

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: 5004 THE BEAUMONT LOT 92 WOB Project: PINE VALLEY & TESTON	
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 30, 2019 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 & TESTON LOT 92 WOB DATE: Apr-19 WINTER NATURAL AIR CHANGE RATE 0.407 HEAT LOSS AT °F. 76 CSA-P280-12
BUILDER: GOLD PARK HOMES TYPE: 5004 THE BEAUMONT GFA: 4106 SUMMER NATURAL AIR CHANGE RATE 0.148 HEAT GAIN AT °F. 16 SB-12 PACKAGE A1

ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	DRESS	BED-2	BED-3	BED-4	ENS-2	WIC-2	ENS-3
ROOM USE	EXP. WALL CLG. HT.	19	38	12	11	18	43	0	13	18
EXP. WALL CLG. HT.		10	9	9	9	9	10	9	9	9
FACTORS										
GRS.WALL AREA	LOSS GAIN	342	LOSS GAIN	108	99	162	430	0	117	162
GLAZING										
NORTH	21.3 16.1	0	0	0	18	383	290	0	0	0
EAST	21.3 40.2	0	0	0	0	0	0	0	0	0
SOUTH	21.3 24.5	0	0	0	0	0	0	0	0	0
WEST	21.3 40.2	42	894	1689	0	0	0	0	0	0
SKYLT.	37.2 103.0	0	0	0	0	0	0	0	0	0
DOORS	25.2 5.2	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5 0.9	148	660	137	305	1361	283	104	464	96
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	468	601	299	312	400	199	228	293	146
NO ATTIC EXPOSED CLG	2.7 1.4	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6 0.5	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS		2155	2549	842	1461	2622	3885	223	821	1237
SUB TOTAL HT GAIN		2125	1829	0.20 0.41	584	2899	0.20 0.41	77	200	751
LEVEL FACTOR / MULTIPLIER		0.20 0.41	0.20 0.41	0.20 0.41	0.20 0.41	0.20 0.41	0.20 0.41	0.20 0.41	0.20 0.41	0.20 0.41
AIR CHANGE HEAT LOSS		883	1044	345	599	1074	1591	91	336	507
AIR CHANGE HEAT GAIN		217	187	35	206	370	548	31	116	174
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	2	480	0	1	240	472	9	22	83
HEAT GAIN APPLIANCES/LIGHTS		786	786	786	786	786	786	0	0	0
TOTAL HT LOSS BTU/H		3037	3593	1187	2266	4065	6024	345	1273	1918
TOTAL HT GAIN x 1.3 BTU/H		4691	2621	1509	2387	6036	6756	122	316	1184

ROOM USE	EXP. WALL CLG. HT.	LIBR	DIN	KIT	GREAT	LAUN	ENS-4	FOY	MUD	WOB	BAS
ROOM USE	EXP. WALL CLG. HT.	27	17	111	56	0	6	37	18	84	146
EXP. WALL CLG. HT.		11	11	11	16	9	9	11	13	10	10
FACTORS											
GRS.WALL AREA	LOSS GAIN	297	187	1221	896	0	54	407	234	840	1022
GLAZING											
NORTH	21.3 16.1	0	0	0	26	553	0	0	0	0	0
EAST	21.3 40.2	41	872	1649	0	0	0	0	0	0	0
SOUTH	21.3 24.5	12	255	294	26	553	0	35	745	1408	170
WEST	21.3 40.2	0	0	0	57	1213	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	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5 0.9	244	1089	226	787	3512	46	205	20	505	105
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	0	0	0	0	0	0	0	0	0	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
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS		2217	1238	8386	6772	375	453	2821	1460	1387	5433
SUB TOTAL HT GAIN		2170	740	6445	4547	131	277	1839	304	2479	562
LEVEL FACTOR / MULTIPLIER		0.30 0.45	0.30 0.45	0.30 0.45	0.30 0.45	0.20 0.41	0.20 0.41	0.30 0.45	0.30 0.45	0.50 1.37	0.50 1.37
AIR CHANGE HEAT LOSS		989	552	3741	3021	154	185	1258	651	728	438
AIR CHANGE HEAT GAIN		222	76	659	465	13	28	188	31	3249	1576
DUCT LOSS		0	0	0	0	53	0	0	0	0	0
DUCT GAIN		0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS		786	786	786	786	786	786	0	786	0	0
TOTAL HT LOSS BTU/H		3206	1790	12127	9792	581	638	4079	2111	8406	22454
TOTAL HT GAIN x 1.3 BTU/H		4131	2082	10257	7537	1330	397	2636	1457	3223	1134

