

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.
Municipality			Lot/con.
Postal code	Plan number/ other description		
VAUGHAN (WOODBIDGE)			
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		Model: 5006 CNR	
HEAT LOSS / GAIN CALCULATIONS		THE SILVERWOOD	
DUCT SIZING		Project: PINE VALLEY & TESTON	
RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY			
RESIDENTIAL SYSTEM DESIGN per CSA-F280-12			
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.			
January 23, 2018		 Signature of Designer	
Date			

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 & TESTON BUILDER: GOLD PARK HOMES TYPE: 8006 CNR THE SILVERWOOD DATE: Jan-18 LO# 77484 GFA: 3453 WINTER NATURAL AIR CHANGE RATE 0.340 HEAT LOSS AT °F. 76 CSA-F280-12 SB-12 PACKAGE A1

ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	WIC-2	MEDIA	ENS-2	HEAT GAIN AT °F. 16
GRS.WALL AREA	46	506	110	0	143	279	306	117	81	72	176	
GLAZING	21.3 16.8	0	30 638 904	0	20 426 336	17 352 286	9 192 161	8 170 136	0	0	0	
NORTH	21.3 42.4	0	0	0	0	0	0	0	0	0	0	
EAST	21.3 42.4	0	0	0	0	0	0	0	0	0	0	
SOUTH	21.3 25.7	30 638 772	0	0	0	0	0	0	0	23 489 592	0	
WEST	21.3 42.4	54 1149 2289	0	0	0	0	0	0	0	0	0	
SKYLT.	37.2 103.0	0	0	0	0	0	0	0	0	0	0	
DOORS	25.2 5.2	10 252 52	0	0	0	0	0	0	0	0	0	
NET EXPOSED WALL	4.5 0.9	412 1839 382	80 357 74	0	123 549 114	262 1169 243	275 1227 255	109 486 101	81 361 75	49 219 45	176 785 163	
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.7	0	0	0	0	0	0	0	0	0	0	
EXPOSED CLG	1.3 0.6	269 345 172	117 150 75	63 81 40	0	204 262 130	174 223 111	152 195 97	39 50 25	245 314 156	0	
NO ATTIC EXPOSED CLG	2.7 1.4	0	0	0	0	35 96 48	55 161 76	0	15 41 21	0	0	
EXPOSED FLOOR	2.6 0.5	0	0	0	0	0	229 584 121	60 153 32	54 138 29	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		4224	1146	81	975	1889	2845	1005	590	1023	785	
SUB TOTAL HT GAIN		3668	553	40	450	707	1647	364	149	794	163	
LEVEL FACTOR / MULTIPLIER	0.30 0.34		0.30 0.34		0.30 0.34		0.20 0.79		0.20 0.79		0.30 0.34	
AIR CHANGE HEAT LOSS		1426	387	27	329	1494	2250	794	467	809	265	
AIR CHANGE HEAT GAIN		474	0	5	58	91	213	47	19	103	21	
DUCT LOSS		0	0	0	0	0	510	180	106	0	0	
DUCT GAIN		0	0	0	0	0	313	41	17	0	0	
HEAT GAIN PEOPLE	240	480	0	1	240	0	240	0	0	0	0	
HEAT GAIN APPLANCES/LIGHTS		1034	0	1034	1034	1034	1034	0	0	1034	0	
TOTAL HT LOSS BTU/H		5650	1532	108	1303	3383	5606	1979	1163	1831	1051	
TOTAL HT GAIN x 1.3 BTU/H		7352	959	59	2317	2693	4480	589	241	2509	240	

