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:** 6001 - QUEENSLAND LOT 104 **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.

July 15, 2022
Date

Michael O'Rourke
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.
375 Finley Ave. Suite 202 Ajax, ON L1S 2E2
Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 | LOT 104 | DATE Jul-22 | WINTER NATURAL AIR CHANGE RATE 0.434 | HEAT LOSS ΔT °F. 76 | CSA-F280-12
BUILDER: GOLD PARK HOMES | TYPE: 6001 - QUEENSLAND | GFA: 5296 | LO# 98032 | SUMMER NATURAL AIR CHANGE RATE 0.145 | HEAT GAIN ΔT °F. 13 | SB-12 PACKAGE A1

ROOM USE			GREAT			KIT			DIN			LIBR			FOY			MUD			PWD		
EXP. WALL			50			56			25			35			38			22			7		
CLG. HT.			20			11			11			11			21			13			11		
	FACTORS																						
GRS.WALL AREA	LOSS	GAIN	1000			616			275			385			798			286			77		
GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN
NORTH	21.3	16.0	46	979	735	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	58	1234	2410	80	1702	3324	0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	33	702	822	48	1021	1195	22	468	548	0	0	0	0	0	0	0	0	0
WEST	21.3	41.6	134	2852	5568	134	2852	5568	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	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	20	505	85	50	1262	213	20	505	85	0	0	0
NET EXPOSED WALL	4.5	0.8	820	3659	616	449	2004	337	227	1013	171	285	1272	214	668	2981	502	266	1187	200	77	344	58
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
EXPOSED CLG	1.3	0.6	430	552	253	0	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	10	27	13	0	0	0	0	0	0	10	27	13	204	561	257	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
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0			0			0	
SLAB ON GRADE HEAT LOSS				0			0			0			0			0			0			0	
SUBTOTAL HT LOSS				8069			5558			2034			3507			6507			1692			344	
SUB TOTAL HT GAIN					7184			6727			1366			3270			4296			285			58
LEVEL FACTOR / MULTIPLIER			0.30	0.52		0.30	0.52		0.30	0.52		0.30	0.52		0.30	0.52		0.30	0.52		0.30	0.52	
AIR CHANGE HEAT LOSS				4235			2917			1068			1840			3415			888			180	
AIR CHANGE HEAT GAIN					580			543			110			264			347			23			5
DUCT LOSS				0			0			0			0			0			0			0	
DUCT GAIN					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
HEAT GAIN APPLIANCES/LIGHTS					1281			1281			1281			1281			0			0			0
TOTAL HT LOSS BTU/H				12304			8474			3102			5347			9922			2580			524	
TOTAL HT GAIN x 1.3 BTU/H					11759			11116			3584			6259			6035			400			81

ROOM USE			WOD			BAS		
EXP. WALL			66			242		
CLG. HT.			10			10		
	FACTORS							
GRS.WALL AREA	LOSS	GAIN	660			2090		
GLAZING				LOSS	GAIN		LOSS	GAIN
NORTH	21.3	16.0	0	0	0	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	9	192	224
WEST	21.3	41.6	10	213	416	0	0	0
SKYLT.	37.2	101.5	0	0	0	0	0	0
DOORS	25.2	4.3	20	505	85	20	505	85
NET EXPOSED WALL	4.5	0.8	0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	366	1317	222	330	1188	200
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS							8389	
SLAB ON GRADE HEAT LOSS				0				
SUBTOTAL HT LOSS				2035			10273	
SUB TOTAL HT GAIN					722			509
LEVEL FACTOR / MULTIPLIER						0.50	1.97	
AIR CHANGE HEAT LOSS							24239	
AIR CHANGE HEAT GAIN								99
DUCT LOSS							0	
DUCT GAIN								0
HEAT GAIN PEOPLE	240		0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS								
TOTAL HT LOSS BTU/H				2035			34511	
TOTAL HT GAIN x 1.3 BTU/H					939			791

TOTAL HEAT GAIN BTU/H: 78538 TONS: 6.54 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 109133 TOTAL COMBINED HEAT LOSS BTU/H: 115289

