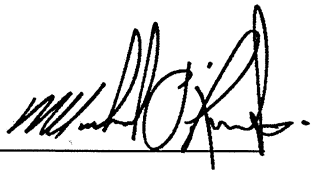


Schedule 1: Designer Information

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@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]			
☐ 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: YORK 2 Project: DEGREY DRIVE	
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>April 18, 2017</u> 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.

SITE NAME: DEGREY DRIVE
BUILDING: GREENWORK HOMES
DATE: Apr-17
LOW 73719
TYPE: YORK 2
GFA: 3729
WINTER NATURAL AIR CHANGE RATE 0.345
SUMMER NATURAL AIR CHANGE RATE 0.122
HEAT LOSS AT °F. 74
HEAT GAIN AT °F. 14
CSA-F280-12
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-5	WIC-2	ENS-4/5	WIC-3
GRS.WALL AREA	40	11	440	320	80	140	120	240	230	110	160	70	90
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	20.8	16.3	0	0	0	0	0	0	0	0	0	0	0
EAST	20.8	41.9	0	0	0	0	0	0	0	0	0	0	0
SOUTH	20.8	25.2	0	0	0	0	0	0	0	0	0	0	0
WEST	20.8	41.9	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	35.4	102.1	0	0	0	0	0	0	0	0	0	0	0
DOORS	24.7	4.7	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.4	0.8	400	1743	329	296	1290	243	80	349	66	124	540
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.5	342	429	208	252	316	163	162	203	98	378	474
NO A/TIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	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
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL HT LOSS	3002	2212	0.20	0.31	1162	640	1226	2200	1602	1045	1134	508	550
LEVEL FACTORY / MULTIPLIER	931	0	0.20	0.31	171	495	616	669	497	324	361	157	171
AIR CHANGE HEAT LOSS	0	227	0	0	0	66	126	228	78	65	110	28	15
AIR CHANGE HEAT GAIN	0	0	0	0	0	209	218	283	210	0	0	0	0
DUCT LOSS	0	0	0	0	0	163	228	335	84	0	0	0	0
DUCT GAIN	2	480	0	0	0	1	240	240	0	1	0	0	0
HEAT GAIN PEOPLE	885	0	0	0	0	685	685	685	0	685	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	3933	4686	0	0	0	3109	2396	4792	2309	1369	1485	665	721
TOTAL HT LOSS x 1.3 BTU/H													
TOTAL HT GAIN x 1.3 BTU/H													

ROOM USE	EXP. WALL	CLG. HT.	DIN	OFF	KTIFM	LAUN	FOY	WUB	BAS
GRS.WALL AREA	286	286	286	242	979	319	242	252	1128
GLAZING	0	0	0	0	0	0	0	0	0
NORTH	20.8	16.3	0	0	0	0	0	0	0
EAST	20.8	41.9	0	0	0	0	0	0	0
SOUTH	20.8	25.2	23	478	580	0	0	0	0
WEST	20.8	41.9	0	0	0	0	0	0	0
SKYLT.	35.4	102.1	0	0	0	0	0	0	0
DOORS	24.7	4.7	0	0	0	0	0	0	0
NET EXPOSED WALL	4.4	0.8	253	1146	216	197	868	162	847
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.5	0	0	0	0	0	0	0
NO A/TIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	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
SUB TOTAL HT LOSS	1624	797	0.30	0.54	6092	463	352	1504	9296
SUB TOTAL HT GAIN	0	0	0.30	0.54	3490	1046	1013	0	0.50
LEVEL FACTORY / MULTIPLIER	881	82	0	0	626	48	36	0	1.14
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	12337
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	97
DUCT LOSS	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	685	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	2505	2033	0	0	9923	685	2879	1504	21633
TOTAL HT LOSS BTU/H									
TOTAL HT GAIN x 1.3 BTU/H									

TOTAL HEAT GAIN BTU/H: 42711

TONS: 3.66

LOSS DUE TO VENTILATION LOAD BTU/H: 2785

STRUCTURAL HEAT LOSS: 6691

TOTAL COMBINED HEAT LOSS BTU/H: 68735

Michael O'Rourke

SITE NAME: DEGREY DRIVE
BUILDER: GREENYORK HOMES

TYPE: YORK 2 DATE: Apr-17 LO# 73719 GFA: 3729

HEATING CFM	1370	COOLING CFM	1370
TOTAL HEAT LOSS	65,951	TOTAL HEAT GAIN	42,185
AIR FLOW RATE CFM	20.77	AIR FLOW RATE CFM	32.48

#CARRIER
59SP5A-80-16
FAN SPEED
LOW
MEDIUM
HIGH

AFUE = 97 %
INPUT (BTU/H) = 80,000
OUTPUT (BTU/H) = 78,000

DESIGN CFM = 1370
CFM @ 8" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	15	9	6
R/A	0	0	5	3	1

All S/A diffusers 4"X10" unless noted otherwise on layout.

