

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 BRAMPTON	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: LIANA 1 LOT 28 Project: GRANELLI HOMES CORP		
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.					
January 14, 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: GRANELLI HOMES CORP LOT 28 TYPE: LIANA 1 DATE: Jan-19 LO# 8165 WINTER NATURAL AIR CHANGE RATE 0.325 HEAT LOSS AT °F 74 CSA-F280-12
BUILDER: GREYHORN HOMES GFA: 2041 SUMMER NATURAL AIR CHANGE RATE 0.106 HEAT GAIN AT °F 11 SB-12 PACKAGE A1

ROOM USE	MBR	ENS	TYPE: LIANA 1	LOT 28	GFA: 2041	LO# 8165	BATH	ENS-2	HEAT LOSS AT °F 74	HEAT GAIN AT °F 11	CSA-F280-12
EXP. WALL	32	21									
CLG. HT.	9	9									
FACTORS											
GRS.WALL AREA	288	189									
GLAZING	LOSS	GAIN									
NORTH	0	0									
EAST	0	0									
SOUTH	0	0									
WEST	0	0									
SKYL.T.	36.4	100.7									
DOORS	24.7	3.7									
NET EXPOSED WALL	4.4	0.6									
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5									
EXPOSED CLG	1.3	0.6									
NO ATTIC EXPOSED CLG	2.7	1.2									
EXPOSED FLOOR	2.5	0.4									
BASEMENT/CRAWL HEAT LOSS	0	0									
SLAB ON GRADE HEAT LOSS	0	0									
SUB TOTAL HT LOSS	2107	1290									
SUB TOTAL HT GAIN	1477	736									
LEVEL FACTOR / MUL TIPLIER	0.20	0.28									
AIR CHANGE HEAT LOSS	594	364									
AIR CHANGE HEAT GAIN	96	48									
DUCT LOSS	0	0									
DUCT GAIN	0	0									
HEAT GAIN PEOPLE	2	0									
HEAT GAIN APPLIANCES/LIGHTS	555	0									
TOTAL HT LOSS BTU/H	2701	1653									
TOTAL HT GAIN x 1.3 BTU/H	3390	1019									

ROOM USE	W/R	FOY	W/R	LAUN	KIL/D	TONS: 1.95	LOSS DUE TO VENTILATION LOAD BTU/H: 1223	LOSS DUE TO VENTILATION LOAD BTU/H: 1223	STRUCTURAL HEAT LOSS: 40791	TOTAL COMBINED HEAT LOSS BTU/H: 42014	CSA-F280-12
EXP. WALL	9	81	9	26	65						
CLG. HT.	10	10	10	12	10						
FACTORS											
GRS.WALL AREA	90	810	90	312	650						
GLAZING	LOSS	GAIN									
NORTH	0	0									
EAST	0	0									
SOUTH	0	0									
WEST	0	0									
SKYL.T.	0	0									
DOORS	0	0									
NET EXPOSED WALL	0	0									
NET EXPOSED BSMT WALL ABOVE GR	0	0									
EXPOSED CLG	0	0									
NO ATTIC EXPOSED CLG	0	0									
EXPOSED FLOOR	0	0									
BASEMENT/CRAWL HEAT LOSS	0	0									
SLAB ON GRADE HEAT LOSS	0	0									
SUB TOTAL HT LOSS	0	0									
SUB TOTAL HT GAIN	0	0									
LEVEL FACTOR / MUL TIPLIER	0.30	0.31									
AIR CHANGE HEAT LOSS	159	1514									
AIR CHANGE HEAT GAIN	14	107									
DUCT LOSS	0	0									
DUCT GAIN	0	0									
HEAT GAIN PEOPLE	0	0									
HEAT GAIN APPLIANCES/LIGHTS	0	0									
TOTAL HT LOSS BTU/H	6339	2281									
TOTAL HT GAIN x 1.3 BTU/H	296	1840									

Michael O'Rourke

SITE NAME: GRANELLI HOMES CORP
BUILDER: GREENYORK HOMESLOT 28
TYPE: LANA 1

DATE: Jan-19

GFA: 2041 LO# 81165

HEATING CFM 785 COOLING CFM 785
TOTAL HEAT LOSS 40,791 TOTAL HEAT GAIN 23,251
AIR FLOW RATE CFM 19,24 AIR FLOW RATE CFM 33,76AFUE = 96 %
INPUT (BTU/H) = 60,000
OUTPUT (BTU/H) = 58,000

#CARRIER

59SP5A-60-12 60

FAN SPEED

LOW 0

MEDIUM 845

HIGH 970

DESIGN CFM = 785

CFM @ 8" E.S.P.