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

SITE NAME: PINE VALLEY PH 2 | LOT 104 | DATE Jul-22 | WINTER NATURAL AIR CHANGE RATE 0.434 | HEAT LOSS ΔT °F. 76 | CSA-F280-12
BUILDER: GOLD PARK HOMES | TYPE: 6001 - QUEENSLAND | GFA: 5296 | LO# 98032 | SUMMER NATURAL AIR CHANGE RATE 0.145 | HEAT GAIN ΔT °F. 13 | SB-12 PACKAGE A1

ROOM USE			MBR			ENS			BED-2			BED-3			BED-4			BED-5			ENS-2			ENS-3			ENS-4			ENS-5		
EXP. WALL			20			32			18			28			37			16			6			19			10			6		
CLG. HT.			10			9			9			11			10			9			9			9			9			9		
	FACTORS																															
GRS.WALL AREA	LOSS	GAIN	200			288			162			308			370			144			54			171			90			54		
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	38	809	607	0	0	0	0	0	0	0	0	0	8	170	128	0	0	0	0	0	0	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	56	1192	2327	45	958	1870	0	0	0	0	0	0	12	255	499	0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	37	787	921	0	0	0	0	0	0	32	681	797	19	404	473	0	0	0	0	0	0	16	340	398	16	340	398
WEST	21.3	41.6	42	894	1745	8	170	332	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	158	705	119	243	1084	183	124	553	93	252	1125	189	293	1308	220	125	558	94	46	205	35	159	710	120	74	330	56	38	170	29
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	380	488	223	240	308	141	438	562	257	291	373	171	293	376	172	304	390	179	66	85	39	84	108	49	80	103	47	72	92	42
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	75	206	94	30	82	38	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	200	510	86	216	551	93	0	0	0	0	0	0	66	168	28	84	214	36	0	0	0	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				2087			2350			2434			3447			3405			1352			629			1287			773			602	
SUB TOTAL HT GAIN					2087			1577			1044			2874			3097			746			229			704			501			469
LEVEL FACTOR / MULTIPLIER			0.20	0.50		0.20	0.50		0.20	0.50		0.20	0.50		0.20	0.50		0.20	0.50		0.20	0.50		0.20	0.50		0.20	0.50		0.20	0.50	
AIR CHANGE HEAT LOSS				1039			1170			1212			1716			1695			673			313			641			385			300	
AIR CHANGE HEAT GAIN					169			127			84			232			250			60			19			57			40			38
DUCT LOSS				0			0			365			516			0			0			94			193			0			0	
DUCT GAIN					0			0			265			463			0			0			25			204			0			0
HEAT GAIN PEOPLE	240		2		480	0		0	1		240	1		240	1		240	1		240	0		0	0		0	0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					1281			0			1281			1281			1281			1281			0			1281			0			0
TOTAL HT LOSS BTU/H				3126			3520			4011			5679			5100			2026			1036			2121			1159			902	
TOTAL HT GAIN x 1.3 BTU/H					5221			2216			3787			6617			6328			3025			355			2919			704			659

ROOM USE			LAUN			HALL		
EXP. WALL			0			0		
CLG. HT.			9			9		
	FACTORS							
GRS.WALL AREA	LOSS	GAIN	0			0		
GLAZING			LOSS	GAIN		LOSS	GAIN	
NORTH	21.3	16.0	0	0	0	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	0	0	0
WEST	21.3	41.6	0	0	0	0	0	0
SKYLT.	37.2	101.5	0	0	0	24	894	2437
DOORS	25.2	4.3	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	84	108	49	80	103	47
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS				0			0	
SLAB ON GRADE HEAT LOSS				0			0	
SUBTOTAL HT LOSS				108			996	
SUB TOTAL HT GAIN					49			2484
LEVEL FACTOR / MULTIPLIER			0.20	0.50		0.20	0.50	
AIR CHANGE HEAT LOSS				54			496	
AIR CHANGE HEAT GAIN					4			201
DUCT LOSS				0			0	
DUCT GAIN					0			0
HEAT GAIN PEOPLE	240		0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					1281			0
TOTAL HT LOSS BTU/H				161			1493	
TOTAL HT GAIN x 1.3 BTU/H					1734			3490

TOTAL HEAT GAIN BTU/H: 78538 TONS: 6.54 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 109133 TOTAL COMBINED HEAT LOSS BTU/H: 115289

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

SITE NAME: PINE VALLEY PH 2 LOT 104
BUILDER: GOLD PARK HOMES TYPE: 6001 - QUEENSLAND DATE: Jul-22 GFA: 5296 LO# 98032 **FURNACE 1**

