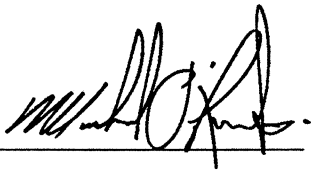


Schedule 1: Designer Information

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	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: 42-1 – OPT 5 BED Project: KLEINBURG GLEN		
D. Declaration of Designer				
I <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate):				
(print name)				
☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____				
☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>				
☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____				
I certify that:				
1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.				
<u>January 29, 2016</u>		 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: KLEINBURG GLEN BUILDER: GOLD PARK HOMES OPT 5 BED TYPE: 42-1 DATE: Jan-16 LO# 67107 GFA: 2983 WINTER NATURAL AIR CHANGE RATE 0.322 HEAT LOSS $\Delta T^{\circ}F$ 76 CSA-F280-12 SB-12 PACKAGE J

ROOM USE	EXP. WALL CLG. HT.	ENR	ENS-2	BATH	BED-4	BED-3	BED-2	KTGR	KTGR	DIN	KTGR	LAUN	FOY	PWD	WIC	ENS-2	HEAT GAIN $\Delta T^{\circ}F$ 16	DEN
GRS WALL AREA GLAZING	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330
FACTORS																		
LOSS GAIN	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1
NORTH	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
EAST	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
SOUTH	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4
WEST	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
SKYLT.	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1
DOORS	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
NET EXPOSED BSMT WALL ABOVE GR	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
EXPOSED CLG	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
NO ATTIC EXPOSED CLG	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
EXPOSED FLOOR	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
BASEMENT/CRAWL HEAT LOSS																		
SLAB ON GRADE HEAT LOSS																		
SUBTOTAL HT LOSS	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188
SUB TOTAL HT GAIN	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788	1788
LEVEL FACTOR / MUL TIPLIER	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
AIR CHANGE HEAT LOSS	681	681	681	681	681	681	681	681	681	681	681	681	681	681	681	681	681	681
AIR CHANGE HEAT GAIN	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
DUCT LOSS	574	574	574	574	574	574	574	574	574	574	574	574	574	574	574	574	574	574
DUCT GAIN	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162
HEAT GAIN PEOPLE	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
HEAT GAIN APPLIANCES/LIGHTS	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
TOTAL HT LOSS BTU/H	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658
TOTAL HT GAIN x 1.3 BTU/H	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168	4168

ROOM USE	EXP. WALL CLG. HT.	ENR	ENS-2	BATH	BED-4	BED-3	BED-2	KTGR	KTGR	DIN	KTGR	LAUN	FOY	PWD	WIC	ENS-2	HEAT GAIN $\Delta T^{\circ}F$ 16	DEN
GRS WALL AREA GLAZING	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330
FACTORS																		
LOSS GAIN	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1
NORTH	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
EAST	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
SOUTH	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4
WEST	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
SKYLT.	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1
DOORS	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
NET EXPOSED WALL	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
NET EXPOSED BSMT WALL ABOVE GR	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
EXPOSED CLG	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
NO ATTIC EXPOSED CLG	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
EXPOSED FLOOR	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
BASEMENT/CRAWL HEAT LOSS																		
SLAB ON GRADE HEAT LOSS																		
SUBTOTAL HT LOSS	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751
SUB TOTAL HT GAIN	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542
LEVEL FACTOR / MUL TIPLIER	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
AIR CHANGE HEAT LOSS	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
AIR CHANGE HEAT GAIN	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
DUCT LOSS	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658	658
DUCT GAIN	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101	1101
HEAT GAIN PEOPLE	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
HEAT GAIN APPLIANCES/LIGHTS	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
TOTAL HT LOSS BTU/H	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607	1607
TOTAL HT GAIN x 1.3 BTU/H	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272	1272

TOTAL HEAT GAIN BTU/H: 34631 TONS: 288 LOSS DUE TO VENTILATION LOAD BTU/H: 2815 STRUCTURAL HEAT LOSS: 53478 TOTAL COMBINED HEAT LOSS BTU/H: 56293

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

SITE NAME: KLEINBURG GLEN
BUILDER: GOLD PARK HOMES

TYPE: 42-1
OPT 5 BED

DATE: Jan-16
GFA: 2983 LO# 67107

HEATING CFM	1100	COOLING CFM	1100
TOTAL HEAT LOSS	53,478	TOTAL HEAT GAIN	33,938
AIR FLOW RATE CFM	20.57	AIR FLOW RATE CFM	32.41

