


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@hvacadesigns.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: 5006 CNR THE SILVERWOOD Project: PINE VALLEY & TESTON	
D. Declaration of Designer				
I, <u>MICHAEL O'ROURKE</u> (print name) declare that (choose one as appropriate):				
<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				
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 BUILDER: GOLD PARK HOMES										DATE: Oct-18 LO# 77484		WINTER NATURAL AIR CHANGE RATE SUMMER NATURAL AIR CHANGE RATE 0.124		HEAT LOSS AT °F. 78 HEAT GAIN AT °F. 16		CSA-F280-12 SB-12 PACKAGE A1	
THE SILVERWOOD TYPE: 5006 CNR										GFA: 3453		MEDIA		ENS-2			
ROOM USE EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	WIC-2	BED-2								
FACTORS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS								
GRS.WALL AREA	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING								
NORTH	21.3	16.8	0	0	0	0	0	0	0								
EAST	21.3	42.4	0	0	0	0	0	0	0								
SOUTH	21.3	25.7	0	0	0	0	0	0	0								
WEST	21.3	42.4	0	0	0	0	0	0	0								
SKYL.T.	37.2	103.0	0	0	0	0	0	0	0								
DOORS	25.2	5.2	0	0	0	0	0	0	0								
NET EXPOSED WALL	4.5	0.9	0	0	0	0	0	0	0								
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0								
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0								
NO A/TIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	0								
EXPOSED FLOOR	2.6	0.5	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	4224	1146	81	975	707	1647	364	590	149								
SUB TOTAL HT GAIN	3668	663	40	450	707	1647	364	590	149								
LEVEL FACTOR / MULTPLIER	0.30	0.34	0.30	0.34	0.30	0.34	0.30	0.34	0.30								
AIR CHANGE HEAT LOSS	1426	387	27	329	1494	2280	794	467	809								
AIR CHANGE HEAT GAIN	0	0	0	0	88	204	45	106	19								
DUCT LOSS	0	0	0	0	0	510	180	106	17								
DUCT GAIN	0	0	0	0	0	312	41	17	0								
HEAT GAIN PEOPLE	240	480	0	1	240	1	0	0	0								
HEAT GAIN APPLANCES/LIGHTS	1034	0	0	1034	1034	1034	0	0	0								
TOTAL HT LOSS BTU/H	5650	1532	108	1303	3383	5605	1979	1163	0								
TOTAL HT GAIN x 1.3 BTU/H	7327	956	59	2314	2889	4488	588	240	289								

SITE NAME: PINE VALLEY & TESTON BUILDER: GOLD PARK HOMES										DATE: Oct-18 LO# 77484		WINTER NATURAL AIR CHANGE RATE SUMMER NATURAL AIR CHANGE RATE 0.124		HEAT LOSS AT °F. 78 HEAT GAIN AT °F. 16		CSA-F280-12 SB-12 PACKAGE A1	
THE SILVERWOOD TYPE: 5006 CNR										GFA: 3453		MEDIA		ENS-2			
ROOM USE EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	WIC-2	BED-2								
FACTORS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS								
GRS.WALL AREA	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING	GLAZING								
NORTH	21.3	16.8	0	0	0	0	0	0	0								
EAST	21.3	42.4	0	0	0	0	0	0	0								
SOUTH	21.3	25.7	0	0	0	0	0	0	0								
WEST	21.3	42.4	0	0	0	0	0	0	0								
SKYL.T.	37.2	103.0	0	0	0	0	0	0	0								
DOORS	25.2	5.2	0	0	0	0	0	0	0								
NET EXPOSED WALL	4.5	0.9	0	0	0	0	0	0	0								
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0								
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0								
NO A/TIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	0								
EXPOSED FLOOR	2.6	0.5	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	4224	1146	81	975	707	1647	364	590	149								
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DUCT LOSS	0	0	0	0	0	510	180	106	17								
DUCT GAIN	0	0	0	0	0	312	41	17	0								
HEAT GAIN PEOPLE	240	480	0	1	240	1	0	0	0								
HEAT GAIN APPLANCES/LIGHTS	1034	0	0	1034	1034	1034	0	0	0								
TOTAL HT LOSS BTU/H	5650	1532	108	1303	3383	5605	1979	1163	0								
TOTAL HT GAIN x 1.3 BTU/H	7327	956	59	2314	2889	4488	588	240	289								

