


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 VAUGHAN (WOODBIDGE)			Postal code
Plan number/ other description			Lot/con.
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@hvacdsgns.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]			
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> 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: 4003 THE BROOKSIDE Project: PINE VALLEY & TESTON	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)			
<input type="checkbox"/> 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: _____			
<input checked="" type="checkbox"/> 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>			
<input type="checkbox"/> 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.			
October 5, 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.

SITE NAME: PINE VALLEY & TESTON
BUILDER: GOLD PARKHOMES
TYPE: 4003 THE BROOKSIDE
DATE: Oct-18
LO# 77458
GFA: 3296
WINTER NATURAL AIR CHANGE RATE 0.341
SUMMER NATURAL AIR CHANGE RATE 0.124
HEAT LOSS AT °F. 76
HEAT GAIN AT °F. 16
CSA-F280-12
SB-12 PACKAGE A.1

ROOM USE	EXP. WALL CLG. HT.	FACTORS	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-2	LOD	BAS
GRS.WALL AREA	300	LOSS GAIN	228	LOSS GAIN	46	118	137	108	84	73	382	1362
GLAZING	0	0	0	0	0	17	0	0	0	8	0	0
NORTH	21.3	16.8	0	0	0	382	0	0	0	170	0	64
EAST	21.3	42.4	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	25.7	0	0	0	0	0	0	0	0	0	0
WEST	21.3	42.4	0	0	0	0	0	0	0	0	0	0
SKYL.T.	37.2	103.0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	5.2	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.9	266	1188	247	101	452	94	64	289	60	20
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	290	372	186	234	300	148	98	82	41	0
NO ATTIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.5	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
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2284	1874	1853	1239	283	1114	629	986	410	542	235	0
SUB TOTAL HT GAIN	0.20	0.31	0.20	0.31	0.20	0.31	0.20	0.31	0.20	0.31	0.20	0.31
LEVEL FACTOR / MULTIPLIER	716	189	518	131	92	349	364	309	129	170	25	0
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	480	0	0	1	240	1	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	615	0	0	0	0	1463	615	1296	539	711	0	0
TOTAL HT LOSS BTU/H	3000	4417	2171	1781	385	1463	1527	1296	539	711	0	0
TOTAL HT GAIN x 1.3 BTU/H												

ROOM USE	EXP. WALL CLG. HT.	FACTORS	MEDIA	DIN	KTGR	STDY	WIR	FOY	MUD	LOD	BAS
GRS.WALL AREA	560	LOSS GAIN	253	LOSS GAIN	770	121	132	473	300	382	1362
GLAZING	0	0	0	0	0	32	0	0	9	0	0
NORTH	21.3	16.8	0	0	0	681	0	0	192	0	64
EAST	21.3	42.4	55	1170	2332	0	0	42	894	0	0
SOUTH	21.3	25.7	0	0	0	0	0	23	489	0	0
WEST	21.3	42.4	0	0	0	0	0	0	0	0	0
SKYL.T.	37.2	103.0	0	0	0	0	0	0	0	0	0
DOORS	25.2	5.2	10	282	52	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.9	495	2209	459	89	397	368	1642	271	1209
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	365	468	233	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.4	79	217	108	0	0	166	428	213	0
EXPOSED FLOOR	2.6	0.5	444	1132	236	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	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	0
SUBTOTAL HT LOSS	5450	3420	1701	1078	5421	1078	589	4464	1906	1437	7746
SUB TOTAL HT GAIN	0.20	0.31	0.30	0.43	0.30	0.43	0.30	0.43	0.30	0.43	0.60
LEVEL FACTOR / MULTIPLIER	1709	733	733	114	2337	465	254	1825	822	1438	10892
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	480	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	615	0	0	0	0	615	0	0	0	0	0
TOTAL HT LOSS BTU/H	7875	6288	2434	615	7768	1543	843	6389	2728	1437	18638
TOTAL HT GAIN x 1.3 BTU/H											

TOTAL HEAT GAIN BTU/H: 42128 TONS: 3.51 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 60735 TOTAL COMBINED HEAT LOSS BTU/H: 63916

