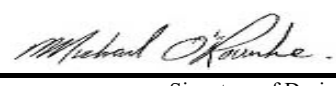


Schedule 1: Designer Information

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: 4201 - MAPLEWOOD ELEV A & B Project: PINE VALLEY PH 2	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> 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 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										ELEV A & B										DATE: Apr-22										WINTER NATURAL AIR CHANGE RATE 0.370										HEAT LOSS ΔT °F. 76										CSA-F280-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
BUILDER: GOLD PARK HOMES										TYPE: 4201 - MAPLEWOOD										GFA: 3006										LO# 96124										SUMMER NATURAL AIR CHANGE RATE 0.124										HEAT GAIN ΔT °F. 13										SB-12 PACKAGE A1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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ROOM USE							K/G/D						PWD		FOY		MUD								LOD		BAS	
EXP. WALL							62						10		43		7								43		202	
CLG. HT.							20						11		11		11								10		10	
FACTORS																												
GRS.WALL AREA	LOSS	GAIN					1240						110		473		77								430		1543	
GLAZING							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		4 85 64	
EAST	21.3	41.6					0 0 0						0 0 0		17 362 706		0 0 0								0 0 0		0 0 0	
SOUTH	21.3	24.9					61 1298 1519						7 149 174		0 0 0		0 0 0								0 0 0		4 85 100	
WEST	21.3	41.6					102 2171 4238						0 0 0		0 0 0		0 0 0								28 596 1163		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	
DOORS	20.1	3.4					20 401 68						0 0 0		40 802 135		20 401 68								0 0 0		40 802 135	
NET EXPOSED WALL	4.5	0.8					1057 4717 794						103 460 77		416 1856 313		57 254 43								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								230 828 139		477 1716 289	
EXPOSED CLG	1.3	0.6					513 658 301						0 0 0		210 270 123		0 0 0								0 0 0		0 0 0	
NO ATTIC EXPOSED CLG	2.7	1.3					238 654 300						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	
BASEMENT/CRAWL HEAT LOSS							0						0		0		0										6756	
SLAB ON GRADE HEAT LOSS							0						0		0		0								0			
SUBTOTAL HT LOSS							9899						609		3290		655								1423		9445	
SUB TOTAL HT GAIN							7220						252		1278		110								1303		588	
LEVEL FACTOR / MULTIPLIER			0.30		0.41								0.30		0.41		0.30		0.41								0.50 1.25	
AIR CHANGE HEAT LOSS							4032						248		1340		267										13546	
AIR CHANGE HEAT GAIN							755						26		134		12										198	
DUCT LOSS							0						0		0		0										0	
DUCT GAIN							0						0		0		0										0	
HEAT GAIN PEOPLE	240						0						0		0		0								0		0	
HEAT GAIN APPLIANCES/LIGHTS							973						0		0		0								0		973	
TOTAL HT LOSS BTU/H							13932						857		4630		922								1423		22991	
TOTAL HT GAIN x 1.3 BTU/H							11633						361		1835		159								1694		2286	

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

ELEV A & B
TYPE: 4201 - MAPLEWOOD

DATE: Apr-22

GFA: 3006 LO# 96124

HEATING CFM 1170 COOLING CFM 1170
TOTAL HEAT LOSS 65,645 TOTAL HEAT GAIN 35,705
AIR FLOW RATE CFM 17.82 AIR FLOW RATE CFM 32.77

