


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@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]				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings </div> <div style="width: 30%;"> <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection </div> <div style="width: 30%;"> <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> On-site Sewage Systems </div> </div>				
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 4001 THE SUMMERDALE 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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

SITENAME: PINE VALLEY & TESTON BUILDER: GOLD PARK HOMES										DATE: Oct-18 LO# 77456		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.		MBR		ENS		WIC		BED-2		BED-3		BED-4		BATH		CHILN		ENS-2	
GRS.WALL AREA		320		248		64		100		337		100		55		364		55	
GLAZING		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
NORTH		0 0 0		0 0 0		0 0 0		18 383 303		0 0 0		0 0 0		0 0 0		0 0 0		8 170 135	
EAST		0 0 0		0 0 0		0 0 0		0 0 0		73 1663 3096		0 0 0		0 0 0		44 938 1866		0 0 0	
SOUTH		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		20 426 515		8 170 206		20 426 515		0 0 0	
WEST		36 766 1626		18 383 763		0 0 0		0 0 0		0 0 0		0 0 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 0 0		0 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 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
NET EXPOSED WALL		4.5 0.9 284 1267 263		228 1016 211		64 284 59		82 366 76		264 1177 245		80 367 74		47 208 43		300 1339 278		47 208 43	
NET EXPOSED BSMT WALL ABOVE GR		3.6 0.7		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
EXPOSED CLG		1.3 0.6 262 323 161		180 231 116		106 136 67		176 228 112		271 348 173		176 228 112		98 123 61		268 331 166		98 123 61	
NO ATTIC EXPOSED CLG		2.7 1.4		0 0 0		0 0 0		0 0 0		28 77 38		0 0 0		0 0 0		28 77 38		0 0 0	
EXPOSED FLOOR		2.6 0.5		0 0 0		0 0 0		0 0 0		289 763 169		0 0 0		0 0 0		23 59 12		31 79 16	
BASEMENT/CRAWL HEAT LOSS		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		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		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
SUBTOTAL HT LOSS		2357		1630		419		975		3918		1009		501		3167		580	
SUB TOTAL HT GAIN		1950		0.20 0.26		0.20 0.26		0.20 0.26		0.20 0.26		0.20 0.26		0.20 0.26		0.20 0.26		0.20 0.26	
LEVEL FACTOR / MUL TIPLER		602		416		107		249		1001		268		128		809		148	
AIR CHANGE HEAT LOSS		182		102		12		46		346		65		29		268		24	
AIR CHANGE HEAT GAIN		0 0 0		0 0 0		0 0 0		0 0 0		482		0 0 0		0 0 0		388		73	
DUCT LOSS		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
DUCT GAIN		0 0 0		0 0 0		0 0 0		1 240 0		1 240 0		1 240 0		0 0 0		387		28	
HEAT GAIN PEOPLE		2		480 0		0 0 0		0 0 0		526		526		0 0 0		0 0 0		0 0 0	
HEAT GAIN APPLIANCES/LIGHTS		2969		2047		526		1224		5410		1267		630		4374		802	
TOTAL HT LOSS BTU/H		4079		1548		179		1693		6884		1992		441		5244		399	
TOTAL HT GAIN x 1.3 BTU/H																			