TEMPERATURE RISE 68 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	9	7	4
R/A	0	0	4	1	1

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	13	14	16	17	18	19	20	21	23	24
ROOM NAME	MBR	ENS	ENS-2	BED-2	BED-3	FAM	BATH	FAM	MBR	K/L/D	K/L/D	K/L/D	LAUN	W/R	FOY	FOY	BAS	BAS	BAS
RM LOSS MBH	1.35	1.65	0.34	1.73	1.00	1.64	1.00	1.64	1.35	2.02	2.02	2.02	2.32	0.67	3.17	3.17	3.43	3.43	3.43
CFM PER RUN HEAT	26	32	7	33	19	31	19	31	26	39	39	39	45	13	61	61	66	66	66
RM GAIN MBH	1.69	1.02	0.08	1.74	1.66	1.44	0.46	1.44	1.69	2.17	2.17	2.17	2.17	1.08	1.14	1.14	0.46	0.46	0.46
CFM PER RUN COOLING	57	34	3	59	56	48	16	48	57	73	73	73	37	10	39	39	16	16	16
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	0.17
ACTUAL DUCT LGH	29	52	21	38	31	37	20	45	40	20	30	25	18	15	28	30	25	29	12
EQUIVALENT LENGTH	165	170	150	155	205	125	170	145	145	120	130	140	150	140	120	120	120	160	140
TOTAL EFFECTIVE LENGTH	194	222	171	193	236	162	190	190	185	140	160	175	148	145	168	150	145	189	152
ADJUSTED PRESSURE	0.09	0.08	0.1	0.09	0.07	0.11	0.09	0.09	0.09	0.12	0.11	0.1	0.12	0.12	0.1	0.11	0.12	0.09	0.11
ROUND DUCT SIZE	5	4	4	6	5	5	4	5	5	5	5	5	4	4	5	5	5	5	5
HEATING VELOCITY (ft/min)	191	367	80	168	140	228	218	228	191	286	286	286	516	149	448	448	485	485	485
COOLING VELOCITY (ft/min)	419	390	34	301	411	352	184	352	419	536	536	536	424	115	286	286	117	117	117
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	A	C	E	E	E	E	E	C	A	A	A	C	E	D	D	A	C	E

25	ROOM NAME	BAS
3.43	RM LOSS MBH	66
0.46	CFM PER RUN HEAT	16
0.17	RM GAIN MBH	30
120	CFM PER RUN COOLING	150
0.11	ADJUSTED PRESSURE	5
485	ROUND DUCT SIZE	117
117	HEATING VELOCITY (ft/min)	3X10
3X10	COOLING VELOCITY (ft/min)	D
	OUTLET GRILL SIZE	

