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	**Postal code**	**Plan number/ other description**		
VAUGHAN (WOODBRIDGE)				

B. Individual who reviews and takes responsibility for design activities

Name		Firm		
MICHAEL O'ROURKE		**HVAC DESIGNS LTD.**		
Street address			Unit no.	Lot/con.
375 FINLEY AVE			**202**	**N/A**
Municipality	Postal code	Province	E-mail	
AJAX	**L1S 2E2**	**ONTARIO**	**info@hvacdesigns.ca**	
Telephone number	Fax number		Cell number	
(905) 619-2300	**(905) 619-2375**		( )	

C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]

☐ House	☒ HVAC – House	☐ Building Structural
☐ Small Buildings	☐ Building Services	☐ Plumbing – House
☐ Large Buildings	☐ Detection, Lighting and Power	☐ Plumbing – All Buildings
☐ Complex Buildings	☐ Fire Protection	☐ 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:** 5012 WILLOWCREEK - WOB **Project:** PINE VALLEY PH 2

D. Declaration of Designer

I **MICHAEL O'ROURKE** declare that (choose one as appropriate):
(print name)

☐ 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 Di vision C, of the Building Code.

Individual BCIN: 19669
Basis for exemption from registration and qualification: O.B.C SENTENCE 3.2.4.1 (4)

☐ 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, 2022
Date

Signature of Designer

NOTE:

1. 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.
2. 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.

HVAC DESIGNS LTD.

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Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 | WILLOWCREEK - WOB | DATE May-22 | WINTER NATURAL AIR CHANGE RATE 0.407 | HEAT LOSS ΔT °F. 76 | CSA-F280-12
BUILDER: GOLD PARK HOMES | TYPE: 5012 | GFA: 4461 | LO# 96520 | SUMMER NATURAL AIR CHANGE RATE 0.137 | HEAT GAIN ΔT °F. 13 | SB-12 PACKAGE A1

ROOM USE			PBR			ENS			WIC			BED-2			BED-3			BED-4			ENS-2			ENS-3			LOFT			ENS-4				
EXP. WALL			42			13			12			14			15			42			6			18			7			17				
CLG. HT.			9			9			9			9			9			9			9			9			9			9				
	FACTORS																																
GRS.WALL AREA	LOSS	GAIN	378			117			108			126			135			378			54			162			63			153				
GLAZING			LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN		
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	0	18	383	288	0	0	0	0	0	0	9	192	144	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	0	68	1447	2826	75	1596	3116	0	0	0	14	298	582	0	0	0	57	1213	2368		
SOUTH	21.3	24.9	0	0	0	17	362	423	0	0	0	0	0	0	0	0	0	41	872	1021	0	0	0	0	0	0	0	0	0	18	383	448		
WEST	21.3	41.6	44	936	1828	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	4	149	406	4	149	406	4	149	406	0	0	0	0	0	0	4	149	406	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	0	0	0	0	0	0	0	0	0	0		
NET EXPOSED WALL	4.5	0.8	334	1491	251	100	446	75	108	482	81	108	482	81	67	299	50	262	1169	197	45	201	34	148	660	111	63	281	47	78	348	59		
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	0	0	0	0	0	0	0	0	0	0		
EXPOSED CLG	1.3	0.6	430	552	253	264	339	155	186	239	109	362	465	213	178	228	105	282	362	166	74	95	43	86	110	51	123	158	72	35	45	21		
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	67	184	84	75	206	94	0	0	0	0	0	0	0	0	0	42	115	53		
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0	0	0	0	166	423	71	249	635	107	0	0	0	74	189	32	86	219	37	64	163	27	0	0	0		
BASEMENT/CRAWL HEAT LOSS			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				
SUBTOTAL HT LOSS			2979			1147			721			1902			2943			4355			676			1288			751			2104				
SUB TOTAL HT GAIN					2332			654			190			1059			3578			5000			253			780			553			2949		
LEVEL FACTOR / MULTIPLIER			0.20	0.39		0.20	0.39		0.20	0.39		0.20	0.39		0.20	0.39		0.20	0.39		0.20	0.39		0.20	0.39		0.20	0.39		0.20	0.39			
AIR CHANGE HEAT LOSS				1163			448			281			742			1149			1700			264			503			293			821				
AIR CHANGE HEAT GAIN					164			46			13			75			252			353			18			55			39			208		
DUCT LOSS				0			0			0			264			409			0			94			179			104			0			
DUCT GAIN					0			0			0			217			487			0			27			84			139			0		
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240	0		0	0		0	0		0	0		0		
HEAT GAIN APPLIANCES/LIGHTS					799			0			0			799			799			799			0			0			799			0		
TOTAL HT LOSS BTU/H				4141			1595			1002			2909			4500			6055			1034			1970			1149			2926			
TOTAL HT GAIN x 1.3 BTU/H					4909			910			265			3107			6964			8310			387			1195			1990			4104		

ROOM USE			GRT			DIN			KT/BF			OFF			LND				FOY			MUD						WOB			BAS		
EXP. WALL			53			36			59			36			7				22			30						53			177		
CLG. HT.			20			11			11			11			9				11			11						10			10		
	FACTORS																																
GRS.WALL AREA	LOSS	GAIN	1060			396			649			396			63				242			330						530			1239		
GLAZING			LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN	LOSS		GAIN		LOSS		GAIN	LOSS		GAIN				LOSS		GAIN	LOSS		GAIN
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0				44	936	703	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	69	1468	2867	0	0	0		28	596	1163	0	0	0				0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	39	830	971	10	213	249	0	0	0	9	192	224		0	0	0	0	0	0				3	64	75	0	0	0
WEST	21.3	41.6	126	2681	5236	0	0	0	97	2064	4031	0	0	0	0	0	0		0	0	0	0	0	0				38	809	1579	0	0	0
SKYLT.	37.2	101.5	0	0	0	0	0	0	0	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		30	757	128	20	505	85				20	505	85	20	505	85
NET EXPOSED WALL	4.5	0.8	934	4168	702	357	1593	268	542	2419	407	327	1459	246	54	241	41		184	821	138	310	1383	233				425	1897	319	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	0				0	0	0	531	1911	322
EXPOSED CLG	1.3	0.6	363	466	213	0	0	0	0	0	0	0	0	0	127	163	75		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	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	0				0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			0			0			0			0			0				0			0									3037		
SLAB ON GRADE HEAT LOSS			0			0			0			0			0				0			0						763					
SUBTOTAL HT LOSS			7315			2423			4696			2928			595				2174			1888						4974			5453		
SUB TOTAL HT GAIN					6151			1239			4687			3113			339			1429			318						2761			407	
LEVEL FACTOR / MULTIPLIER			0.30	0.53		0.30	0.53		0.30	0.53		0.30	0.53		0.20	0.39			0.30	0.53		0.30	0.53								0.50	1.82		
AIR CHANGE HEAT LOSS				3891			1289			2497			1557			232				1156			1004									18991		
AIR CHANGE HEAT GAIN					434			87			330			219			24				101			22										223
DUCT LOSS				0			0			0			0			0				0			0									0		
DUCT GAIN					0			0			0			0			0				0			0										0
HEAT GAIN PEOPLE	240		0		0	0		0	0		0	0		0	0		0		0		0	0		0				0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					799			799			799			799			799				0			0										
TOTAL HT LOSS BTU/H				11206			3712			7193			4485			828				3331			2893						5737			24445		
TOTAL HT GAIN x 1.3 BTU/H					9599			2764			7562			5371			1511				1989			443						3589			819	

