

MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL

Housetype 40-1 Stanley

File # 3075

Builder	Esquire
Address	
City	
Phone	

Principal Ventilation Capacity			
Master Bed	1	31.8 cfm	31.8
Other Bed	2	15.9 cfm	31.8
Total cfm			63.6

Combustion Appliances	
☒	a) Direct Vent (sealed combust) including fireplaces
☐	b) Positive venting induced draft (exclude fireplace)
☐	c) Natural Draft, B vent or induced draft fireplaces
☐	d) Solid Fuel
☐	e) No Combustion Appliances

Total Ventilation Capacity			
Bsmt & Master	2	21.2 cfm	42.4
Other Bed	2	10.6 cfm	21.2
Bath & Kitchen	4	10.6 cfm	42.4
Other Rooms	3	10.6 cfm	31.8
Room Count cfm			137.8
Air Change TVC= HouseVol.X0.3/60			127.0

Heating System	
☒	Forced Air
☐	Non Forced Air
☐	Electric Space Heat

Principal Exhaust Fan Capacity		
Make	Model	Location
Broan or Equivalent	684N	Bath
90cfm/2.5 Sones/ HVI listed		

Housetype	
☒	I - Type a or b appliances only, no solid fuel
☐	II - Type I with solid fuel (including fireplace)
☐	III - Type C appliance
☐	IV - Type I or II with electric space heat
☐	Other - Type I,II,or IV no forced air

Supplemental Ventilation Capacity	
TVC room or air change (which larger)	138
Less Principal Exhaust Capacity	90
Required Supp.Vent Capacity	CFM 48

System Design Option	
☒	Exhaust Only/Forced air system
☒	HRV Simplified Connection to Forced Air System
☐	HRV with ducting to forced air system
☐	HRV fully ducted/ not coupled with forced air sys.
☐	Part 6 design CSA F326-M91
☒	Part 9 9.32.3.1

Supplemental Fans			
Location	cfm	Model	Sones
Ens	50	Broan 650	2.5
Pwd	50	Broan 650	2.5
all fans HVI listed			

Heat Recovery Ventilator	
Model	
Venmar Vanee 60H	
Cfm High	150 Cfm Low 36
Sensible effective @ 0 C	72 %
HRV is HVI listed	

Designer Certification	
I have reviewed and take responsibility for this design and am qualified as an "other designer" as required by the OBC 3.2.5 as it relates to residential HVAC design	
Alexis Dearle-Vonk	<i>Alexis Dearle-Vonk</i>
BCIN# 27098	HRAI# 3986

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Customer	Esquire
Housetype	40-1 Stanley
File #	3075
Date	Aug-13
Township	Clarington

A. Quare-Vorob

[illegible]

ALHLM
Air Leakage
Vent Loss

11719 \	26174	
2988 x	0.053 x	74
137.8 x	1.08 x	74

0.45
11719
11013

Total Structure Heat Loss
Ventilation Loss
TOTAL HEAT LOSS BTU

NEWRES HVAC DESIGN

9 Hurontario street
Orangeville Ont
L9W 1Y8
416-320-5870

Heat Gain Calculation

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as it relates to residential HVAC design.
Alexis Dearie-Vorik BCIN# 27058 HRA# 3986
Alexis Dearie-Vorik

Customer Esquire
House type 40-1 Stanley
File # 3075
Date Aug-13
Township Clarington

Heat loss °F 74 Heat Gain °F 1.1 Bsmnt °F 22

Fac	Bath		Br2		Br3		Hall		Mas		Ens		Kit		Great		WIC		Foy		G.Ent		Laun/Mud		Bsmt	
	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain	Act	Gain
Width	17	13	15		16		11		5		12		15		5		9		10		5				34	
	5	13	12		7		15		15		20		19		6		7		12		10				34	
	85	169	180		112		165		75		240		285		30		63		120		50				1156	
	8	8	8		8		9		9		9		9		9		11		9		9				8	
	22	39	49		7		26		5		35		30		11		18		10		15				168	
	176	312	392		56		234		45		315		270		99		198		90		135					
	22	170	108	296	188	376	239	48	31	204	130	29	18	280	178	250	159	87	55	170	108	90	57	135	86	
	36.01				16	576				30	1080	16	576	35	1260			12	432	28	1008					6
21.77	6	131					8	174																		
13.97		16	224										20	279											5	84
62.23																										
4																										
50	85	71	169	142	180	151	112	94	165	139	75	63	200	168	150	126	30	25	63	53						
31					180	52																				
22									26	17	5	3	35	22	30	19	11	7	18	11	10	6	15	10		
0.5																										
Total Cond	310		554		1019		299		1365																	
	57		101		186		55		250																	
Peop/App		1	240	1	240				1	240				1	1604	1	240							1	1195	
Late-Gain		110	269		434		106		556		234		1059		279		184		471		49		392			
Total Rm.Gain BTU	477	1164	1879		1879	459	2411		1016	4590	1209	799	2042	211	1700											1030