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE										
	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 CFM	STATIC PRESS	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	176	0.08	7.3	8	396	0	0.00	0	0	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK B	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.06	0	0	0
TRUNK C	385	0.08	9.8	12	578	0	0.00	0	0	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK D	188	0.10	7.1	8	423	0	0.00	0	0	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK E	400	0.07	10.3	12	600	0	0.00	0	0	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK F	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.06	0	0	0
RETURN AIR #	1		3	4	5	6				BR										
AIR VOLUME	85	0	85	95	85	315	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	0.06	13.8	22	8
EQUAL DUCT LGH	34	1	38	40	48	12	1	1	1	1	1	1	1	1	1	1	0.06	0	0	642
ACTUVALENT LENGTH	185	165	185	165	185	120	0	0	0	0	0	0	0	0	0	0	0.06	0	0	0
TOTAL EFFECTIVE LH	219	166	223	205	233	132	1	1	1	1	1	1	1	1	1	1	0.06	0	0	0
ADJUSTED PRESSURE	0.07	0.09	0.07	0.07	0.06	0.11	0.06	0.07	0.07	0.06	0.11	0.06	0.07	0.07	0.06	0.11	0.06	13.8	24	10
ROUND DUCT SIZE	5.8	0	5.8	6	8.4	6	8.4	6	6	8.4	6	8.4	6	6	8.4	6	0.06	0	0	471
INLET GRILL SIZE	8	0	8	8	8	8	8	8	8	8	8	8	8	8	8	8	0.06	0	0	0
INLET GRILL SIZE	14	0	14	14	14	24	0	14	14	0	0	0	0	0	0	0	0.06	0	0	0

TYPE: LIANA 1
SITE NAME: GRANELLI HOMES CORP

LO # 81165
LOT 28

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	2 @ 10.6 cfm	21.2 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	5 @ 10.6 cfm	53.0 cfm
Table 9.32.3.A.	TOTAL	169.6 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	63.6	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	169.6	cfm
Less Principal Ventil. Capacity	63.6	cfm
Required Supplemental Capacity	106.0	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: LIFE BREATH RNC5-HEX	Location: BSMT
63.6 cfm	3.0 sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	$\Delta T \cdot F$
63.6 CFM	74 F
X	X
1.08	X
% LOSS	
0.24	

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
LAUN	QTXEN050C	50	☒
W/R	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: LIFE BREATH RNC5-HEX		
108	cfm high	59 cfm low
76	% Sensible Efficiency	☒ HVI Approved
@ 32 deg F (0 deg C)		

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

BUILDER: GREENYORK 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-19

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: LIANA 1	LOT 28	BUILDER: GREENYORK HOMES
SFQT: 2041	LO# 81165	SITE: GRANELLI HOMES CORP

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

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):	28440.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 46.0 ft	WIDTH: 30.0 ft	EXPOSED PERIMETER:	152.0 ft

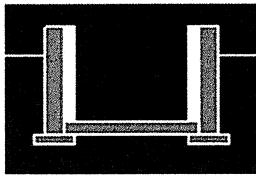
2012 OBC - COMPLIANCE PACKAGE		Compliance Package A1	
Component		Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value		60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value		31	27.65
Exposed Floor Minimum RSI (R)-Value		31	29.80
Walls Above Grade Minimum RSI (R)-Value		22	17.03
Basement 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:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	14.0	 Insulation Configuration
Floor Width (m):	9.1	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
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):		1515

