS-3	BED-3	BED-4	BED-4	LOFT	ENS-2	BED-3	ENS-4	LND	
RM LOSS MBH	1.84	1.84	1.00	1.00	0.84	0.78	1.00	1.00	2.28	1.37	1.39	1.39	1.92	1.06	1.37	0.80	0.25	
CFM PER RUN HEAT	71	71	39	39	33	30	39	39	88	53	54	54	74	41	53	31	10	
RM GAIN MBH	2.46	2.46	0.68	0.68	0.37	0.37	1.16	1.16	1.16	2.24	1.58	1.58	1.82	0.41	2.24	0.49	1.25	
CFM PER RUN COOLING	88	88	24	24	13	13	41	41	41	80	56	56	65	15	80	17	44	
ADJUSTED PRESSURE	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	
ACTUAL DUCT LGH.	52	63	48	16	51	19	72	77	78	69	66	73	84	65	64	75	46	
EQUIVALENT LENGTH	210	190	255	130	245	120	170	180	200	190	180	190	170	170	180	160	130	
TOTAL EFFECTIVE LENGTH	262	253	303	303	146	296	139	242	257	278	259	243	274	235	244	235	176	
ADJUSTED PRESSURE	0.06	0.06	0.06	0.12	0.06	0.12	0.07	0.07	0.06	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.1	
ROUND DUCT SIZE	6	6	5	4	4	5	5	5	6	6	6	6	6	5	6	4	4	
HEATING VELOCITY (ft/min)	362	362	286	447	379	344	286	286	449	270	275	275	377	301	270	356	115	
COOLING VELOCITY (ft/min)	449	449	176	275	149	149	301	301	209	408	286	286	331	110	408	195	505	
OUTLET GRILL SIZE	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	
TRUNK	C	C	C	C	C	C	B	B	A	A	A	A	B	B	A	A	B	

RUN #	37	38
ROOM NAME	BED-3	BED-4
RM LOSS MBH	1.37	1.39
CFM PER RUN HEAT	53	54
RM GAIN MBH	2.24	1.58
CFM PER RUN COOLING	80	56
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH.	67	71
EQUIVALENT LENGTH	190	170
TOTAL EFFECTIVE LENGTH	257	241
ADJUSTED PRESSURE	0.07	0.07
ROUND DUCT SIZE	6	6
HEATING VELOCITY (ft/min)	270	275
COOLING VELOCITY (ft/min)	408	286
OUTLET GRILL SIZE	4X10	4X10
TRUNK	A	A

SUPPLY AIR TRUNK SIZE	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	494	0.06	11.6	16	556	0	0.00	0	0	8
TRUNK B	697	0.06	13.2	22	570	0	0.00	0	0	8
TRUNK C	980	0.06	15	26	678	0	0.00	0	0	8
TRUNK D	0	0.00	0	0	0	0	0.00	0	0	8
TRUNK E	0	0.00	0	0	0	0	0.00	0	0	8
TRUNK F	0	0.00	0	0	0	0	0.00	0	0	8

RETURN AIR #	1	2	3	4	5	8
AIR VOLUME	155	115	115	115	115	145
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	62	93	79	75	69	59
EQUIVALENT LENGTH	170	235	195	245	230	165
TOTAL EFFECTIVE LH	232	328	274	320	299	224
ADJUSTED PRESSURE	0.06	0.05	0.05	0.05	0.05	0.07
ROUND DUCT SIZE	7.5	7	7	7	7	7
INLET GRILL SIZE	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	14

RETURN AIR TRUNK SIZE	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK O	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK P	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK Q	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK R	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK S	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK T	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK U	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK V	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK W	0	0.05	0	0	0	0	0.00	0	0	8
TRUNK X	825	0.05	14.7	26	571	0	0.00	0	0	8
TRUNK Y	450	0.05	11.7	16	506	0	0.00	0	0	8
TRUNK Z	155	0.05	7.8	8	349	0	0.00	0	0	8
DROP	980	0.05	15.7	24	588	0	0.00	0	0	10

TYPE: 5013 - ELEV B - RIVERVIEW
SITE NAME: PINE VALLEY PH 2

LO # 96629

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	6 @ 10.6 cfm	63.6 cfm
Other Rooms	5 @ 10.6 cfm	53.0 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	150	cfm
Required Supplemental Capacity	40.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY			
Model: VANEE V150H	Location: BSMT		
150.0 cfm	☒ HVI Approved		
PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
150.0 CFM	X 76 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		BY INSTALLING CONTRACTOR	
Location	Model	cfm	HVI
ENS	BY INSTALLING CONTRACTOR	50	☒
ENS-2	BY INSTALLING CONTRACTOR	50	☒
ENS-3	BY INSTALLING CONTRACTOR	50	☒
ENS-4	BY INSTALLING CONTRACTOR	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE V150H	INSTALL 2 HRV / ERV's	
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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	May-22