TOTAL HEAT GAIN BTU/H: 66306 TONS: 5.53 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 91109 TOTAL COMBINED HEAT LOSS BTU/H: 97265

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

HVAC DESIGNS LTD.

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

WILLOWCREEK - WOB
TYPE: 5012

DATE: May-22

GFA: 4461 LO# 96520

FURNACE 1

HEATING CFM	1170	COOLING CFM	1170
TOTAL HEAT LOSS	63,001	TOTAL HEAT GAIN	32,137
AIR FLOW RATE CFM	18.57	AIR FLOW RATE CFM	36.41

furnace pressure	0.6
furnace filter	0.05
a/c coil pressure	0.2
available pressure for s/a & r/a	0.35
plenum pressure s/a	0.18
max s/a dif press. loss	0.02
min adjusted pressure s/a	0.16
r/a pressure	0.17
r/a grille press. Loss	0.02
adjusted pressure r/a	0.15

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 66079 BTUH

$LENNOX
ML196UH090XE36C 90
FAN SPEED
LOW 0
MEDLOW 0
MEDIUM 0
MEDIUM HIGH 1170
HIGH 1300

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,600

DESIGN CFM = 1170
CFM @ .6 " E.S.P.

TEMPERATURE RISE 68 °F

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

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5"Ø unless noted otherwise on layout.

RUN #	20	21	22	23	24
ROOM NAME	GRT	GRT	GRT	GRT	DIN
RM LOSS MBH.	2.80	2.80	2.80	2.80	3.71
CFM PER RUN HEAT	52	52	52	52	69
RM GAIN MBH.	2.40	2.40	2.40	2.40	2.76
CFM PER RUN COOLING	87	87	87	87	101
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	62	56	50	45	14
EQUIVALENT LENGTH	100	120	130	150	120
TOTAL EFFECTIVE LENGTH	162	176	180	195	134
ADJUSTED PRESSURE	0.1	0.09	0.09	0.08	0.12
ROUND DUCT SIZE	**6**	**6**	**6**	**6**	5
HEATING VELOCITY (ft/min)	265	265	265	265	507
COOLING VELOCITY (ft/min)	444	444	444	444	742
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	3X10
TRUNK	E	E	E	E	H

RUN #	25	26	27	28	29	30	31	32	33	34	35	36		39
ROOM NAME	KT/BF	KT/BF	KT/BF	OFF	OFF	FOY	MUD	BAS	BAS	BAS	BAS	BAS		BAS
RM LOSS MBH.	2.40	2.40	2.40	2.24	2.24	3.33	2.89	5.03	5.03	5.03	5.03	5.03		5.03
CFM PER RUN HEAT	45	45	45	42	42	62	54	93	93	93	93	93		93
RM GAIN MBH.	2.52	2.52	2.52	2.69	2.69	1.99	0.44	0.73	0.73	0.73	0.73	0.73		0.73
CFM PER RUN COOLING	92	92	92	98	98	72	16	27	27	27	27	27		27
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.16	0.16	0.16	0.16	0.16		0.16
ACTUAL DUCT LGH.	44	47	58	62	57	38	31	44	45	73	38	48		73
EQUIVALENT LENGTH	100	120	130	130	110	110	90	140	140	120	150	130		160
TOTAL EFFECTIVE LENGTH	144	167	188	192	167	148	121	184	185	193	188	178		233
ADJUSTED PRESSURE	0.11	0.1	0.09	0.08	0.1	0.12	0.14	0.09	0.09	0.08	0.09	0.09		0.07
ROUND DUCT SIZE	**6**	**6**	**6**	**6**	**6**	5	4	**6**	**6**	**6**	**6**	**6**		**6**
HEATING VELOCITY (ft/min)	229	229	229	214	214	455	620	474	474	474	474	474		474
COOLING VELOCITY (ft/min)	469	469	469	500	500	529	184	138	138	138	138	138		138
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	4X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10		4X10
TRUNK	D	D	D	G	G	G	F	E	D	E	G	G		D

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	0	0.00	0	0	x	8	0	TRUNK G	332	0.08	9.3	10	x	8	598
TRUNK B	0	0.00	0	0	x	8	0	TRUNK H	1170	0.07	15.4	28	x	8	752
TRUNK C	0	0.00	0	0	x	8	0	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	321	0.07	9.5	10	x	8	578	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	394	0.08	9.9	12	x	8	591	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	769	0.07	13.1	20	x	8	692	TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK O	0	0.06	0	0	x	8	0
TRUNK P	0	0.06	0	0	x	8	0
TRUNK Q	0	0.06	0	0	x	8	0
TRUNK R	0	0.06	0	0	x	8	0
TRUNK S	0	0.06	0	0	x	8	0
TRUNK T	0	0.06	0	0	x	8	0
TRUNK U	0	0.06	0	0	x	8	0
TRUNK V	0	0.06	0	0	x	8	0
TRUNK W	0	0.06	0	0	x	8	0
TRUNK X	1015	0.06	15.2	26	x	8	**703**
TRUNK Y	0	0.06	0	0	x	8	0
TRUNK Z	360	0.06	10.3	12	x	8	540
DROP	1170	0.06	16	24	x	10	**702**

RETURN AIR #							7	8	9							BR
AIR VOLUME	0	0	0	0	0	0	360	390	155	0	0	0	0	0	0	265
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	1	1	1	1	1	1	57	20	50	1	1	1	1	1	1	23
EQUIVALENT LENGTH	0	0	0	0	0	0	190	155	130	0	0	0	0	0	0	195
TOTAL EFFECTIVE LH	1	1	1	1	1	1	247	175	180	1	1	1	1	1	1	218
ADJUSTED PRESSURE	14.80	14.80	14.80	14.80	14.80	14.80	0.06	0.08	0.08	14.80	14.80	14.80	14.80	14.80	14.80	0.07
ROUND DUCT SIZE	0	0	0	0	0	0	10.3	9.9	7	0	0	0	0	0	0	8.8
INLET GRILL SIZE	0	0	0	0	0	0	8	8	8	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	0	0	0	0	0	0	30	30	14	0	0	0	0	0	0	30

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke - INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

HVAC DESIGNS LTD.