HEATING CFM 1340 COOLING CFM 1340
TOTAL HEAT LOSS 78,800 TOTAL HEAT GAIN 40,964
AIR FLOW RATE CFM 17.01 AIR FLOW RATE CFM 32.71

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 81878 BTUH

$*LENNOX
ML196UH090XE48C 90
AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = **85,600**

FAN SPEED
LOW 0
MEDLOW 1080
MEDIUM 1190
MEDIUM HIGH 1340
HIGH 1575

DESIGN CFM = **1340**
CFM @ .6 " E.S.P.
TEMPERATURE RISE 59 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	19	8
R/A	0	0	0	3	1

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	21	22	23	24
ROOM NAME	GREAT	GREAT	GREAT	GREAT	GREAT	KIT	KIT	KIT	KIT	DIN	DIN	LIBR	LIBR	LIBR	FOY	FOY	FOY	MUD	PWD	BAS	BAS	BAS	BAS
RM LOSS MBH.	2.46	2.46	2.46	2.46	2.46	2.12	2.12	2.12	2.12	1.55	1.55	1.78	1.78	1.78	3.31	3.31	3.31	2.58	0.52	4.57	4.57	4.57	4.57
CFM PER RUN HEAT	42	42	42	42	42	36	36	36	36	26	26	30	30	30	56	56	56	44	9	78	78	78	78
RM GAIN MBH.	2.35	2.35	2.35	2.35	2.35	2.78	2.78	2.78	2.78	1.79	1.79	2.09	2.09	2.09	2.01	2.01	2.01	0.40	0.08	0.22	0.22	0.22	0.22
CFM PER RUN COOLING	77	77	77	77	77	91	91	91	91	59	59	68	68	68	66	66	66	13	3	7	7	7	7
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	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
ACTUAL DUCT LGH.	74	89	83	78	72	67	59	45	46	46	10	22	27	31	40	46	37	48	55	67	56	65	71
EQUIVALENT LENGTH	140	130	150	160	130	130	140	170	110	120	150	150	110	120	140	110	100	150	130	110	120	120	140
TOTAL EFFECTIVE LENGTH	214	219	233	238	202	197	199	215	156	166	160	172	137	151	180	156	137	198	185	177	176	185	211
ADJUSTED PRESSURE	0.08	0.08	0.07	0.07	0.09	0.08	0.08	0.08	0.1	0.1	0.11	0.1	0.13	0.11	0.1	0.11	0.13	0.09	0.09	0.1	0.1	0.09	0.08
ROUND DUCT SIZE	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	5	5	5	5	5	5	5	5	4	4	5	5	**6**	**6**
HEATING VELOCITY (ft/min)	214	214	214	214	214	184	184	184	184	191	191	220	220	220	411	411	411	505	103	573	573	398	398
COOLING VELOCITY (ft/min)	393	393	393	393	393	464	464	464	464	433	433	499	499	499	485	485	485	149	34	51	51	36	36
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10
TRUNK	A	A	A	A	B	B	B	C	D	D	D	F	F	F	E	E	E	D	D	C	C	B	A

RUN #	25	26	27	28
ROOM NAME	BAS	BAS	BAS	BAS
RM LOSS MBH.	4.57	4.57	4.57	4.57
CFM PER RUN HEAT	78	78	78	78
RM GAIN MBH.	0.22	0.22	0.22	0.22
CFM PER RUN COOLING	7	7	7	7
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	39	44	23	41
EQUIVALENT LENGTH	140	160	100	130
TOTAL EFFECTIVE LENGTH	179	204	123	171
ADJUSTED PRESSURE	0.1	0.08	0.14	0.1
ROUND DUCT SIZE	5	5	5	5
HEATING VELOCITY (ft/min)	573	573	573	573
COOLING VELOCITY (ft/min)	51	51	51	51
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10
TRUNK	D	E	F	E

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	246	0.07	8.6	8	x	10	443	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	438	0.07	10.6	12	x	10	526	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	192	0.08	7.6	8	x	8	432	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	849	0.07	13.6	16	x	12	637	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	324	0.08	9.2	10	x	8	583	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	492	0.08	10.8	14	x	8	633	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	450	0.06	11.2	14	x	8	579
TRUNK X	890	0.06	14.4	16	x	12	668
TRUNK Y	580	0.06	12.3	12	x	10	696
TRUNK Z	275	0.06	9.3	10	x	8	495
DROP	1340	0.06	16.8	24	x	12	670