TYPE: LIANA 1
LO# 81165

LOT 28

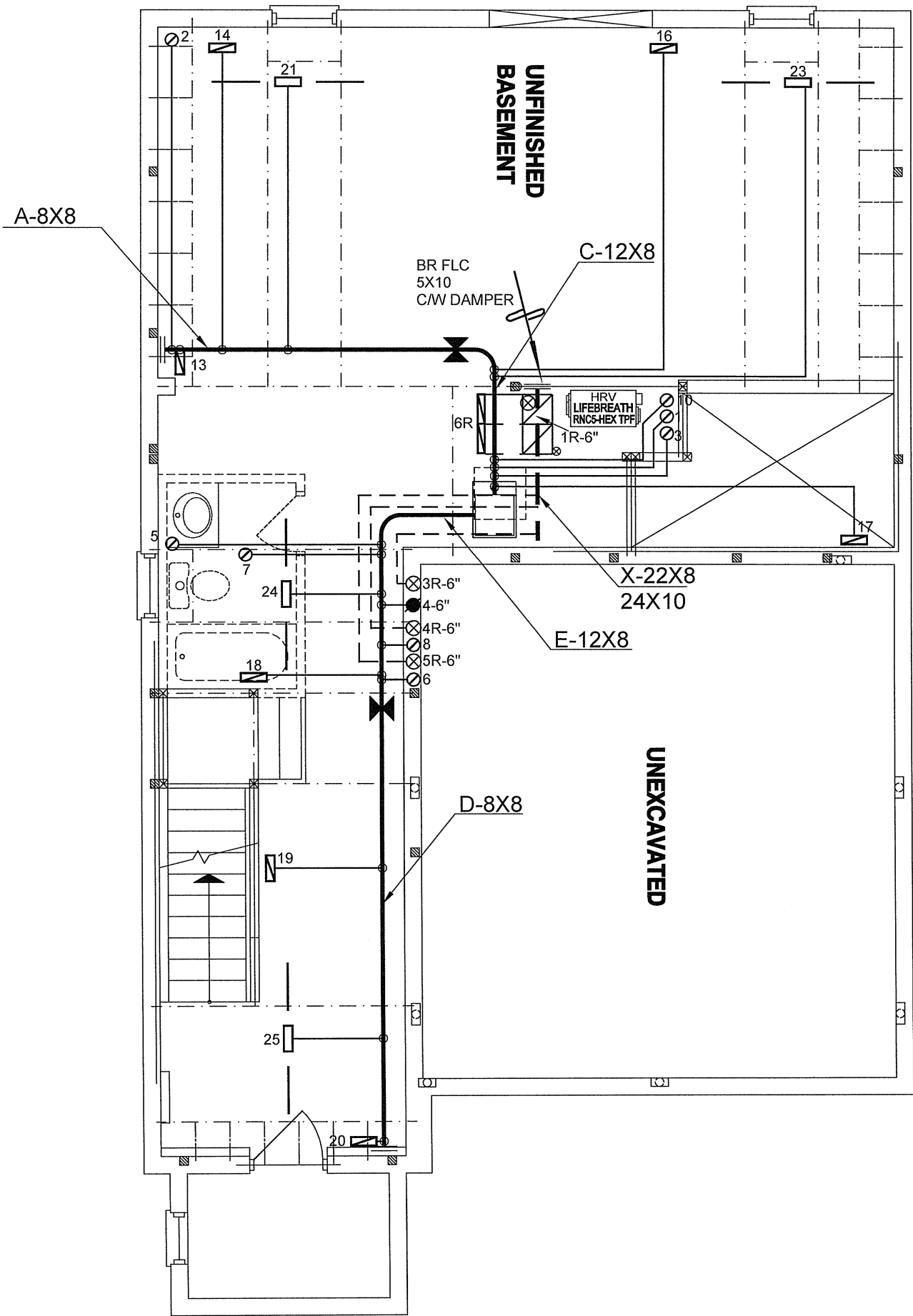
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Brampton			
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):	805.3			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1073.5 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	30.0	30.0		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.325			
Cooling Air Leakage Rate (ACH/H):	0.106			

TYPE: LIANA 1
LO# 81165

LOT 28



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.

