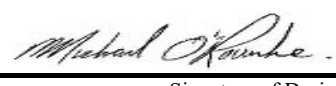


Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name		Unit no.	Lot/con.
Municipality VAUGHAN (WOODBIDGE)	Postal code	Plan number/ other description	
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdesigns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]			
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings ☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection ☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems			
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 6002 - KINGSVIEW 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.			
April 14, 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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

SITE NAME: PINE VALLEY PH 2				TYPE: 6002 - KINGSVIEW				GFA: 5526				DATE Apr-22				WINTER NATURAL AIR CHANGE RATE 0.342				HEAT LOSS AT °F. 76				CSA-F280-12			
BUILDER: GOLD PARK HOMES												LO# 96139				SUMMER NATURAL AIR CHANGE RATE 0.115				HEAT GAIN AT °F. 13				SB-12 PACKAGE A1			
ROOM USE																											
EXP. WALL																											
CLG. HT.																											
FACTORS																											
GRS.WALL AREA	LOSS	GAIN																									
GLAZING																											
NORTH	21.3	16.0																									
EAST	21.3	41.6																									
SOUTH	21.3	24.9																									
WEST	21.3	41.6																									
SKYLT.	37.2	101.5																									
DOORS	25.2	4.3																									
NET EXPOSED WALL	4.5	0.8																									
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6																									
EXPOSED CLG	1.3	0.6																									
NO ATTIC EXPOSED CLG	2.7	1.3																									
EXPOSED FLOOR	2.6	0.4																									
BASEMENT/CRAWL HEAT LOSS																											
SLAB ON GRADE HEAT LOSS																											
SUBTOTAL HT LOSS																											
SUB TOTAL HT GAIN																											
LEVEL FACTOR / MULTIPLIER																											
AIR CHANGE HEAT LOSS																											
AIR CHANGE HEAT GAIN																											
DUCT LOSS																											
DUCT GAIN																											
HEAT GAIN PEOPLE	240																										
HEAT GAIN APPLIANCES/LIGHTS																											
TOTAL HT LOSS BTU/H																											
TOTAL HT GAIN x 1.3 BTU/H																											

ROOM USE			OFFICE			FM/DN			KIT			GRT			CATER			PWD			FOY			MUD									WOD			BAS					
EXP. WALL			32			30			47			83			19			11			68			21									73			244					
CLG. HT.			11			11			11			11			11			11			11			11									10			10					
FACTORS			LOSS		GAIN																																				
GRS.WALL AREA			355				333				522				921				211				122				755				233				737		2170				
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	0	12	255	192				0	0	0	0	0	0	0				
EAST	21.3	41.6	67	1426	2784				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	2171	4238	0	0	0			0	0	0	0	0	0				
SOUTH	21.3	24.9	0	0	0			69	1468	1718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	8	170	199					
WEST	21.3	41.6	0	0	0		0	0	0	0	120	2554	4986	108	2298	4488	14	298	582	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	0					
DOORS	25.2	4.3	0	0	0		0	0	0	0	20	505	85	0	0	0	10	252	43	0	0	0	0	13	328	55	0	0	0			0	0	0	20	505	85				
NET EXPOSED WALL	4.5	0.8	288	1286	217		264	1178	198	382	1703	287	813	3630	611	187	834	140	122	545	92		640	2855	481	221	987	166			0	0	0	0	0	0					
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0			413	1486	250	294	1058	178						
EXPOSED CLG	1.3	0.6	0	0	0		0	0	0	0	0	0	375	481	220	0	0	0	0	0	0		116	149	68	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	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	0	0						
BASEMENT/CRAWL HEAT LOSS			0			0			0			0			0			0			0			0			0			0			0			0			8537		
SLAB ON GRADE HEAT LOSS			0			0			0			0			0			0			0			0			0			0			0			0			0		
SUBTOTAL HT LOSS			2712			2646			4762			6409			1384			545			5503			1242									2018			10271					
SUB TOTAL HT GAIN			3001			1916			5358			5319			765			92			4843			358						1289			462								
LEVEL FACTOR / MULTIPLIER			0.30	0.48		0.30	0.48		0.30	0.48		0.30	0.48		0.30	0.48		0.30	0.48		0.30	0.48		0.30	0.48		0.30	0.48					0.50	1.63							
AIR CHANGE HEAT LOSS			1295			1264			2274			3060			661			260			2627			593									20057								
AIR CHANGE HEAT GAIN			224			143			401			398			57			7			362			27									131								
DUCT LOSS			0			0			0			0			0			0			0			0									0								
DUCT GAIN			0			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	0	0	0	0	0			0	0	0	0	0	0						
HEAT GAIN APPLIANCES/LIGHTS			1371			1371			1371			1371			0			0			0			0									0								
TOTAL HT LOSS BTU/H			4007			3910			7036			9469			2046			805			8130			1835						2018			30327								
TOTAL HT GAIN x 1.3 BTU/H			5975			4460			9269			9215			1068			128			6766			500						1676			771								

SITE NAME: PINE VALLEY PH 2										DATE Apr-22										WINTER NATURAL AIR CHANGE RATE 0.342										HEAT LOSS AT °F. 76		CSA-F280-12																					
BUILDER: GOLD PARK HOMES										TYPE: 6002 - KINGSVIEW										GFA: 5526										LO# 96139										SUMMER NATURAL AIR CHANGE RATE 0.115										HEAT GAIN ΔT °F. 13		SB-12 PACKAGE A1	
ROOM USE			PRI		ENS			PWIC-1			PWIC-2			BED-2			WIC-2			ENS-2			BED-3			WIC-3			ENS-3																								
EXP. WALL			21		35			0			0			14			0			5			39			0			5																								
CLG. HT.			9		9			9			9			9			9			9			9			9			9																								
FACTORS																																																					
GRS.WALL AREA			LOSS GAIN		191			319			0			127			0			46			355			0			46																								
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	9	192	144	0	0	0	0	0	0	9	192	144																						
EAST			21.3	41.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	1681	3283	0	0	0	0	0	0																						
SOUTH			21.3	24.9	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																						
WEST			21.3	41.6	44	936	1828	28	596	1163	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																					
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																				
NET EXPOSED WALL			4.5	0.8	147	656	111	291	1296	218	0	0	0	0	0	107	479	81	0	0	0	37	163	27	276	1231	207	0	0	0	37	163	27																				
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																				
EXPOSED CLG			1.3	0.6	440	565	259	304	390	179	52	67	31	165	212	97	285	366	167	43	55	25	65	83	38	386	495	227	43	55	25	65	83	38																			
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	0	0	0																			
EXPOSED FLOOR			2.6	0.4	0	0	0	0	0	0	0	0	0	55	140	24	218	556	94	43	110	18	65	166	28	296	755	127	43	110	18	65	166	28																			
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					2157			2282			67			352			1827			165			604			4163			165			604																					
SUB TOTAL HT GAIN					2197			1560			31			121			661			44			237			3844			44			237																					
LEVEL FACTOR / MULTIPLIER			0.20	0.44			0.20	0.44			0.20	0.44			0.20	0.44			0.20	0.44			0.20	0.44			0.20	0.44			0.20	0.44																					
AIR CHANGE HEAT LOSS					949			1004			29			155			803			72			265			1830			72			265																					
AIR CHANGE HEAT GAIN					164			117			2			9			49			3			18			287			3			18																					
DUCT LOSS					0			0			0			51			263			24			87			599			24			87																					
DUCT GAIN					0			0			0			13			232			5			26			574			5			26																					
HEAT GAIN PEOPLE			240		2	480	0	0	0	0	0	0	0	1	240	0	0	240	0	0	0	1	240	0	0	0	0	0	0	0	0	0	0	0																			
HEAT GAIN APPLIANCES/LIGHTS					1371			0			0			0			1371			0			0			1371			0			0																					
TOTAL HT LOSS BTU/H					3106			3286			96			557			2893			261			956			6592			261			956																					
TOTAL HT GAIN x 1.3 BTU/H					5477			2180			43			185			3320			67			365			8212			67			365																					