RETURN AIR #	1	2	3														**BR**
AIR VOLUME	275	305	450	0	0	0	0	0	0	0	0	0	0	0	0	0	310
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	0.15
ACTUAL DUCT LGH.	76	47	41	1	1	1	1	1	1	1	1	1	1	1	1	1	19
EQUIVALENT LENGTH	180	165	140	0	0	0	0	0	0	0	0	0	0	0	0	0	145
TOTAL EFFECTIVE LH	256	212	181	1	1	1	1	1	1	1	1	1	1	1	1	1	164
ADJUSTED PRESSURE	0.06	0.07	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.09
ROUND DUCT SIZE	9.3	9.3	10.4	0	0	0	0	0	0	0	0	0	0	0	0	0	8.8
INLET GRILL SIZE	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	30	30	0	0	0	0	0	0	0	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.
375 Finley Ave. Suite 202 Ajax, ON L1S 2E2
Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 LOT 104
BUILDER: GOLD PARK HOMES TYPE: 6001 - QUEENSLAND DATE: Jul-22 GFA: 5296 LO# 98032 **FURNACE 2**

HEATING CFM 1110 COOLING CFM 1110
TOTAL HEAT LOSS 30,333 TOTAL HEAT GAIN 37,055
AIR FLOW RATE CFM 36.59 AIR FLOW RATE CFM 29.96

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 33411 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	21	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	20	21
ROOM NAME	MBR	MBR	MBR	ENS	ENS	BED-2	BED-2	ENS-2	BED-3	BED-3	BED-3	ENS-3	BED-4	BED-4	BED-4	ENS-4	BED-5	BED-5	ENS-5	LAUN	HALL
RM LOSS MBH.	1.04	1.04	1.04	2.64	0.88	2.01	2.01	1.04	1.89	1.89	1.89	2.12	1.70	1.70	1.70	1.16	1.01	1.01	0.90	0.16	1.49
CFM PER RUN HEAT	38	38	38	97	32	73	73	38	69	69	69	78	62	62	62	42	37	37	33	6	55
RM GAIN MBH.	1.74	1.74	1.74	1.66	0.55	1.89	1.89	0.35	2.21	2.21	2.21	2.92	2.11	2.11	2.11	0.70	1.51	1.51	0.66	1.73	3.49
CFM PER RUN COOLING	52	52	52	50	17	57	57	11	66	66	66	87	63	63	63	21	45	45	20	52	105
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.17	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	0.16
ACTUAL DUCT LGH.	67	72	83	75	69	85	95	102	79	85	91	86	37	30	42	32	24	28	67	82	34
EQUIVALENT LENGTH	150	160	220	170	180	160	170	180	170	180	170	160	170	150	140	200	210	180	180	190	110
TOTAL EFFECTIVE LENGTH	217	232	303	245	249	245	265	282	249	265	261	246	207	180	182	232	234	208	247	272	144
ADJUSTED PRESSURE	0.08	0.07	0.06	0.07	0.07	0.07	0.06	0.06	0.07	0.06	0.07	0.07	0.08	0.1	0.09	0.07	0.07	0.08	0.07	0.06	0.11
ROUND DUCT SIZE	**6**	**6**	**6**	**6**	4	**6**	**6**	5	**6**	**6**	**6**	**6**	5	5	5	5	5	4	4	5	**6**
HEATING VELOCITY (ft/min)	194	194	194	495	367	372	372	279	352	352	352	398	455	455	455	308	272	424	379	44	280
COOLING VELOCITY (ft/min)	265	265	265	255	195	291	291	81	337	337	337	444	463	463	463	154	330	516	229	382	535
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	3X10	4X10	4X10	3X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10
TRUNK	B	B	A	B	B	A	A	A	C	C	C	C	D	D	D	C	C	C	B	A	D