TOTAL HEAT GAIN BTU/H: 60467 TONS: 5.04 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 88893 TOTAL COMBINED HEAT LOSS BTU/H: 92074

Michael O'Rourke

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

LOT 92 WOB

DATE: Apr-19

GFA: 4106 LO# 82133

TYPE: 5004 THE BEAUMONT

HEATING CFM 1955 COOLING CFM 1955
TOTAL HEAT LOSS 88,893
AIR FLOW RATE CFM 21.99

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

EL296UH110XE60C
FAN SPEED
LOW
MEDIUM
HIGH

AFUE = 96 %
INPUT (BTU/H) = 110,000
OUTPUT (BTU/H) = 106,000

DESIGN CFM = 1955
CFM @ .6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	17	12	8
R/A	0	0	5	4	1

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

All S/A fans 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	DRESS	BED-2	BED-3	BED-4	ENS-2	WIC-2	ENS-4	MBR	ENS-3	LIBR	DIN	KIT	KIT	GREAT	LAUN	KIT	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.52	1.80	1.19	2.27	1.36	2.01	0.35	1.27	0.64	1.52	1.92	1.60	1.79	3.03	3.03	3.26	0.58	3.03	4.08	2.11	3.86	3.86	3.86	3.86
CFM PER RUN HEAT	33	40	26	50	30	44	8	28	14	33	42	35	39	67	67	72	13	67	90	46	85	85	85	85
CFM PER RUN COOLING	77	43	49	78	66	74	4	10	13	77	39	68	84	84	84	82	43	84	86	48	18	18	18	18
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.16	0.16	0.17	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	190	140	180	180	120	150	160	150	190	180	160	180	80	140	150	130	150	140	150	130	160	150	150	170
TOTAL EFFECTIVE LENGTH	236	202	209	214	158	200	188	181	233	234	201	221	107	180	182	179	176	176	174	146	215	215	195	205
ADJUSTED PRESSURE	0.07	0.09	0.08	0.08	0.11	0.09	0.09	0.1	0.07	0.07	0.09	0.08	0.16	0.09	0.09	0.09	0.09	0.1	0.09	0.12	0.08	0.08	0.08	0.08
ROUND DUCT SIZE	6	4	5	5	5	5	4	4	4	6	4	5	5	5	5	5	4	5	6	4	6	6	6	6
HEATING VELOCITY (ft/min)	168	459	191	367	220	323	92	321	161	168	482	257	286	492	492	529	149	492	459	528	433	433	433	433
COOLING VELOCITY (ft/min)	393	493	360	573	485	543	46	115	149	393	447	499	499	617	617	602	493	617	438	551	92	92	92	92
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10	4X10
TRUNK	B	C	D	F	F	E	F	D	E	B	F	E	F	C	C	A	D	B	E	D	A	A	C	C