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

ROOM NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
RM LOSS MBH	1.97	1.38	0.72	2.30	2.40	1.55	1.15	1.15	1.55	1.97	0.67	1.38	1.38	1.38	2.48	2.48	2.97	2.48	2.88	1.37	1.49	0.72	1.38	2.50
CFM PER RUN HEAT	41	29	15	48	50	32	24	24	32	41	14	29	29	52	52	52	62	52	60	28	31	15	29	52
RM GAIN MBH	2.34	0.83	0.24	2.33	3.26	2.40	0.60	0.60	2.40	2.34	0.39	1.91	1.91	2.41	2.41	2.41	1.55	2.41	0.50	2.10	1.54	0.22	0.83	2.03
CFM PER RUN COOLING	76	27	8	76	106	78	20	20	78	76	13	62	62	78	78	78	50	78	16	68	50	7	27	66
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	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
EQUIVALENT LENGTH	150	170	120	180	130	130	150	170	140	140	180	170	160	100	150	140	100	90	55	77	88	70	44	59
TOTAL EFFECTIVE LENGTH	207	202	163	249	192	211	219	231	227	206	252	245	229	124	185	185	150	145	147	227	278	240	204	229
ADJUSTED PRESSURE	0.08	0.09	0.11	0.07	0.08	0.08	0.08	0.07	0.08	0.08	0.07	0.07	0.08	0.14	0.09	0.09	0.11	0.12	0.12	0.08	0.06	0.07	0.08	0.06
ROUND DUCT SIZE	5	4	4	6	6	5	4	4	5	5	4	5	5	5	5	5	5	5	4	5	5	4	4	5
HEATING VELOCITY (ft/min)	301	333	172	245	255	235	275	275	235	301	161	213	213	382	382	382	455	382	688	206	228	172	333	382
COOLING VELOCITY (ft/min)	558	310	92	388	540	573	229	229	573	558	149	455	455	573	573	573	367	573	184	499	367	80	310	485
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	D	D	B	B	A	B	B	A	C	A	A	A	D	C	C	C	C	A	B	A	B	D	A

ROOM NAME	25	26	27	28	29	30
RM LOSS MBH	3.86	3.86	3.86	3.86	3.86	3.86
CFM PER RUN HEAT	80	80	80	80	80	80
RM GAIN MBH	0.37	0.37	0.37	0.37	0.37	0.37
CFM PER RUN COOLING	12	12	12	12	12	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17
EQUIVALENT LENGTH	110	140	110	190	90	140
TOTAL EFFECTIVE LENGTH	160	175	129	225	144	211
ADJUSTED PRESSURE	0.11	0.1	0.13	0.08	0.12	0.08
ROUND DUCT SIZE	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	587	587	587	587	587	587
COOLING VELOCITY (ft/min)	88	88	88	88	88	88
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	C	D	B	B	A

TRUNK	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	0.06	10.3	12	539	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK B	0.06	10.3	12	539	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK C	0.06	10.5	14	591	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK D	0.06	17	26	760	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK E	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK F	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0

TRUNK	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	0.06	10.3	12	539	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK B	0.06	10.3	12	539	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK C	0.06	10.5	14	591	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK D	0.06	17	26	760	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK E	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK F	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0

TYPE: YORK 2
SITE NAME: DEGREY DRIVE

LO # 73719

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	4 @ 10.6 cfm	42.4 cfm
Table 9.32.3.A. TOTAL		180.2 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	180.2	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	41.2	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 60H-V+ Location: BSMT
139.0 cfm	3.0 sones ☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
139.0 CFM	X 74 F	X 1.08	X	0.25

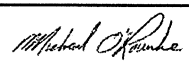
SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
ENS-4/5	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 60H-V+	
139 cfm high	50 cfm low	
75 % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

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

BUILDER:		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:	
HRAI #	001820
Date:	April-17

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** YORK 2**BUILDER:** GREENYORK HOMES**SFQT:** 3729**LO#** 73719**SITE:** DEGREY DRIVE**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
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):	53940.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 52.0 ft	WIDTH: 42.0 ft	EXPOSED PERIMETER:	188.0 ft

2012 OBC - COMPLIANCE PACKAGE		Compliance Package	
Component		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	29.8
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	-

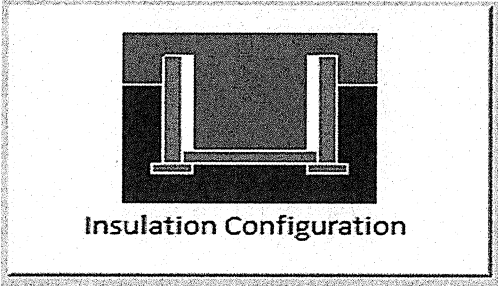
INDIVIDUAL BCIN: 19669

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):	15.8	 Insulation Configuration
Floor Width (m):	12.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.1	
Door Area (m ²):	3.7	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1926