ROOM USE	EXP. WALL CLG. HT.	K/BIF	DIN	LIB	PWD	FOY	MUD	BAS
GRS.WALL AREA	1044	504	528	66	304	120	1652	
GLAZING	21.3 16.8	0	0	0	0	0	LOSS GAIN	
NORTH	21.3 42.4	0	0	0	0	0	3 64 50	
EAST	21.3 42.4	0	0	0	0	0	6 128 154	
SOUTH	21.3 25.7	0	34 724 875	0	0	0	3 64 127	
WEST	21.3 42.4	136 2894 5765	0	0	0	0	20 505 105	
SKYLT.	37.2 103.0	0	0	0	0	0	708 2548 530	
DOORS	25.2 5.2	0	0	0	0	0	0 0 0	
NET EXPOSED WALL	4.5 0.9	908 4052 842	470 2097 436	66 295 61	284 1178 245	100 446 93	0 0 0	
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.7	0	0	0	0	0	0 0 0	
EXPOSED CLG	1.3 0.6	652 837 416	427 548 273	0	0	0	0 0 0	
NO ATTIC EXPOSED CLG	2.7 1.4	0	0	185 508 253	0	72 198 98	0 0 0	
EXPOSED FLOOR	2.6 0.5	0	0	0	0	0	0 0 0	
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0	0 0 0	
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	8391	
SUBTOTAL HT LOSS		7783	3369	3840	295	2385	11699	
SUB TOTAL HT GAIN		7024	1584	3148	61	553	967	
LEVEL FACTOR / MULTIPLIER	0.30 0.34	0.30 0.34	0.30 0.34	0.30 0.34	0.30 0.34	0.30 0.34	0.50 1.24	
AIR CHANGE HEAT LOSS	2827	1137	1296	99	805	321	14534	
AIR CHANGE HEAT GAIN	0	0	205	8	72	26	125	
DUCT LOSS	0	0	0	0	0	0	0	
DUCT GAIN	0	0	0	0	0	0	0	
HEAT GAIN PEOPLE	240	480	0	0	0	0	0	
HEAT GAIN APPLANCES/LIGHTS		1034	1034	1034	0	0	0	
TOTAL HT LOSS BTU/H		10410	4506	5136	394	3191	26233	
TOTAL HT GAIN x 1.3 BTU/H		11656	3668	5864	90	812	2763	