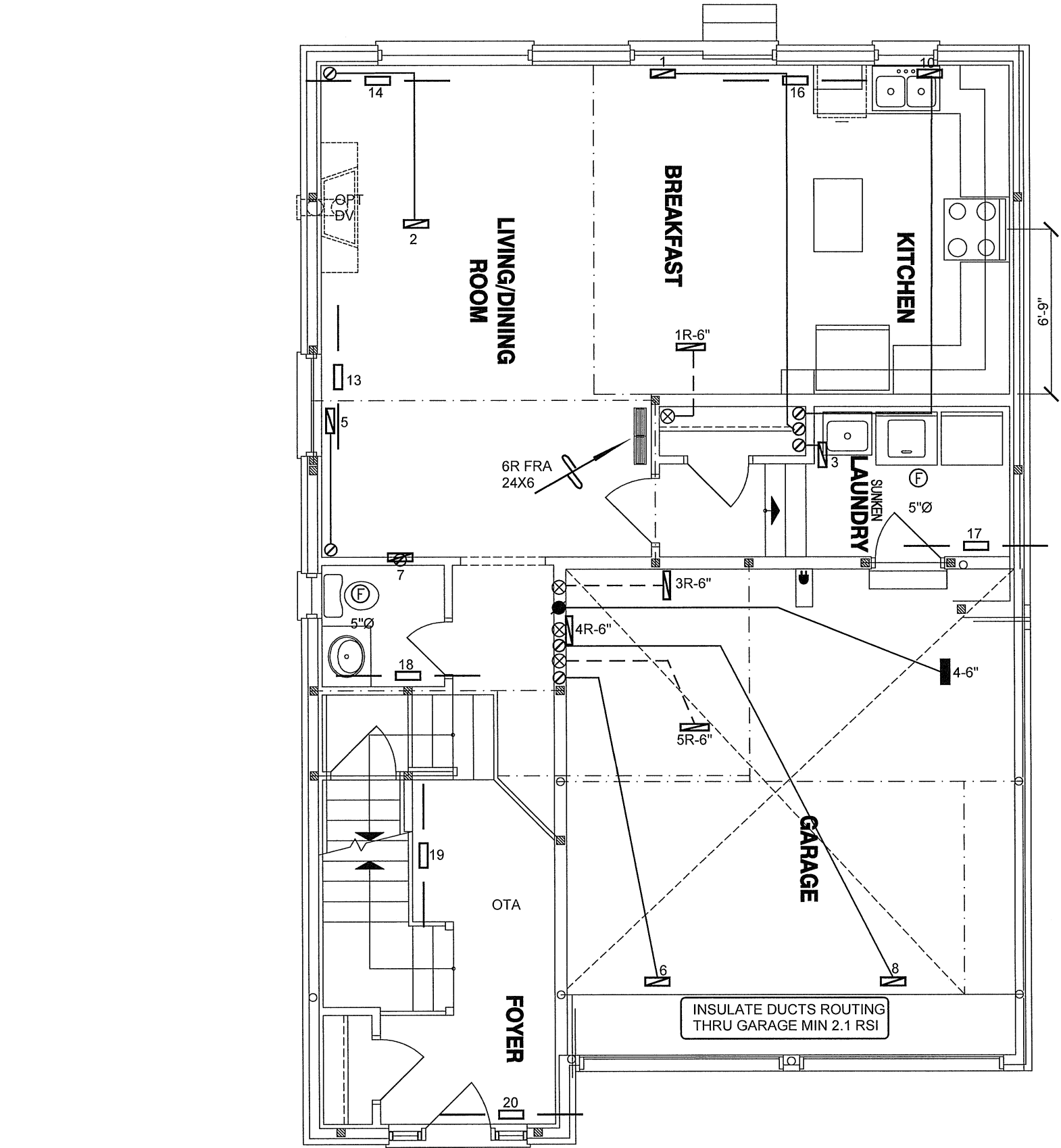
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

LOT 28
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.	
	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	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 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 42014 BTU/H		# OF RUNS			S/A	R/A	FANS	Sheet Title	
GREENYORK HOMES		UNIT DATA		3RD FLOOR						BASEMENT	
Project Name GRANELLI HOMES CORP BRAMPTON, ONTARIO		MAKE		2ND FLOOR			9	4	3	HEATING	
		MODEL		1ST FLOOR			7	1	3	LAYOUT	
		INPUT		BASEMENT			4	1	0	Date	
		60 MBTU/H								JAN/2019	
		OUTPUT		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						Scale	
		58 MBTU/H								3/16" = 1'-0"	
		COOLING								BCIN# 19669	
		2.0 TONS								LO#	
LIANA 1 - LOT 28 2041 sqft	FAN SPEED								81165		
785 cfm @ 0.6" w.c.											