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

\$LENNOX

AFUE = 96 %

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

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	5	12	5
R/A	0	0	3	3	1

plenium 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

FAN SPEED 90
LOW 0
MEDLOW 0
MEDIUM 0
MEDIUM HIGH 1170
HIGH 1300

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

TEMPERATURE RISE 68 °F

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	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	ENS	BED-2	BED-3	BED-4	BATH	BED-4	MEDIA	MBR	K/G/D	K/G/D	K/G/D	K/G/D	PWD	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.79	1.01	1.01	2.13	3.04	3.11	1.20	3.11	2.68	1.79	3.48	3.48	3.48	3.48	0.86	4.63	0.92	4.88	4.88	4.88	4.88
CFM PER RUN HEAT	32	18	18	38	54	55	21	55	48	32	62	62	62	62	15	83	16	87	87	87	87
RM GAIN MBH.	2.26	0.41	0.41	2.30	2.44	2.61	0.20	2.61	2.23	2.26	2.91	2.91	2.91	2.91	0.36	1.83	0.16	0.80	0.80	0.80	0.80
CFM PER RUN COOLING	74	14	14	75	80	86	7	86	73	74	95	95	95	95	12	60	5	26	26	26	26
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.16	0.17	0.17	0.16	0.16	0.16	0.16	0.17	0.16	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	56	19	18	10	50	46	21	49	54	51	62	55	51	26	28	33	12	49	50	12	47
EQUIVALENT LENGTH	120	120	130	180	160	140	140	150	170	110	170	150	120	140	130	90	140	120	110	130	130
TOTAL EFFECTIVE LENGTH	176	139	148	190	210	186	161	199	224	161	232	205	171	166	158	123	152	169	160	142	177
ADJUSTED PRESSURE	0.1	0.12	0.12	0.09	0.08	0.09	0.11	0.08	0.08	0.11	0.07	0.08	0.09	0.1	0.11	0.13	0.11	0.1	0.1	0.11	0.09
ROUND DUCT SIZE	5	4	4	6	6	6	4	6	6	5	6	6	6	6	4	6	4	6	6	6	6
HEATING VELOCITY (ft/min)	235	207	207	194	275	280	241	280	245	235	316	316	316	316	172	423	184	444	444	444	444
COOLING VELOCITY (ft/min)	543	161	161	382	408	438	80	438	372	543	484	484	484	484	138	306	57	133	133	133	133
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	4X10	4X10	3X10	4X10	4X10	3X10	4X10	4X10	4X10	4X10	3X10	4X10	3X10	4X10	4X10	4X10	4X10
TRUNK	A	B	E	E	C	C	D	C	B	A	A	A	B	D	C	C	D	A	B	D	C

RUN #	25
ROOM NAME	BAS
RM LOSS MBH.	4.88
CFM PER RUN HEAT	87
RM GAIN MBH.	0.80
CFM PER RUN COOLING	26
ADJUSTED PRESSURE	0.16
ACTUAL DUCT LGH.	33
EQUIVALENT LENGTH	140
TOTAL EFFECTIVE LENGTH	173
ADJUSTED PRESSURE	0.09
ROUND DUCT SIZE	6
HEATING VELOCITY (ft/min)	444
COOLING VELOCITY (ft/min)	133
OUTLET GRILL SIZE	4X10
TRUNK	B