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Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 — WILLOWCREEK - WOB
BUILDER: GOLD PARK HOMES — TYPE: 5012 — DATE: May-22 — GFA: 4461 — LO# 96520 — **FURNACE 2**

HEATING CFM	1110	COOLING CFM	1110	furnace pressure	0.6
TOTAL HEAT LOSS	28,108	TOTAL HEAT GAIN	33,651	furnace filter	0.05
AIR FLOW RATE CFM	39.49	AIR FLOW RATE CFM	32.99	a/c coil pressure	0.2
				available pressure for s/a & r/a	0.35

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 31186 BTUH

$LENNOX
ML196UH045XE36B 45

FAN SPEED	
LOW	620
MEDLOW	685
MEDIUM	980
MEDIUM HIGH	1110
HIGH	0

AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = **42,800**
DESIGN CFM = **1110** CFM @ .6 " E.S.P.
TEMPERATURE RISE 36 °F

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

plenum pressure s/a 0.18 — r/a pressure 0.17
max s/a dif press. loss 0.02 — r/a grille press. Loss 0.02
min adjusted pressure s/a 0.16 — adjusted pressure r/a 0.15

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
ROOM NAME	PBR	PBR	ENS	ENS	WIC	BED-2	BED-2	BED-3	BED-3	BED-3	BED-4	BED-4	BED-4	LOFT	ENS-2	ENS-3	ENS-4	ENS-4	LND
RM LOSS MBH.	1.38	1.38	0.80	0.80	1.00	1.45	1.45	1.50	1.50	1.50	2.02	2.02	2.02	1.15	1.03	1.97	1.46	1.46	0.83
CFM PER RUN HEAT	55	55	31	31	40	57	57	59	59	59	80	80	80	45	41	78	58	58	33
RM GAIN MBH.	1.64	1.64	0.45	0.45	0.27	1.55	1.55	2.32	2.32	2.32	2.77	2.77	2.77	1.99	0.39	1.19	2.05	2.05	1.51
CFM PER RUN COOLING	54	54	15	15	9	51	51	77	77	77	91	91	91	66	13	39	68	68	50
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	65	70	15	46	35	68	75	64	59	51	79	58	55	83	63	64	64	67	22
EQUIVALENT LENGTH	150	150	140	240	150	200	210	150	140	130	170	180	150	220	190	160	140	140	140
TOTAL EFFECTIVE LENGTH	215	220	155	286	185	268	285	214	199	181	249	238	205	303	253	224	204	207	162
ADJUSTED PRESSURE	0.08	0.08	0.11	0.06	0.09	0.06	0.06	0.08	0.09	0.1	0.07	0.07	0.08	0.06	0.07	0.08	0.08	0.08	0.11
ROUND DUCT SIZE	5	5	4	4	4	5	5	6	6	6	6	6	6	6	5	6	5	5	4
HEATING VELOCITY (ft/min)	404	404	356	356	459	419	419	301	301	301	408	408	408	229	301	398	426	426	379
COOLING VELOCITY (ft/min)	396	396	172	172	103	374	374	393	393	393	464	464	464	337	95	199	499	499	574
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	4X10	3X10	3X10	3X10
TRUNK	C	C	C	B	C	B	B	B	B	B	A	A	A	B	B	B	A	A	C

RUN #	37
ROOM NAME	PBR
RM LOSS MBH.	1.38
CFM PER RUN HEAT	55
RM GAIN MBH.	1.64
CFM PER RUN COOLING	54
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	75
EQUIVALENT LENGTH	190
TOTAL EFFECTIVE LENGTH	265
ADJUSTED PRESSURE	0.06
ROUND DUCT SIZE	5
HEATING VELOCITY (ft/min)	404
COOLING VELOCITY (ft/min)	396
OUTLET GRILL SIZE	3X10
TRUNK	C

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	356	0.07	9.8	12	x	8	534	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	842	0.06	14.1	24	x	8	632	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	269	0.06	9.2	10	x	8	484	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	0	0.00	0	0	x	8	0	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK O	0	0.05	0	0	x	8	0
TRUNK P	0	0.05	0	0	x	8	0
TRUNK Q	0	0.05	0	0	x	8	0
TRUNK R	0	0.05	0	0	x	8	0
TRUNK S	0	0.05	0	0	x	8	0
TRUNK T	0	0.05	0	0	x	8	0
TRUNK U	0	0.05	0	0	x	8	0
TRUNK V	0	0.05	0	0	x	8	0
TRUNK W	0	0.05	0	0	x	8	0
TRUNK X	1110	0.05	16.4	32	x	8	624
TRUNK Y	575	0.05	12.8	20	x	8	518
TRUNK Z	0	0.05	0	0	x	8	0
DROP	1110	0.05	16.4	24	x	10	666

RETURN AIR #	1	2	3	4	5	6										BR
AIR VOLUME	280	120	120	120	335	135	0	0	0	0	0	0	0	0	0	0
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	64	82	62	69	64	60	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	180	195	235	235	220	195	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	244	277	297	304	284	255	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.05	0.05	0.05	0.05	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	9.4	7.1	7.1	7.1	10.5	7.1	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	14	14	14	30	14	0	0	0	0	0	0	0	0	0	0

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke — INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

HVAC DESIGNS LTD.

375 Finley Ave. Suite 202 Ajax, ON L1S 2E2
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Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

TYPE: 5012 LO # 96520
SITE NAME: PINE VALLEY PH 2 WILLOWCREEK - 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	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	Sones
ENS	BY INSTALLING CONTRACTOR	50	✓	3.5
ENS-2	BY INSTALLING CONTRACTOR	50	✓	3.5
ENS-3	BY INSTALLING CONTRACTOR	50	✓	3.5
ENS-4	BY INSTALLING CONTRACTOR	50	✓	3.5

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANEE V150H INSTALL 2 HRV / ERV's

150 cfm high 35 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: 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: Michael O'Rourke.
HRAI # 001820
Date: May-22

I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669 Michael O'Rourke. MICHAEL O'ROURKE

HVAC DESIGNS LTD.

