

SITE NAME: LECCO RIDGE

BUILDER: GREENPARK HOMES

TYPE: IVY 5

GFA: 2027

DATE: Jan-17

LO# 71716

WINTER NATURAL AIR CHANGE RATE 0.265

SUMMER NATURAL AIR CHANGE RATE 0.089


HEAT LOSS ΔT °F. 72

HEAT GAIN ΔT °F. 14

CSA-F280-12

ENERGYSTAR

ROOM USE			MBR		ENS		WIC		BED-2			BED-3			BATH			COMP								
EXP. WALL			16		10		0		10			24			0			0								
CLG. HT.			9		9		9		9			9			9			9								
FACTORS																										
GRS.WALL AREA	LOSS	GAIN	144		90		0		90			216			0			0								
GLAZING			LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN								
NORTH	20.4	16.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
EAST	20.4	41.9	0	0	0	0	0	0	0	0	26	530	1090	26	530	1090	0	0	0	0						
SOUTH	20.4	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
WEST	20.4	41.9	32	653	1341	14	286	587	0	0	0	0	0	0	0	0	0	0	0	0						
SKYLT.	35.7	102.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
DOORS	24.1	4.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
NET EXPOSED WALL	3.1	0.6	112	344	66	76	233	45	0	0	64	196	38	190	583	113	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						
EXPOSED CLG	1.4	0.7	224	324	161	117	169	84	72	104	52	168	243	121	146	211	105	72	104	52	195	282	140			
NO ATTIC EXPOSED CLG	2.3	1.2	0	0	0	0	0	0	0	0	0	0	0	0	30	70	35	0	0	0	0	0	0			
EXPOSED FLOOR	2.3	0.5	0	0	0	52	121	23	28	65	13	168	392	76	14	33	6	32	75	14	0	0	0			
BASEMENT/CRAWL HEAT LOSS			0		0		0		0			0			0			0			0					
SLAB ON GRADE HEAT LOSS			0		0		0		0			0			0			0			0					
SUBTOTAL HT LOSS			1321		810		170		1362			1427			179			282								
SUB TOTAL HT GAIN			1569		740		64		1325			1349			66			140								
LEVEL FACTOR / MULTIPLIER	0.20	0.33			0.20		0.33		0.20			0.33			0.20			0.33			0.20			0.33		
AIR CHANGE HEAT LOSS			436		267		56		450			471			59			93								
AIR CHANGE HEAT GAIN			157		74		6		133			135			7			14								
DUCT LOSS			0		108		23		181			190			24			0								
DUCT GAIN			0		81		7		207			210			45			0								
HEAT GAIN PEOPLE	240	2	480		0		0		1			240			1			240			0			0		
HEAT GAIN APPLIANCES/LIGHTS			373		0		0		373			373			373			373								
TOTAL HT LOSS BTU/H			1757		1185		248		1994			2089			262			376								
TOTAL HT GAIN x 1.3 BTU/H			3352		1163		101		2960			2998			637			686								



TOWN OF MILTON

PLANNING AND DEVELOPMENT

IVY 5 MODE

BUILDING: REVIEWED

SCOTT SHERRIFFS

APR 7, 201

PLANS EXAMINER

DAT

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province on Ontario, By-laws of the Region of Halton and Town of Milton.