Total Structure Heat Gain	18987
Ventilation	2128
Total Heat Gain BTU	21115

People @240	1200	& kitchen	1504	& Laundry	1195	3999
Latent Multiplier (3)	6896	Air Leakage	2988	X	0.051	X
Ventilation Gain	TVC * 1.08 * 1.3 * HGAT	2128	ALHGM	1676	9170	0.18

9 Hurontario street
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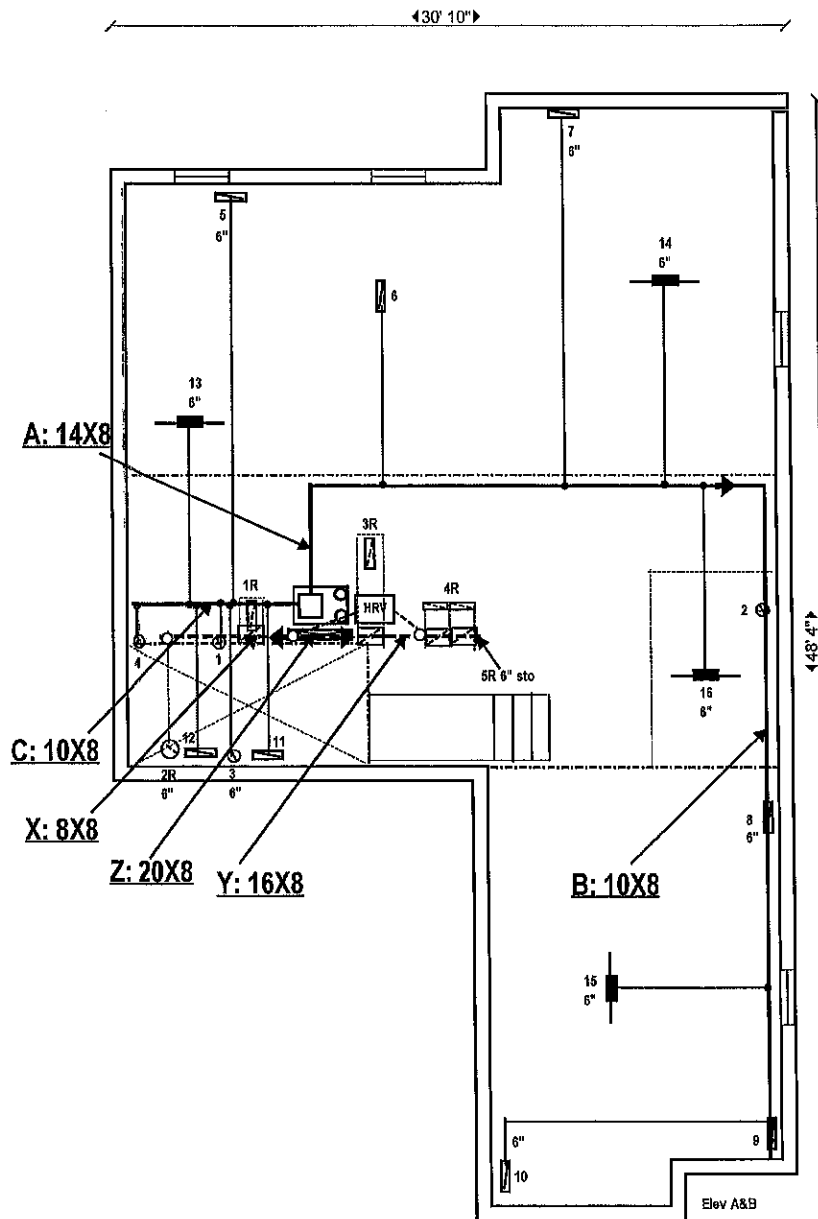
Customer	Esquire
Housetype	40-1 Stanley
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Trunk		X		Y		Z			
Inlet #		2R	1R	5R	4R	3R	All		
CFM		90	140	100	285	140			
Inlet Size		6"	14X8	6"	30X8	14X8			
Act&Eff Len		195	160	205	185	155			
Adj. Press.		0.06	0.07	0.05	0.06	0.07	0.06		
Tr. Fl. Rate			230			525	755		
Tr. Width			8		16	20			
Tr. Height			8		8	8			
Velocity			518			591	680		