TYPE: YORK 2
LO# 73719

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):	7.32			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1527.4			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2036.1 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	65.6	65.6		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.345			
Cooling Air Leakage Rate (ACH/H):	0.122			

TYPE: YORK 2
LO# 73719

BASEMENT PLAN - EL. B

BASEMENT PLAN - EL. A

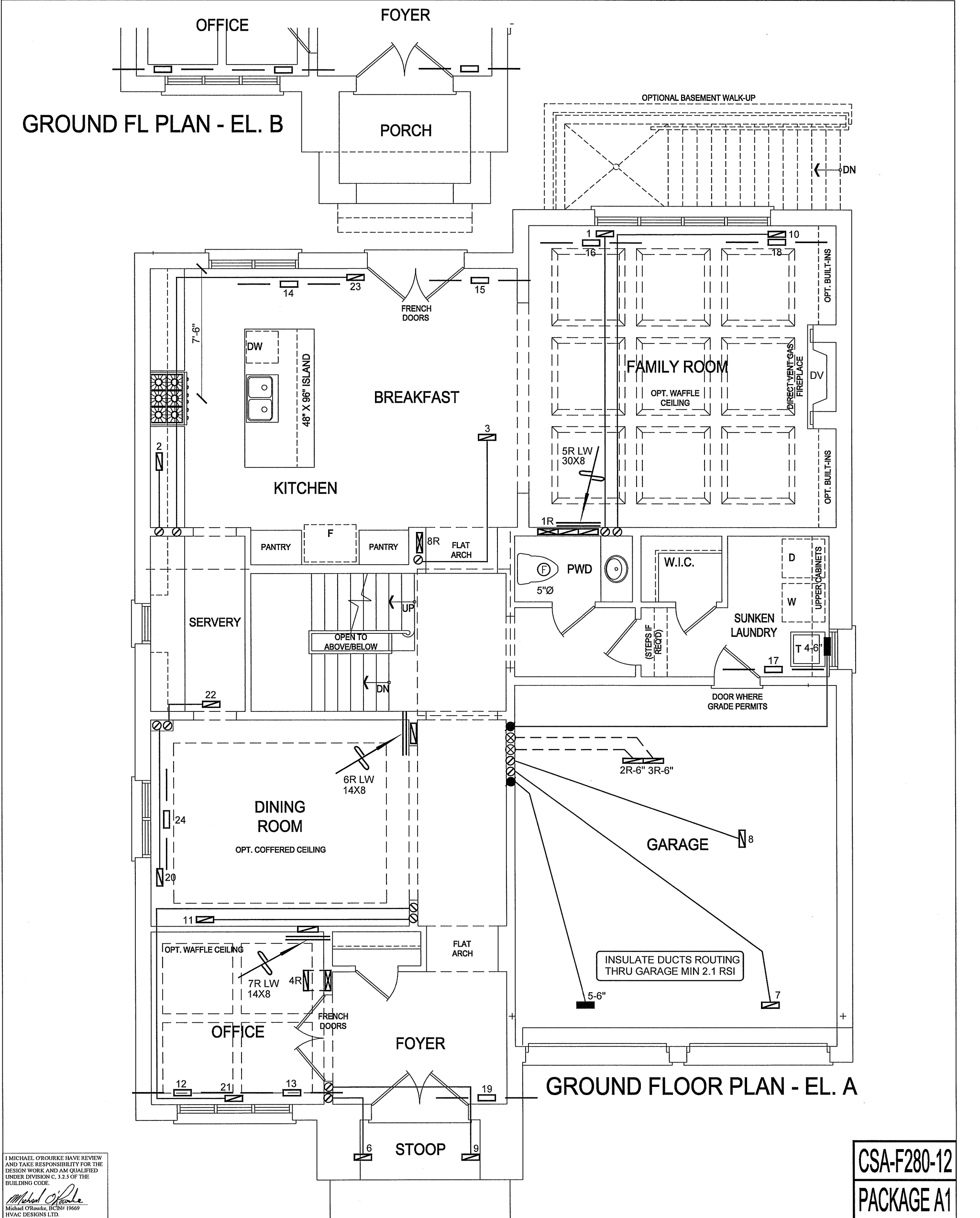
**CSA-F280-12
PACKAGE A1**

CSA-F280-12
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.		
	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		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 68736 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GREENYORK HOMES			MAKE	CARRIER	3RD FLOOR				BASEMENT HEATING LAYOUT
Project Name			MODEL	59SP5A-80-16	2ND FLOOR	15	5	4	
DEGREY DRIVE BRAMPTON, ONTARIO			INPUT	80 MBTU/H	1ST FLOOR	9	3	2	
YORK 2			OUTPUT	78 MBTU/H	BASEMENT	6	1	0	Date
3729 sqft		COOLING	3.5 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				Scale	3/16" = 1'-0"
		FAN SPEED	1370 cfm @ 0.5" w.g.					BCIN# 19669	
								LO#	73719