EL195UH070XE38B
FAN SPEED
LOW 0
MEDLOW 0
MEDIUM 995
MEDIUM HIGH 1100
HIGH 1200

LENNOX

AFUE = 95.0 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 63,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	10	8	4
R/A	0	0	4	2	1

furnace pressure 0.6
a/c coil pressure 0.2
available pressure
for s/a & r/a 0.35
plenum pressure s/a 0.18
max s/a diff press. loss 0.02
min adjusted pressure s/a 0.16

DESIGN CFM = 1100
CFM @ 6" E.S.P.
TEMPERATURE RISE 53 °F

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

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

RUN #	1	2	3	4	5	6	7	8	10	11	13	14	15	16	17	19	20	23	24
ROOM NAME	MBR	BED-2	ENS	ENS-2	BED-4	BED-5	BATH	WIC	MBR	BED-3	DIN	KT/GR	KT/GR	KT/GR	LAUN	FOY	PWD	DEN	BAS
RM LOSS MBH	1.72	2.43	1.18	2.43	2.22	1.79	1.80	1.17	1.72	1.46	1.10	2.26	2.26	2.26	2.02	4.78	0.82	1.37	5.12
CFM PER RUN HEAT	35	50	24	13	46	37	37	24	35	30	23	47	47	47	42	98	17	28	105
RM GAIN MBH	2.08	2.93	0.78	0.34	3.28	2.35	1.05	0.87	2.08	1.90	1.61	2.44	2.44	2.44	1.46	2.26	0.53	1.38	0.43
CFM PER RUN COOLING	67	95	25	11	106	76	34	28	67	61	52	79	79	79	47	73	17	45	14
ADJUSTED PRESSURE	0.17	0.16	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.16
EQUIVALENT LENGTH	140	200	110	170	120	170	150	180	160	170	100	140	130	90	150	80	100	130	100
TOTAL EFFECTIVE LENGTH	186	255	138	197	151	198	177	216	201	209	123	181	161	130	174	108	133	150	132
ADJUSTED PRESSURE	0.09	0.06	0.12	0.09	0.11	0.09	0.1	0.08	0.09	0.08	0.14	0.1	0.11	0.11	0.13	0.15	0.13	0.11	0.12
ROUND DUCT SIZE	5	6	4	4	6	5	4	4	5	5	4	5	5	5	4	5	4	4	5
HEATING VELOCITY (ft/min)	257	255	275	149	235	272	424	275	257	220	264	345	345	345	482	720	195	321	771
COOLING VELOCITY (ft/min)	492	484	287	126	540	558	390	321	492	448	597	580	580	580	539	536	195	516	103
OUTLET GRILL SIZE	3X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	B	B	C	B	C	C	A	C	B	A	A	A	B	C	C	B	B

RUN #	25	26	27
ROOM NAME	BAS	BAS	BAS
RM LOSS MBH	5.12	5.12	5.12
CFM PER RUN HEAT	105	105	105
RM GAIN MBH	0.43	0.43	0.43
CFM PER RUN COOLING	14	14	14
ADJUSTED PRESSURE	0.16	0.16	0.16
EQUIVALENT LENGTH	140	130	110
TOTAL EFFECTIVE LENGTH	172	144	136
ADJUSTED PRESSURE	0.09	0.11	0.12
ROUND DUCT SIZE	6	6	5
HEATING VELOCITY (ft/min)	535	535	771
COOLING VELOCITY (ft/min)	71	71	103
OUTLET GRILL SIZE	4X10	4X10	3X10
TRUNK	A	C	C

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	366	0.06	10.3	12	8	549	0	0.00	0	0	0	TRUNK O	0	0.07	0	0	8
TRUNK B	638	0.06	10.3	18	8	638	0	0.00	0	0	0	TRUNK P	0	0.07	0	0	8
TRUNK C	462	0.08	10.5	14	8	594	0	0.00	0	0	0	TRUNK Q	0	0.07	0	0	8
TRUNK D	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK R	0	0.07	0	0	8
TRUNK E	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK S	0	0.07	0	0	8
TRUNK F	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK T	0	0.07	0	0	8
TRUNK G	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK U	0	0.07	0	0	8
TRUNK H	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK V	0	0.07	0	0	8
TRUNK I	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK W	0	0.07	0	0	8
TRUNK J	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK X	1100	0.07	15	28	8
TRUNK K	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK Y	545	0.07	11.6	16	8
TRUNK L	0	0.00	0	0	8	0	0	0.00	0	0	0	TRUNK Z	0	0.07	0	0	8
TRUNK M	0	0.00	0	0	8	0	0	0.00	0	0	0	DROP	1100	0.07	15	24	10