TOTAL HEAT GAIN BTU/H: 48529 TONS: 4.04 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 75026 TOTAL COMBINED HEAT LOSS BTU/H: 78207

Michael Offord

SITE NAME: PINE VALLEY & TESTON
BUILDER: GOLD PARK HOMESTHE SILVERWOOD
TYPE: 5006 CNR

DATE: Oct-18

GFA: 3453 LO# 77484

HEATING CFM	1525	COOLING CFM	1525		
TOTAL HEAT LOSS	75.026	TOTAL HEAT GAIN	47.868		
AIR FLOW RATE CFM	20.33	AIR FLOW RATE CFM	31.86		
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 5/2 unless noted otherwise on layout.

EL296UJH080XE48C	90	AFUE = 96 %
FAN SPEED	LOW	INPUT (BTU/H) = 88,000
MEDIUM	MEDIUM	OUTPUT (BTU/H) = 85,000
HIGH	HIGH	DESIGN CFM = 1525
		CFM @ 8" E.S.P.
TEMPERATURE RISE	52	°F

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	4.42	4.42	4.42	4.42
CFM PER RUN HEAT	57	16	2	26	69	57	40	24	37	57	21	16	57	53	53	46	52	8	65	26	90	90	90	90
RM GAIN MBH	3.66	0.48	0.06	2.31	2.69	2.23	0.59	0.24	2.50	3.66	0.24	0.48	2.23	2.90	2.90	1.83	2.97	0.09	0.81	0.29	0.68	0.68	0.68	0.68
CFM PER RUN COOLING	117	15	2	74	86	71	19	8	80	117	8	15	71	92	92	58	95	3	28	9	22	22	22	22
ADJUSTED PRESSURE	0.15	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	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
ACTUAL DUCT LGH	52	30	33	14	43	49	23	50	45	42	6	21	56	63	46	55	76	20	55	11	37	55	43	29
EQUIVALENT LENGTH	150	130	190	180	210	160	170	150	160	150	160	140	180	140	150	220	200	180	160	130	170	130	100	110
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	5	4	6	6	5	5
HEATING VELOCITY (ft/min)	291	184	23	191	352	419	459	275	272	291	241	184	419	270	270	338	265	92	477	298	459	459	661	661
COOLING VELOCITY (ft/min)	597	172	23	543	438	521	218	92	587	597	92	172	521	469	469	469	484	34	191	103	112	112	162	162
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	4.42	4.42	2.60	2.80	2.57	2.25
CFM PER RUN HEAT	90	90	53	53	52	46
RM GAIN MBH	0.68	0.68	2.90	2.90	2.97	1.83
CFM PER RUN COOLING	22	22	92	92	95	58
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16	0.17
ACTUAL DUCT LGH	29	65	53	17	70	60
EQUIVALENT LENGTH	140	170	150	150	160	160
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)	661	459	270	389	265	338
COOLING VELOCITY (ft/min)	162	112	469	675	484	426
OUTLET GRILL SIZE	3X10	4X10	4X10	3X10	4X10	3X10
TRUNK	A	D	A	B	D	D

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) <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
PWD	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 #	Bulking 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:	October-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: 10/5/2018
Volume Calculation		Air Change & Delta T Data	
House Volume		WINTER NATURAL AIR CHANGE RATE	0.340
Level	Floor Area (ft²)	Floor Height (ft)	SUMMER NATURAL AIR CHANGE RATE
Bsmt	2351	10	0.124
First	2351	11	
Second	1499	9	
Third	0	9	
Fourth	0	9	
	Total:	62,862.0 ft³	
	Total:	1780.1 m³	
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			
$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$			
0.340	x	494.46	x
		9 °C	x
		1.2	=
			646 W
			=
			2204 Btu/h
6.2.7 Sensible heat Gain due to Ventilation			
$HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$			
155 CFM	x	76 °F	x
		1.08	x
		0.25	=
			3181 Btu/h
			=
			661 Btu/h
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)			
$HL_{qirr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{aglevel} + HL_{bglevel})\}$			
Level	Level Factor (LF)	HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)
1	0.5	29,067	11,977
2	0.3		1,213
3	0.2		0.338
4	0		7,352
5	0		0.791
		0	0.000
		0	0.000