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CSA F280-12 Residential Heat Loss and Heat Gain Calculations

Formula Sheet (For Air Leakage / Ventiliation Calculation)

LO#: 96520 Model: 5012 Builder: GOLD PARK HOMES Date: 2022-05-04

Volume Calculation

House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	2112	10	21120
First	2112	11	23232
Second	2700	9	24300
Third	0	9	0
Fourth	0	9	0
		Total:	68,652.0 ft³
		Total:	1944.0 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.407
SUMMER NATURAL AIR CHANGE RATE	0.137

Design Temperature Difference

	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-20	42	76
Summer DTDc	24	31	7	13

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 540.00 x 42 °C x 1.2 = 11132 W

= **37983 Btu/h**

6.2.6 Sensible Gain due to Air Leakage

$$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

= 0.137 x 540.00 x 7 °C x 1.2 = 629 W

= **2146 Btu/h**

5.2.3.2 Heat Loss due to Mechanical Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

x 2 HRV / ERV's

300 CFM x 76 °F x 1.08 x 0.25 = **6156 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)

$$HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$$

Level	Level Factor (LF)	HLairve 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	37,983	10,427	1.821
2	0.3		21,425	0.532
3	0.2		19,461	0.390
4	0		0	0.000
5	0		0	0.000

*HLairbv = Air leakage heat loss + ventilation heat loss
*For a balanced or supply only ventilation system HLairve = 0

Michael O'Rourke
BCIN# 19669

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HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5012 WILLOWCREEK - WOB **BUILDER:** GOLD PARK HOMES
SFQT: 4461 **LO#** 96520 **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 (ft^3):	68652.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft^2):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 72.0 ft	WIDTH: 43.0 ft	EXPOSED PERIMETER:	177.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	53.0 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	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

Michael O'Rourke

HVAC Designs Ltd.
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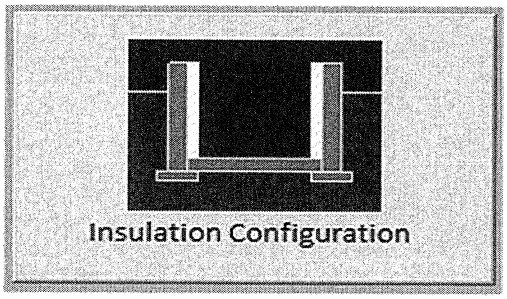
905-619-2300

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description	
Province:	Ontario
Region:	Vaughan (Woodbridge)
Site Description	
Soil Conductivity:	Normal conductivity: dry sand, loam, clay
Water Table:	Normal (7-10 m, 23-33 ft)

Foundation Dimensions		
Floor Length (m):	**4.6**	 Insulation Configuration
Floor Width (m):	**13.1**	
Exposed Perimeter (m):	**53.9**	
Wall Height (m):	**3.0**	
Depth Below Grade (m):	**1.84**	
Window Area (m^2):	**0.0**	
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):	**890**	

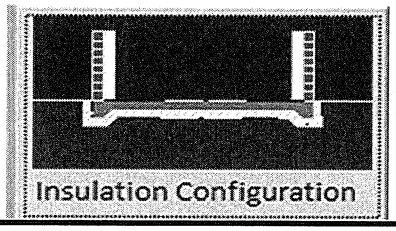
TYPE: 5012
LO# 96520

WILLOWCREEK - WOB

HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	**1.5**	 Insulation Configuration
Width (m):	**13.1**	
Exposed Perimeter (m):	**16.2**	
Radiant Slab		
Heated Fraction of the Slab:	**0**	
Fluid Temperature (°C):	**33**	
Design Months		
Heating Month	**1**	
Results		
Heating Load (Watts):	**224**	

TYPE: 5012
LO# 96520

WILLOWCREEK - WOB

HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

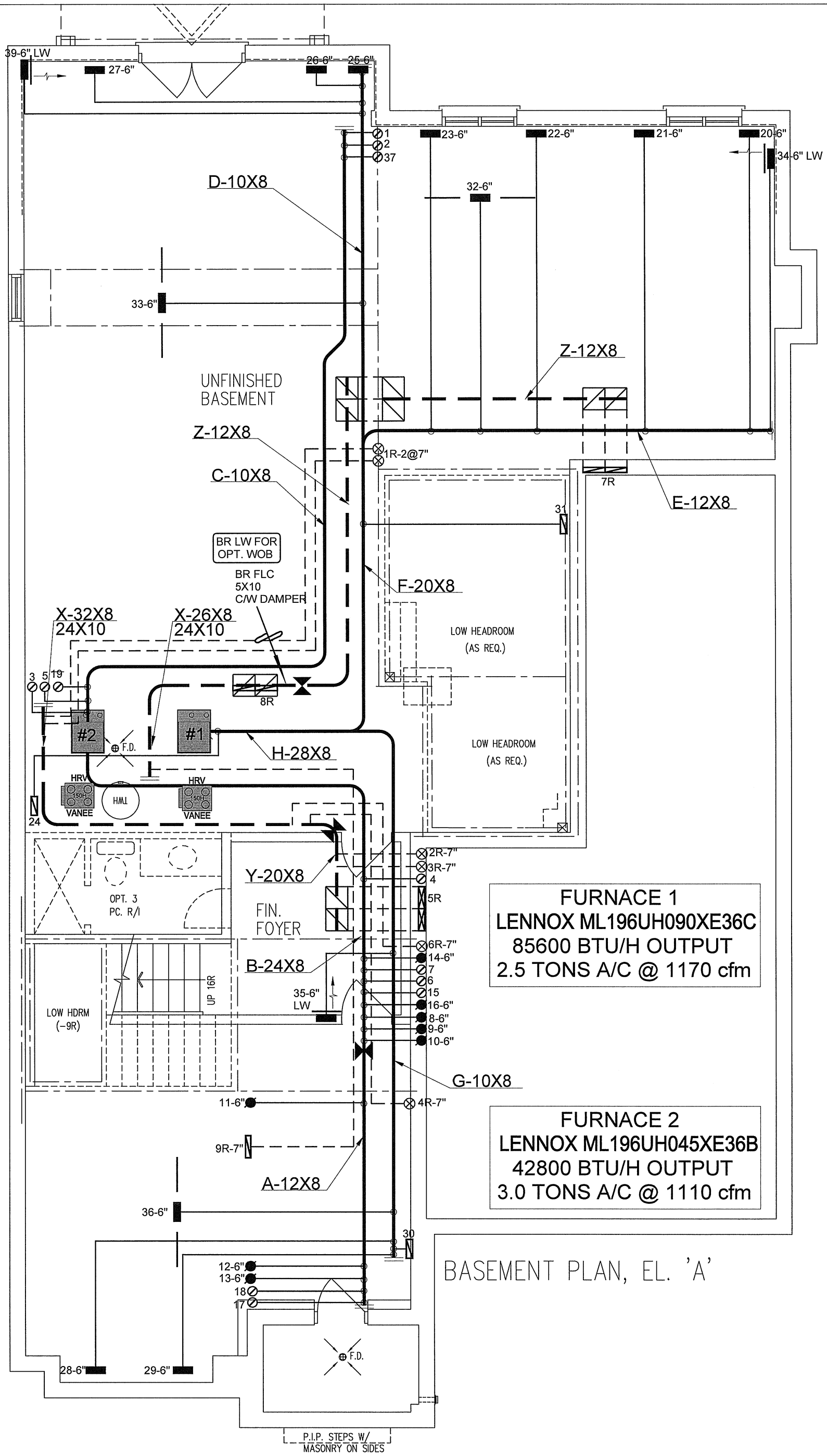
Air Infiltration Residential Load Calculator