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

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

LOT 28

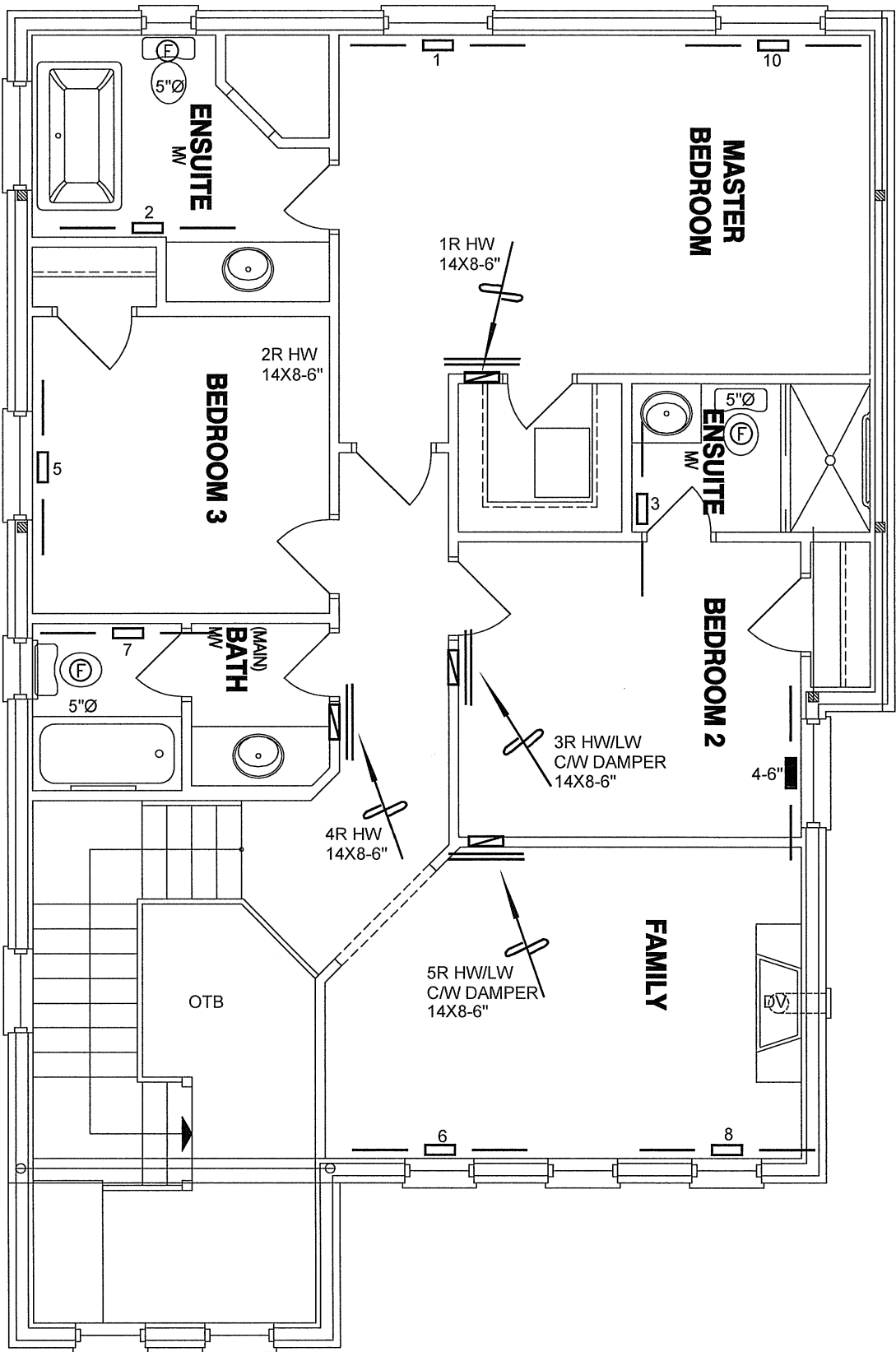
CSA-F280-12

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.	
	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	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
GREENYORK HOMES				FIRST FLOOR HEATING LAYOUT
Project Name				Date JAN/2019
GRANELLI HOMES CORP BRAMPTON, ONTARIO				Scale 3/16" = 1'-0"
LIANA 1 - LOT 28 2041 sqft				BCIN# 19669
				LO# 81165



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.

LOT 28
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.		
	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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GREENYORK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2019
GRANELLI HOMES CORP BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
LIANA 1 - LOT 28 2041 sqft			BCIN# 19669	
			LO#	81165