SUPPLY AIR TRUNK SIZE																	RETURN AIR TRUNK SIZE								
	TRUNK	STATIC	ROUND	RECT			VELOCITY			TRUNK	STATIC	ROUND	RECT			VELOCITY	TRUNK	STATIC	ROUND	RECT			VELOCITY		
	CFM	PRESS.	DUCT	DUCT			(ft/min)			CFM	PRESS.	DUCT	DUCT			(ft/min)	CFM	PRESS.	DUCT	DUCT			(ft/min)		
TRUNK A	275	0.07	8.9	10	x	8	495			TRUNK G	0	0.00	0	0	x	8	0			0	0	x	8	0	
TRUNK B	577	0.07	11.8	16	x	8	649			TRUNK H	0	0.00	0	0	x	8	0	TRUNK O	0	0.05	0	0	x	8	0
TRUNK C	349	0.08	9.5	10	x	8	628			TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.05	0	0	x	8	0
TRUNK D	535	0.08	11.1	14	x	8	688			TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.05	0	0	x	8	0
TRUNK E	1168	0.07	15.4	28	x	8	751			TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.05	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	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	
RETURN AIR #	1	2	3	4	5	6										BR	TRUNK X	1170	0.05	16.7	32	x	8	658	
AIR VOLUME	115	120	155	145	300	135	0	0	0	0	0	0	0	0	0	200	TRUNK Y	455	0.05	11.7	16	x	8	512	
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	TRUNK Z	380	0.05	11	14	x	8	489	
ACTUAL DUCT LGH.	46	45	43	17	57	40	1	1	1	1	1	1	1	1	1	14	DROP	1170	0.05	16.7	24	x	12	585	
EQUIVALENT LENGTH	225	210	145	185	150	165	0	0	0	0	0	0	0	0	0	135									
TOTAL EFFECTIVE LH	271	255	188	202	207	205	1	1	1	1	1	1	1	1	1	149									
ADJUSTED PRESSURE	0.05	0.06	0.08	0.07	0.07	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10									
ROUND DUCT SIZE	7	6.8	7	7	9.2	6.8	0	0	0	0	0	0	0	0	0	7.3									
INLET GRILL SIZE	8	8	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	X	X									
INLET GRILL SIZE	14	14	14	14	30	14	0	0	0	0	0	0	0	0	0	14									

TYPE: 4201 - MAPLEWOOD
SITE NAME: PINE VALLEY PH 2

LO # 96124
ELEV A & B

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>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Kitchen & Bathrooms	<u>5</u> @ 10.6 cfm	<u>53</u> cfm
Other Rooms	<u>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Table 9.32.3.A.	TOTAL	<u>159.0</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>79.5</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>159</u>	cfm
Less Principal Ventil. Capacity	<u>79.5</u>	cfm
Required Supplemental Capacity	<u>79.5</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE V150H	Location: BSMT
<u>79.5</u> cfm	☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
79.5 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
BATH	BY INSTALLING CONTRACTOR	50	☒	3.5
PWD	BY INSTALLING CONTRACTOR	50	☒	3.5

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE V150H		
<u>150</u> cfm high	<u>35</u> cfm low	
<u>75</u> % 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:	<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#: 96124	Model: 4201 - MAPLEWOOD	Builder: GOLD PARK HOMES	Date: 2022-04-14																																																									
Volume Calculation			Air Change & Delta T Data																																																									
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>1886</td><td>10</td><td>18860</td></tr> <tr><td>First</td><td>1886</td><td>11</td><td>20746</td></tr> <tr><td>Second</td><td>1589</td><td>9</td><td>14301</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>53,907.0 ft³</td></tr> <tr><td colspan="3" style="text-align: right;">Total:</td><td>1526.5 m³</td></tr> </tbody> </table>			Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	1886	10	18860	First	1886	11	20746	Second	1589	9	14301	Third	0	9	0	Fourth	0	9	0	Total:			53,907.0 ft³	Total:			1526.5 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%; text-align: center;">0.370</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td style="text-align: center;">0.124</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 style="text-align: center;">22</td> <td style="text-align: center;">-20</td> <td style="text-align: center;">42</td> <td style="text-align: center;">76</td> </tr> <tr> <td>Summer DTDc</td> <td style="text-align: center;">24</td> <td style="text-align: center;">31</td> <td style="text-align: center;">7</td> <td style="text-align: center;">13</td> </tr> </table>		WINTER NATURAL AIR CHANGE RATE	0.370	SUMMER NATURAL AIR CHANGE RATE	0.124	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																																																									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.370 x 424.02 x 42 °C x 1.2 = 7940 W = 27092 Btu/h			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.124 x 424.02 x 7 °C x 1.2 = 449 W = 1534 Btu/h																																																									
5.2.3.2 Heat Loss due to Mechanical Ventilation			6.2.7 Sensible heat Gain due to Ventilation																																																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 80 CFM x 76 °F x 1.08 x 0.25 = 1631 Btu/h			$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 80 CFM x 13 °F x 1.08 x 0.25 = 275 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 / HL _{clevel})																																																								
1	0.5	27,092	10,869	1.246																																																								
2	0.3		19,954	0.407																																																								
3	0.2		7,165	0.756																																																								
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 																																																								