RETURN AIR #	1	2	3	4	5	6
AIR VOLUME	165	165	95	105	190	190
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	42	28	33	32	24	22
EQUIVALENT LENGTH	150	135	175	165	150	145
TOTAL EFFECTIVE LENGTH	192	163	208	197	174	167
ADJUSTED PRESSURE	0.08	0.09	0.07	0.08	0.09	0.09
ROUND DUCT SIZE	7.1	6.9	6	6	7.3	7.3
INLET GRILL SIZE	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	14	14

TYPE: 42-1
SITE NAME: KLEINBURG GLEN

LO # 67107
OPT 5 BED

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	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	5 @ 10.6 cfm	53.0 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
More than 5 - Part 6	TOTAL	95.4 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	98	cfm
Required Supplemental Capacity	92.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 60H
Location:	BSMT
98.0 cfm	3.0 sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	ΔT °F
98.0 CFM	76 F
X	X
FACTOR	% LOSS
1.08	0.35
X	X

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

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 60H	
98 cfm high	50 cfm low	
65 % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

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

BUILDER:		GOLD PARK HOMES
Name:		
Address:		
City:		
Telephone #:	Fax #:	

INSTALLING CONTRACTOR	
Name:	
Address:	
City:	
Telephone #:	Fax #:

DESIGNER CERTIFICATION	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name:	HVAC Designs Ltd.
Signature:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	January-16

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 42-1	OPT 5 BED	BUILDER: GOLD PARK HOMES
SFQT: 2983	LO# 67107	SITE: KLEINBURG GLEN

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):	40797.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.35	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 54.0 ft	WIDTH: 33.0 ft	EXPOSED PERIMETER:	174.0 ft

2012 OBC - COMPLIANCE PACKAGE

Component	Compliance Package
	J
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	22
Basement Walls Minimum RSI (R)-Value	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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
Windows and Sliding Glass Doors Maximum U-Value	1.8
Skylights Maximum U-Value	2.8
Space Heating Equipment Minimum AFUE	0.94
HRV Minimum Efficiency	60%
Domestic Hot Water Heater Minimum EF	0.67

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



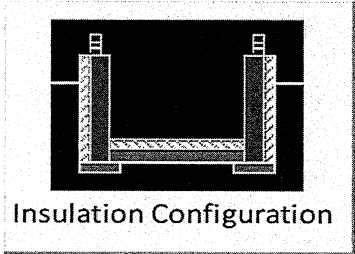
Air Infiltration Residential Load Calculator

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):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1155.2			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (ACH=3.57)			
Custom BDT Data:	ELA @ 10 Pa. 716.42 cm ² 3.57 ACH @ 50 Pa			
Mechanical Ventilation (L/s):	Total Supply:		Total Exhaust:	
	0		0	
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Change Rate (ACH/H):		0.322		
Cooling Air Change Rate (ACH/H):		0.098		