ROOM USE			BED-4		ENS-4		LAUN		BED-5		ENS-5												
EXP. WALL			31		5		7		14		7												
CLG. HT.			9		9		9		9		9												
FACTORS																							
GRS.WALL AREA	LOSS	GAIN	282		46		64		127		64												
GLAZING			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
EAST	21.3	41.6	67	1426	2784	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	9	192	224	9	192	224	20	426	498	9	192	224						
WEST	21.3	41.6	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
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
NET EXPOSED WALL	4.5	0.8	215	960	162	37	163	27	55	244	41	107	479	81	55	244	41						
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						
EXPOSED CLG	1.3	0.6	332	426	195	56	72	33	220	282	129	362	465	213	78	100	46						
NO ATTIC EXPOSED CLG	2.7	1.3	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						
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0							
SLAB ON GRADE HEAT LOSS				0			0			0			0			0							
SUBTOTAL HT LOSS				2812			426			718			1369			536							
SUB TOTAL HT GAIN					3141			284			394			791			311						
LEVEL FACTOR / MULTIPLIER			0.20	0.44		0.20	0.44		0.20	0.44		0.20	0.44		0.20	0.44							
AIR CHANGE HEAT LOSS				1236			187			316			602			236							
AIR CHANGE HEAT GAIN					235			21			30			59			23						
DUCT LOSS				0			0			0			0			0							
DUCT GAIN				0			0			0			0			0							
HEAT GAIN PEOPLE	240		1	240		0		0	0		0	1	240		0		0						
HEAT GAIN APPLIANCES/LIGHTS				1371			0			1371			1371			0							
TOTAL HT LOSS BTU/H				4048			614			1034			1972			771							
TOTAL HT GAIN x 1.3 BTU/H					6483			397			2334			3200			435						

TOTAL HEAT GAIN BTU/H: 73478 TONS: 6.12 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 96986 TOTAL COMBINED HEAT LOSS BTU/H: 103142

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

TYPE: 6002 - KINGSVIEW

DATE: Apr-22

GFA: 5526

LO# 96139

FURNACE 1

HEATING CFM 1340 COOLING CFM 1340
TOTAL HEAT LOSS 69,583 TOTAL HEAT GAIN 39,829
AIR FLOW RATE CFM 19.26 AIR FLOW RATE CFM 33.64

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
= 72661 BTUH**
\$*LENNOX
ML196UH090XE48C 90
FAN SPEED LOW 0
MEDLOW 1080
MEDIUM 1190
MEDIUM HIGH 1340
HIGH 1575

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

DESIGN CFM = **1340**
CFM @ .6" E.S.P.

TEMPERATURE RISE 59 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	17	7
R/A	0	0	0	4	1

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

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

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	FOY	FOY	FOY	OFFCE	OFFCE	FM/DN	FM/DN	GRT	GRT	GRT	KIT	KIT	KIT	KIT	CATER	MUD	PWD	BAS	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH.	2.71	2.71	2.71	2.00	2.00	1.96	1.96	3.16	3.16	3.16	1.76	1.76	1.76	1.76	2.05	1.84	0.81	4.62	4.62	4.62	4.62	4.62	4.62	4.62
CFM PER RUN HEAT	52	52	52	39	39	38	38	61	61	61	34	34	34	34	39	35	16	89	89	89	89	89	89	89
RM GAIN MBH.	2.26	2.26	2.26	2.99	2.99	2.23	2.23	3.07	3.07	3.07	2.32	2.32	2.32	2.32	1.07	0.50	0.13	0.35	0.35	0.35	0.35	0.35	0.35	0.35
CFM PER RUN COOLING	76	76	76	101	101	75	75	103	103	103	78	78	78	78	36	17	4	12	12	12	12	12	12	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	58	60	52	51	58	37	27	45	45	36	31	32	32	42	49	36	32	36	24	41	28	28	52	41
EQUIVALENT LENGTH	150	180	150	160	190	110	170	120	110	110	190	140	130	110	120	120	120	120	150	110	130	130	160	110
TOTAL EFFECTIVE LENGTH	208	240	202	211	248	147	197	165	155	146	221	172	162	152	169	156	152	156	174	151	158	158	212	151
ADJUSTED PRESSURE	0.08	0.07	0.09	0.08	0.07	0.12	0.09	0.1	0.1	0.11	0.08	0.1	0.11	0.11	0.1	0.11	0.11	0.1	0.09	0.11	0.1	0.1	0.08	0.11
ROUND DUCT SIZE	6	6	5	6	6	5	5	6	6	6	6	6	6	6	4	4	4	6	6	6	6	6	6	6
HEATING VELOCITY (ft/min)	265	265	382	199	199	279	279	311	311	311	173	173	173	173	447	402	184	454	454	454	454	454	454	454
COOLING VELOCITY (ft/min)	388	388	558	515	515	551	551	525	525	525	398	398	398	398	413	195	46	61	61	61	61	61	61	61
OUTLET GRILL SIZE	4X10	4X10	3X10	4X10	4X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10
TRUNK	A	A	A	A	A	B	B	C	C	C	E	E	E	E	E	E	B	E	E	C	C	B	A	B