*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

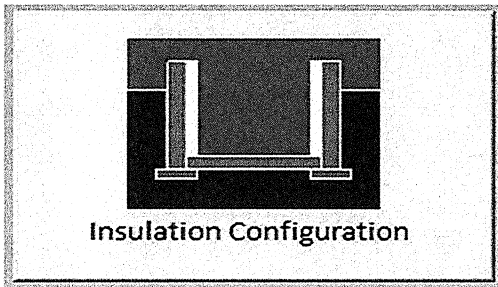
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 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):	3.2	
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):		2429

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.	2372.9 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):	0.340			
Cooling Air Leakage Rate (ACH/H):	0.124			

TYPE: 5006 CNR
LO# 77484

THE SILVERWOOD

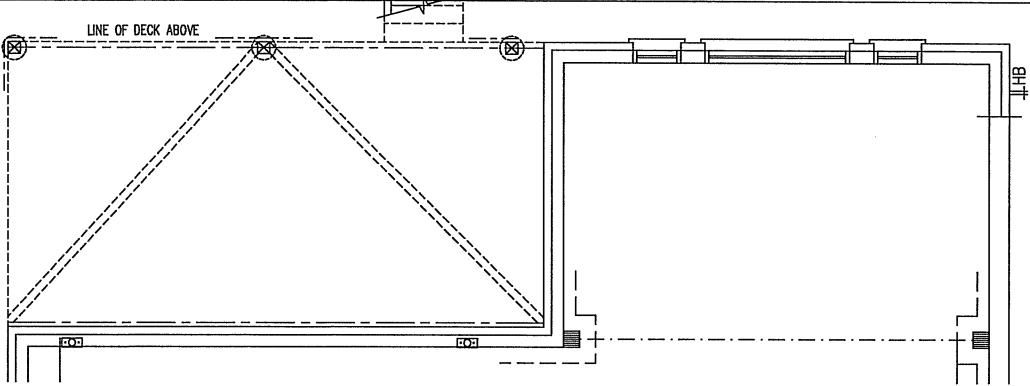
I MICHAEL OROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED TO SIGN THESE DRAWINGS IN ACCORDANCE WITH THE BUILDING CODE.

Michael O'Rourke
REGISTERED PROFESSIONAL ENGINEER
H.V.A.C. DESIGNER
H.V.A.C. DESIGNS LTD. 19869

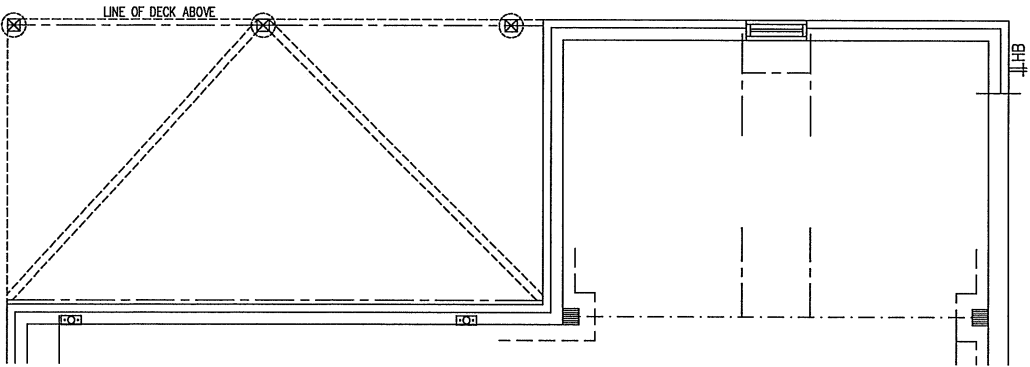
WOD
LOD
CSA-F280-12
PACKAGE A1

HVAC LEGEND						3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		2.
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		1.
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA - FLOOR RETURN AIR GRILLE		REDUCER
						REVISIONS	
						Description	Date
						DECK CONDITIONS ADDED	OCT12018