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 4201 - MAPLEWOOD	ELEV A & B	BUILDER: GOLD PARK HOMES
SFQT: 3006	LO# 96124	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):	53907.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 68.0 ft	WIDTH: 33.0 ft	EXPOSED PERIMETER:	202.0 ft

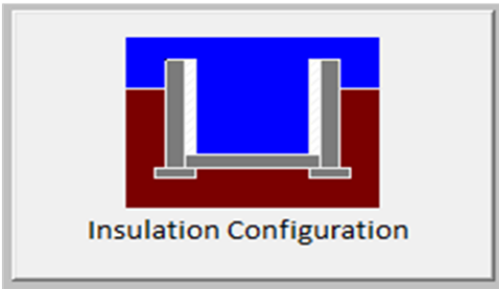
2012 OBC - COMPLIANCE PACKAGE		Compliance Package A1	
Component		Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value		60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value		31	27.65
Exposed Floor Minimum RSI (R)-Value		31	29.80
Walls Above Grade Minimum RSI (R)-Value		22	17.03
Basement 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		96%	-
HRV/ERV 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):	20.7	 Insulation Configuration
Floor Width (m):	10.1	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	3.3	
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):		1980

TYPE: 4201 - MAPLEWOOD
LO# 96124

ELEV A & B

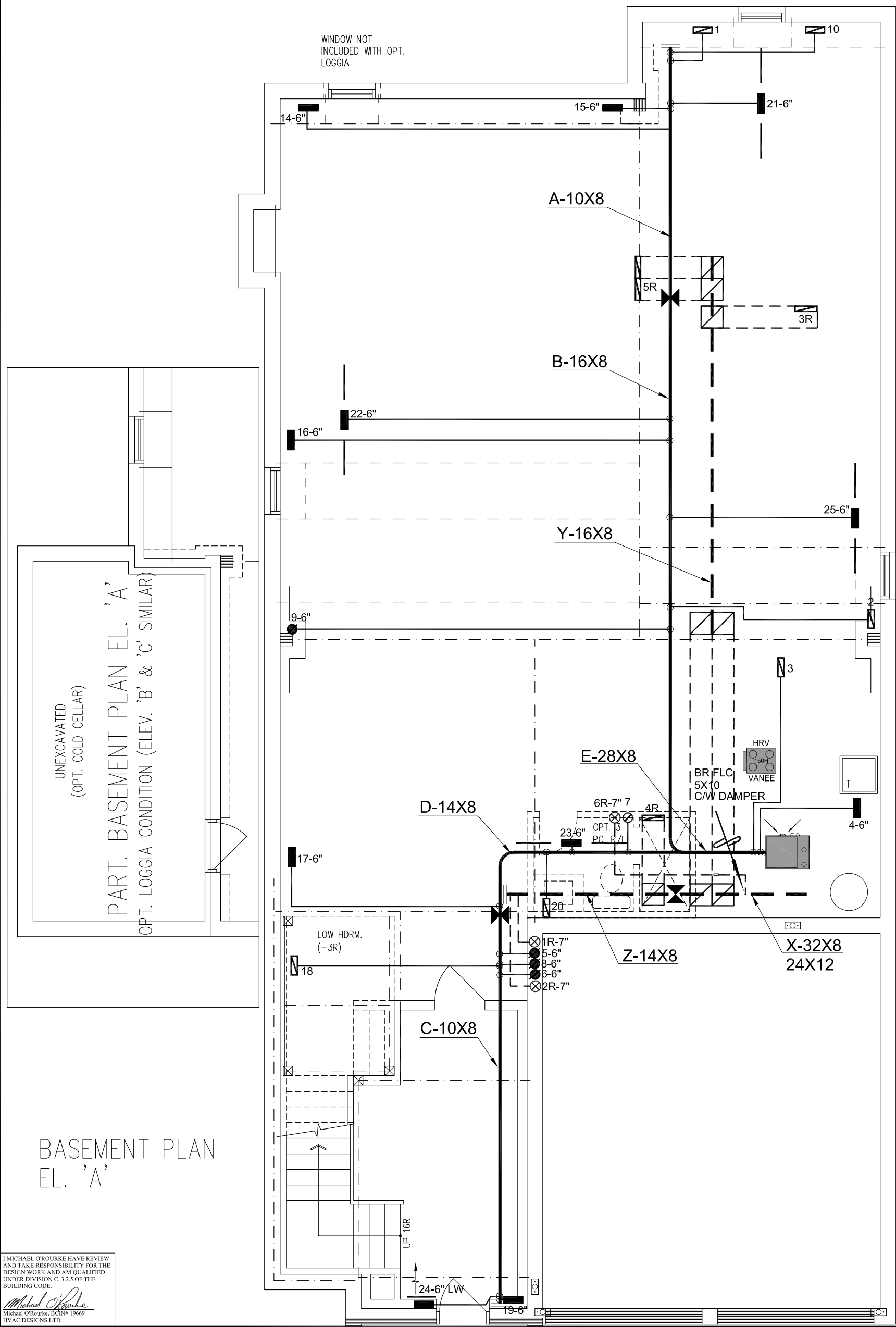
Air Infiltration Residential Load Calculator