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										RETURN AIR TRUNK SIZE									
TRUNK	STATIC	ROUND	RECT	VELOCITY						TRUNK	STATIC	ROUND	RECT	VELOCITY					
CFM	PRESS.	DUCT	DUCT	(ft/min)						CFM	PRESS.	DUCT	DUCT	(ft/min)					
TRUNK A	323	0.07	9.5	14	x	8	415			TRUNK G	0	0.00	0	0	x	8	0		
TRUNK B	593	0.07	11.9	18	x	8	593			TRUNK H	0	0.00	0	0	x	8	0		
TRUNK C	361	0.10	9.1	10	x	8	650			TRUNK I	0	0.00	0	0	x	8	0		
TRUNK D	954	0.07	14.2	24	x	8	716			TRUNK J	0	0.00	0	0	x	8	0		
TRUNK E	388	0.08	9.8	12	x	8	582			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 #	1	2	3	4	BR									
AIR VOLUME	130	340	420	185	0	0	0	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
ACTUAL DUCT LGH.	58	53	44	34	1	1	1	1	1	1	1	1	1	15
EQUIVALENT LENGTH	195	200	150	160	0	0	0	0	0	0	0	0	0	140
TOTAL EFFECTIVE LH	253	253	194	194	1	1	1	1	1	1	1	1	1	155
ADJUSTED PRESSURE	0.06	0.06	0.08	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10
ROUND DUCT SIZE	7	10.1	10.1	7.5	0	0	0	0	0	0	0	0	0	8.1
INLET GRILL SIZE	8	8	8	8	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	30	30	14	0	0	0	0	0	0	0	0	0	24

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

TYPE: 6002 - KINGSVIEW

DATE: Apr-22

GFA: 5526 LO# 96139

FURNACE 2

HEATING CFM 1110 COOLING CFM 1110
TOTAL HEAT LOSS 27,403 TOTAL HEAT GAIN 33,130
AIR FLOW RATE CFM 40.51 AIR FLOW RATE CFM 33.5furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure
for s/a & r/a 0.35FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 30481 BTUH\$LENNOX
ML196UH045XE36B
FAN SPEED 45
LOW 620
MEDLOW 685
MEDIUM 980
MEDIUM HIGH 1110
HIGH 0AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = 42,800DESIGN CFM = 1110
CFM @ .6" E.S.P.

TEMPERATURE RISE 36 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	22	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 #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
ROOM NAME	PRI	PRI	ENS	ENS	PWIC-1	PWIC-2	BED-2	BED-2	ENS-2	WIC-2	WIC-3	ENS-3	BED-3	BED-3	BED-3	BED-4	BED-4	BED-4	ENS-4	LAUN	BED-5	ENS-5
RM LOSS MBH.	1.55	1.55	1.23	2.05	0.10	0.56	1.45	1.45	0.96	0.26	0.26	0.96	2.20	2.20	2.20	1.35	1.35	1.35	0.61	1.03	1.97	0.77
CFM PER RUN HEAT	63	63	50	83	4	23	59	59	39	11	11	39	89	89	89	55	55	55	25	42	80	31
RM GAIN MBH.	2.74	2.74	0.82	1.36	0.04	0.19	1.66	1.66	0.36	0.07	0.07	0.36	2.74	2.74	2.74	2.16	2.16	2.16	0.40	2.33	3.20	0.43
CFM PER RUN COOLING	92	92	27	46	1	6	56	56	12	2	2	12	92	92	92	72	72	72	13	78	107	15
ADJUSTED PRESSURE	0.16	0.16	0.17	0.16	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	0.15	0.17
ACTUAL DUCT LGH.	55	67	61	57	29	26	40	42	43	31	40	47	57	53	50	59	79	72	60	49	47	55
EQUIVALENT LENGTH	200	170	170	160	170	180	190	200	110	130	140	120	160	170	180	150	190	170	160	160	170	200
TOTAL EFFECTIVE LENGTH	255	237	231	217	199	206	230	242	153	161	180	167	217	223	230	209	269	242	220	209	217	255
ADJUSTED PRESSURE	0.06	0.07	0.07	0.07	0.09	0.08	0.07	0.07	0.11	0.11	0.1	0.1	0.07	0.07	0.07	0.08	0.06	0.07	0.08	0.08	0.07	0.07
ROUND DUCT SIZE	6	6	5	6	4	4	5	5	4	4	4	4	6	6	6	6	6	6	4	5	6	4
HEATING VELOCITY (ft/min)	321	321	367	423	46	264	433	433	447	126	126	447	454	454	454	280	280	280	287	308	408	356
COOLING VELOCITY (ft/min)	469	469	198	235	11	69	411	411	138	23	23	138	469	469	469	367	367	367	149	573	546	172
OUTLET GRILL SIZE	4X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	4X10	3X10
TRUNK	B	B	B	B	B	B	B	B	C	C	C	C	C	C	C	A	A	A	A	A	A	B

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	312	0.06	9.7	14	x	8	401	TRUNK G	0	0.00	0	0	8
TRUNK B	435	0.06	11	14	x	8	559	TRUNK H	0	0.00	0	0	8
TRUNK C	802	0.06	13.9	22	x	8	656	TRUNK I	0	0.00	0	0	8
TRUNK D	0	0.00	0	0	x	8	0	TRUNK J	0	0.00	0	0	8
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	8
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	8

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)
TRUNK O	0	0.05	0	0	x	8
TRUNK P	0	0.05	0	0	x	8
TRUNK Q	0	0.05	0	0	x	8
TRUNK R	0	0.05	0	0	x	8
TRUNK S	0	0.05	0	0	x	8
TRUNK T	0	0.05	0	0	x	8
TRUNK U	0	0.05	0	0	x	8
TRUNK V	0	0.05	0	0	x	8
TRUNK W	270	0.05	9.7	12	x	8
TRUNK X	1110	0.05	16.4	32	x	8
TRUNK Y	550	0.05	12.6	20	x	8
TRUNK Z	420	0.05	11.4	16	x	8
DROP	1110	0.05	16.4	24	x	10

RETURN AIR

	1	2	3	4	5	6										
AIR VOLUME	270	155	135	110	130	310	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.	90	31	48	78	91	75	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	110	135	175	200	150	195	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	200	166	223	278	241	270	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.09	0.07	0.05	0.06	0.05	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	8.9	6.8	6.8	6.9	7	10.2	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	14	30	0	0	0	0	0	0	0	0	0	0

TYPE: 6002 - KINGSVIEW
SITE NAME: PINE VALLEY PH 2

LO # 96139

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	☒ Direct vent (sealed combustion) only	
b)	☐ Positive venting induced draft (except fireplaces)	
c)	☐ Natural draft, B-vent or induced draft gas fireplace	
d)	☐ Solid Fuel (including fireplaces)	
e)	☐ No Combustion Appliances	