RUN #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
ROOM NAME	BAS	BAS	BAS	BAS	ENS	ENS	BED-3	BED-3	BED-4	BED-4	LIBR	KIT	GREAT	GREAT	GREAT	GREAT	GREAT	GREAT	GREAT	GREAT	GREAT	GREAT	GREAT	GREAT
RM LOSS MBH	3.86	3.86	3.86	3.86	1.80	1.80	1.36	1.36	2.01	2.01	1.60	3.03	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26
CFM PER RUN HEAT	85	85	85	85	40	40	30	30	44	44	35	67	72	72	72	72	72	72	72	72	72	72	72	72
CFM PER RUN COOLING	18	18	18	18	43	43	66	66	74	74	68	84	82	82	82	82	82	82	82	82	82	82	82	82
ADJUSTED PRESSURE	0.16	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	0.16	0.16	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	120	80	120	150	140	140	130	140	150	130	140	150	150	150	150	150	150	150	150	150	150	150	150	150
TOTAL EFFECTIVE LENGTH	157	103	137	181	174	174	172	186	197	170	175	178	189	214	214	214	214	214	214	214	214	214	214	214
ADJUSTED PRESSURE	0.1	0.16	0.12	0.09	0.1	0.1	0.1	0.09	0.1	0.1	0.1	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
ROUND DUCT SIZE	5	5	5	5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	624	624	624	624	459	459	220	220	323	323	257	492	529	529	529	529	529	529	529	529	529	529	529	529
COOLING VELOCITY (ft/min)	132	132	132	132	493	493	485	485	543	543	499	617	602	602	602	602	602	602	602	602	602	602	602	602
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	D	F	E	D	D	F	F	E	E	E	B	A	A	A	A	A	A	A	A	A	A	A	A

TRUNK	CFM	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	386	0.08	9.8	12	8	579	0	0.00	0	0	8	0	0	0.00	0	0	0
TRUNK B	671	0.07	12.5	18	8	671	0	0.00	0	0	8	0	0	0.00	0	0	0
TRUNK C	344	0.08	9.4	10	8	619	0	0.00	0	0	8	0	0	0.00	0	0	0
TRUNK D	1253	0.07	15.8	28	8	806	0	0.00	0	0	8	0	0	0.00	0	0	0
TRUNK E	391	0.07	10.2	12	8	587	0	0.00	0	0	8	0	0	0.00	0	0	0
TRUNK F	705	0.07	12.7	18	8	705	0	0.00	0	0	8	0	0	0.00	0	0	0

RETURN AIR #	1	2	3	4	5	6	7	8	9	BR															
AIR VOLUME	120	120	120	120	305	85	300	300	185	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	0.15
ACTUAL DUCT LGH.	38	37	37	45	43	59	27	25	34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	195	185	165	205	145	175	190	185	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	233	222	202	250	188	234	217	210	184	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.07	0.07	0.06	0.08	0.06	0.07	0.07	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	6.8	6.6	6.6	6.8	8	6	9.2	9.2	7.5	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	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INLET GRILL SIZE	14	14	14	14	30	14	30	30	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

TYPE: 5004 THE BEAUMONT
SITE NAME: PINE VALLEY & TESTON

LO # 82133
LOT 92 WOB

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	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	6 @ 10.6 cfm	63.6 cfm
Other Rooms	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	201.4 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	201.4	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	46.4	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
155.0 cfm	3.0 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
ENS	QTXEN050C	50	☒
ENS-2	QTXEN050C	50	☒
ENS-3	QTXEN050C	50	☒
ENS-4	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
155 cfm high	64 cfm low	
75 % 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:	
HRAI #	001820
Date:	April-19

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																					
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																					
LO#: 82133		Model: 5004 THE BEAUMONT		Builder: GOLD PARK HOMES		Date: 4/30/2019																																															
Volume Calculation						Air Change & Delta T Data																																															
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5.2.3.1 Heat Loss due to Air Leakage						6.2.6 Sensible Gain due to Air Leakage																																															
$HL_{air-b} = LR_{air-h} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$						$HG_{salb} = LR_{air-c} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																															
0.407 x 483.96 x 42 °C x 1.2 = 9977 W						= 0.148 x 483.96 x 9 °C x 1.2 = 755 W																																															
= 34041 Btu/h						= 2577 Btu/h																																															
5.2.3.2 Heat Loss due to Mechanical Ventilation						6.2.7 Sensible heatGain due to Ventilation																																															
$HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$						$HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																															
155 CFM x 76 °F x 1.08 x 0.25 = 3181 Btu/h						155 CFM x 16 °F x 1.08 x 0.25 = 661 Btu/h																																															
5.2.3.3 Calculation of Air Change HeatLoss for Each Room (Floor Multiplier Section)																																																					
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*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairrr = 0																																																					