RECEIVED

TOWN OF MILTON

MAR 29, 2017

IVY 5

BUILDING DIVISION



TOWN OF MILTON
PLANNING AND DEVELOPMENT
IVY 5 MODEL

BUILDING: REVIEWED
SCOTT SHERRIFFS APR 7, 2017
PLANS EXAMINER DATE

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

ROOM USE				LVD/N				KT/FM	LAUN				FOY	MUD				WOD	BAS					
EXP. WALL				14				45	0				25	11				28	94					
CLG. HT.				10				10	9				10	10				9	9					
FACTORS																								
GRS.WALL AREA	LOSS GAIN			140			450			0			250			110			252			770		
GLAZING				LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN					
NORTH	20.4	16.3	0	0	0		0	0	0	0	0	0	0	0	0	0	12	245	196	0	0	0		
EAST	20.4	41.9	28	571	1174		0	0	0	0	0	0	10	204	419	0	0	0	0	0	0			
SOUTH	20.4	25.3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
WEST	20.4	41.9	0	0	0		55	1122	2305	0	0	0	0	0	0	0	0	0	0	0	0			
SKYLT.	35.7	102.2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
DOORS	24.1	4.7	0	0	0		20	481	93	0	0	0	20	481	93	20	481	93	0	0	0			
NET EXPOSED WALL	3.1	0.6	112	344	66		375	1150	222	0	0	0	220	675	131	90	276	53	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	156	565	109			
EXPOSED CLG	1.4	0.7	0	0	0		0	0	0	91	132	66	0	0	0	0	0	0	0	0	0			
NO ATTIC EXPOSED CLG	2.3	1.2	0	0	0		52	121	60	0	0	0	0	0	0	0	0	0	0	0	0			
EXPOSED FLOOR	2.3	0.5	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			2923					
SLAB ON GRADE HEAT LOSS				0			0			0			0			0								
SUBTOTAL HT LOSS				915			2875			132			1360			757			810					
SUB TOTAL HT GAIN				1240			2681			66			643			146			305					
LEVEL FACTOR / MULTIPLIER	0.30 0.48						0.30 0.48			0.20 0.33			0.30 0.48			0.30 0.48			0.50 1.04					
AIR CHANGE HEAT LOSS	436						1370			44			648			361			4692					
AIR CHANGE HEAT GAIN	124						268			7			64			15			45					
DUCT LOSS	0						0			0			0			0			0					
DUCT GAIN	0						0			0			0			0			0					
HEAT GAIN PEOPLE	240	0		0			1	240		1	240		0	0		0	0		0	0				
HEAT GAIN APPLIANCES/LIGHTS	373						373			373			0			373			373					
TOTAL HT LOSS BTU/H	1351						4245			175			2008			1118			810					
TOTAL HT GAIN x 1.3 BTU/H	2258						4631			890			919			694			397					

TOTAL HEAT GAIN BTU/H:

22864

TONS: 1.91

LOSS DUE TO VENTILATION LOAD BTU/H: 2286

STRUCTURAL HEAT LOSS: 25991

TOTAL COMBINED HEAT LOSS BTU/H: 28277

SITE NAME: LECCO RIDGE
BUILDER: GREENPARK HOMES

TYPE: IVY 5

DATE: Jan-17

GFA: 2027 LO# 71716

HEATING CFM 890 COOLING CFM 890
TOTAL HEAT LOSS 25,991 TOTAL HEAT GAIN 22,422
AIR FLOW RATE CFM 34.24 AIR FLOW RATE CFM 39.69

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35

#AMANA
AMEC960402BNA
FAN SPEED 40
LOW
MEDLOW
MEDIUM
MEDIUM HIGH
HIGH 890

AFUE = 96 %
INPUT (BTU/H) = 40,000
OUTPUT (BTU/H) = 38,400

DESIGN CFM = 890
CFM @ .5" E.S.P.

TEMPERATURE RISE 40 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	10	5	3
R/A	0	0	3	2	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	9	10	12	14	15	17	19	20	21	22	23
ROOM NAME	MBR	ENS	MBR	BED-2	BED-3	BED-3	BATH	COMP	WIC	LV/DN	KT/FM	KT/FM	LAUN	FOY	MUD	BAS	BAS	BAS
RM LOSS MBH.	0.88	1.18	0.88	1.99	1.04	1.04	0.26	0.38	0.25	1.35	2.12	2.12	0.18	2.01	1.12	3.06	3.06	3.06
CFM PER RUN HEAT	30	41	30	68	36	36	9	13	9	46	73	73	6	69	38	105	105	105
RM GAIN MBH.	1.68	1.16	1.68	2.96	1.50	1.50	0.64	0.69	0.10	2.26	2.32	2.32	0.89	0.92	0.69	0.38	0.38	0.38
CFM PER RUN COOLING	67	46	67	117	59	59	25	27	4	90	92	92	35	36	28	15	15	15
ADJUSTED PRESSURE	0.17	0.17	0.17	0.15	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16
ACTUAL DUCT LGH.	49	31	40	53	60	56	43	26	75	44	23	34	30	42	20	27	13	36
EQUIVALENT LENGTH	190	130	140	160	160	150	170	160	170	170	170	170	140	170	170	170	190	170
TOTAL EFFECTIVE LENGTH	239	161	180	213	220	206	213	186	245	214	193	204	170	212	190	197	203	206
ADJUSTED PRESSURE	0.07	0.11	0.1	0.07	0.08	0.08	0.08	0.09	0.07	0.08	0.08	0.08	0.1	0.08	0.09	0.08	0.08	0.08
ROUND DUCT SIZE	5	4	5	6	5	5	4	4	4	6	6	6	4	5	4	6	6	6
HEATING VELOCITY (ft/min)	220	470	220	347	264	264	103	149	103	235	372	372	69	507	436	535	535	535
COOLING VELOCITY (ft/min)	492	528	492	597	433	433	287	310	46	459	469	469	402	264	321	76	76	76
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	4X10	4X10	4X10
TRUNK	C	C	C	B	A	A	B	B	B	A	C	C	B	A	B	C	C	A