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																			
Formula Sheet (For Air Leakage / Ventilation Calculation)																																			
LO#: 96629	Model: 5013 - ELEV B - RIVERVIEW	Builder: GOLD PARK HOMES	Date: 2022-05-05																																
Volume Calculation																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> <tr> <td>Bsmt</td> <td>2122</td> <td>10</td> <td>21220</td> </tr> <tr> <td>First</td> <td>2122</td> <td>11</td> <td>23342</td> </tr> <tr> <td>Second</td> <td>2778</td> <td>9</td> <td>25002</td> </tr> <tr> <td>Third</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Fourth</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td colspan="2">Total:</td> <td></td> <td>69,564.0 ft³</td> </tr> <tr> <td colspan="2">Total:</td> <td></td> <td>1969.8 m³</td> </tr> </table>				Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2122	10	21220	First	2122	11	23342	Second	2778	9	25002	Third	0	9	0	Fourth	0	9	0	Total:			69,564.0 ft³	Total:			1969.8 m³
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)																																
Bsmt	2122	10	21220																																
First	2122	11	23342																																
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Third	0	9	0																																
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Air Change & Delta T Data																																			
		WINTER NATURAL AIR CHANGE RATE	0.340																																
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Design Temperature Difference																																			
	Tin °C	Tout °C	ΔT °C																																
Winter DTDh	22	-20	42																																
Summer DTDc	24	31	7																																
			13																																
6.2.6 Sensible Gain due to Air Leakage																																			
$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																			
0.340	x	0.114	x																																
		547.18	x																																
		7 °C	x																																
		1.2	=																																
			534 W																																
			=																																
			1821 Btu/h																																
6.2.7 Sensible heat Gain due to Ventilation																																			
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																			
300 CFM	x	13 °F	x																																
		1.08	x																																
		0.25	=																																
			1,037 Btu/h																																
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																			
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$																																			
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*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairve = 0																																			

Michael O'Rourke
BCIN# 19669

Michael O'Rourke

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 5013 - ELEV B - RIVERVIEW**BUILDER:** GOLD PARK HOMES**SFQT:** 4501**LO#** 96629**SITE:** PINE VALLEY PH 2**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
		WINDOW SHGC	0.50

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):	69564.0	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: 70.0 ft	WIDTH: 43.0 ft	EXPOSED PERIMETER:	226.0 ft

2012 OBC - COMPLIANCE PACKAGE		Compliance Package	
Component		A1	
		Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value		60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value		31	27.65
Exposed Floor Minimum RSI (R)-Value		31	29.80
Walls Above Grade Minimum RSI (R)-Value		22	17.03
Basement Walls Minimum RSI (R)-Value		20 ci	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value		-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value		10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value		10	11.13
Windows and Sliding Glass Doors Maximum U-Value		0.28	-
Skylights Maximum U-Value		0.49	-
Space Heating Equipment Minimum AFUE		0.96	-
HRV Minimum Efficiency		75%	-
Domestic Hot Water Heater Minimum EF		0.8	-

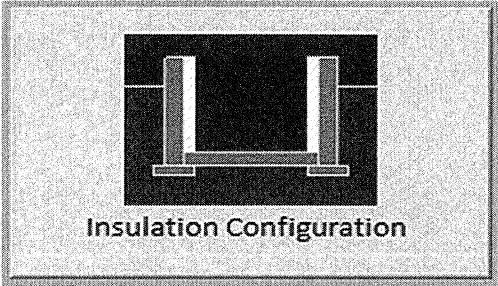
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	21.3	 Insulation Configuration
Floor Width (m):	13.1	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	2.5	
Door Area (m ²):	0.0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		2345