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5004 THE BEAUMONT	LOT 92 WOB	BUILDER: GOLD PARK HOMES
SFQT: 4106	LO# 82133	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):	61527.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.40	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 74.0 ft	WIDTH: 41.0 ft	EXPOSED PERIMETER:	146.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	84.0 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	-

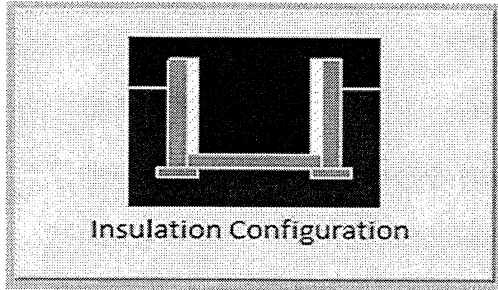
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

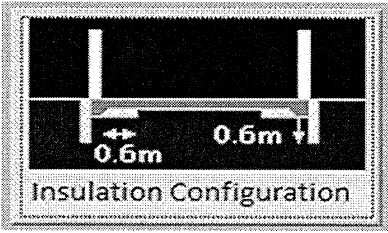
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	9.4	 Insulation Configuration
Floor Width (m):	12.5	
Exposed Perimeter (m):	44.5	
Wall Height (m):	3.0	
Depth Below Grade (m):	1.93	
Window Area (m ²):	0.7	
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):		932

TYPE: 5004 THE BEAUMONT
LO# 82133

LOT 92 WOB

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		
Length (m):	6.4	
Width (m):	12.5	
Exposed Perimeter (m):	25.6	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		406

TYPE: 5004 THE BEAUMONT
LO# 82133

LOT 92 WOB

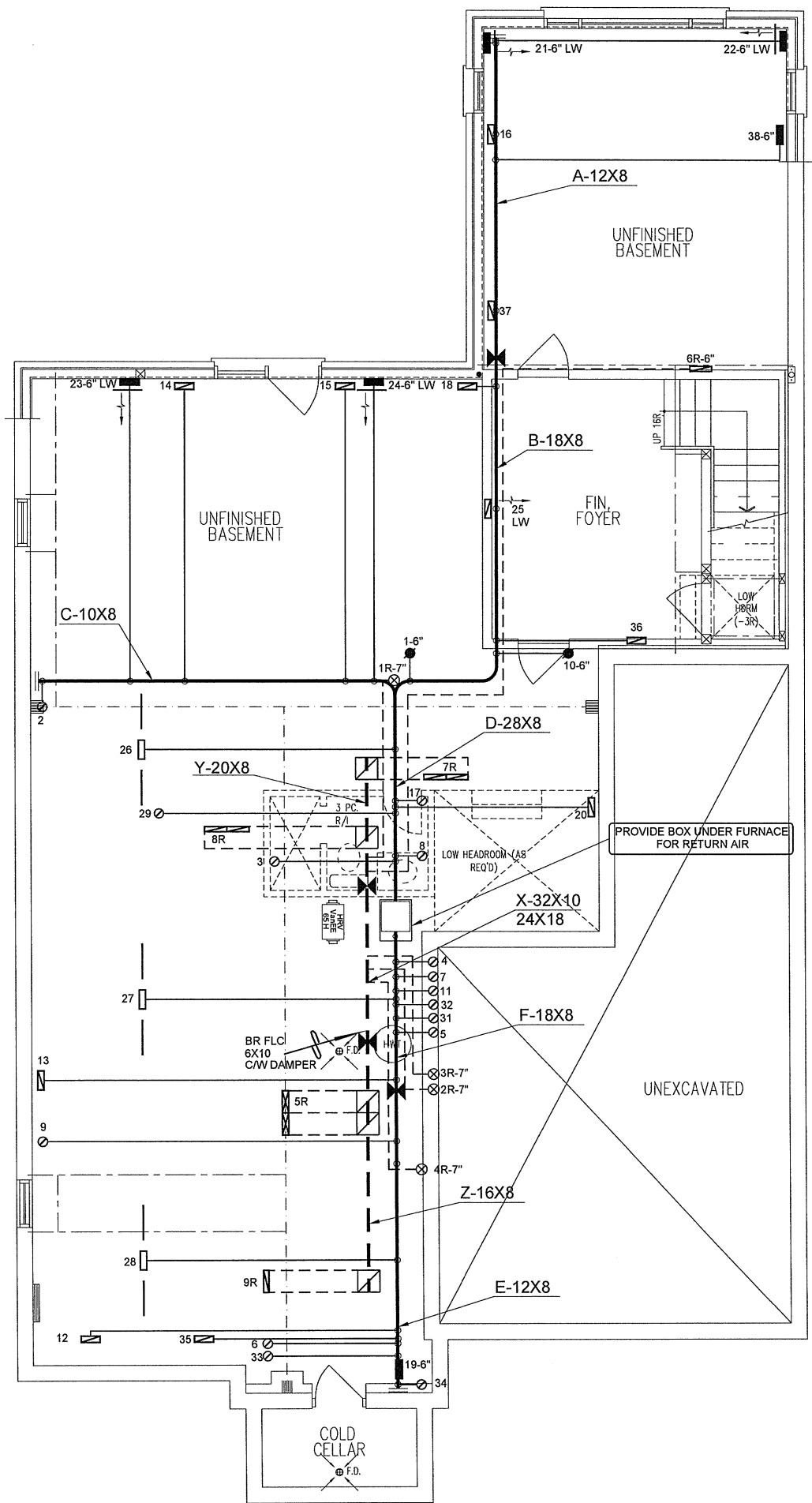
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