TOTAL HEAT GAIN BTU/H: 47342 TONS: 3.95

STRUCTURAL HEAT LOSS: 74748

TOTAL COMBINED HEAT LOSS BTU/H: 77829

Michael O'Rourke

SITE NAME: PINE VALLEY & TESTON
BUILDER: GOLD PARK HOMES

TYPE: 5006 CNR

DATE: Jan-18

GFA: 3453 LO# 77484

HEATING CFM 1525 COOLING CFM 1525
TOTAL HEAT GAIN 46,681
AIR FLOW RATE CFM 20.4

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

EL296UH090XE48C
FAN SPEED
LOW 0
MEDIUM 1105
HIGH 1525

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000
DESIGN CFM = 1525
CFM @ 8" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	6	18	6
R/A	0	0	3	5	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	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	WIC-2	MEDIA	MBR	ENS-2	ENS	BED-4	K/B/F	K/B/F	DIN	LIB	PWD	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	2.82	0.77	0.11	1.30	3.38	2.80	1.98	1.16	1.83	2.82	1.05	0.77	2.80	2.60	2.60	2.25	2.57	0.39	3.19	1.27	4.37	4.37	4.37	4.37
CFM PER RUN HEAT	58	16	2	27	69	57	40	24	37	58	21	16	57	53	53	46	52	8	65	26	89	89	89	89
RM GAIN MBH	3.68	0.48	0.06	2.32	2.69	2.24	0.59	0.24	2.51	3.68	0.24	0.48	2.24	2.91	2.91	1.83	2.98	0.09	0.81	0.29	0.46	0.46	0.46	0.46
CFM PER RUN COOLING	120	16	2	76	88	73	19	8	82	120	8	16	73	95	95	60	97	3	27	9	15	15	15	15
ADJUSTED PRESSURE	0.15	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.15	0.17	0.17	0.17	0.16	0.16	0.17	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	52	30	33	14	43	49	23	50	45	42	6	21	56	63	46	55	76	20	55	11	37	55	43	29
TOTAL EFFECTIVE LENGTH	202	160	223	194	253	209	193	200	205	192	166	161	236	203	196	275	276	200	215	141	207	185	143	139
ADJUSTED PRESSURE	0.08	0.11	0.08	0.09	0.06	0.08	0.09	0.09	0.08	0.08	0.1	0.11	0.07	0.08	0.08	0.06	0.06	0.09	0.08	0.12	0.08	0.09	0.11	0.12
ROUND DUCT SIZE	6	4	4	5	6	5	4	4	5	6	4	4	5	6	6	5	6	4	4	5	6	6	5	5
HEATING VELOCITY (ft/min)	296	184	23	198	352	419	459	275	272	296	241	184	419	270	270	338	265	92	477	298	454	454	653	653
COOLING VELOCITY (ft/min)	612	184	23	558	449	536	218	92	602	612	92	184	536	484	484	441	495	34	198	103	76	76	110	110
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	4X10	3X10	4X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10
TRUNK	B	C	B	C	B	E	C	E	E	C	C	C	E	A	B	D	D	E	D	D	B	A	C	C

RUN #	25	26	27	28	29	30
ROOM NAME	BAS	BAS	K/B/F	K/B/F	LIB	DIN
RM LOSS MBH	4.37	4.37	2.60	2.60	2.57	2.25
CFM PER RUN HEAT	89	89	53	53	52	46
RM GAIN MBH	0.46	0.46	2.91	2.91	2.98	1.83
CFM PER RUN COOLING	15	15	95	95	97	60
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16	0.17
EQUIVALENT LENGTH	29	65	53	17	70	60
TOTAL EFFECTIVE LENGTH	169	235	203	167	230	220
ADJUSTED PRESSURE	0.1	0.07	0.08	0.1	0.07	0.08
ROUND DUCT SIZE	5	6	6	5	6	5
HEATING VELOCITY (ft/min)	653	454	270	389	265	338
COOLING VELOCITY (ft/min)	110	76	484	698	495	441
OUTLET GRILL SIZE	3X10	4X10	4X10	3X10	4X10	3X10
TRUNK	A	D	A	B	D	D

SUPPLY AIR TRUNK SIZE											RETURN AIR TRUNK SIZE																		
TRUNK		STATIC PRESS.		ROUND DUCT		RECT DUCT		VELOCITY (ft/min)		TRUNK CFM		STATIC PRESS.		ROUND DUCT		RECT DUCT		VELOCITY (ft/min)		TRUNK CFM		STATIC PRESS.		ROUND DUCT		RECT DUCT		VELOCITY (ft/min)	
TRUNK A	284	0.08	8.8	10	8	511	0	0.00	0	0	TRUNK G	0	0.00	0	0	0	0	8	0	0.05	0	0	0	0	0	0	8		
TRUNK B	608	0.06	12.5	18	8	608	0	0.00	0	0	TRUNK H	0	0.00	0	0	0	0	8	0	0.05	0	0	0	0	0	0	8		
TRUNK C	964	0.06	14.9	26	8	667	0	0.00	0	0	TRUNK I	0	0.00	0	0	0	0	8	0	0.05	0	0	0	0	0	0	8		
TRUNK D	376	0.06	10.4	12	8	564	0	0.00	0	0	TRUNK J	0	0.00	0	0	0	0	8	0	0.05	0	0	0	0	0	0	8		
TRUNK E	559	0.06	12.1	18	8	559	0	0.00	0	0	TRUNK K	0	0.00	0	0	0	0	8	0	0.05	0	0	0	0	0	0	8		
TRUNK F	0	0.00	0	0	0	0	0	0.00	0	0	TRUNK L	0	0.00	0	0	0	0	8	0	0.05	0	0	0	0	0	0	8		