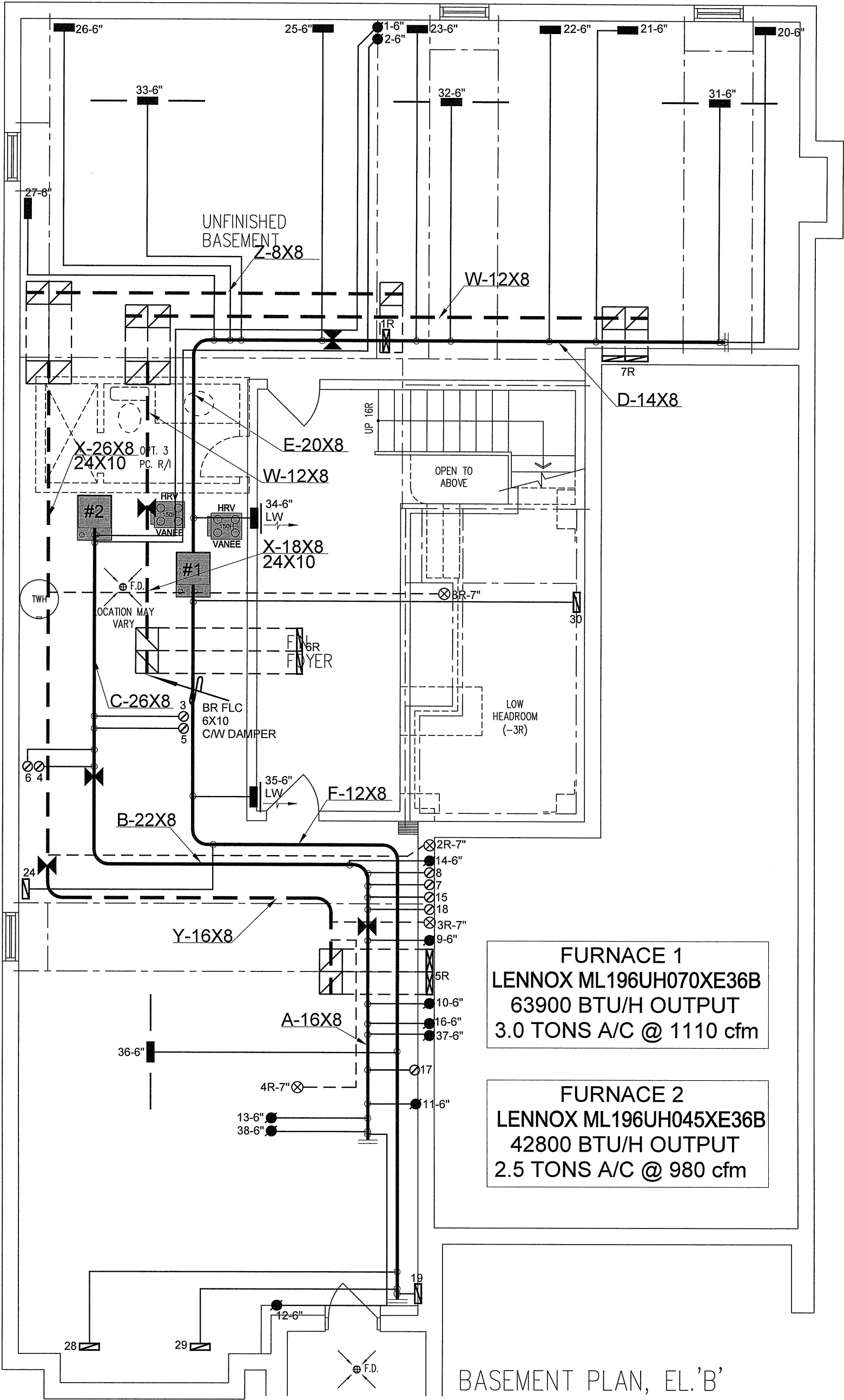
TYPE: 5013 - ELEV B - RIVERVIEW
LO# 96629

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	7.01			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1969.8			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2625.8 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	70.8	70.8		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.340			
Cooling Air Leakage Rate (ACH/H):	0.114			

TYPE: 5013 - ELEV B - RIVERVIEW
LO# 96629



BASEMENT PLAN, EL.'B'

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.

LOD
WOD
CSA-F280-12
PACKAGE A1

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ONTARIO BUILDING CODE.

HVAC LEGEND			REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE	2.
	SUPPLY AIR GRILLE 6" BOOT		6" SUPPLY AIR STACK FROM 2nd FLOOR	1.
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR	
	6" SUPPLY AIR STACK 2nd FLOOR		FRA - FLOOR RETURN AIR GRILLE	
	14"x6" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	
	30"x6" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR REDUCER	
			Description	Date

GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

RIVERVIEW
5013 - ELEV B 4501 sqft

HVACDESIGNS 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.