ROOM USE EXP. WALL CLG. HT.		DIN		STDY		KT/FTM		LN/MD		W/R		FOY		LOD		BAS	
GRS.WALL AREA		198		98		737		260		44		605		382		1277	
GLAZING		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
NORTH		0 0 0		20 426 336		0 0 0		9 192 161		0 0 0		0 0 0		0 0 0		0 0 0	
EAST		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
SOUTH		24 511		0 0 0		0 0 0		0 0 0		7 149 180		0 0 0		0 0 0		0 0 0	
WEST		21.3 42.4		0 0 0		135 2873 5723		0 0 0		0 0 0		0 0 0		0 0 0		3 64 77	
SKYL.T.		37.2 103.0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
DOORS		26.2 6.2		0 0 0		0 0 0		20 805 105		0 0 0		40 1010 210		0 0 0		0 0 0	
NET EXPOSED WALL		174 777 161		79 363 73		602 2687 559		231 1031 214		37 165 34		565 2521 524		0 0 0		0 0 0	
NET EXPOSED BSMT WALL ABOVE GR		3.6 0.7		0 0 0		0 0 0		0 0 0		0 0 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 0 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 0 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 0 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		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		0 0 0		0 0 0		0 0 0		0 0 0	
SUBTOTAL HT LOSS		1287		778		5559		1727		314		3531		0		6529	
SUBTOTAL HT GAIN		779		410		5281		471		215		734		1437		7004	
LEVEL FACTOR / MUL TIPLER		0.30 0.42		0.30 0.42		0.30 0.42		0.30 0.42		0.30 0.42		0.30 0.42		0.80		1.10	
AIR CHANGE HEAT LOSS		544		329		2350		730		133		1493		9298		371	
AIR CHANGE HEAT GAIN		73		38		586		44		20		68		0		0	
DUCT LOSS		0 0 0		0 0 0		0 0 0		0 0 0		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		0 0 0		0 0 0		0 0 0		0 0 0	
HEAT GAIN PEOPLE		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0	
HEAT GAIN APPLIANCES/LIGHTS		526		526		526		526		526		5024		0		0	
TOTAL HT LOSS BTU/H		1831		1107		7909		2488		447		5024		1437		16302	
TOTAL HT GAIN x 1.3 BTU/H		1791		1265		9611		1352		305		1043		1859		1385	

TOTAL HEAT GAIN BTU/H: 41763

TOTAL HEAT LOSS BTU/H: 3181

TOTAL COMBINED HEAT LOSS BTU/H: 56764

TOTAL COMBINED HEAT LOSS BTU/H: 56834

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

TYPE: 4001 THE SUMMERDALE DATE: Oct-18 GFA: 2840 LO# 77456

HEATING CFM 1255 COOLING CFM 1255
TOTAL HEAT LOSS 55,754 TOTAL HEAT GAIN 41,092
AIR FLOW RATE CFM 22.51 AIR FLOW RATE CFM 30.54EL296UH090XE48C
FAN SPEED

AFUE = 96 %

INPUT (BTU/H) = 88,000

OUTPUT (BTU/H) = 85,000

DESIGN CFM = 1255

CFM @ 8" E.S.P.

furnace pressure 0.6
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35plenum pressure s/a 0.18
max s/a diff press. loss 0.03
min adjusted pressure s/a 0.15r/a grille press. loss 0.02
adjusted pressure r/a 0.15

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

All S/A runs 5"Ø unless noted otherwise on layout.

ROOM #	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	BED-3	BED-3	MBR	ENS-2	DIN	STDY	KT/FM	KT/FM	KT/FM	CM/LN	W/R	FOY	CM/LN	LN/MD	KT/FM	BAS	BAS
RM LOSS MBH	1.48	2.05	0.53	1.22	1.80	1.27	0.63	1.80	1.80	1.48	0.80	1.83	1.11	1.98	1.98	1.98	2.19	0.45	5.02	2.19	2.46	1.98	4.43	4.43
CFM PER RUN HEAT	33	46	12	28	41	29	14	41	41	33	18	41	25	45	45	45	49	10	113	49	55	45	100	100
RM GAIN MBH	2.04	1.55	0.18	1.69	2.30	1.99	0.44	2.30	2.30	2.04	0.40	1.79	1.27	2.40	2.40	2.40	2.62	0.30	1.04	2.62	1.35	2.40	0.81	0.81
CFM PER RUN COOLING	62	47	5	52	70	61	13	70	70	62	12	55	39	73	73	73	80	9	32	80	41	73	25	25
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	0.17	0.17	0.17	0.15	0.17	0.17	0.17	0.16	0.16
ACTUAL DUCT LGH	55	28	24	24	51	49	53	56	61	44	55	36	5	40	32	26	65	42	46	71	12	23	38	19
EQUIVALENT LENGTH	150	140	190	120	150	110	120	160	170	160	180	140	120	130	130	150	130	160	100	140	110	120	130	150
TOTAL EFFECTIVE LENGTH	205	168	214	144	201	159	173	216	231	204	235	176	125	170	162	176	195	202	146	211	122	143	168	169
ADJUSTED PRESSURE	0.08	0.1	0.08	0.12	0.09	0.11	0.1	0.08	0.07	0.08	0.07	0.1	0.14	0.1	0.11	0.11	0.09	0.09	0.1	0.08	0.14	0.12	0.1	0.1
ROUND DUCT SIZE	5	4	4	4	5	5	4	5	5	5	4	4	4	5	5	5	5	4	6	5	4	5	6	6
HEATING VELOCITY (ft/min)	242	528	138	321	301	213	161	301	301	242	207	470	287	330	330	330	360	115	576	360	631	330	510	510
COOLING VELOCITY (ft/min)	455	539	57	597	514	448	149	514	514	455	138	631	447	536	536	536	587	103	163	587	470	536	127	127
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	4X10
TRUNK	B	D	C	D	A	B	B	A	A	C	A	B	D	B	C	D	A	B	A	A	D	D	B	D