HEATING SYSTEM	
☒ Forced Air	☐ Non Forced Air
☐ Electric Space Heat	

HOUSE TYPE		9.32.1(2)
☒ I	Type a) or b) appliance only, no solid fuel	
☐ II	Type I except with solid fuel (including fireplaces)	
☐ III	Any Type c) appliance	
☐ IV	Type I, or II with electric space heat	
☐	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
☐ 1	Exhaust only/Forced Air System	
☐ 2	HRV with Ducting/Forced Air System	
☒ 3	HRV Simplified/connected to forced air system	
☐ 4	HRV with Ducting/non forced air system	
☐	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Kitchen & Bathrooms	<u>7</u> @ 10.6 cfm	<u>74.2</u> cfm
Other Rooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>222.6</u> cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED		9.32.3.4.(1)
1 Bedroom	31.8	cfm
2 Bedroom	47.7	cfm
3 Bedroom	63.6	cfm
4 Bedroom	79.5	cfm
5 Bedroom	95.4	cfm
TOTAL		<u>95.4</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>222.6</u>	cfm
Less Principal Ventil. Capacity	<u>150</u>	cfm
Required Supplemental Capacity	<u>72.6</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE V150H	Location: BSMT
<u>150.0</u> 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
PWD	BY INSTALLING CONTRACTOR	50	☒	3.5

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE V150H	INSTALL 2 HRV / ERV's	
<u>150</u> cfm high	<u>35</u> cfm low	
<u>75</u> % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER: GOLD PARK HOMES	
Name:	
Address:	
City:	
Telephone #:	Fax #:

INSTALLING CONTRACTOR	
Name:	
Address:	
City:	
Telephone #:	Fax #:

DESIGNER CERTIFICATION	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name:	HVAC Designs Ltd.
Signature:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	April-22

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

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																												
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																												
LO#: 96139	Model: 6002 - KINGSVIEW	Builder: GOLD PARK HOMES	Date: 2022-04-14																																																									
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House Volume <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Bsmt</td> <td>2602</td> <td>10</td> <td>26280.2</td> </tr> <tr> <td>First</td> <td>2602</td> <td>11</td> <td>28882.2</td> </tr> <tr> <td>Second</td> <td>3415</td> <td>9</td> <td>31076.5</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="3" style="text-align: right;">Total:</td> <td>86,238.9 ft³</td> </tr> <tr> <td colspan="3" style="text-align: right;">Total:</td> <td>2442.0 m³</td> </tr> </tbody> </table>			Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2602	10	26280.2	First	2602	11	28882.2	Second	3415	9	31076.5	Third	0	9	0	Fourth	0	9	0	Total:			86,238.9 ft³	Total:			2442.0 m³	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 30%;">0.342</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td>0.115</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> <td>42</td> <td>76</td> </tr> <tr> <td>Summer DTDc</td> <td>24</td> <td>31</td> <td>7</td> <td>13</td> </tr> </table>		WINTER NATURAL AIR CHANGE RATE	0.342	SUMMER NATURAL AIR CHANGE RATE	0.115	Design Temperature Difference						Tin °C	Tout °C	ΔT °C	ΔT °F	Winter DTDh	22	-20	42	76	Summer DTDc	24	31	7	13
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5.2.3.1 Heat Loss due to Air Leakage			6.2.6 Sensible Gain due to Air Leakage																																																									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.342 x 678.34 x 42 °C x 1.2 = 11757 W = 40114 Btu/h			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.115 x 678.34 x 7 °C x 1.2 = 666 W = 2271 Btu/h																																																									
5.2.3.2 Heat Loss due to Mechanical Ventilation			6.2.7 Sensible heat Gain due to Ventilation																																																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E) \times 2 \text{ HRV / ERV's}$ 300 CFM x 76 °F x 1.08 x 0.25 = 6156 Btu/h			$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 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)																																																												
$HL_{airr} = Level \ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairve Air Leakage + Ventilation Heat Loss (Btu/h)</th> <th>Level Conductive Heat Loss: (HL_{clevel})</th> <th>Air Leakage Heat Loss Multiplier (LF x HLairbv / HL_{clevel})</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center; vertical-align: middle;">40,114</td> <td>12,289</td> <td>1.632</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>25,204</td> <td>0.477</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>18,246</td> <td>0.440</td> </tr> <tr> <td>4</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> <tr> <td>5</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> </tbody> </table> *HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairve = 0					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 / HL _{clevel})	1	0.5	40,114	12,289	1.632	2	0.3	25,204	0.477	3	0.2	18,246	0.440	4	0	0	0.000	5	0	0	0.000																														
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HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 6002 - KINGSVIEW	BUILDER: GOLD PARK HOMES
SFQT: 5526	LO# 96139 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):	86238.9	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.1 ft
LENGTH: 69.0 ft	WIDTH: 53.0 ft	EXPOSED PERIMETER:	244.0 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	-

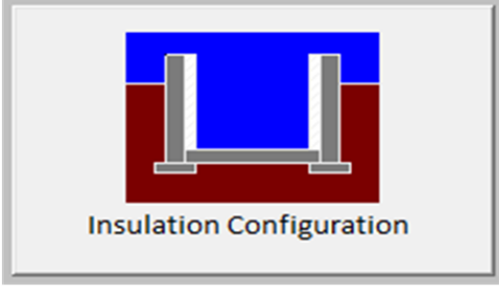
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



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):	21.0	
Floor Width (m):	16.2	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.1	
Depth Below Grade (m):	2.16	
Window Area (m ²):	3.1	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		2501