Michael O'Rourke

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

TYPE: 4003 THE BROOKSIDE DATE: Oct-18

GFA: 3296 LO# 77458

HEATING CFM 1525 COOLING CFM 1525
TOTAL HEAT LOSS 60,735 TOTAL HEAT GAIN 41,467
AIR FLOW RATE CFM 25.11 AIR FLOW RATE CFM 36.78

EL286UH090XE48C

FAN SPEED 90

AFUE = 96 %

INPUT (BTU/H) = 88,000

OUTPUT (BTU/H) = 85,000

DESIGN CFM = 1525

CFM @ 6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	10	5
R/A	0	0	5	2	1

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

All S/A runs 5'x2" 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	MEDIA	MEDIA	MEDIA	ENS-2	DIN	KT/GR	KT/GR	KT/GR	KT/GR	MUD	W/R	FOY	MEDIA	STDY	FOY	KT/GR	KT/GR
RM LOSS MBH	1.50	2.17	0.38	1.46	1.53	1.30	0.54	2.62	2.62	2.62	0.71	2.43	1.94	1.94	1.94	1.94	2.73	0.84	3.19	2.62	1.54	3.19	3.19	1.94
CFM PER RUN HEAT	38	55	10	37	38	33	14	66	66	66	18	61	49	49	49	49	68	21	80	66	39	80	80	49
RM GAIN MBH	2.06	1.78	0.12	1.87	2.11	2.02	0.17	2.10	2.10	2.06	0.34	2.35	2.22	2.22	2.22	2.22	1.53	0.18	2.26	2.10	1.89	2.26	2.22	2.22
CFM PER RUN COOLING	76	66	5	69	78	74	6	77	77	76	12	86	81	81	81	81	56	6	83	77	62	83	81	81
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.16	0.17	0.17	0.16	0.16	0.16
EQUIVALENT LENGTH	150	140	130	150	120	160	150	175	185	140	260	140	170	170	160	100	250	120	110	170	130	120	110	110
TOTAL EFFECTIVE LENGTH	196	185	157	177	167	205	204	231	246	191	287	171	213	196	133	133	271	149	163	241	141	173	140	140
ADJUSTED PRESSURE	0.09	0.09	0.11	0.11	0.11	0.08	0.08	0.07	0.07	0.09	0.06	0.09	0.08	0.08	0.08	0.12	0.08	0.12	0.12	0.07	0.12	0.09	0.12	0.12
ROUND DUCT SIZE	5	5	4	5	5	5	4	6	6	5	4	5	5	5	5	5	6	4	5	6	4	5	5	5
HEATING VELOCITY (ft/min)	279	404	115	272	279	242	161	337	337	279	207	448	360	360	360	360	347	241	587	337	447	587	360	360
COOLING VELOCITY (ft/min)	558	485	57	507	573	543	69	393	393	558	138	631	595	595	595	595	286	69	609	393	447	609	595	595
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10
TRUNK	A	B	B	B	D	B	D	C	C	A	B	B	B	A	A	A	B	D	C	C	B	C	C	A

RUN #	25	26	27	28	29
ROOM NAME	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	4.02	4.02	4.02	4.02	4.02
CFM PER RUN HEAT	101	101	101	101	101
RM GAIN MBH	0.70	0.70	0.70	0.70	0.70
CFM PER RUN COOLING	26	26	26	26	26
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	44	19	23	35	44
EQUIVALENT LENGTH	150	180	150	140	110
TOTAL EFFECTIVE LENGTH	194	179	173	175	154
ADJUSTED PRESSURE	0.08	0.09	0.09	0.09	0.11
ROUND DUCT SIZE	6	6	6	6	5
HEATING VELOCITY (ft/min)	515	515	515	515	742
COOLING VELOCITY (ft/min)	133	133	133	133	191
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	3X10
TRUNK	A	A	B	D	C

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	0.08	10.6	14	609	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK B	0.06	14.5	24	672	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK C	0.07	10.8	14	590	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK D	0.07	12.2	18	633	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK E	0.06	17.7	28	786	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK F	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0

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	85	125	155	155	180	390	190	0	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
ACTUAL DUCT LGH	41	53	45	67	71	26	25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	195	190	185	190	185	145	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LENGTH	236	243	230	237	256	171	170	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.06	0.06	0.06	0.06	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
ROUND DUCT SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