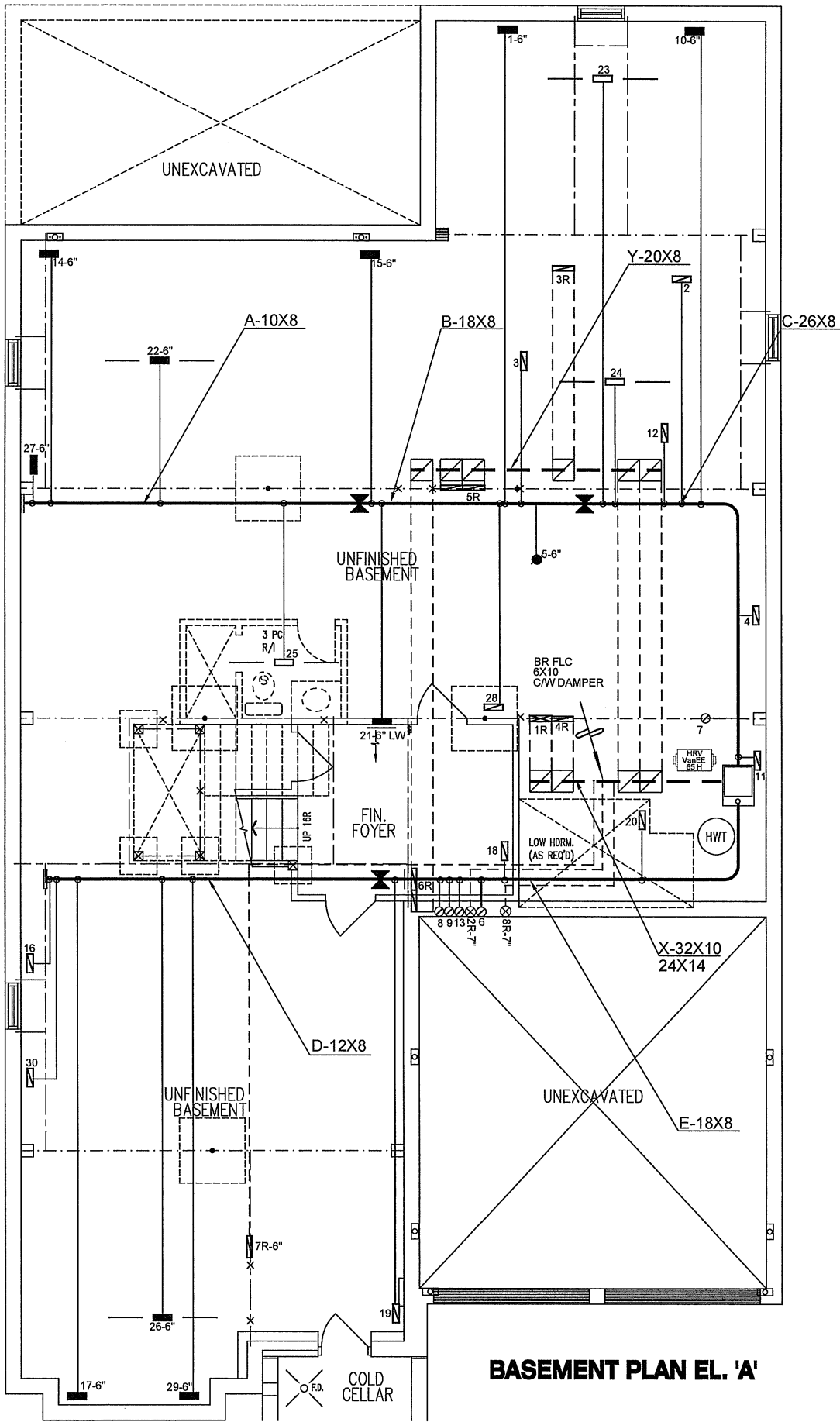
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PART. BASEMENT PLAN ELEV. 'A', & 'B' - L.O.D. COND.