RUN #																					
ROOM NAME																					
RM LOSS MBH.																					
CFM PER RUN HEAT																					
RM GAIN MBH.																					
CFM PER RUN COOLING																					
ADJUSTED PRESSURE																					
ACTUAL DUCT LGH.																					
EQUIVALENT LENGTH																					
TOTAL EFFECTIVE LENGTH																					
ADJUSTED PRESSURE																					
ROUND DUCT SIZE																					
HEATING VELOCITY (ft/min)																					
COOLING VELOCITY (ft/min)																					
OUTLET GRILL SIZE																					
TRUNK																					

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	228	0.06	8.7	8	x	10	410	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	466	0.06	11.3	12	x	10	559	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	867	0.06	14.3	16	x	12	650	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	241	0.08	8.2	10	x	8	434	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	390	0.05	11.1	14	x	8	501
TRUNK X	765	0.05	14.3	16	x	12	574
TRUNK Y	720	0.05	13.9	16	x	10	648
TRUNK Z	345	0.05	10.6	10	x	10	497
DROP	1110	0.05	16.4	24	x	10	666

RETURN AIR #	1	2	3	4	5	6											**BR**
AIR VOLUME	230	115	260	130	115	260	0	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	0.15
ACTUAL DUCT LGH.	75	71	71	60	83	65	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	230	215	195	185	225	190	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	305	286	266	245	308	255	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.05	0.05	0.06	0.06	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	9.1	7	9.1	7	7	9.1	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	30	14	14	30	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
Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

TYPE: 6001 - QUEENSLAND LO # 98032
SITE NAME: PINE VALLEY PH 2 LOT 104

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	4	@ 10.6 cfm	42.4	cfm
Kitchen & Bathrooms	7	@ 10.6 cfm	74.2	cfm
Other Rooms	5	@ 10.6 cfm	53.0	cfm
Table 9.32.3.A.		TOTAL	212.0	cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED 9.32.3.4.(1)

1	Bedroom	31.8	cfm
2	Bedroom	47.7	cfm
3	Bedroom	63.6	cfm
4	Bedroom	79.5	cfm
5	Bedroom	95.4	cfm
	TOTAL	**95.4**	**cfm**

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	212	cfm
Less Principal Ventil. Capacity	150	cfm
Required Supplemental Capacity	62.0	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: July-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.

375 Finley Ave. Suite 202 Ajax, ON L1S 2E2
Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

CSA F280-12 Residential Heat Loss and Heat Gain Calculations

Formula Sheet (For Air Leakage / Ventiliation Calculation)

LO#: 98032 Model: 6001 - QUEENSLAND Builder: GOLD PARK HOMES Date: 2022-07-15

Volume Calculation

House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	2551	10	25510
First	2551	11	28061
Second	3185	9	28665
Third	0	9	0
Fourth	0	9	0
		Total:	82,236.0 ft³
		Total:	2328.7 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.434
SUMMER NATURAL AIR CHANGE RATE	0.145

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

$$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$$

0.434 x 646.85 x 42 °C x 1.2 = 14208 W

= **48477 Btu/h**

6.2.6 Sensible Gain due to Air Leakage

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

= 0.145 x 646.85 x 7 °C x 1.2 = 801 W

= **2733 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	48,477	12,308	1.969
2	0.3		27,710	0.525
3	0.2		19,470	0.498
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

HVAC DESIGNS LTD.
375 Finley Ave. Suite 202 Ajax, ON L1S 2E2
Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 6001 - QUEENSLAND LOT 104 **BUILDER:** GOLD PARK HOMES
SFQT: 5296 **LO#** 98032 **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):	82236.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft^2):	1.70	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 66.0 ft	WIDTH: 55.0 ft	EXPOSED PERIMETER:	242.0 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

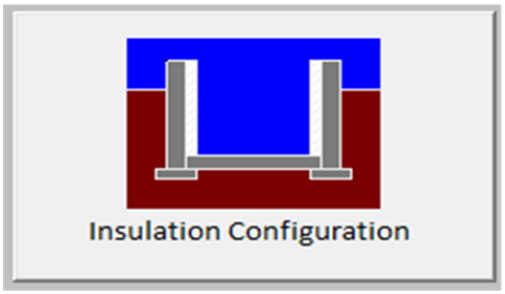
Michael O'Rourke

HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
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):	**20.1**	 Insulation Configuration
Floor Width (m):	**16.8**	
Exposed Perimeter (m):	**0.0**	
Wall Height (m):	**3.0**	
Depth Below Grade (m):	**2.13**	
Window Area (m^2):	**1.8**	
Door Area (m^2):	**3.7**	
Radiant Slab		
Heated Fraction of the Slab:	**0**	
Fluid Temperature (°C):	**33**	
Design Months		
Heating Month	**1**	
Foundation Loads		
Heating Load (Watts):	**2458**	