TYPE: 4003 THE BROOKSIDE
SITE NAME: PINE VALLEY & TESTON

LO # 77458

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	<input checked="" type="checkbox"/> Direct vent (sealed combustion) only	
b)	<input type="checkbox"/> Positive venting induced draft (except fireplaces)	
c)	<input type="checkbox"/> Natural draft, B-vent or induced draft gas fireplace	
d)	<input type="checkbox"/> Solid Fuel (including fireplaces)	
e)	<input type="checkbox"/> No Combustion Appliances	

HEATING SYSTEM	
<input checked="" type="checkbox"/> Forced Air	<input type="checkbox"/> Non Forced Air
<input type="checkbox"/> Electric Space Heat	

HOUSE TYPE		9.32.1(2)
<input checked="" type="checkbox"/> I	Type a) or b) appliance only, no solid fuel	
<input type="checkbox"/> II	Type I except with solid fuel (including fireplaces)	
<input type="checkbox"/> III	Any Type c) appliance	
<input type="checkbox"/> IV	Type I, or II with electric space heat	
<input type="checkbox"/>	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
<input type="checkbox"/> 1	Exhaust only/Forced Air System	
<input type="checkbox"/> 2	HRV with Ducting/Forced Air System	
<input checked="" type="checkbox"/> 3	HRV Simplified/connected to forced air system	
<input type="checkbox"/> 4	HRV with Ducting/non forced air system	
<input type="checkbox"/>	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	190.8 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		79.5 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	35.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 65H
Location:	BSMT
155.0 cfm	3.0 sones
<input checked="" type="checkbox"/> 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	<input checked="" type="checkbox"/>	0.3
BATH	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
W/R	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 65H	
155	cfm high	64 cfm low
75	% Sensible Efficiency	<input checked="" type="checkbox"/> HVI Approved
@ 32 deg F (0 deg C)		

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

BUILDER:		GOLD PARKHOMES
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:	October-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations			
Formula Sheet (For Air Leakage / Ventilation Calculation)			
LO#: 77458	Model: 4003 THE BROOKSIDE	Builder: GOLD PARKHOMES	Date: 10/5/2018
Volume Calculation			
House Volume	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Level			
Bsmt	1530	9	13923
First	1530	11	16830
Second	1782	9	16216.2
Third	0	9	0
Fourth	0	9	0
Total:			46,969.2 ft³
Total:			1330.0 m³
Air Change & Delta T Data			
		WINTER NATURAL AIR CHANGE RATE	0.341
		SUMMER NATURAL AIR CHANGE RATE	0.124
Design Temperature Difference			
	Tin °C	Tout °C	ΔT °C
Winter DTDh	22	-20	42
Summer DTDc	22	31	9
			ΔT °F
			76
			16
6.2.6 Sensible Gain due to Air Leakage			
$HG_{sdlb} = LR_{airlc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$			
0.341	x	369.45	x
		9 °C	x
		1.2	=
			484 W
			=
			1652 Btu/h
6.2.7 Sensible heat Gain due to Ventilation			
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$			
155 CFM	x	16 °F	x
		1.08	x
		0.25	=
			661 Btu/h
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)			
$HL_{airrr} = Level Factor \times HL_{airrbv} \times \{(HL_{ugcr} + HL_{bgcr}) \div (HL_{uglevel} + HL_{bglevel})\}$			
Level	Level Factor (LF)	Hlairst Air Leakage + Ventilation Heat Loss (Btu/h)	Air Leakage Heat Loss Multiplier (LF x Hlairst / HLlevel)
1	0.5	9,184	1.186
2	0.3	15,159	0.431
3	0.2	13,894	0.314
4	0	0	0.000
5	0	0	0.000
$HL_{airrbv} = Air leakage heat loss + ventilation heat loss$			
$*For a balanced or supply only ventilation system Hlairst = 0$			

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 4003 THE BROOKSIDE**BUILDER:** GOLD PARKHOMES**SFQT:** 3296**LO#** 77458**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 (ft ³):	46969.2	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.1 ft
LENGTH: 59.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	182.0 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	-