Residential Foundation Thermal Load Calculator

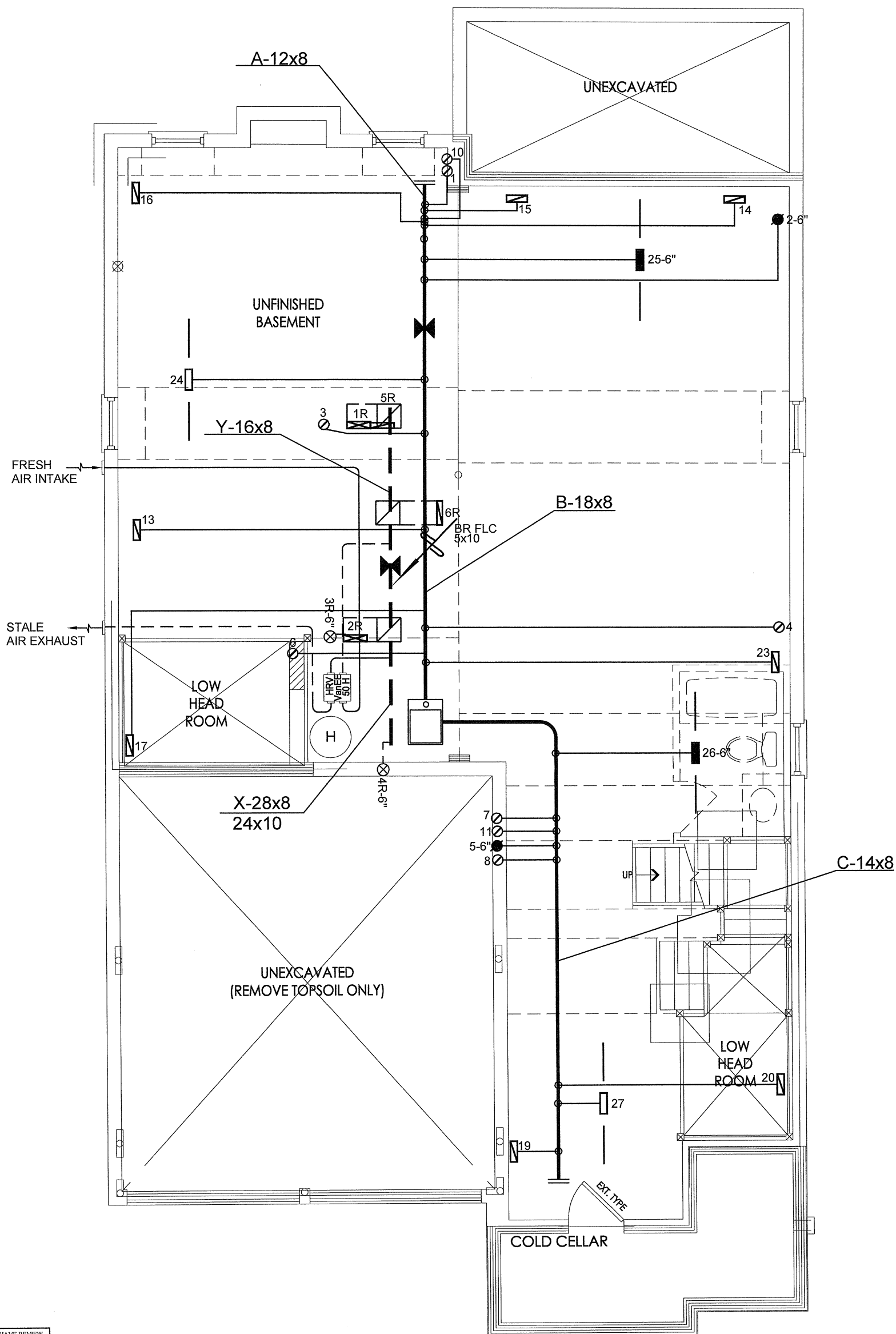
Supplemental tool for CAN/CSA-F280

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):	16.5	 Insulation Configuration
Floor Width (m):	10.1	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	1.4	
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):	2156	