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	135	130	135	155	255	235	115	115	0	0	0	0	0	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	0.15	0.15	0.15	0.15	0.15	0.15	0.15
EQUIVALENT LENGTH	42	63	45	26	39	42	68	60	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL EFFECTIVE LENGTH	230	185	225	225	205	245	250	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED PRESSURE	0.05	0.06	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
ROUND DUCT SIZE	7.5	7	7.5	7.5	9	9.2	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	14	14	14	14	14	14	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: 5006 CNR
SITE NAME: PINE VALLEY & TESTON

LO # 77484
THE SILVERWOOD

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>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>190.8</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>190.8</u>	cfm
Less Principal Ventil. Capacity	<u>155</u>	cfm
Required Supplemental Capacity	<u>35.8</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANE 65H	Location: BSMT
<u>155.0</u> cfm	<u>3.0</u> sones ☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
155.0 CFM	X 76 F	X 1.08	X	0.25

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
ENS-2	QTXEN050C	50	☒	0.3
PWD	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 65H		
<u>155</u> cfm high	<u>64</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:	January-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																									
Formula Sheet (For Air Leakage / Ventilation Calculation)																																									
LO#: 77484		Model: 5006 CNR		Builder: GOLD PARK HOMES		Date: 1/23/2018																																			
Volume Calculation																																									
<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>2351</td> <td>10</td> <td>23510</td> </tr> <tr> <td>First</td> <td>2351</td> <td>11</td> <td>25861</td> </tr> <tr> <td>Second</td> <td>1499</td> <td>9</td> <td>13491</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="2" style="text-align: right;">Total:</td> <td></td> <td>62,862.0 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>1780.1 m³</td> </tr> </tbody> </table>										Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2351	10	23510	First	2351	11	25861	Second	1499	9	13491	Third	0	9	0	Fourth	0	9	0	Total:			62,862.0 ft³	Total:			1780.1 m³
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)																																						
Bsmt	2351	10	23510																																						
First	2351	11	25861																																						
Second	1499	9	13491																																						
Third	0	9	0																																						
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6.2.6 Sensible Gain due to Air Leakage																																									
$HG_{sath} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																									
$= 0.124 \times 494.46 \times 9 \times 1.2 = 646 \text{ W}$																																									
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6.2.7 Sensible heat Gain due to Ventilation																																									
$HL_{yairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																									
$155 \text{ CFM} \times 16^\circ\text{F} \times 1.08 \times 0.25 = 661 \text{ Btu/h}$																																									
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																									
$HL_{qirr} = \text{Level Factor} \times HL_{airbv} \times \{(HL_{qgcr} + HL_{bgcr}) \div (HL_{qglevel} + HL_{bglevel})\}$																																									
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*HLairbv = Air leakage heat loss + ventilation heat loss
 *For a balanced or supply only ventilation system HLairve = 0

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5006 CNR	THE SILVERWOOD	BUILDER: GOLD PARK HOMES
SFQT: 3453	LO# 77484	SITE: PINE VALLEY & TESTON

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

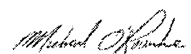
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	62862.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 76.0 ft	WIDTH: 42.0 ft	EXPOSED PERIMETER:	236.0 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	-

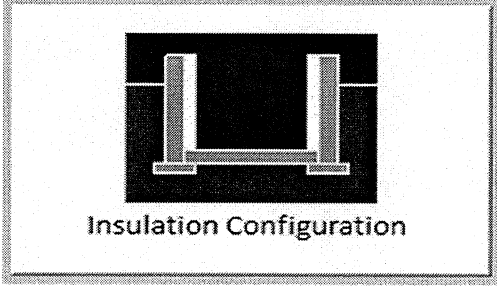
INDIVIDUAL BCIN: 19669

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):	23.2	 Insulation Configuration
Floor Width (m):	12.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	1.1	
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):	2459	