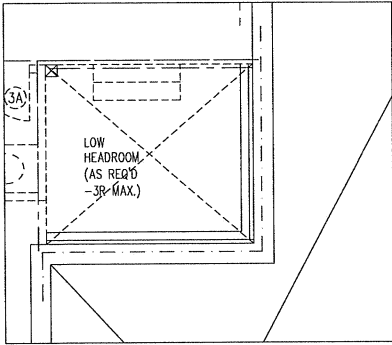
Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	9.14			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1742.3			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2322.5 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):	0.407			
Cooling Air Leakage Rate (ACH/H):	0.148			

TYPE: 5004 THE BEAUMONT
LO# 82133

LOT 92 WOB



PART. BASEMENT PLAN ELEV. 'A' - W.O.B. COND.



PART. BASEMENT PLAN EL. 'A' SUNKEN MUDROOM CONDITION (EL. 'B&C' SIMILAR)

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

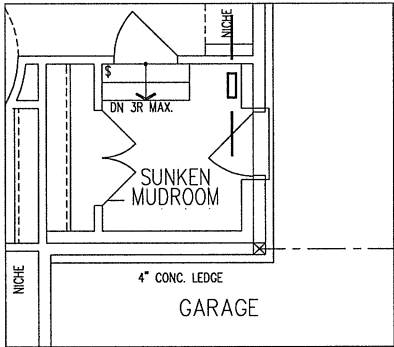
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