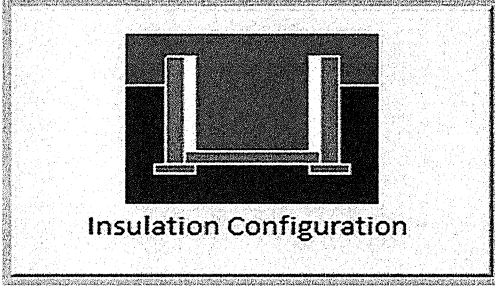
INDIVIDUAL BCIN: 19669

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):	18.0	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.8	
Depth Below Grade (m):	1.86	
Window Area (m ²):	3.3	
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):		1774

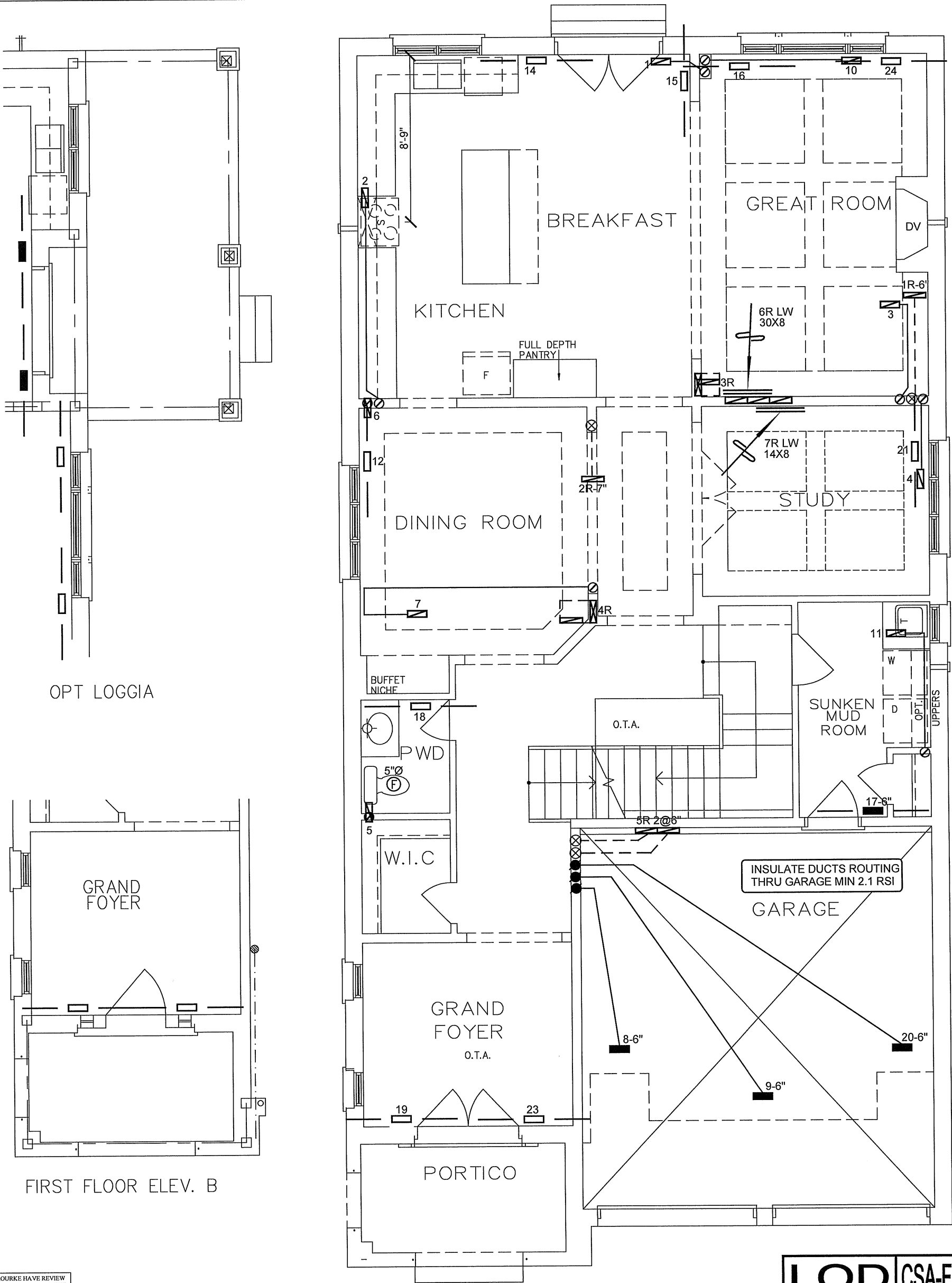
TYPE: 4003 THE BROOKSIDE
LO# 77458

Air Infiltration Residential Load Calculator

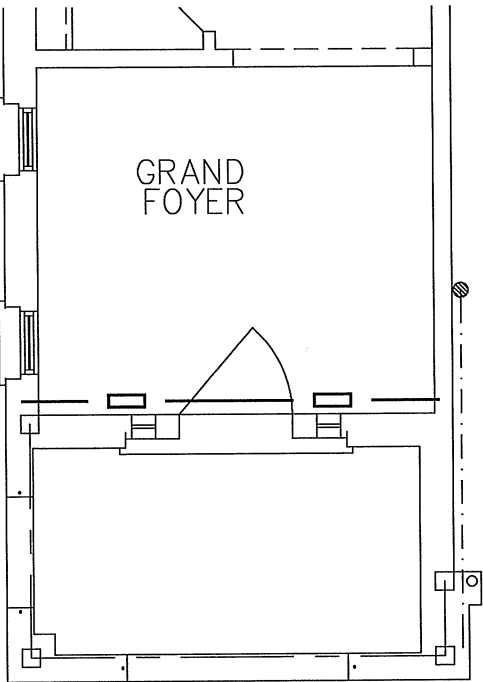
Supplemental tool for CAN/CSA-F280

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):	7.04			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1330.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1773.0 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	73.2	73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.341			
Cooling Air Leakage Rate (ACH/H):	0.124			

TYPE: 4003 THE BROOKSIDE
LO# 77458



OPT LOGGIA



FIRST FLOOR ELEV. B

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 32.5 OF THE BUILDING CODE.