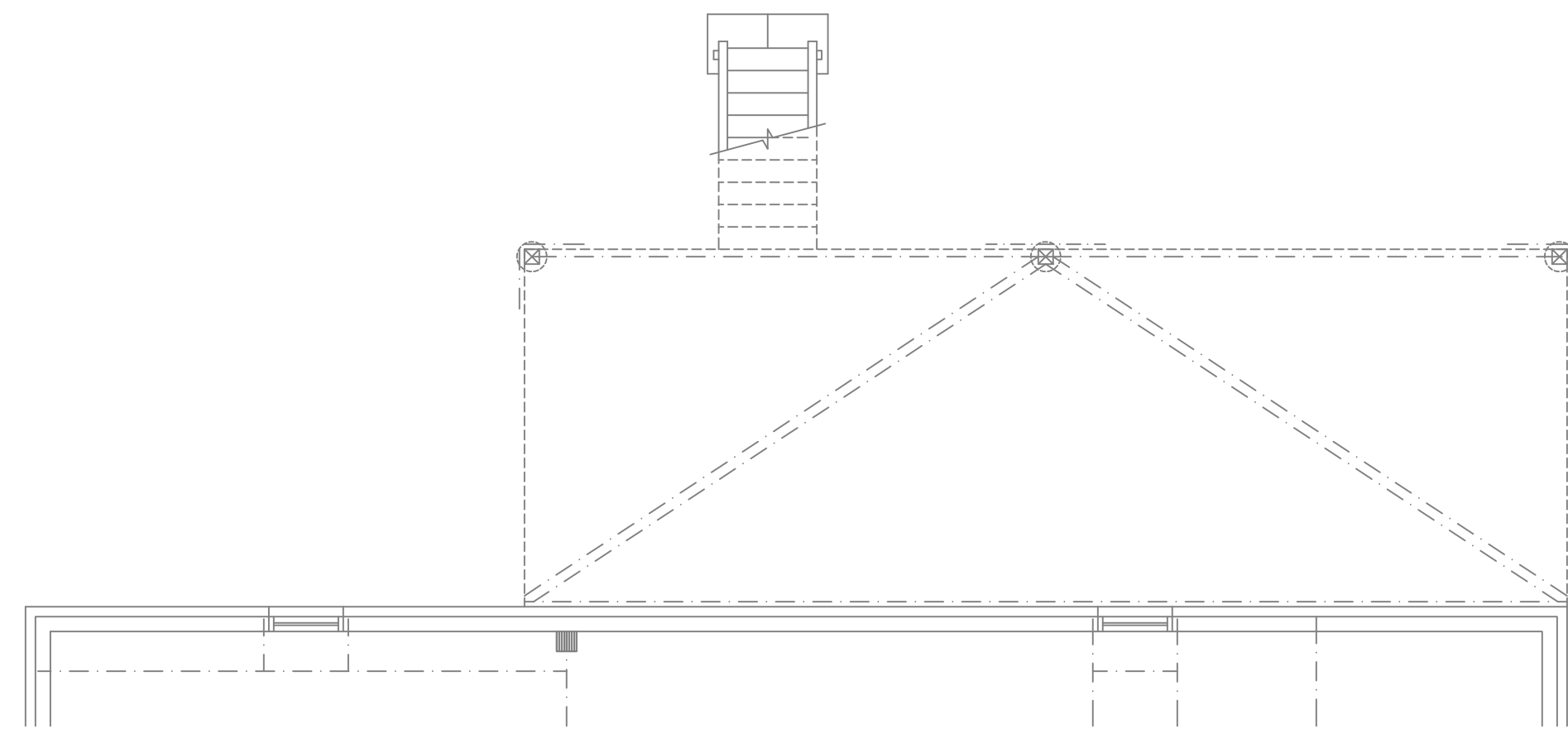
TYPE: 6002 - KINGSVIEW
LO# 96139

Air Infiltration Residential Load Calculator

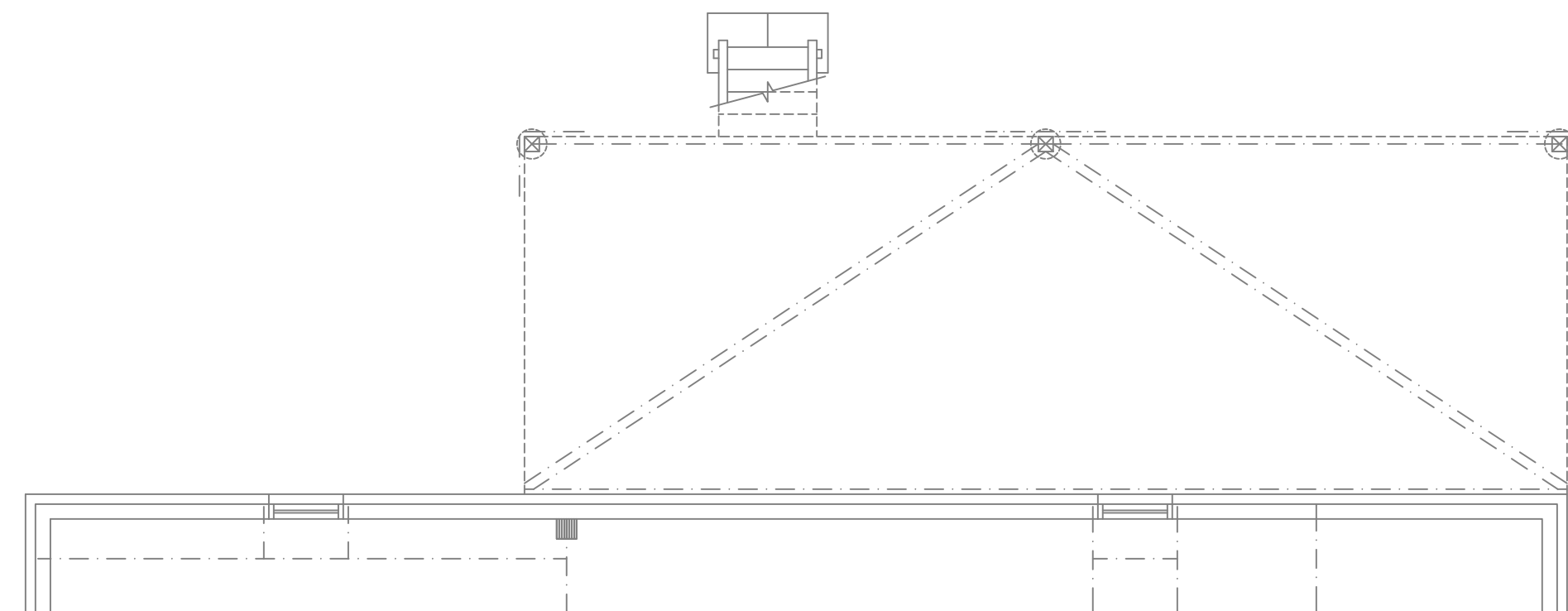
Supplemental tool for CAN/CSA-F280

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):	7.07			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	2442.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	3255.3 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):	0.342			
Cooling Air Leakage Rate (ACH/H):	0.115			