Equipment	
Manufacturer	Carrier
Furnace	59SC060
Output	58000
AirFlow	755
AC Size	2

Supply Air Pres	0.15
S,Air Plenum Pres	0.14
Diffuser Loss	0.01
System Static	0.5

Return Air Pres	0.15
R.Air Plenum Pres	0.11
Diffuser Loss	0.04



1828 SF

(Or Equivalent Furnace)

All runs 5" unless otherwise specified

UNIT DATA			
Make	Carrier	Model	59SC060
Input	60000 BTU	Output	58000 BTU
Cooling	2 Tons	Fan	755 Cfm
No. of Runs	S/A	R/A	
2nd Floor	4	2	
1st Floor	8	2	
Basement	4	1	

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Alexis D. Vork

Alexis D. Vork 27098 3886 BCIN HRAI

J Package

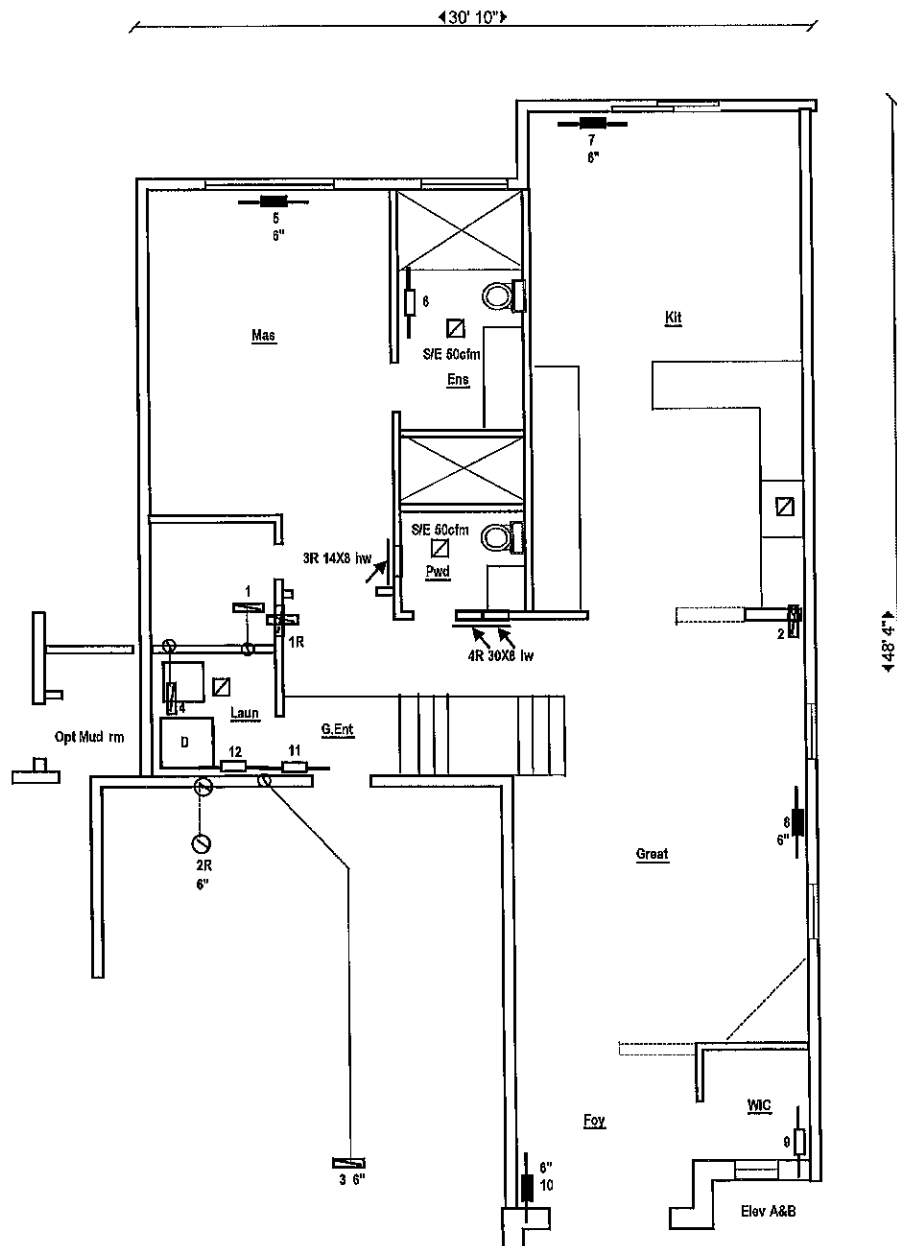
Cell.w Attic	R50 Heated Slab	R10
Cell.w/o Attic	R31 Windows	R3.13
Exp.Floor	R31 Skylights	U2.8
Walls	R22 Furn Eff	94%
B.G.Slab	R10 HRV Eff	72%