TYPE: 6001 - QUEENSLAND LOT 104
LO# 98032

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):	10.06
Building Configuration	
Type:	Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m^3):	2328.7
Air Leakage/Ventilation	
Air Tightness Type:	Present (1961-) (3.57 ACH)
Custom BDT Data:	ELA @ 10 Pa. 3104.2 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):	**0.434**
Cooling Air Leakage Rate (ACH/H):	**0.145**

TYPE: 6001 - QUEENSLAND LOT 104

LO# 98032

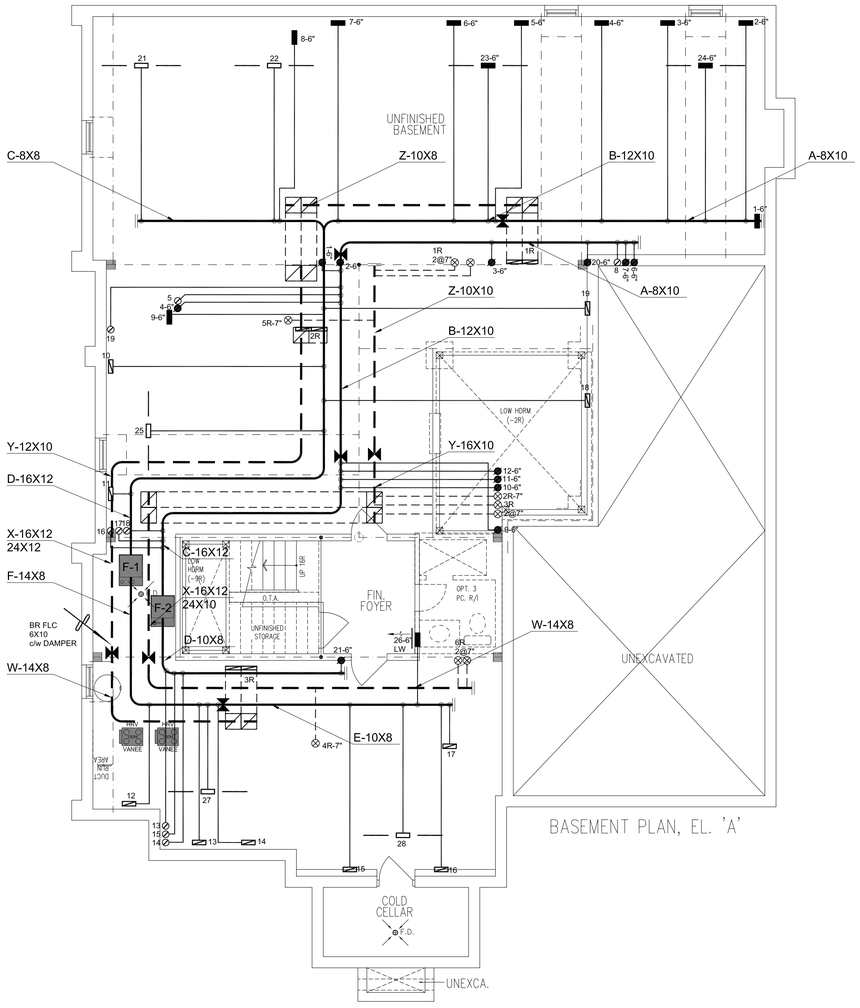
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY BRANCH OUTLETS SHALL BE EQUIPPED WITH MANUAL BALANCING DAMPER. DUCTWORK WHICH PASSES THROUGH THE GARAGE OR UNHEATED SPACES SHALL BE ADEQUATELY INSULATED AND GAS-PROOFED

ALL S/A DIFFUSERS "4x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

FURNACE 1 (F-1)
LENNOX ML196UH090XE48C
85600 BTU/H OUTPUT
3.5 TONS A/C @ 1340 cfm

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

	S/A	R/A	FANS
2ND	21	6	7
1ST	19	3	2
BAS	8	1	0



HVAC LEGEND

	4X10 SUPPLY GRILLE
	14X6 RETURN GRILLE
	4X10 SUPPLY GRILLE 6"Ø BOOT
	30X8 RETURN GRILLE
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	EXHAUST FAN
LW	LOW WALL
HW	HIGH WALL

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.