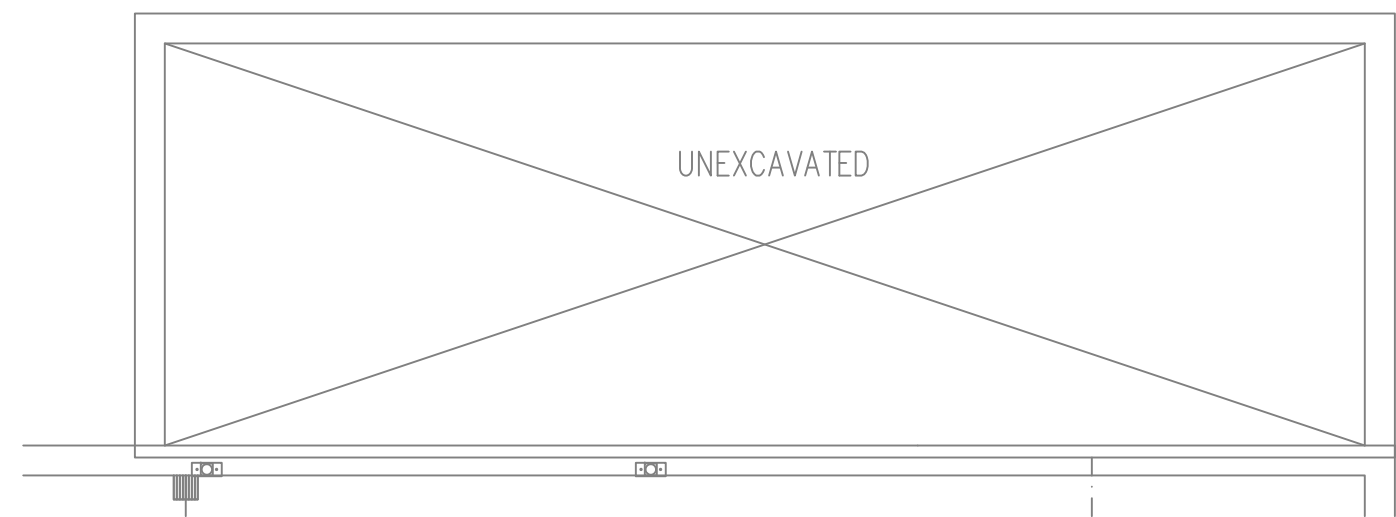
TYPE: 6002 - KINGSVIEW
LO# 96139



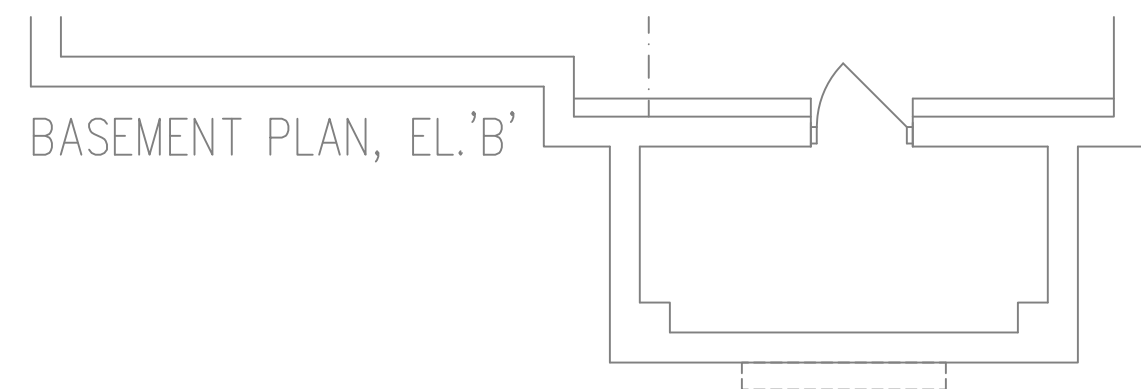
BASEMENT PLAN ELEV. 'A', 'B' & 'C' - L.O.D. COND.



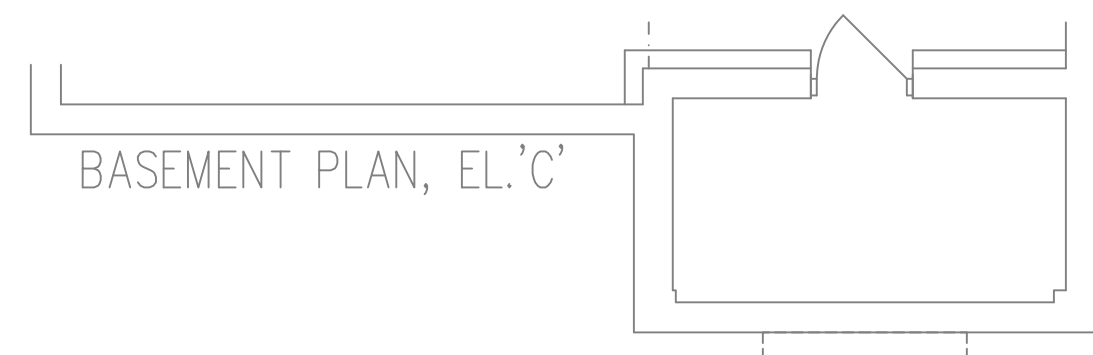
BASEMENT PLAN ELEV. 'A', 'B' & 'C' - W.O.D. COND.



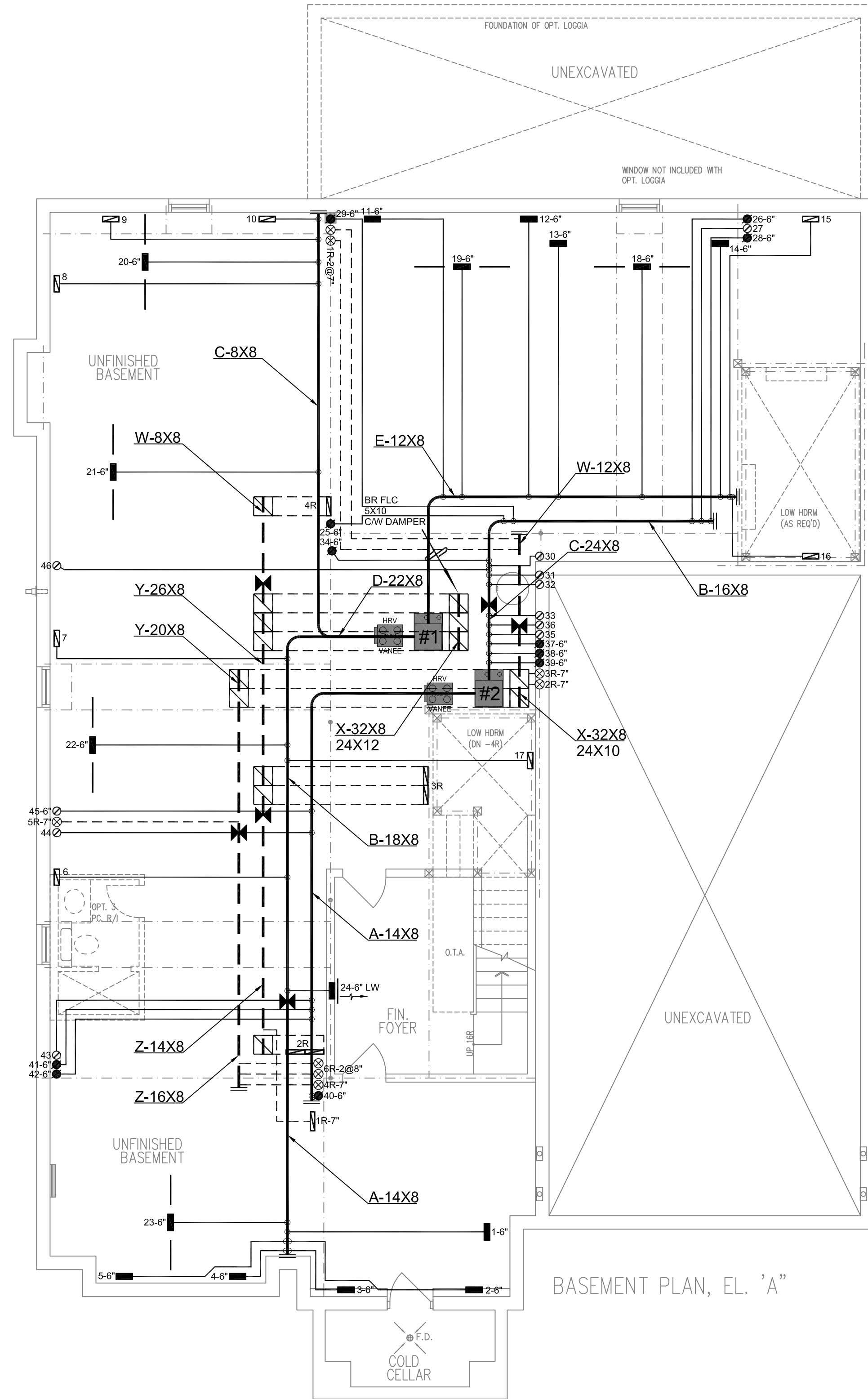
BASEMENT PLAN ELEV. 'A', 'B' & 'C' (OPT. COVERED LOGGIA)