53.2

2.6 142.24

141.74

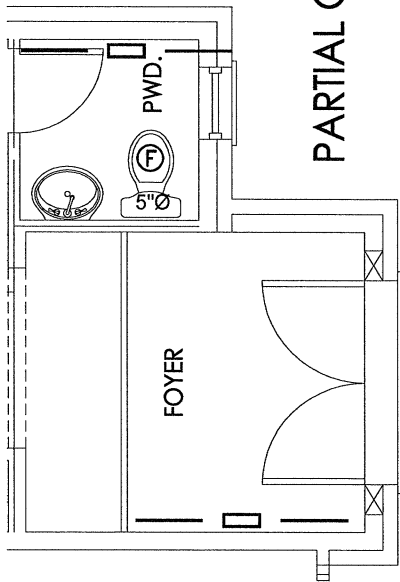
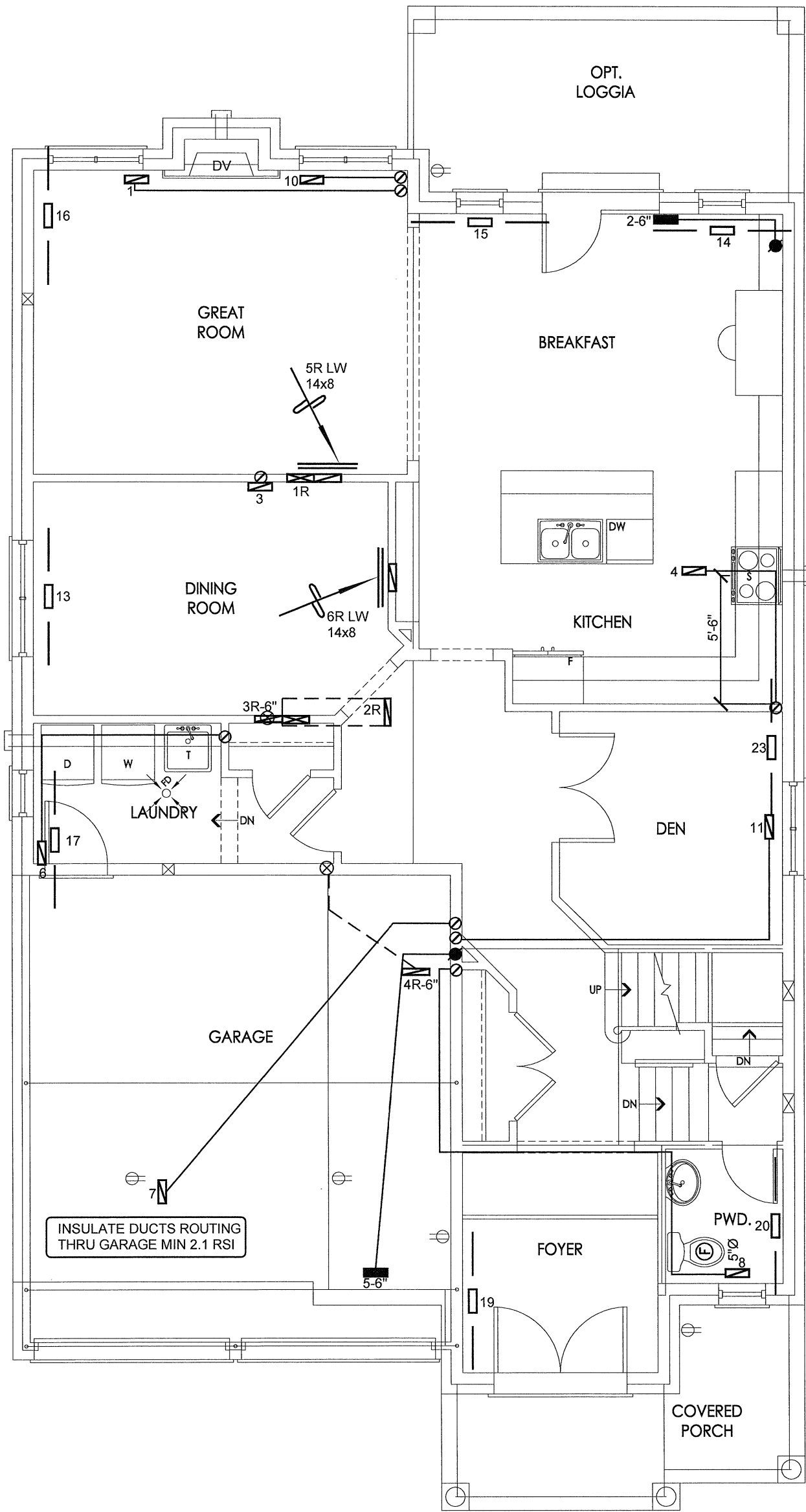


BASEMENT FLOOR ELEV 'A'

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.		
	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		 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.	HEAT LOSS 56293 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title	
GOLD PARK HOMES			MAKE	LENNOX	3RD FLOOR				BASEMENT HEATING LAYOUT	
			MODEL	EL195UH070XE36B-70	2ND FLOOR	10	4	4		
			INPUT	66 MBTU/H	1ST FLOOR	8	2	2		
			OUTPUT	63 MBTU/H	BASEMENT	4	1	0		
Project Name		COOLING 3.0 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 JAN/2016		
KLEINBURG GLEN VAUGHAN, ONTARIO		FAN SPEED 1100 cfm @ 0.6" w.c.						Scale 3/16" = 1'-0"		
OPT 5 BED 42-1								BCIN# 19669		
2983 sqft								LO# 67107		



PARTIAL GROUND FLOOR ELEV 'B'

GROUND FLOOR ELEV 'A'