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):	1944.0
Air Leakage/Ventilation	
Air Tightness Type:	Present (1961-) (3.57 ACH)
Custom BDT Data:	ELA @ 10 Pa. 2591.4 cm^2
	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply 70.8 / Total Exhaust 70.8
Flue Size	
Flue #:	#1 #2 #3 #4
Diameter (mm):	0 0 0 0
Natural Infiltration Rates	
Heating Air Leakage Rate (ACH/H):	**0.407**
Cooling Air Leakage Rate (ACH/H):	**0.137**

TYPE: 5012
LO# 96520

WILLOWCREEK - WOB



FURNACE 1
LENNOX ML196UH090XE36C
85600 BTU/H OUTPUT
2.5 TONS A/C @ 1170 cfm

FURNACE 2
LENNOX ML196UH045XE36B
42800 BTU/H OUTPUT
3.0 TONS A/C @ 1110 cfm

BASEMENT PLAN, EL. 'A'

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, BCIN# 19669
HVAC DESIGNS LTD.

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

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

SYMBOL	DESCRIPTION
	RETURN AIR STACK ABOVE
	RETURN AIR STACK 2nd FLOOR

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

WILLOWCREEK - WOB
5012 4238 sqft

HVAC DESIGNS LTD.
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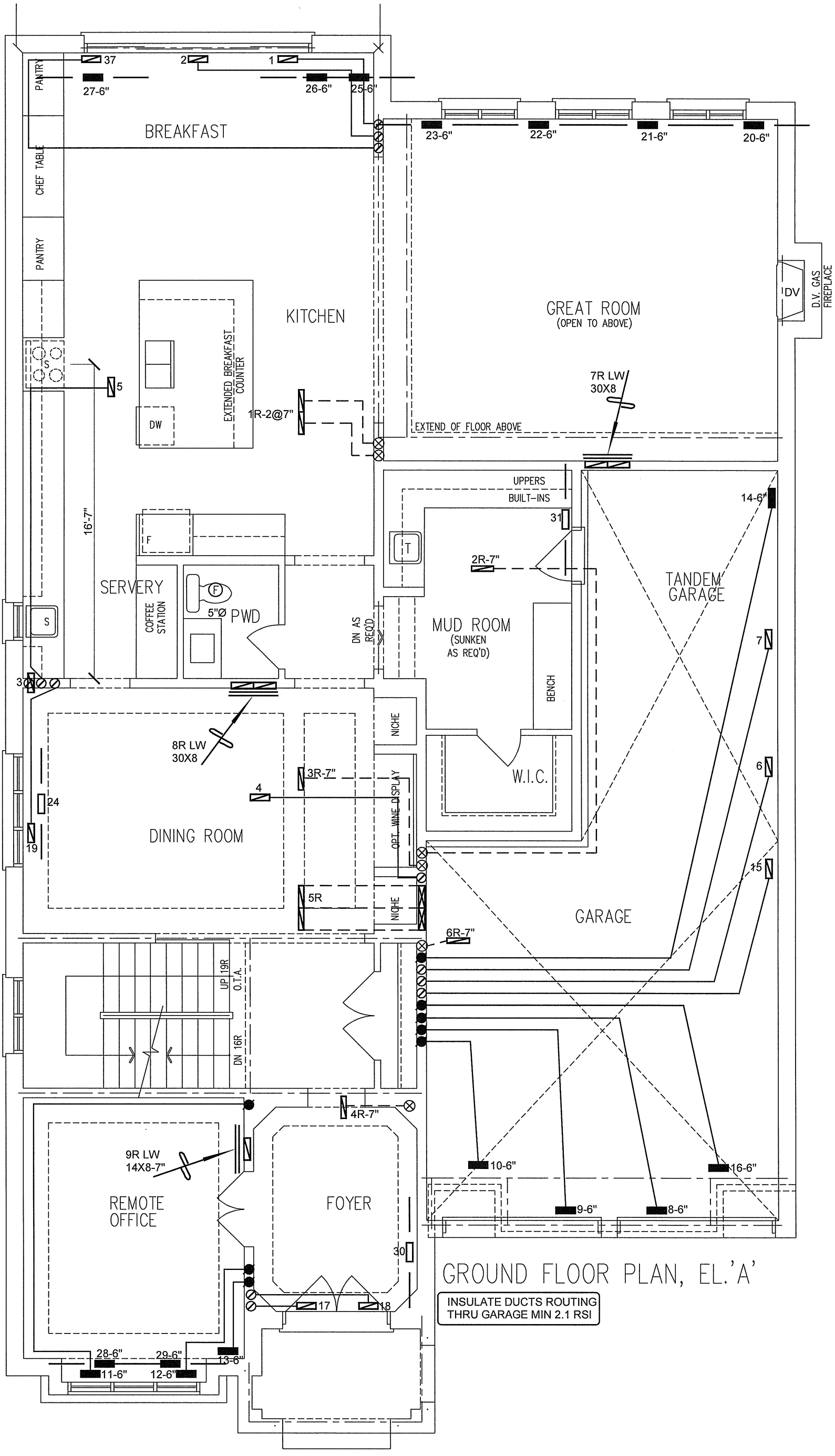
Email: info@hvacdesigns.ca
Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

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.

	S/A	R/A	FANS
2ND	20	6	5
1ST	12	3	2
BAS	6	1	0

Sheet Title
BASEMENT HEATING LAYOUT

Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96520



GROUND FLOOR PLAN, EL.'A'

INSULATE DUCTS ROUTING THRU GARAGE MIN 2.1 RSI

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, BCIN# 19669
HVAC DESIGNS LTD.