ROOM #	25	26
ROOM NAME	BAS	BAS
RM LOSS MBH	4.43	4.43
CFM PER RUN HEAT	100	100
RM GAIN MBH	0.81	0.81
CFM PER RUN COOLING	25	25
ADJUSTED PRESSURE	0.16	0.16
ACTUAL DUCT LGH	27	50
EQUIVALENT LENGTH	110	160
TOTAL EFFECTIVE LENGTH	137	210
ADJUSTED PRESSURE	0.12	0.08
ROUND DUCT SIZE	5	6
HEATING VELOCITY (ft/min)	734	510
COOLING VELOCITY (ft/min)	184	127
OUTLET GRILL SIZE	3X10	4X10
TRUNK	C	A

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE										VELOCITY (ft/min)									
TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY
TRUNK A	452	0.07	10.8	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.06	0	0	8	0	0.06	0	0	8	0	0.06	0	0	8
TRUNK B	272	0.08	8.6	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK C	914	0.07	14	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK D	344	0.10	8.9	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK E	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK F	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK G	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK H	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK I	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK J	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK K	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK L	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK M	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK N	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK O	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK P	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK Q	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK R	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK S	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK T	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK U	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK V	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK W	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK X	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK Y	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
TRUNK Z	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8
DROP	0	0.00	0	8	0	0.00	0	0	8	0	0.00	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8	0	0.08	0	0	8

TYPE: 4001 THE SUMMERDALE
SITE NAME: PINE VALLEY & TESTON

LO # 77456

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	<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	79.5	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:	VANEE 65H
Location:	BSMT
<u>155.0</u> cfm	<u>3.0</u> 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
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>
BATH	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>
W/R	QTXEN050C	50	<input checked="" type="checkbox"/>

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 65H	
<u>155</u> cfm high	<u>64</u> cfm low	
<u>75</u> % 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 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:	October-18

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 4001 THE SUMMERDALE**BUILDER:** GOLD PARK HOMES**SFQT:** 2840**LO#** 77456**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):	40095.0	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: 52.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	168.0 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):	15.8	
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):	3.1	
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):		1620

TYPE: 4001 THE SUMMERDALE
LO# 77456

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):	0.0	
Width (m):	0.0	
Exposed Perimeter (m):	0.0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		0