BASEMENT PLAN, EL. 'B'



BASEMENT PLAN, EL. 'C'



FURNACE 1
LENNOX ML196UH090XE48C
85,600 BTU/H OUTPUT
3.0 TONS A/C @ 1190 cfm

FURNACE 2
LENNOX ML196UH045XE36B
42,800 BTU/H OUTPUT
3.0 TONS A/C @ 1110 cfm

	S/A	R/A	FANS
2ND	22	6	6
1ST	17	4	2
BAS	7	1	0

HVAC LEGEND	
	OUTLET BY AIRMAX
	4"x10" SUPPLY GRILLE - 6' BOOT
	4"x10" SUPPLY GRILLE - 6' BOOT
	FLEX DUCT
	1400 RETURN AIR STACK
	1400 RETURN AIR GRILLE
	3000 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	LINT TRAP by REVERSOMATIC
	EXHAUST FAN
	DRYER BOOSTER FAN PROVIDE ACCESS PANEL, see Page
	DIRECT VENT
	LOW WALL
	HIGH WALL
	CEILING
	MOTORIZED ZONE DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC HRV or ERV VENT KIT
	SINGLE WALL BOX by REVERSOMATIC
	DOUBLE WALL BOX by REVERSOMATIC
	TRIPLE WALL BOX by REVERSOMATIC
	CONCENTRIC HRV VENT by REVERSOMATIC

I HEREBY CERTIFY THAT I HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED TO SIGN EXHIBITS 1.1.1 OF THE REGULATION.
Hvac Designer Ltd. 1999
Hvac Designer Ltd.

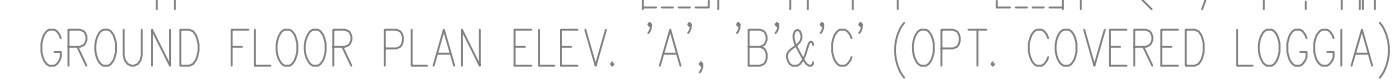
1. ISSUED FOR PERMIT APRIL 2022 AK
No. Revision Date By

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375 Finley Ave - Unit 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

Client: GOLDPARK HOMES
Project Name: PINE VALLEY PH2
VAUGHAN, ONTARIO
6002 - KINGSVIEW
OPT 2ND
5901 SQFT

Sheet Title: BASEMENT HVAC LAYOUT
Drawn By: AK Checked By: MO
Scale: 3/16"=1'-0"
Date: APRIL 2022 Sheet No.: 1
LO #: 96140