TYPE: 5006 CNR
LO# 77484

THE SILVERWOOD

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):	7.01			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1780.1			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa. 3.57	2372.9 cm ² ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply 73.2	Total Exhaust 73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.340			
Cooling Air Leakage Rate (ACH/H):	0.124			

TYPE: 5006 CNR
LO# 77484

THE SILVERWOOD

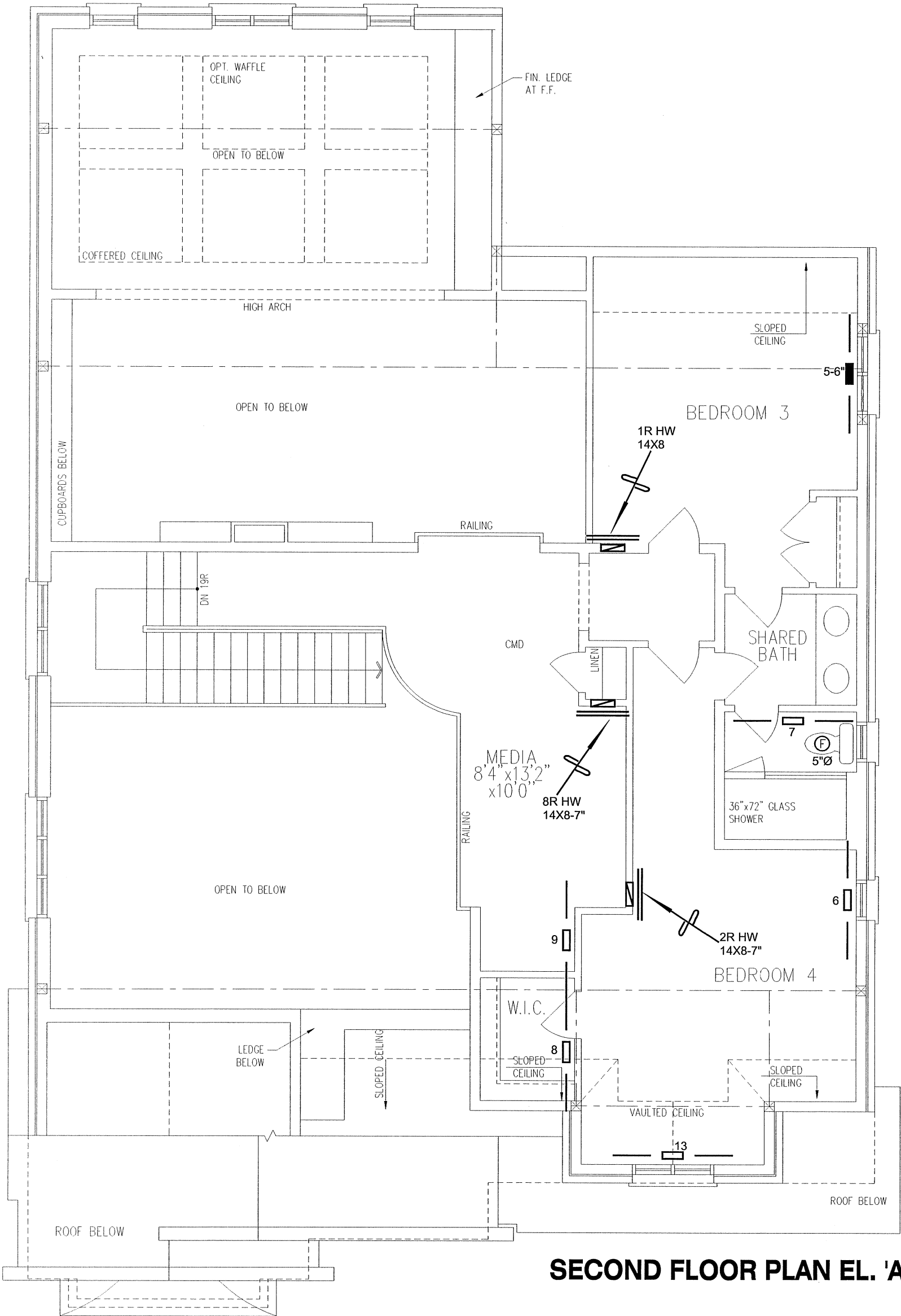
I MICHAEL OROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN AND CONSTRUCTION OF THE BUILDING DIVISION C.3.2.5 OF THE BUILDING CODE.