Michael O'Rourke

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

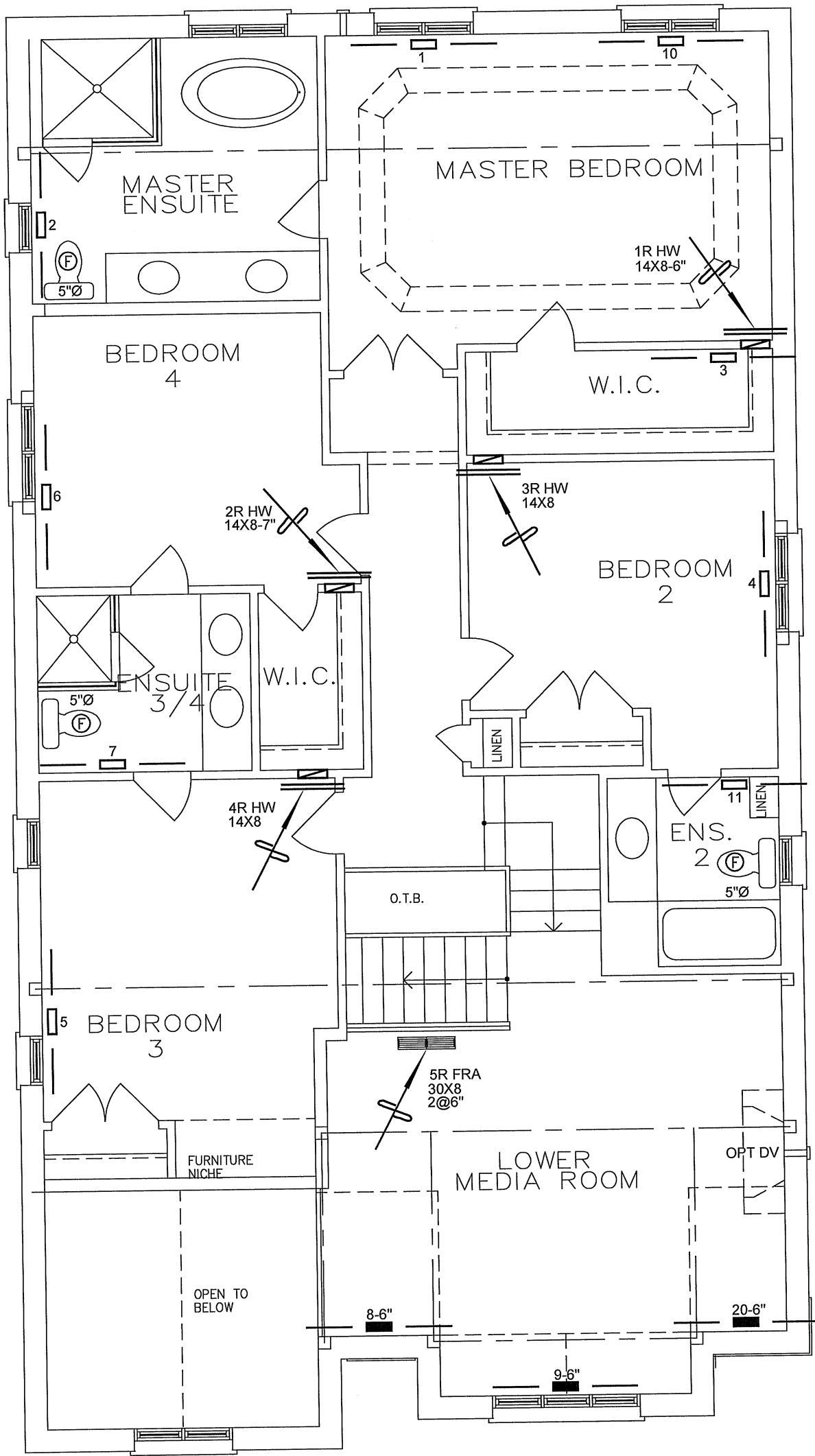
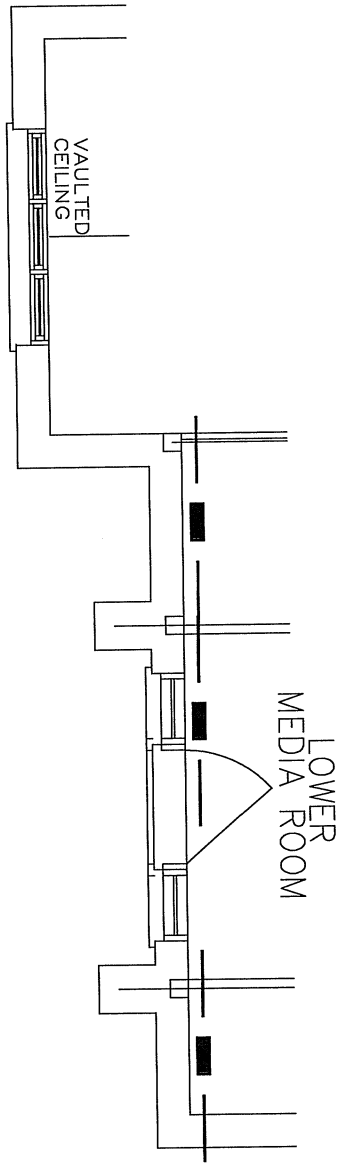
LOD	CSA-F280-12
WOD	PACKAGE A1

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

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Client		<div></div> <div>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</div> <div>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.</div>	Sheet Title	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE BROOKSIDE 4003			BCIN# 19669	
3296 sqft			LO#	77458

SECOND FLOOR ELEV. B



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

LOD	CSA-F280-12
WOD	PACKAGE A1

HVAC DESIGNS LTD.		HVAC LEGEND						3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	DECK CONDITIONS ADDED	OCT/2018
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	REVISED AS PER CAD	JULY/2018
	FLOOR 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
GOLD PARK HOMES

Project Name
**PINE VALLEY & TESTON
VAUGHAN, ONTARIO**

**THE BROOKSIDE
4003** **3296 sqft**

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Sheet Title
**SECOND FLOOR
HEATING
LAYOUT**

Date
JAN/2018

Scale
3/16" = 1'-0"

BCIN# 19669

LO# **77458**