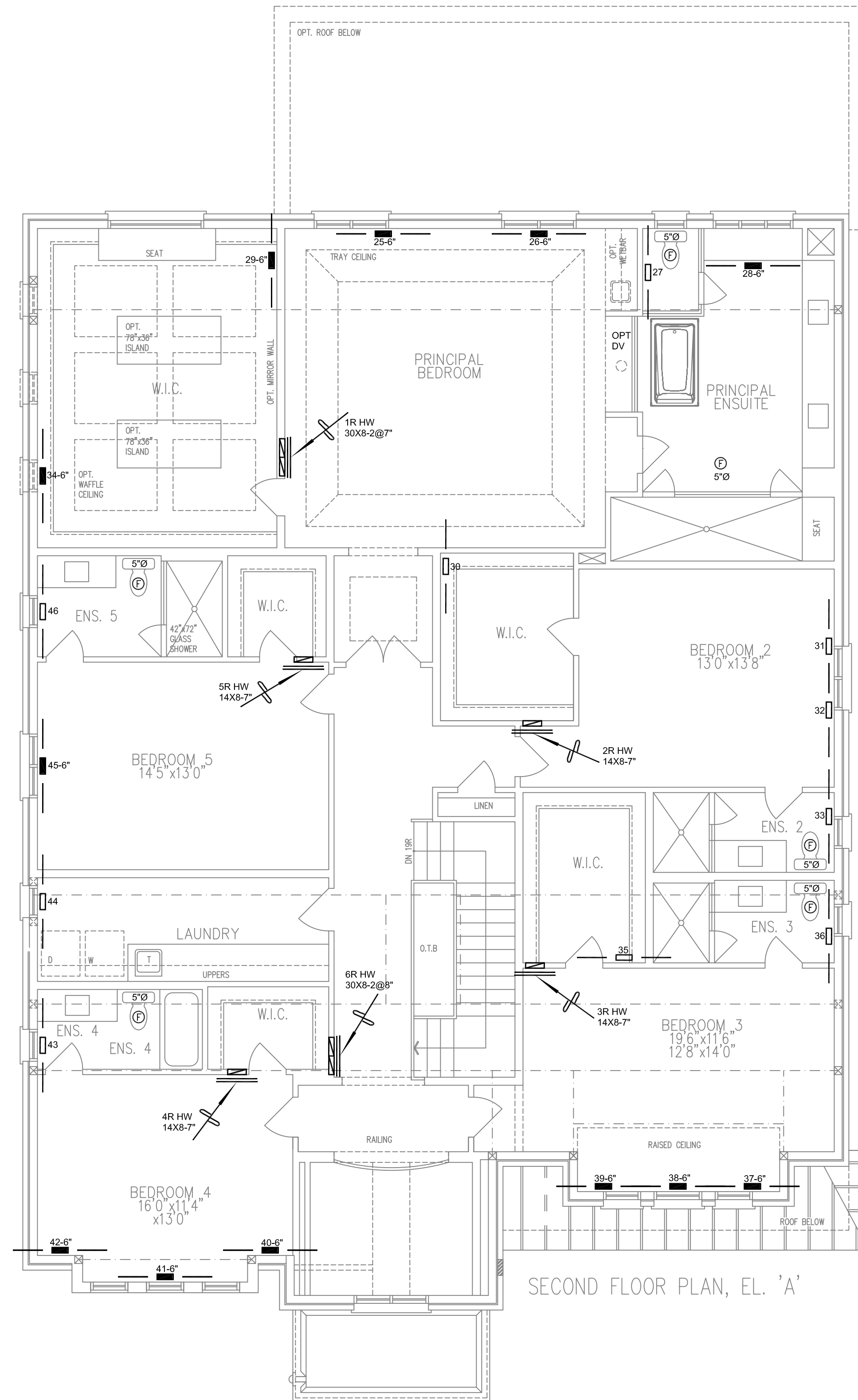
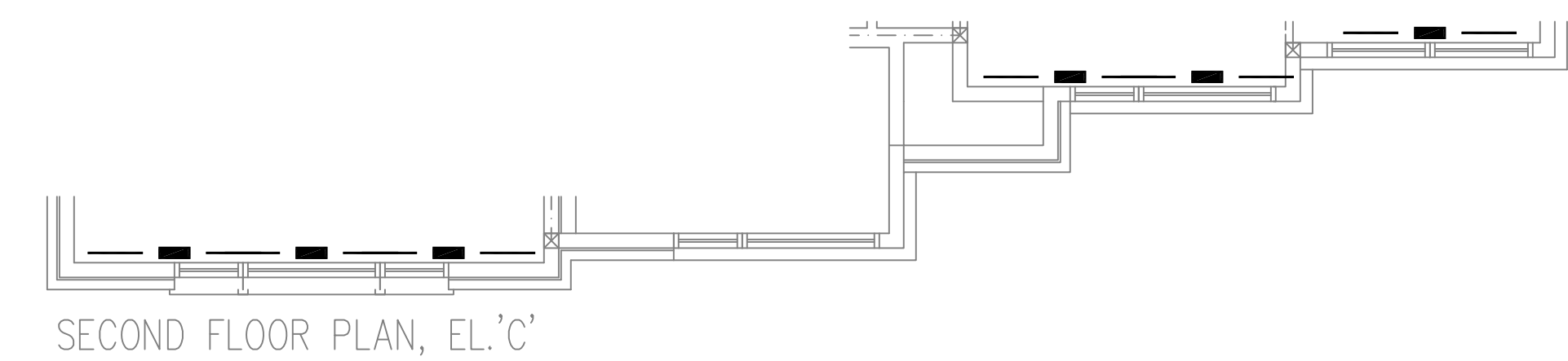
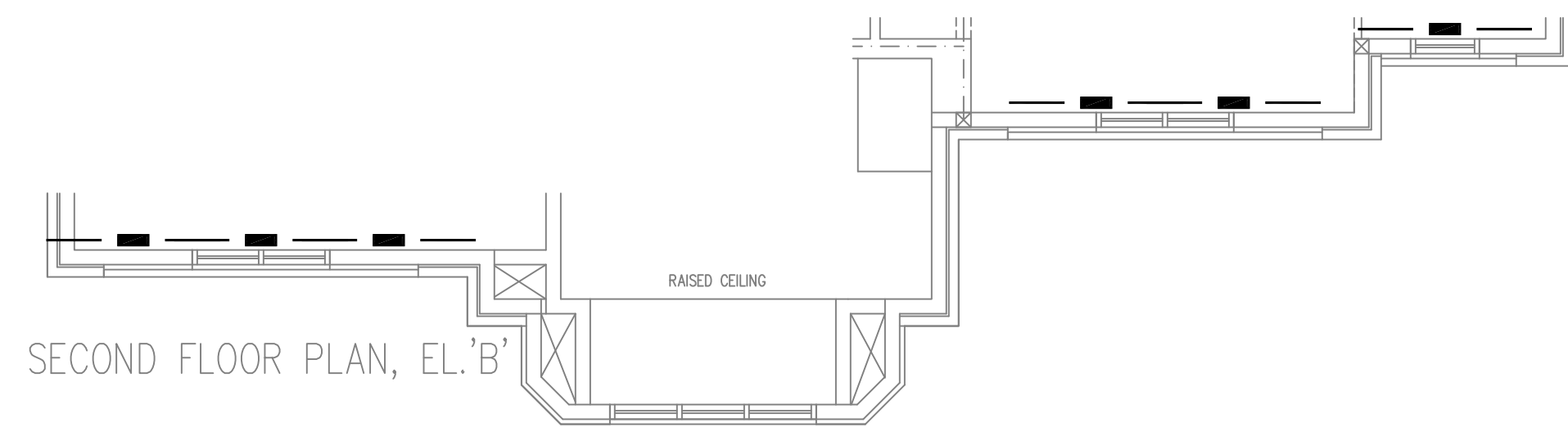


I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke, BCIN# 19609
HVAC DESIGNS LTD.

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Sheet Title FIRST FLOOR HVAC LAYOUT		
Drawn By AK	Checked By MO	
Scale 3/16"=1'-0"		Sheet No.
Date APRIL 2022		2
LO # 96140		



HVAC LEGEND	
	OUTLET or AIRBOX
	4\"/>
	6\"/>
	FLEX DUCT
	H/V SUPPLY AIR STACK
	1000 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	LINT TRAP by REVERSOMATIC
	EXHAUST FAN
	DRYER BOOSTER FAN PROVIDES EXHAUST PANEL in Rm20
	DIRECT VENT
	LOW INFIL
	HIGH INFIL
	CEILING
	MOTORIZED DOOR DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC H/V or E/V VENT KIT
	SINGLE WALL BOX by REVERSOMATIC
	DOUBLE WALL BOX by REVERSOMATIC
	TRIPLE WALL BOX by REVERSOMATIC
	CONCENTRIC H/V VENT by REVERSOMATIC

I MICHAEL O'Rourke HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND A QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke, BCIN# 19609
HVAC DESIGNS LTD.



2		
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Email: info@hvacdesigns.ca
Web: www.hvacdesigns.ca

Specializing In Residential Mechanical Design Services

Client **GOLDPARK HOMES**

Client **GOLDPARK HOMES**

Project Name PINE VALLEY PH2

VAUGHAN, ONTARIO
6000 KINGVIEW

6002 - KINGSVIEW
OPT 2ND

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Sheet Title SECOND FLOOR HVAC LAYOUT

Drawn By	AK	Checked By	MO
Scale		Checked	

Date	3/16"=1'-0"	Sheet No.
Date	1.2.2011	

APRIL 2022	2
LO#	

96140	5
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