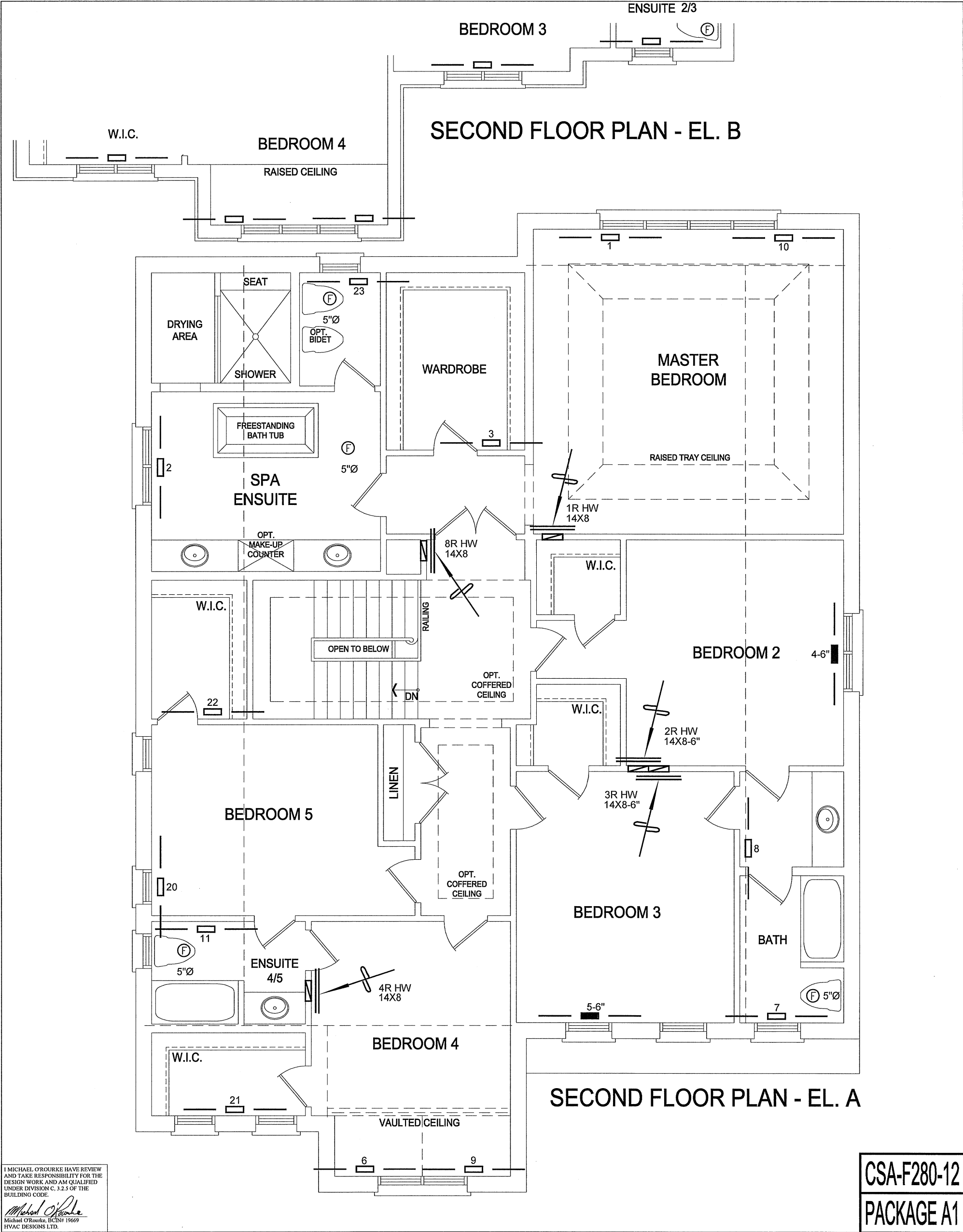
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke
Michael O'Rourke, B.C.M.A. 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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GREENYORK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	APR/2017
DEGREY DRIVE BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
YORK 2			BCIN# 19669	
3729 sqft			LO#	73719



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.

CSA-F280-12

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.		
	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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GREENYORK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	APR/2017
DEGREY DRIVE BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
YORK 2		3729 sqft	BCIN# 19669	
			LO#	73719