Northglen-Clarington

HRV: Venmar Vanee 60H

Type	40-1 Stanley
Floor	Basement
Scale	3/16"=1'0"
Date	Aug-13
Revised	

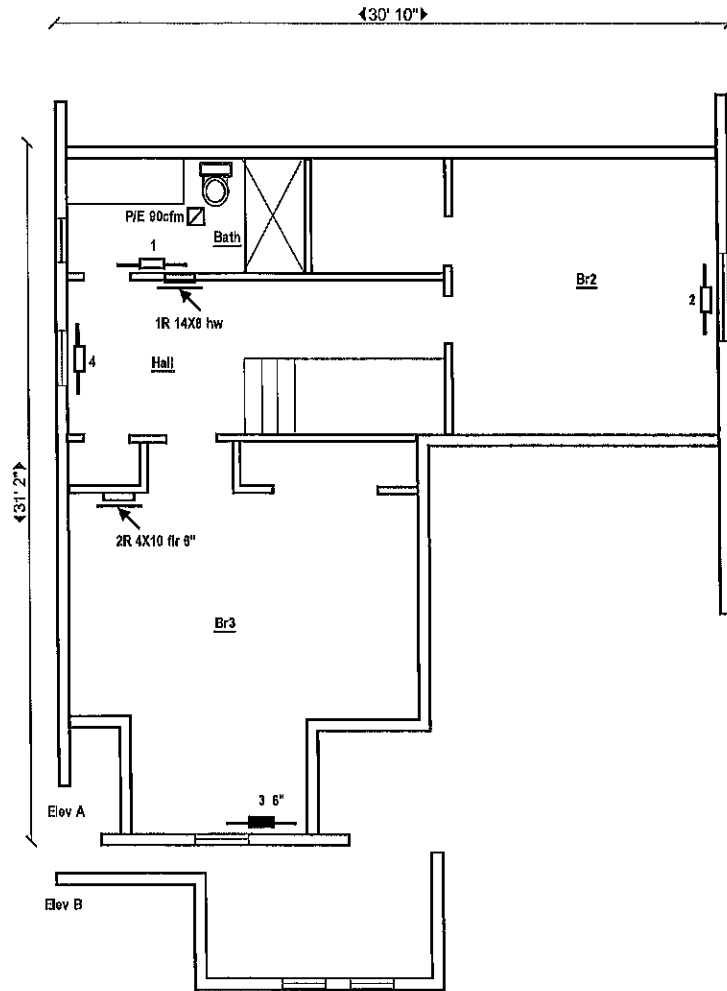
NewRes HVAC Design 9 Hurontario st Orangeville On L9W 1Y8 Phone (416) 320-5870
Client Esquire
LO# 3075



All runs 5" unless otherwise specified

Northglen-Clarington

Make		UNIT DATA Model		I have reviewed and take responsibility for this design and am qualified as an "other designer" as described by the OBC Div.C, Part 3, ss 3.2.5 in relation to HVAC design. <i>Alexis Deerie-Vonk</i> Alexis Deerie-Vonk 27098 3986 BCIN HRAI	Type	40-1 Stanley		NewRes HVAC Design 9 Hurontario st Orangeville On L9W 1Y8 Phone (416) 320-5870
Input		Output			Floor	First		
Cooling		Fan			Scale	3/16"=1'0"		
Total		Cfm			Date	Aug-13		
No. of Runs		S/A			R/A		Client	Esquire
2nd Floor							LO#	
1st Floor							3075	
Basement								



All runs 5" unless otherwise specified

Northglen-Clarington

Make		UNIT DATA Model		I have reviewed and take responsibility for this design and am qualified as an "other designer" as described by the OBC Div.C, Part 3, as 3.2.5 in relation to HVAC design. <i>Alexis D'Amico</i> Alexis D'Amico 27998 3986 BCIN HRAI	Type	40-1 Stanley	NewRes HVAC Design 9 Hurontario st Orangeville On L9W 1Y8 Phone (416) 320-5870
Input		Output			Floor	Second	
Cooling		Fan			Scale	3/16"=1'0"	
No. of Runs		S/A			Date	Aug-13	
2nd Floor					Revised		
1st Floor					Client		
Basement					Esquire		
				LO#		3075	