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

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

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

WILLOWCREEK - WOB
5012 4238 sqft

HVAC DESIGNS LTD.
375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
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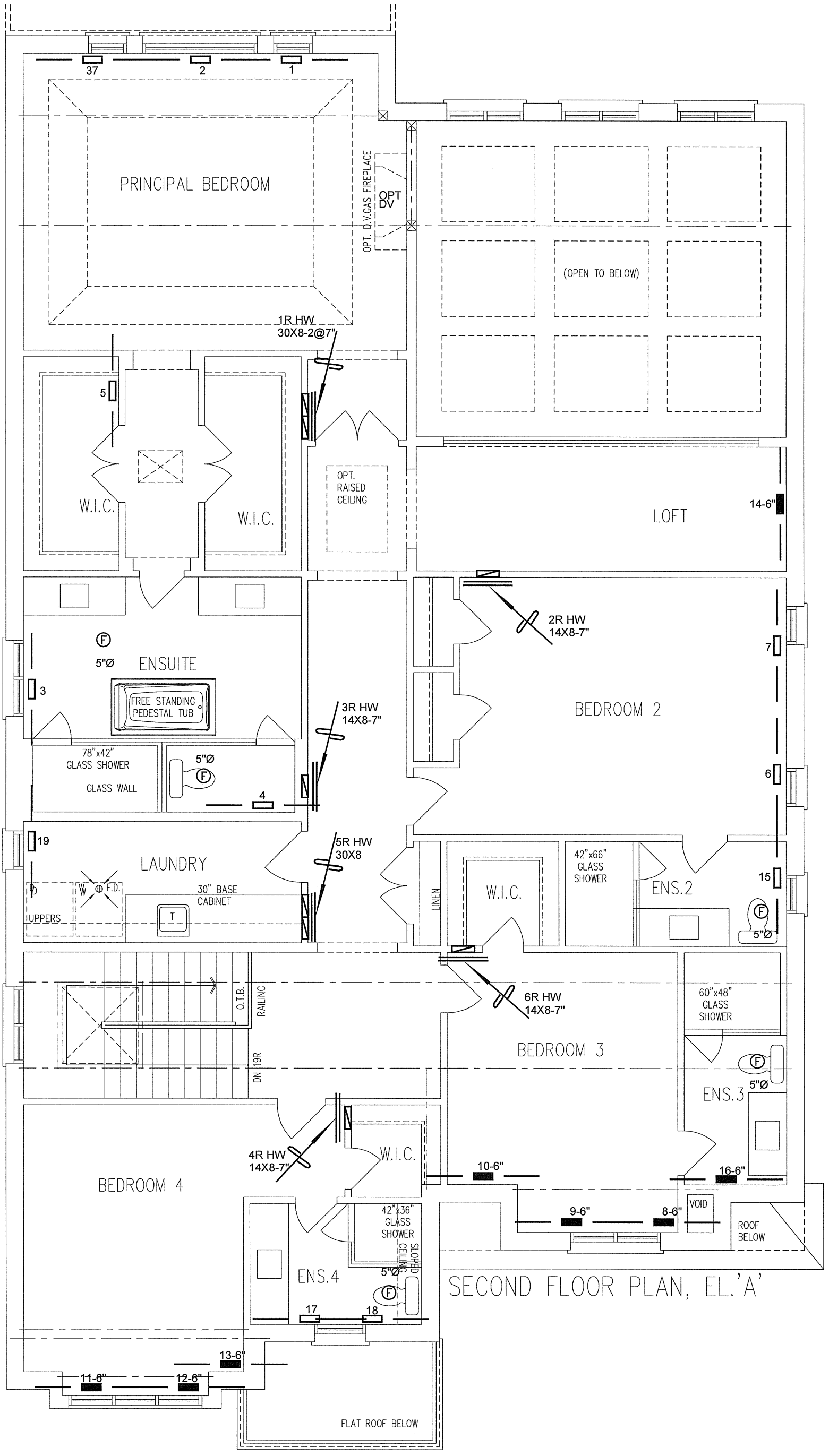
Specializing in Residential Mechanical Design Services

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# 96520



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, BCIN# 19669
HVAC DESIGNS LTD.