WOB
CSA-F280-12
PACKAGE A1

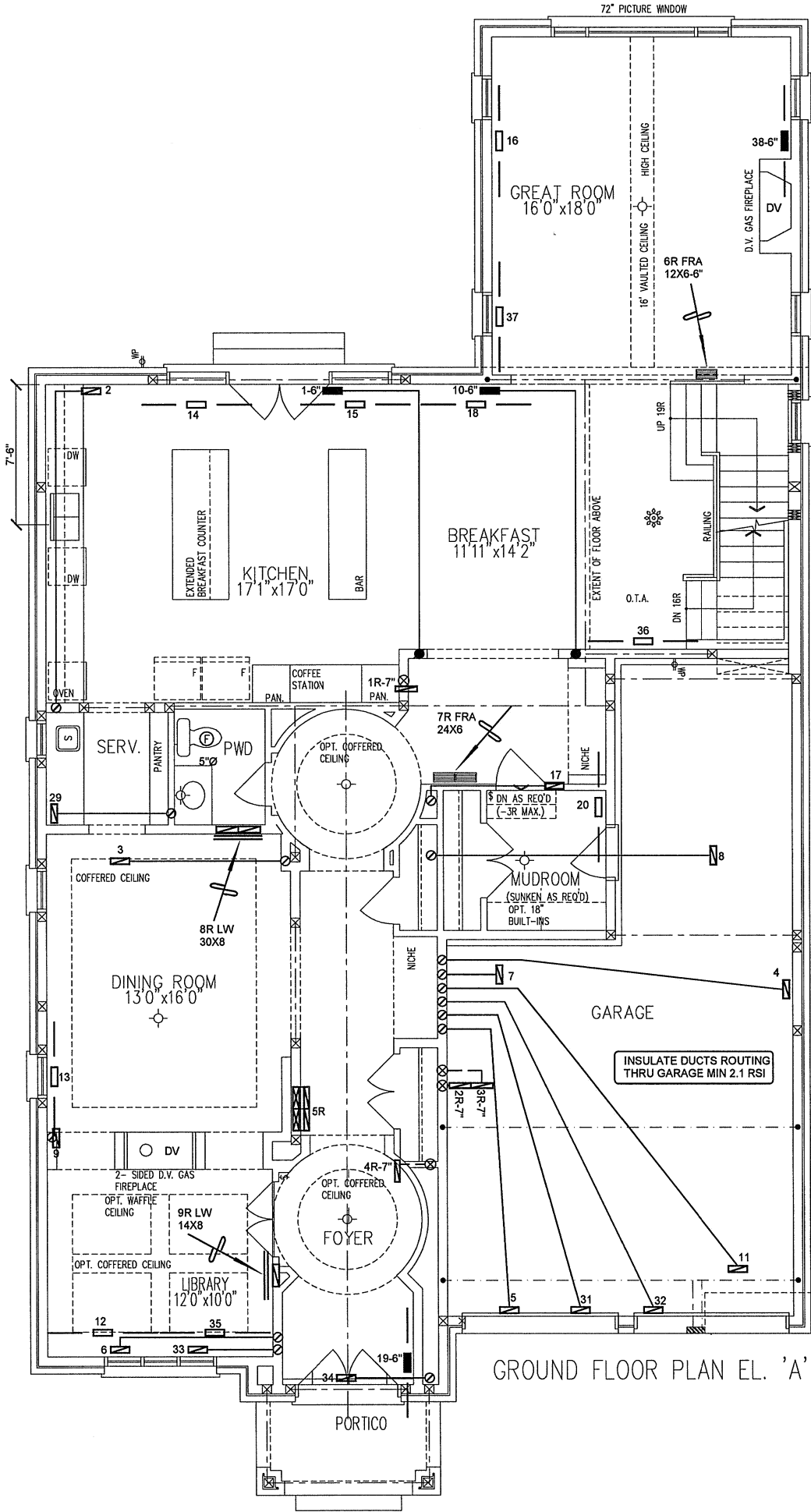
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED	SEPT/2018
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" 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		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	HEAT LOSS 92074 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO			MAKE LENNOX	3RD FLOOR				BASEMENT HEATING LAYOUT	
			MODEL EL296110XE60C	2ND FLOOR	17	5	6		
			INPUT 110 MBTU/H	1ST FLOOR	12	4	2		
			OUTPUT 106 MBTU/H	BASEMENT	8	1	0		
THE BEAUMONT WOB 5004 LOT 92 4106 sqft		COOLING 5.0 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					Date APRIL/2019	
		FAN SPEED 1955 cfm @ 0.6" w.c.						Scale 1/8" = 1'-0"	
							BCIN# 19669		
							LO#	82133	



PART. GROUND FLOOR PLAN EL. 'A'
SUNKEN MUDROOM CONDITION
(EL. 'B&C' SIMILAR)



GROUND FLOOR PLAN EL. 'A'