No.	Revision	Date	By
1	ISSUED FOR PERMIT	JULY 2022	JC

SB-12 PACKAGE

A1

HVAC DESIGNS LTD.
375 Finley Ave - Unit 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

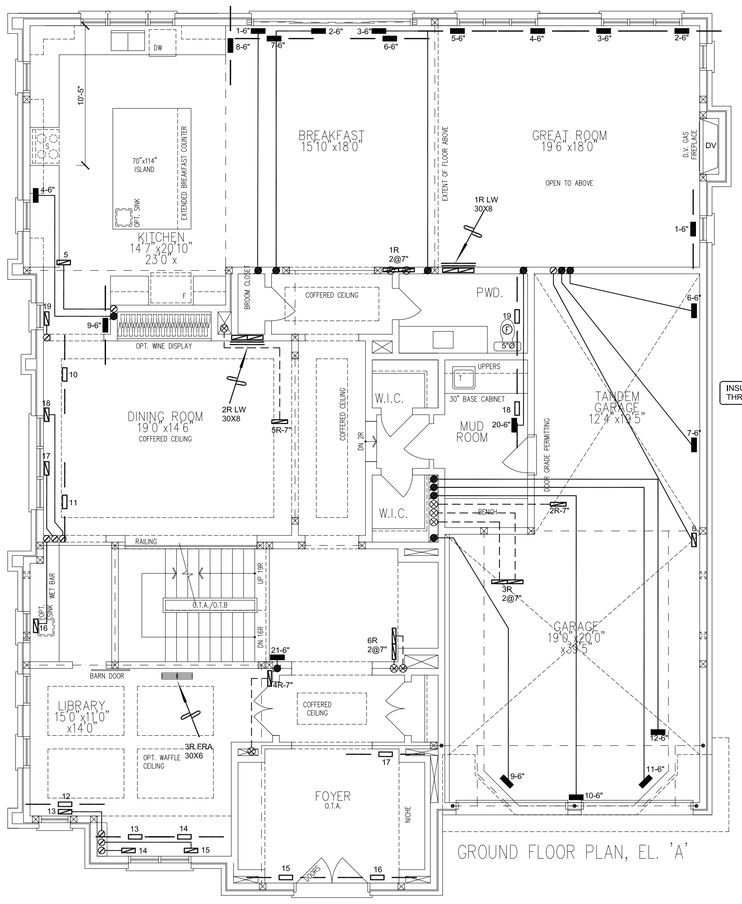
Client	GOLDPARK HOMES
Project Name	PINE VALLEY & TESTON VAUGHAN, ONTARIO **6001 - QUEENSLAND** LOT 104 5296 SQFT
Sheet Title	BASEMENT HVAC LAYOUT
Drawn By	JC
Checked By	MO
Scale	3/16"=1'-0"
Sheet No.	1
Date	JULY/2022
LO #	98032

LOT 104

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY BRANCH OUTLETS SHALL BE EQUIPPED WITH MANUAL BALANCING DAMPER. DUCTWORK WHICH PASSES THROUGH THE GARAGE OR UNHEATED SPACES SHALL BE ADEQUATELY INSULATED AND GAS-PROOFED

ALL S/A DIFFUSERS "4x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

	S/A	R/A	FANS
2ND	21	6	7
1ST	19	3	2
BAS	8	1	0



GROUND FLOOR PLAN, EL. 'A'

INSULATE DUCTS ROUTING THRU GARAGE MIN 2.1 RSI

LOT 104

HVAC LEGEND

	4X10 SUPPLY GRILLE
	14X6 RETURN GRILLE
	4X10 SUPPLY GRILLE 6"Ø BOOT
	30X8 RETURN GRILLE
	SUPPLY DUCTWORK
	RETURN DUCTWORK
Ⓕ	EXHAUST FAN
LW	LOW WALL
HW	HIGH WALL

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# 19695
HVAC DESIGNS LTD.