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

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

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

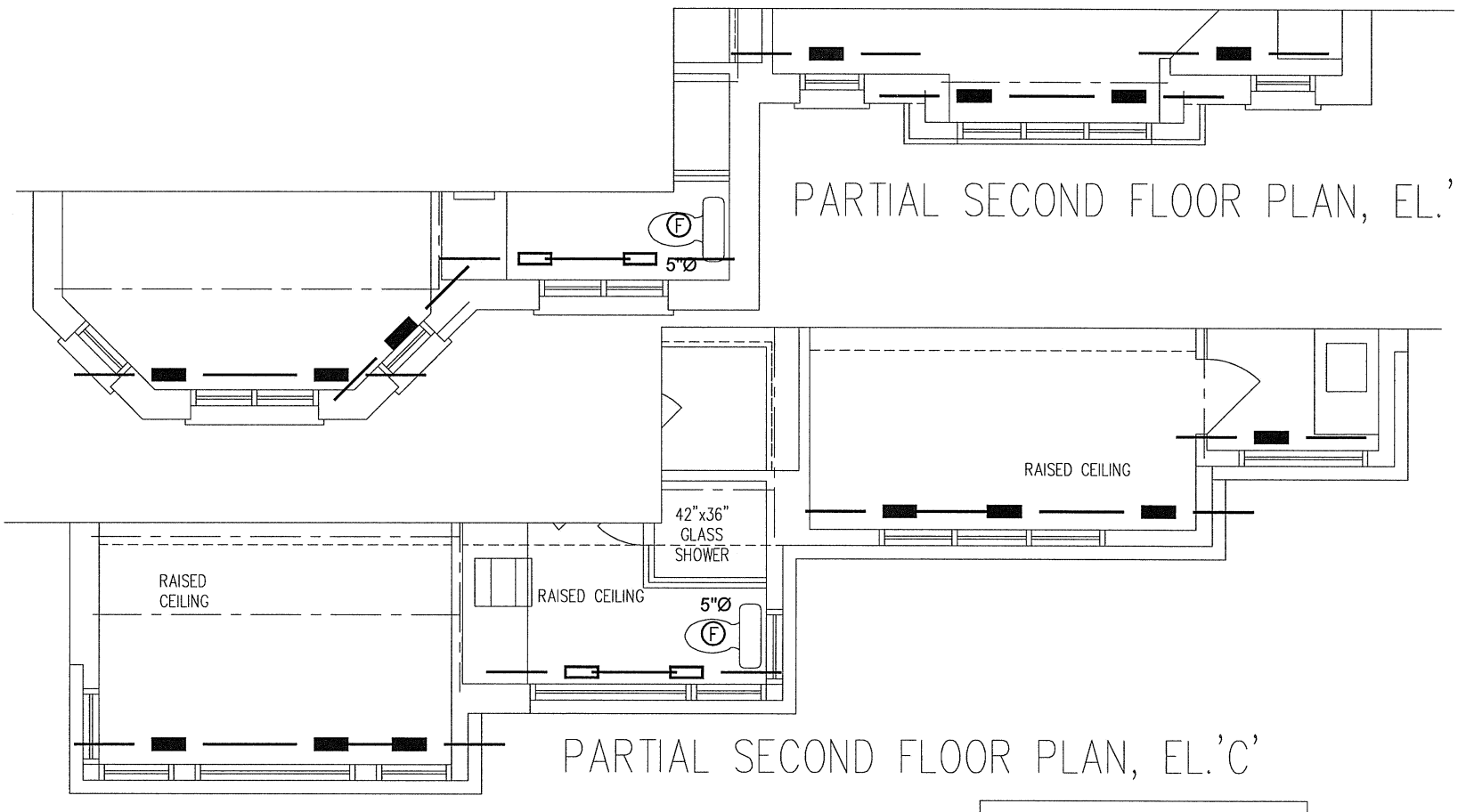
WILLOWCREEK - WOB
5012 4238 sqft

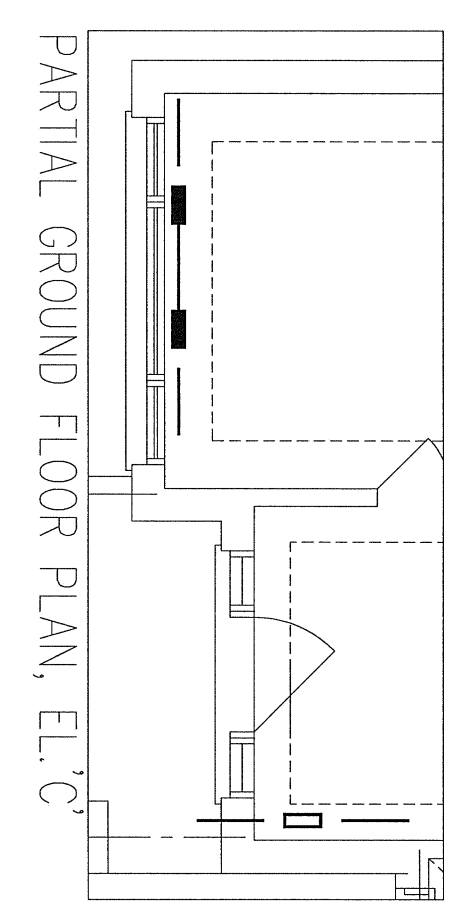
HVAC DESIGNS LTD.
375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdesigns.ca
Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

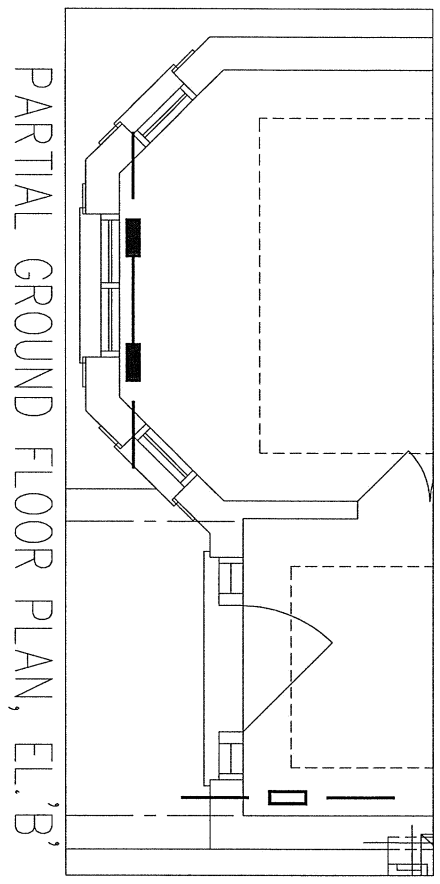
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

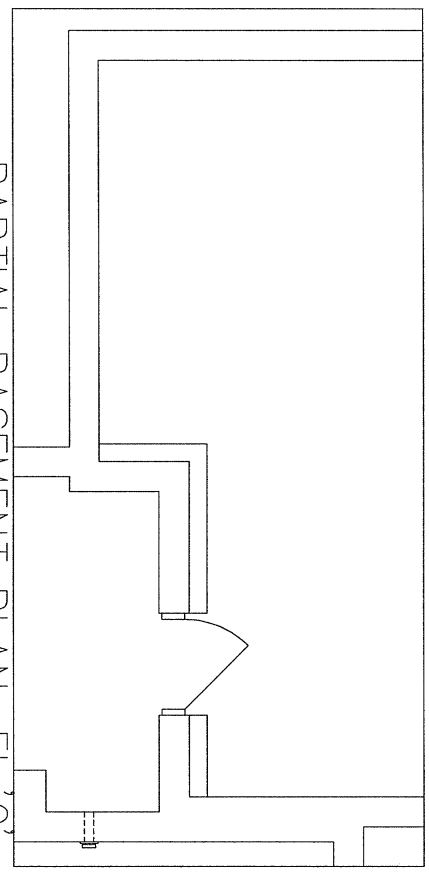
Sheet Title
SECOND FLOOR HEATING LAYOUT

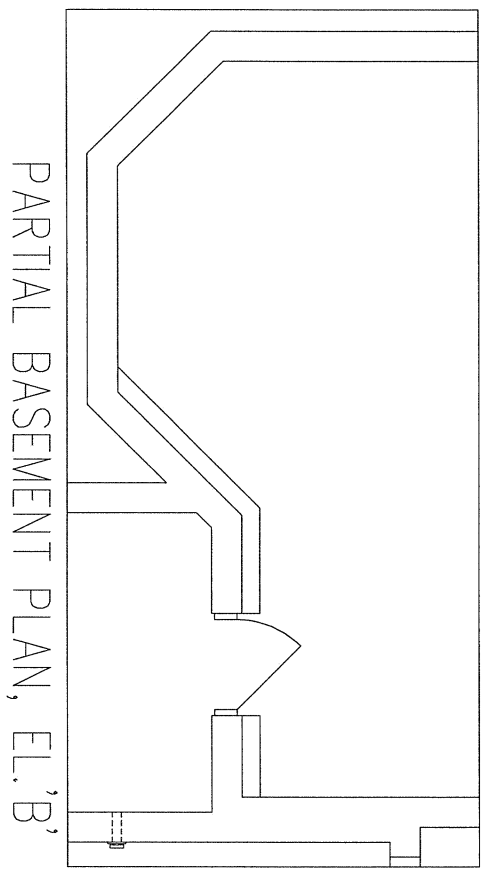
Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96520











HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—	SUPPLY AIR GRILLE	■	6" SUPPLY AIR BOOT ABOVE	▨	14"x8" RETURN AIR GRILLE
—	SUPPLY AIR GRILLE 6" BOOT	⊘	SUPPLY AIR STACK FROM 2nd FLOOR	▨	30"x8" RETURN AIR GRILLE
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE
N	REDUCER	N	RETURN AIR STACK 2nd FLOOR	N	RETURN AIR STACK ABOVE

REVISIONS

No.	Description	Date
1.		
2.		
3.		

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, BCIN# 19669
HVAC DESIGNS LTD.

WOB

CSA-F280-12

PACKAGE A1

Client

GOLD PARK HOMES

Project Name

PINE VALLEY PH 2
VAUGHAN, ONTARIO

WILLOWCREEK - WOB
5012 4238 sqft

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Sheet Title

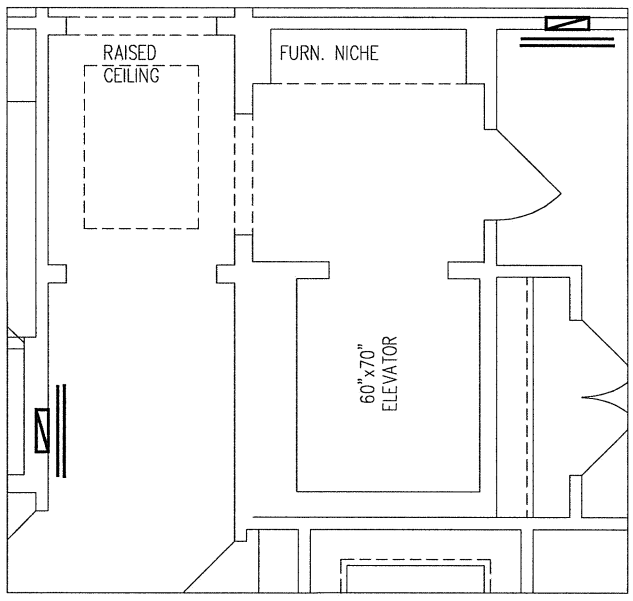
ELEVATIONS
HEATING
LAYOUT

Date MAY/2022

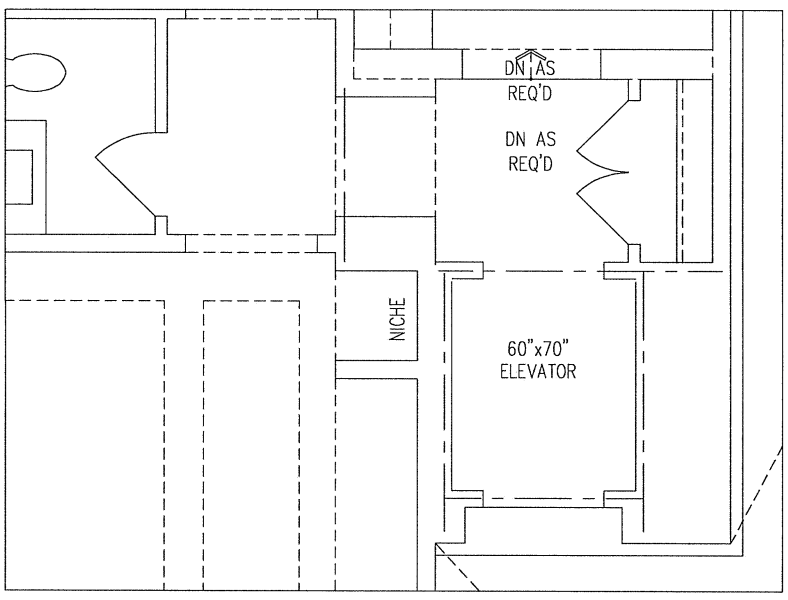
Scale 3/16" = 1'-0"

BCIN# 19669

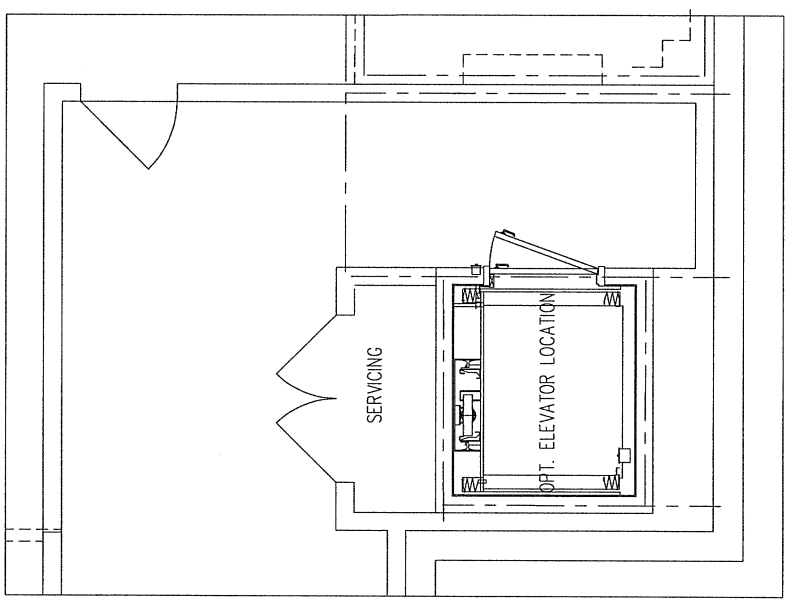
LO# 96520



PARTIAL SECOND FLOOR PLAN,
(W/ ELEVATOR) ELEV. 'A', 'B'&'C'



PARTIAL GROUND FLOOR PLAN
(W/ ELEVATOR) ELEV. 'A', 'B'&'C'



PARTIAL BASEMENT PLAN
(W/ ELEVATOR) ELEV. 'A', 'B'&'C'

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, BCIN# 19669
HVAC DESIGNS LTD.

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

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

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

WILLOWCREEK - WOB
5012 4238 sqft

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Sheet Title
STRIP PLAN
HEATING
LAYOUT

Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96520