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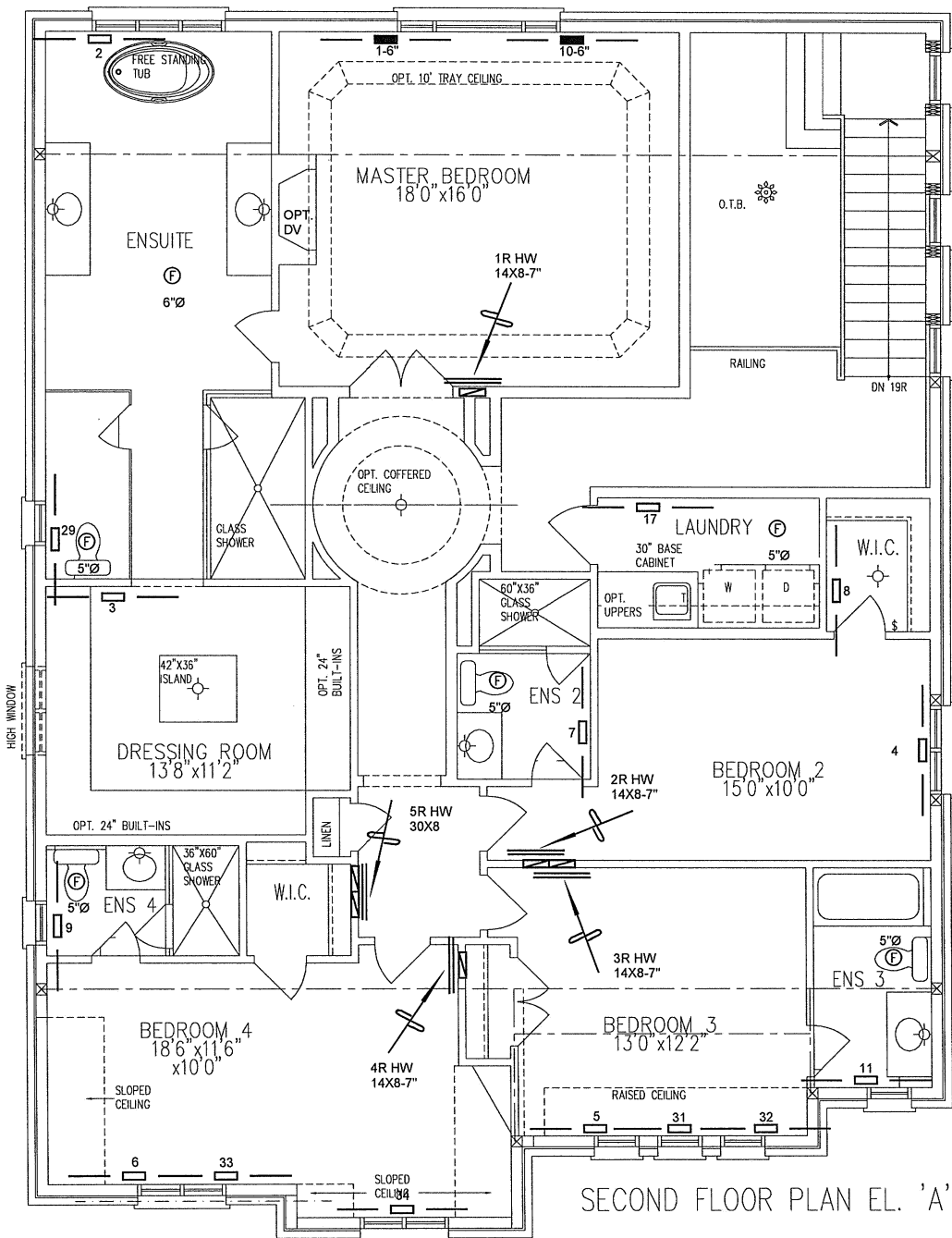
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

WOB
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.	DECK CONDITIONS ADDED	SEPT/2018
	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	APRIL/2019
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	1/8" = 1'-0"
THE BEAUMONT WOB			BCIN# 19669	
5004 LOT 92	4106 sqft	LO#	82133	



SECOND FLOOR PLAN EL. 'A'

I MICHAEL O'ROURKE HAVE REVIEW 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.

WOB
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.	DECK CONDITIONS ADDED
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER		Date
							REVISIONS		

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Client GOLD PARK HOMES		 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	
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO			Date APRIL/2019	
THE BEAUMONT WOB 5004 LOT 92 4106 sqft			Scale 1/8" = 1'-0"	
			BCIN# 19669	
			LO#	82133