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

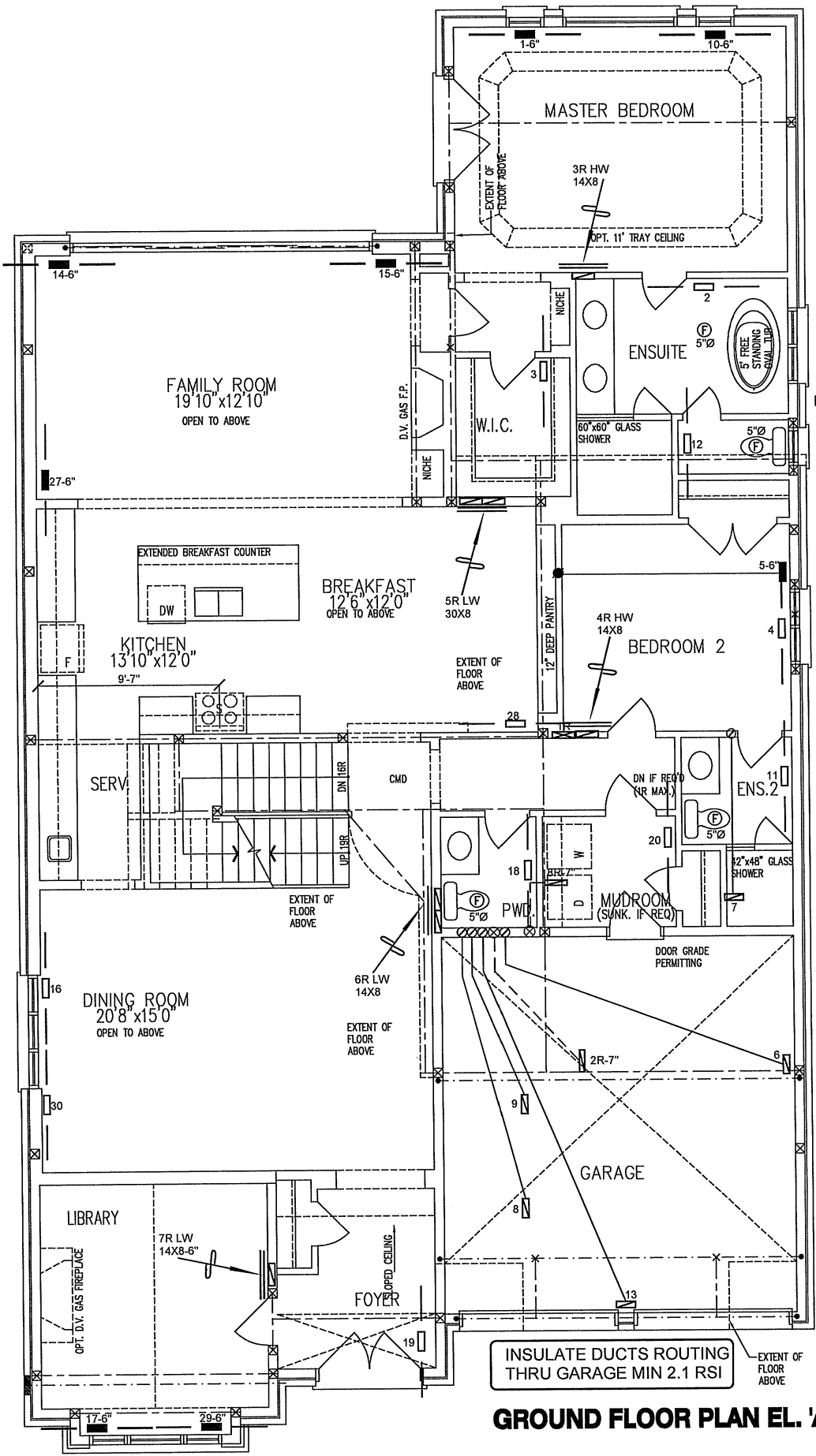



BASEMENT PLAN EL. 'A'

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@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.	HEAT LOSS 78207 BTU/H UNIT DATA	# OF RUNS	S/A	R/A	FANS	Sheet Title BASEMENT HEATING LAYOUT Date JAN/2018 Scale 3/16" = 1'-0" BCIN# 19669 LO# 77484
Project Name	PINE VALLEY & TESTON VAUGHAN, ONTARIO		MAKE LENNOX	3RD FLOOR				
			MODEL EL296UH090XE48C	2ND FLOOR	6	3	1	
			INPUT 88 MBTU/H	1ST FLOOR	18	5	5	
			OUTPUT 85 MBTU/H	BASEMENT	6	1	0	
			COOLING 4.0 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				
			FAN SPEED 1525 cfm @ 0.6" w.c.					