	S/A	R/A	FANS
2ND	20	6	6
1ST	12	2	2
BAS	6	1	0

Sheet Title

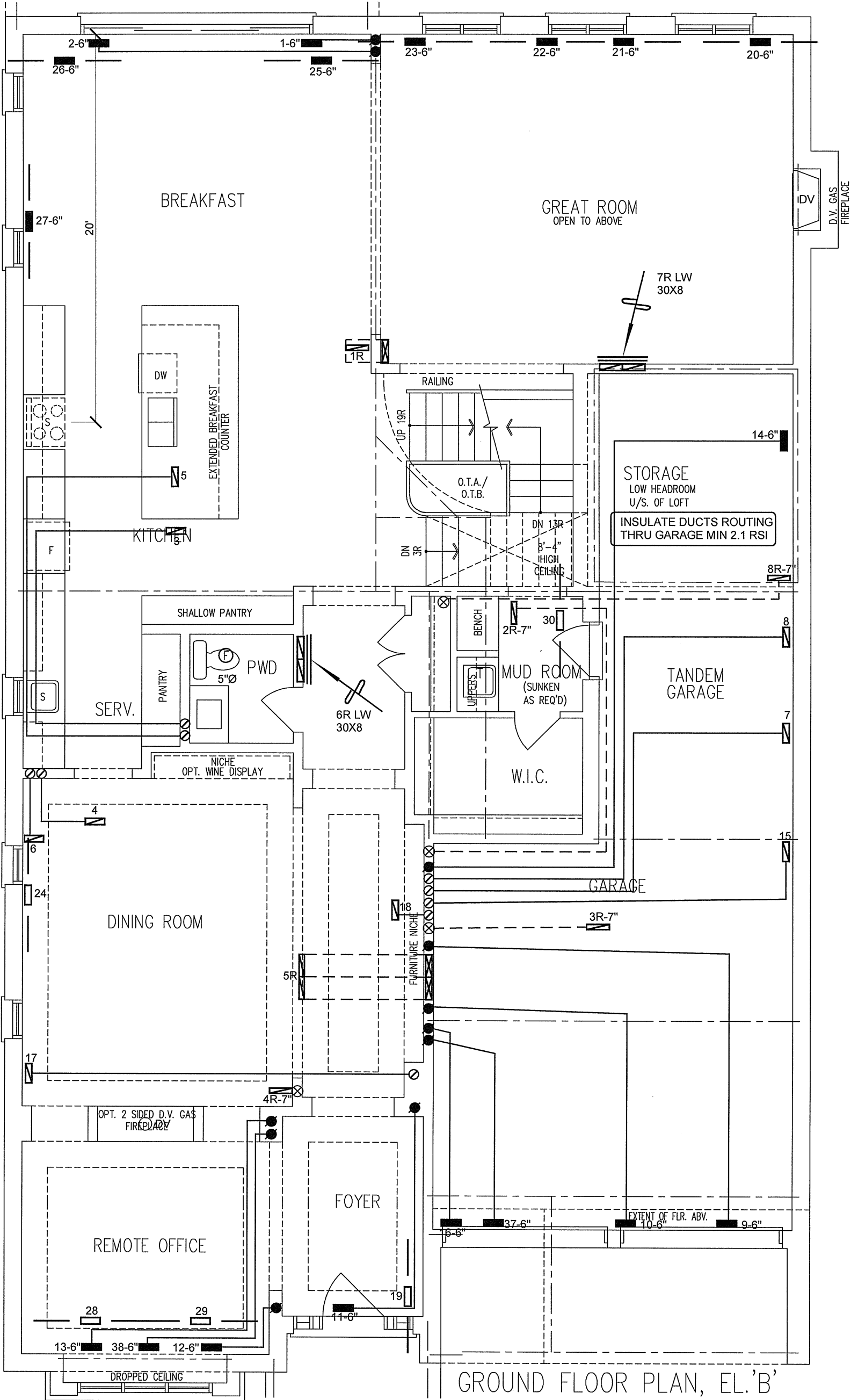
BASEMENT
HEATING
LAYOUT

Date MAY/2022

Scale 3/16" = 1'-0"

BCIN# 19669

LO# 96629



I MICHAEL O'ROURKE HAVE REVIEW
AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C, 3.2.3 OF THE
BUILDING CODE.

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

LOD

WOD

CSA-F280-12

PACKAGE A1

HVAC LEGEND			3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE	1.
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR	
	14"x6" RETURN AIR GRILLE		30"x6" RETURN AIR GRILLE	
	FR4 FLOOR RETURN AIR GRILLE		RETURN AIR STACK ABOVE	
	REDUCER		RETURN AIR STACK 2nd FLOOR	
REVISIONS			No.	Description
			Date	

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Client

GOLD PARK HOMES

Project Name

**PINE VALLEY PH 2
VAUGHAN, ONTARIO**

**RIVERVIEW
5013 - ELEV B 4501 sqft**

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	MAY/2022
Scale	3/16" = 1'-0"
BCIN# 19669	
LO#	96629

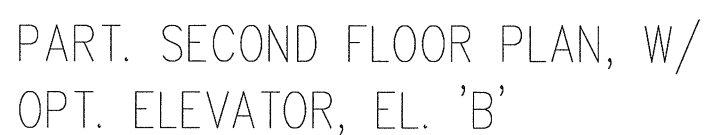


I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.



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

LOD
WOD
CSA-F280-12
PACKAGE A1



HVAC LEGEND						3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		RETURN AIR STACK ABOVE	1.	
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		RETURN AIR STACK 2nd FLOOR	No.	Description
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA - FLOOR RETURN AIR GRILLE		REDUCER
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							Date

LO#	96629
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