No.	Revision	Date	By
1	ISSUED FOR PERMIT	JULY 2022	JC

SB-12 PACKAGE

A1

HVAC DESIGNS LTD.
375 Finley Ave - Unit 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

Client: GOLDPARK HOMES

Project Name: PINE VALLEY & TESTON
VAUGHAN, ONTARIO
6001 - QUEENSLAND
LOT 104
5296 SQFT

Sheet Title: FIRST FLOOR HVAC LAYOUT

Drawn By: JC | Checked By: MO

Scale: 3/16"=1'-0" | Sheet No.: 2

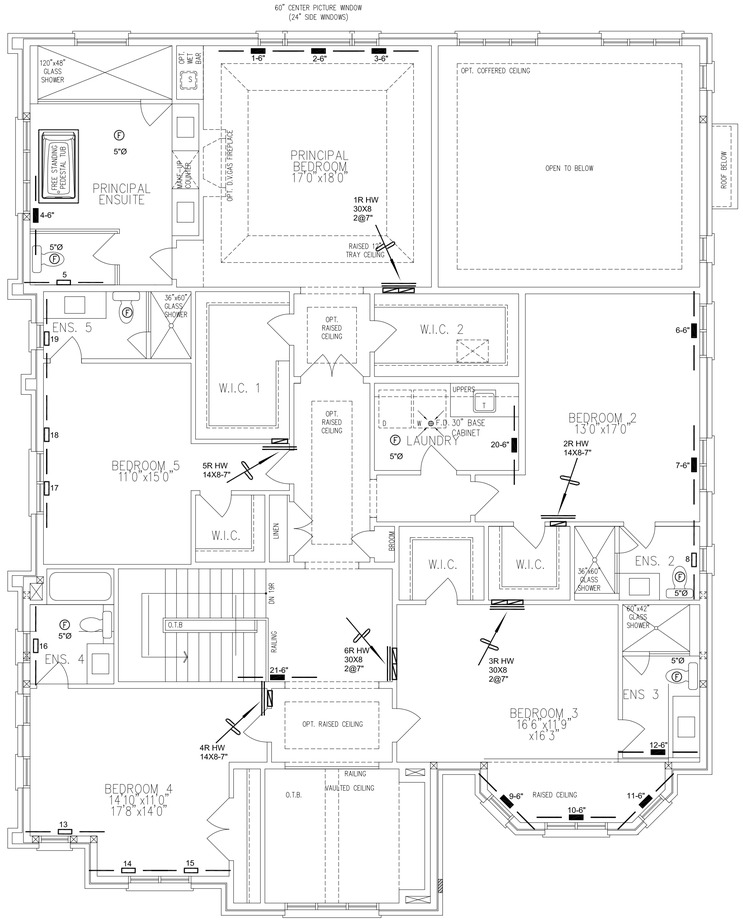
Date: JULY/2022

LO #: 98032

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY BRANCH OUTLETS SHALL BE EQUIPPED WITH MANUAL BALANCING DAMPER. DUCTWORK WHICH PASSES THROUGH THE GARAGE OR UNHEATED SPACES SHALL BE ADEQUATELY INSULATED AND GAS-PROOFED

ALL S/A DIFFUSERS "4x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

	S/A	R/A	FANS
2ND	21	6	7
1ST	19	3	2
BAS	8	1	0



SECOND FLOOR PLAN, EL. 'A'

LOT 104

HVAC LEGEND

	4X10 SUPPLY GRILLE
	14X8 RETURN GRILLE
	4X10 SUPPLY GRILLE 6"Ø BOOT
	30X8 RETURN GRILLE
	SUPPLY DUCTWORK
	RETURN DUCTWORK
Ⓕ	EXHAUST FAN
LW	LOW WALL
HW	HIGH WALL

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# 39669
HVAC DESIGNS LTD.

No.	Revision	Date	By
1	ISSUED FOR PERMIT	JULY 2022	JC

SB-12 PACKAGE

A1

HVAC DESIGNS LTD.
375 Finley Ave - Unit 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

Client: GOLDPARK HOMES

Project Name: PINE VALLEY & TESTON
VAUGHAN, ONTARIO
6001 - QUEENSLAND
LOT 104
5296 SQFT

Sheet Title: SECOND FLOOR HVAC LAYOUT
Drawn By: JC
Checked By: MO
Scale: 3/16"=1'-0"
Sheet No.: 3
Date: JULY/2022
LO #: 98032