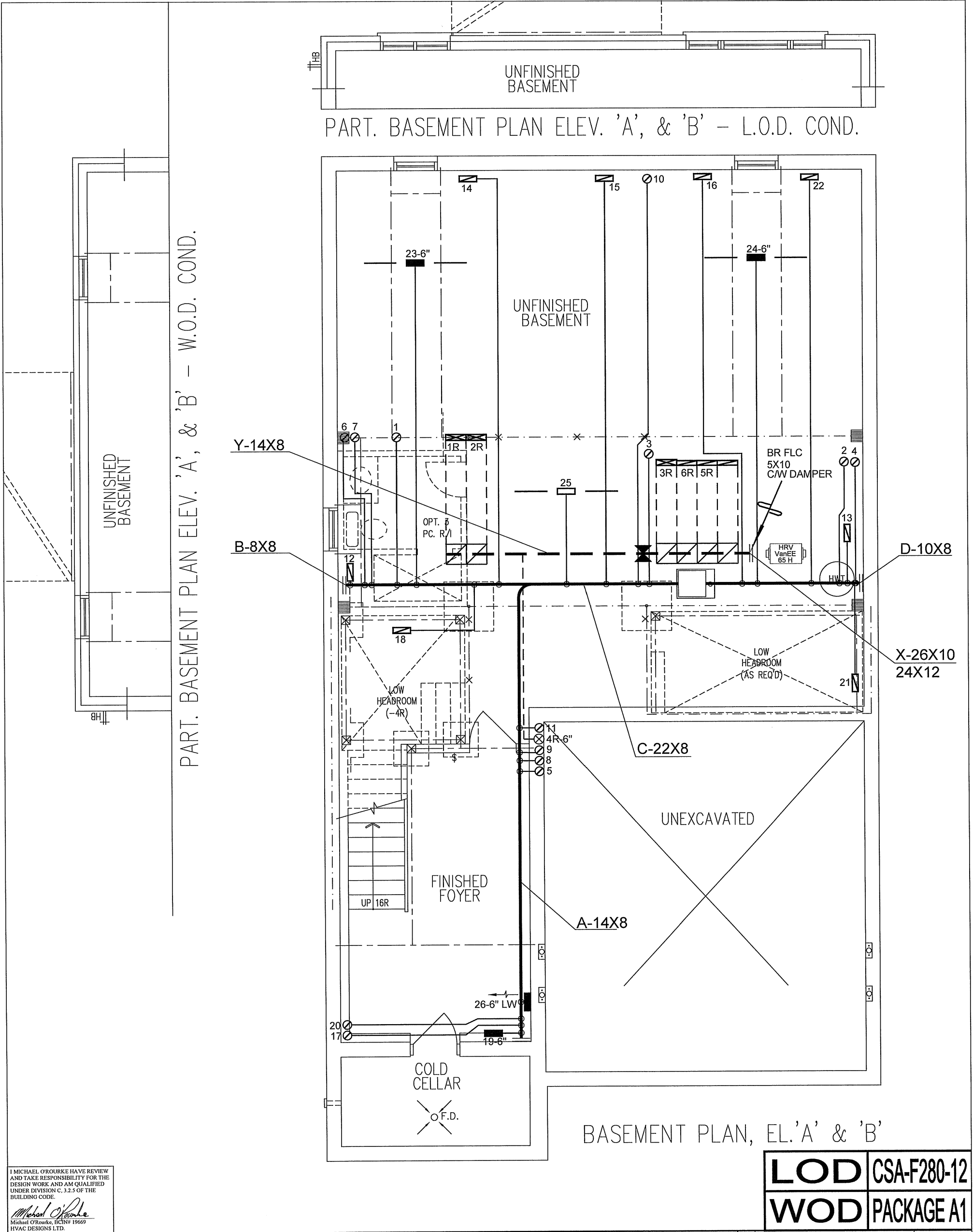
TYPE: 4001 THE SUMMERDALE
LO# 77456

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):	1135.4			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1513.5 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):	0.341			
Cooling Air Leakage Rate (ACH/H):	0.124			

TYPE: 4001 THE SUMMERDALE
LO# 77456



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

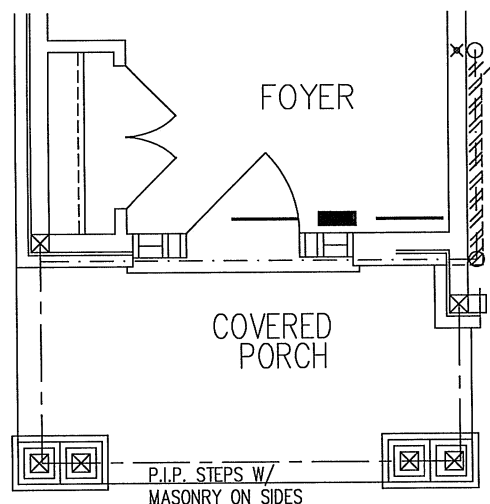
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	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	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		<div><div>HVACDESIGNS LTD.</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></div>	HEAT LOSS 58934 BTU/H		# OF RUNS		S/A		R/A		FANS		Sheet Title	
GOLD PARK HOMES			UNIT DATA		3RD FLOOR								BASEMENT HEATING LAYOUT	
Project Name			MAKE		2ND FLOOR		13		4		3		Date	
PINE VALLEY & TESTON VAUGHAN, ONTARIO			MODEL		1ST FLOOR		9		2		2		JAN/2018	
THE SUMMERDALE 4001			INPUT		BASEMENT		4		1		0		Scale	
2840 sqft			88 MBTU/H		OUTPUT		85 MBTU/H		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				3/16" = 1'-0"	
			COOLING		3.5 TONS								BCIN# 19669	
			FAN SPEED		1255 cfm @ 0.6" w.c.								LO#	
													77456	