WOD	CSA-F280-12
LOD	PACKAGE A1

HVAC LEGEND							
						3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2ND FLOOR		RETURN AIR STACK 2ND FLOOR	No.	Description
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2ND FLOOR		FRP-FLOOR RETURN AIR GRILLE		REVISIONS
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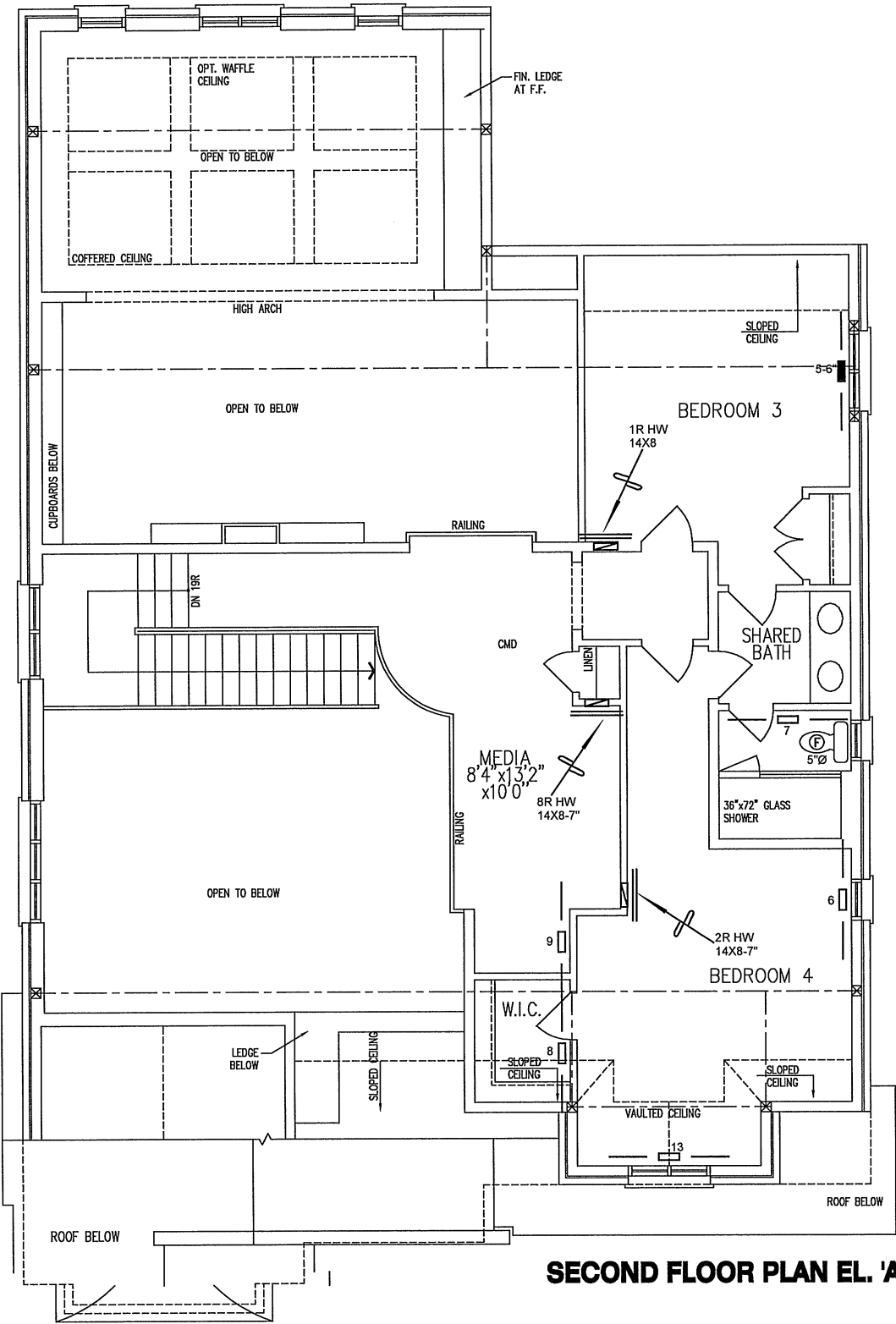
Client		 <p>375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services</p>	FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE SILVERWOOD 5006 CNR			BCIN# 19669	
3453 sqft	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.		LO#	77484

MICHAEL CRONKHITE HAS REVIEWED AND TAKEN RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.2 OF THE BUILDING CODE.
Michael Cronkhite
Michael Cronkhite, BCIN# 19669
HVAC DESIGNS LTD.

WOD
LOD
CSA-F280-12
PACKAGE A1

HVAC LEGEND									
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	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"x6" 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	REVISIONS	
								Date	

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Client GOLD PARK HOMES		<div></div> <p>375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services</p> <p>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.</p>	Sheet Title SECOND FLOOR HEATING LAYOUT		
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO			Date JAN/2018		
THE SILVERWOOD 5006 CNR			Scale 3/16" = 1'-0"		
3453 sqft			BCIN# 19669		
			LO#	77484	