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

CSA-F280-12
PACKAGE A1

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



SECOND FLOOR PLAN EL. 'A'

Client
GOLD PARK HOMES

Project Name
PINE VALLEY & TESTON
VAUGHAN, ONTARIO

THE SILVERWOOD
5006 CNR 3453 sqft

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.

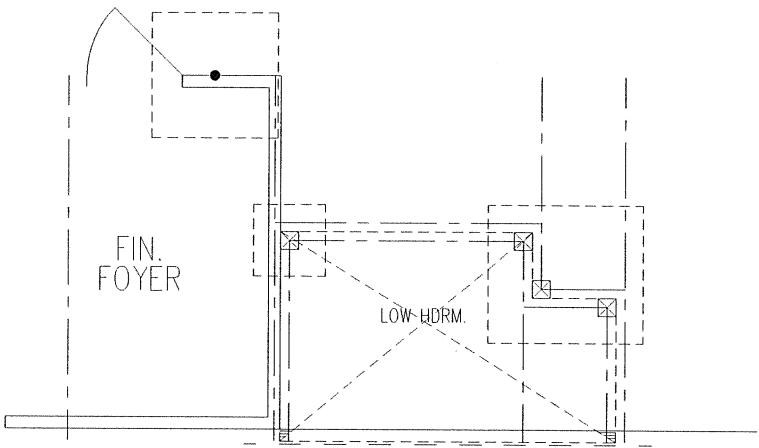
Sheet Title
SECOND FLOOR
HEATING
LAYOUT

Date
JAN/2018

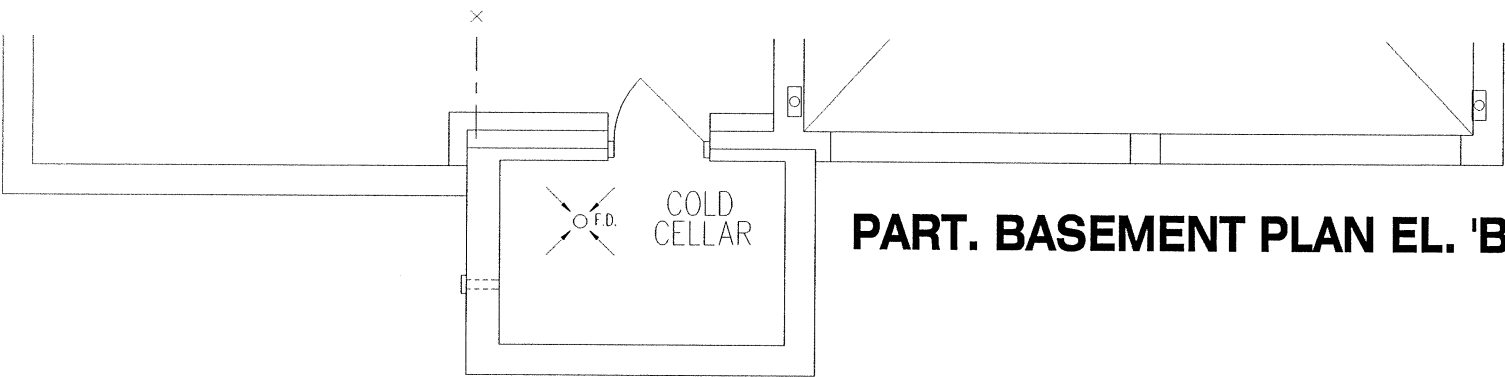
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3/16" = 1'-0"