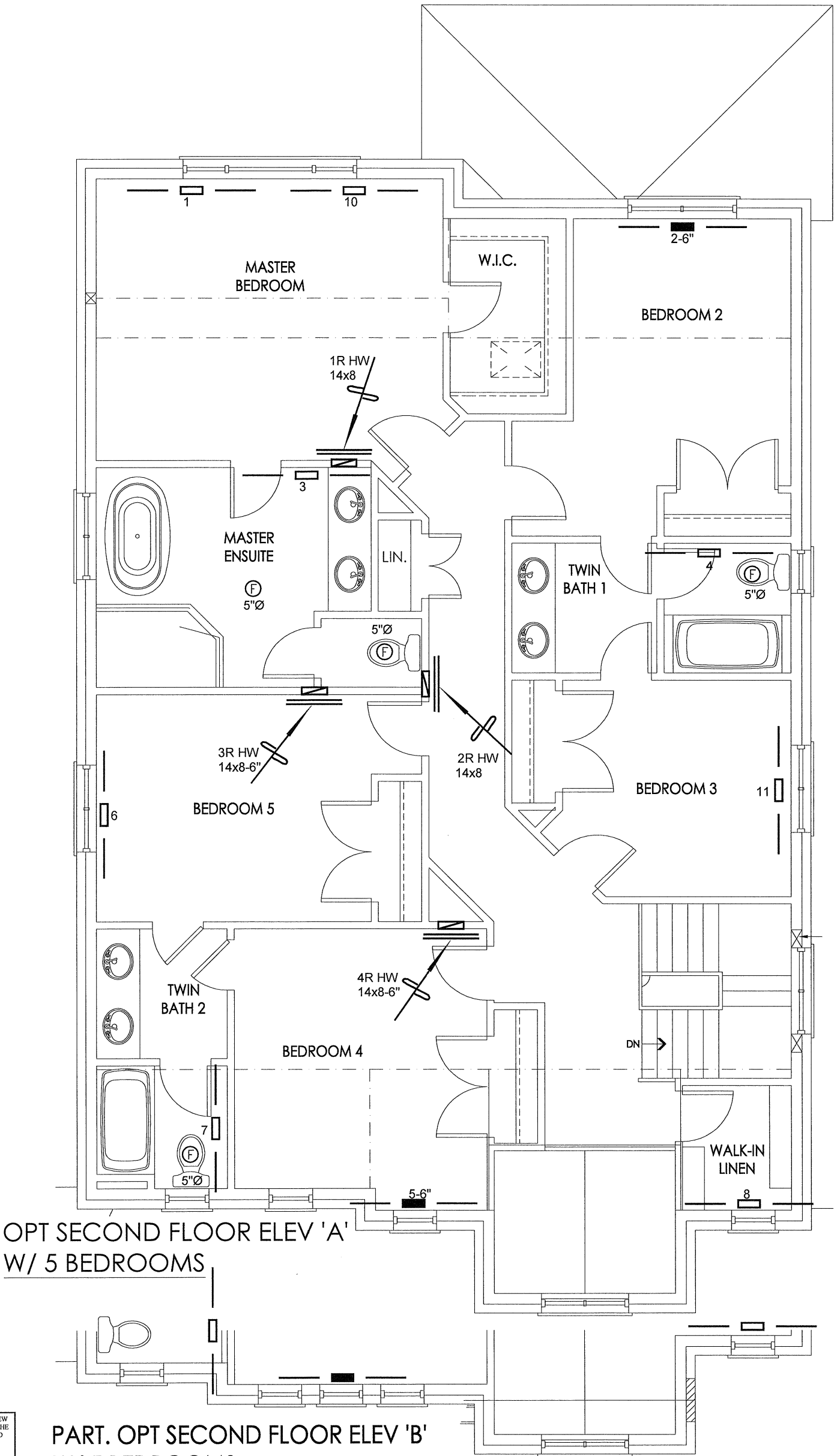
CSA-F280-12
PACKAGE J

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.3 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.	
	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		 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 FIRST FLOOR HEATING LAYOUT	
Project Name KLEINBURG GLEN VAUGHAN, ONTARIO			Date JAN/2016	
OPT 5 BED 42-1			Scale 3/16" = 1'-0"	
2983 sqft			BCIN# 19669	
			LO#	67107



I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 32.3 OF THE BUILDING CODE.

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

PART. OPT SECOND FLOOR ELEV 'B'
W/ 5 BEDROOMS

CSA-F280-12
PACKAGE J

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.		
	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 HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
OPT 5 BED 42-1			BCIN# 19669	
2983 sqft			LO#	67107