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):	7.92			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1526.5			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2034.8 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	37.5	37.5		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.370			
Cooling Air Leakage Rate (ACH/H):	0.124			

TYPE: 4201 - MAPLEWOOD
LO# 96124

ELEV A & B



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

Michael O'Rourke

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

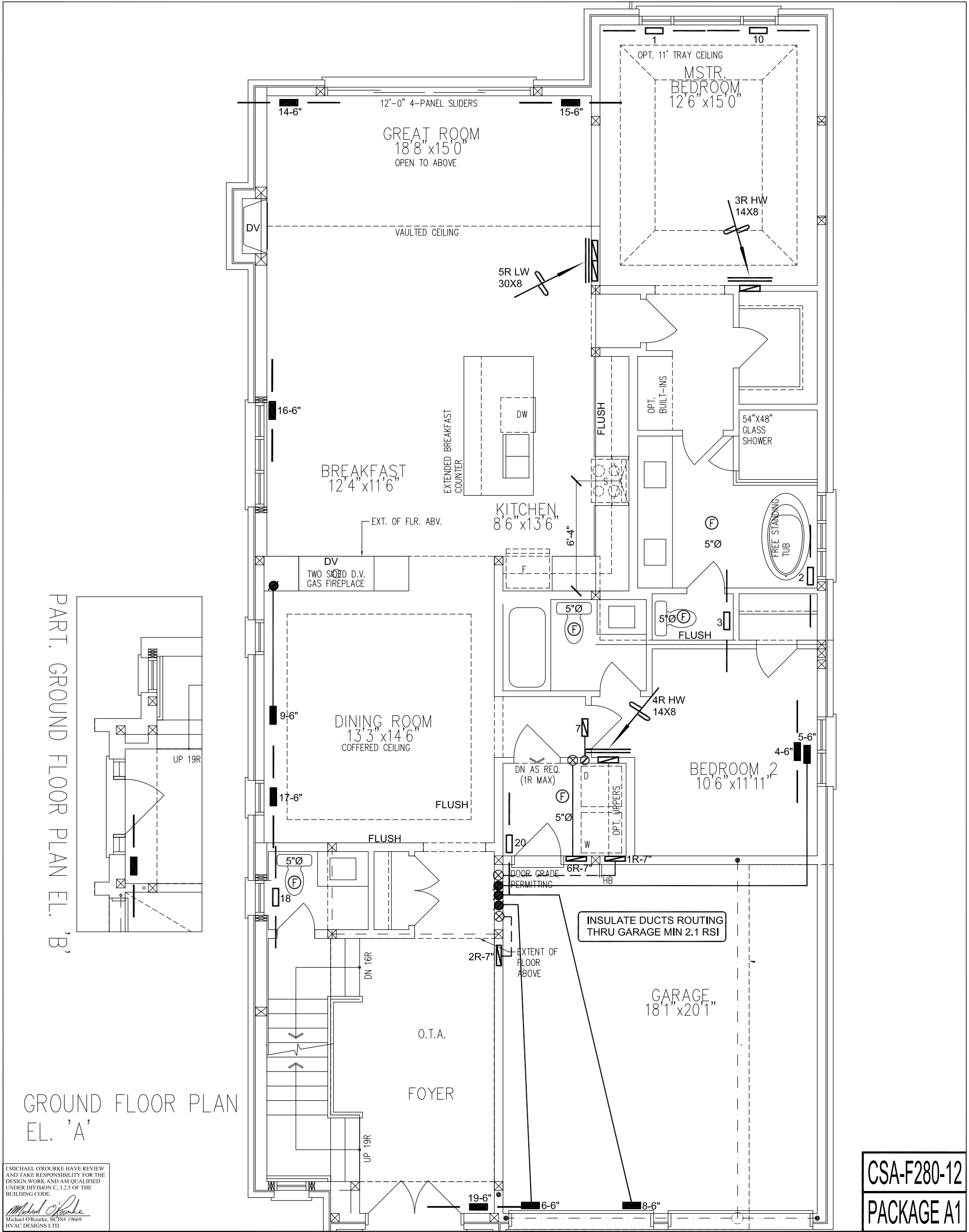
CSA-F280-12

PACKAGE A1

HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client		HVACDESIGNS 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.	HEAT LOSS 67277 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title	
GOLD PARK HOMES			MAKE LENNOX	3RD FLOOR				BASEMENT HEATING LAYOUT		
Project Name PINE VALLEY PH 2 VAUGHAN, ONTARIO			MODEL ML196UH090XE36C	2ND FLOOR	5	3	1			
			INPUT 88 MBTU/H	1ST FLOOR	12	3	6	Date	APR/2022	
			OUTPUT 85.6 MBTU/H	BASEMENT	5	1	0	Scale	3/16" = 1'-0"	
			COOLING 3.0 TONS	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A				BCIN# 19669		
			FAN SPEED 1170 cfm @ 0.6" w.c.					LO#	96124	
MAPLEWOOD - ELEV A & B 4201 2723 sqft										



CSA-F280-12
PACKAGE A1

HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS	

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Client		 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	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	APR/2022
PINE VALLEY PH 2 VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
MAPLEWOOD - ELEV A & B 4201 2723 sqft			BCIN# 19669	
			LO#	96124

Media Room
13'3" x 16'0"

Bedroom 3
12'6" x 11'11"

Bedroom 4
13'3" x 15'6"

Other Features:
 - 57" x 36" Glass Shower
 - 5" Ø (F)
 - OPT. DOOR
 - 6R HW 14x8-7"
 - 1R HW 14x8-7"
 - 2R HW 14x8-7"
 - LINEN
 - O.T.B.
 - DN 19R
 - VAULTED CEILING
 - SLOPED CEILING
 - 9'-6"
 - 5'-6"
 - 6'-6"
 - 8'-6"

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

CSA-F280-12
PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
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	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Client	 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	Sheet Title	
GOLD PARK HOMES		SECOND FLOOR	
Project Name		HEATING	
PINE VALLEY PH 2		LAYOUT	
VAUGHAN, ONTARIO	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.	Date	APR/2022
MAPLEWOOD - ELEV A & B		Scale	3/16" = 1'-0"
4201		BCIN# 19669	
2723 sqft		LO#	96124