BCIN# 19669

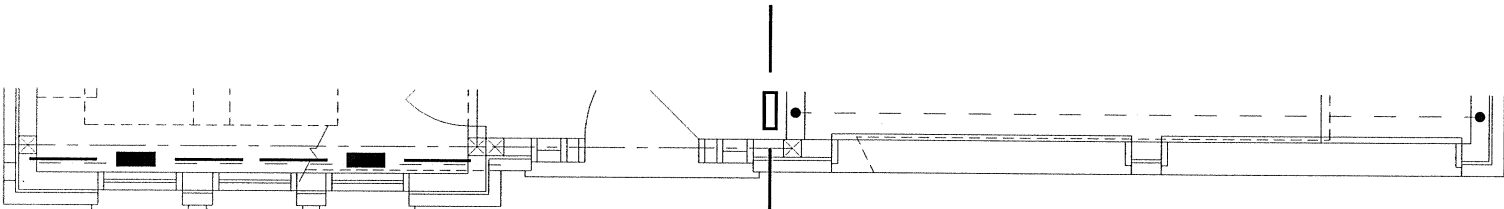
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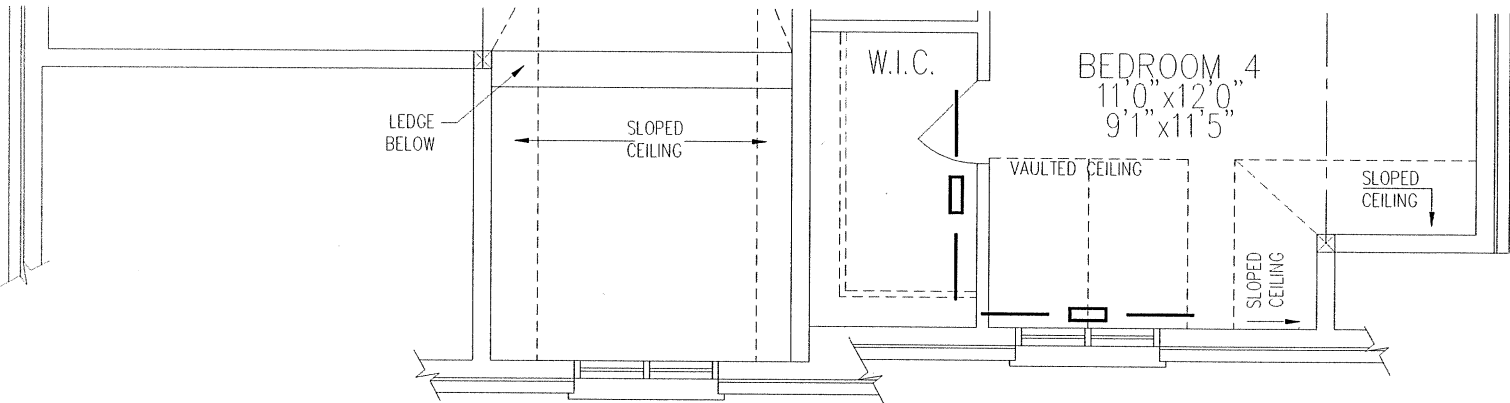
OPT. SUNKEN MUD ROOM 'A' & 'B'



PART. BASEMENT PLAN EL. 'B'



PART. GROUND FLOOR PLAN EL. 'B'



PART. SECOND FLOOR PLAN EL. 'B'

I MICHAEL OROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE UNDER DIVISION C. 12.5 OF THE BUILDING CODE.
Michael Orourke
Michael Orourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F-280-12
PACKAGE A1

HVAC LEGEND					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
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	RETURN AIR STACK 2nd FLOOR		REDUCER		

3.	
2.	
1.	
No.	
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Date	

REVISIONS

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Sheet Title
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Date
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