The floor plan shows a large rectangular room labeled "STUDY" at the top. To the left of the study is a smaller room labeled "MUD ROOM (SUNK. - 2R MAX.)". The mud room has a dashed line indicating a sunken area. There are two arched doorways: one between the study and mud room, and another at the bottom left of the mud room. A small square feature is located at the bottom center of the mud room. The plan also shows various wall lines, windows, and a door at the top right of the study.



8'-0" 3-PANEL GARDEN

1 14 10 15 16 22

BREAKFAST

FAMILY ROOM

KITCHEN

COFFERED CEILING

COFFERED CEILING

DINING ROOM

COFFERED CEILING

STUDY

LAUNDRY

FOYER

GARAGE

COVERED PORCH

INSULATE DUCTS ROUTING THRU GARAGE MIN 2.1 RSI

GROUND FLOOR PLAN, FL 'A'

GROUND FLOOR PLAN, EL.'A'

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

LOD	CSA-F280-12
WOD	PACKAGE A1

Sheet Title	
FIRST FLOOR HEATING LAYOUT	
Date	JAN/2018
Scale	3/16" = 1'-0"
BCIN# 19669	
LO#	77456

Client

GOLD PARK HOMES

Project Name

**PINE VALLEY & TESTON
VAUGHAN, ONTARIO**

THE SUMMERDALE

4001 **2840 sqft**

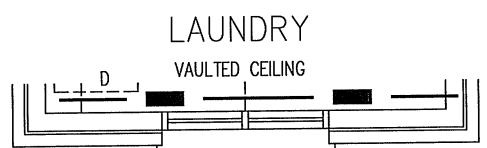
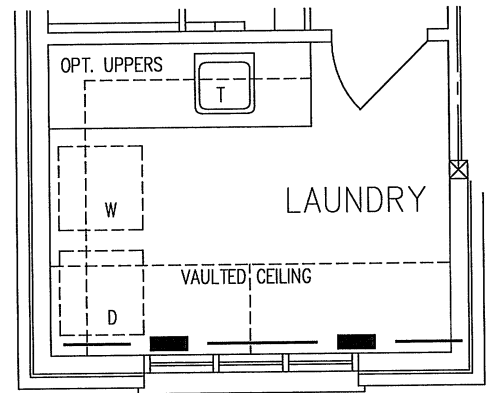
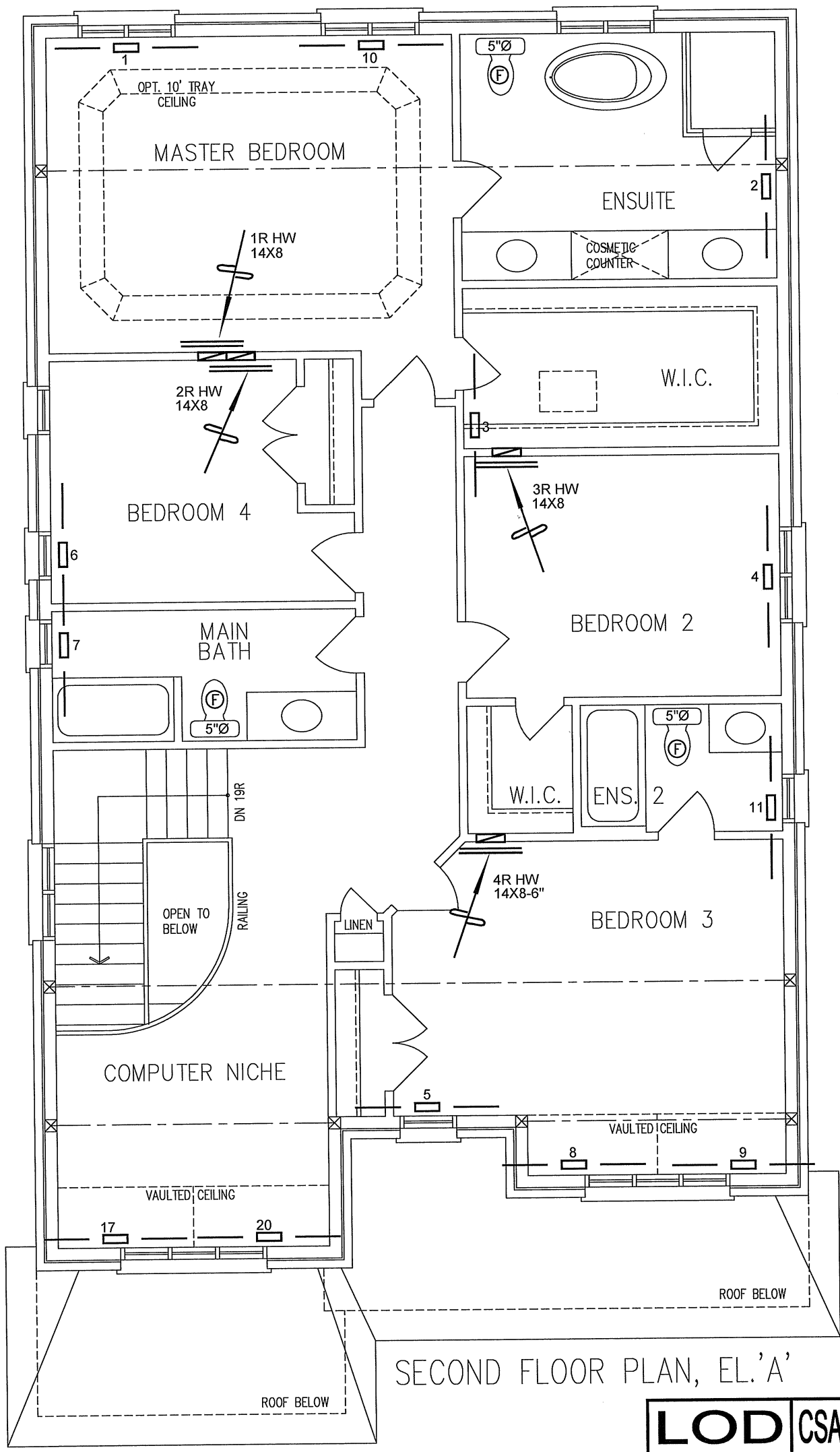
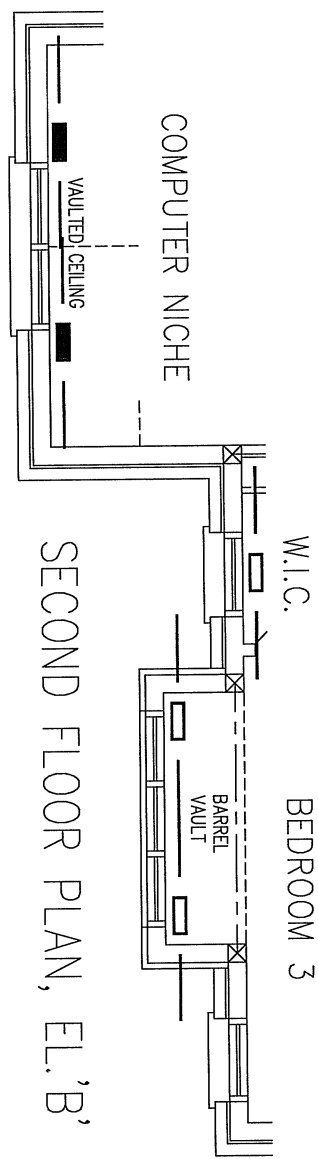
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PART. SECOND FLOOR PLAN
W/ OPT. LAUNDRY, EL. 'A'

PART. SECOND FLOOR PLAN
W/ OPT. LAUNDRY, EL. 'B'

SECOND FLOOR PLAN, EL. 'A'

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.

LOD CSA-F280-12
WOD PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED	OCT/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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GOLD PARK HOMES			SECOND FLOOR	
Project Name			HEATING LAYOUT	
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Date	JAN/2018
THE SUMMERDALE 4001		Scale	3/16" = 1'-0"	
2840 sqft		BCIN# 19669		
		LO#	77456	