RUN #
ROOM NAME
RM LOSS MBH.
CFM PER RUN HEAT
RM GAIN MBH.
CFM PER RUN COOLING
ADJUSTED PRESSURE
ACTUAL DUCT LGH.
EQUIVALENT LENGTH
TOTAL EFFECTIVE LENGTH
ADJUSTED PRESSURE
ROUND DUCT SIZE
HEATING VELOCITY (ft/min)
COOLING VELOCITY (ft/min)
OUTLET GRILL SIZE
TRUNK

RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

SUPPLY AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	292	0.08	8.8	10	x 8 526
TRUNK B	435	0.07	10.6	14	x 8 559
TRUNK C	457	0.07	10.8	14	x 8 588
TRUNK D	0	0.00	0	0	x 8 0
TRUNK E	0	0.00	0	0	x 8 0
TRUNK F	0	0.00	0	0	x 8 0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK O	0	0.05	0	0	x 8 0
TRUNK P	0	0.05	0	0	x 8 0
TRUNK Q	0	0.05	0	0	x 8 0
TRUNK R	0	0.05	0	0	x 8 0
TRUNK S	0	0.05	0	0	x 8 0
TRUNK T	0	0.05	0	0	x 8 0
TRUNK U	0	0.05	0	0	x 8 0
TRUNK V	0	0.05	0	0	x 8 0
TRUNK W	0	0.05	0	0	x 8 0
TRUNK X	890	0.05	15.1	26	x 8 616
TRUNK Y	370	0.05	10.9	14	x 8 476
TRUNK Z	0	0.05	0	0	x 8 0
DROP	890	0.05	15.1	24	x 10 534

RETURN AIR #	1	2	3	4	5	6	7	9	10	12	14	15	17	19	20	21	22	23
AIR VOLUME	145	125	115	220	130	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	0.15	0.15
ACTUAL DUCT LGH.	30	61	100	28	44	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	155	185	205	120	195	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	185	246	305	148	239	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.08	0.06	0.05	0.10	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	6.8	6.9	7	7.5	7	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: IVY 5
SITE NAME: LECCO RIDGE

LO # 71716

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	2 @ 10.6 cfm	21.2 cfm
Kitchen & Bathrooms	4 @ 10.6 cfm	42.4 cfm
Other Rooms	6 @ 10.6 cfm	63.6 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	
More than 5 - Part 6	TOTAL	63.6 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	169.6	cfm
Less Principal Ventil. Capacity	86	cfm
Required Supplemental Capacity	83.6	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 40H+
Location:	BSMT
86.0 cfm	3.0 sones
<input checked="" type="checkbox"/>	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
86.0 CFM	X 72 F	X 1.08	X 0.34

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

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 40H+	
86 cfm high	37 cfm low	
66 % Sensible Efficiency	<input checked="" type="checkbox"/> HVI Approved	
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Cc
Township	Pl
Address	
Roll #	

BUILDER:		TOWN OF MILTON	
Name:	GF	PLANNING AND DEVELOPMENT	
Address:		IVY 5 MODEL	
City:		BUILDING: REVIEWED	
Telephone #:		SCOTT SHERRIFFS	
		APR 7, 2017	
		PLANS EXAMINER DATE	

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-17

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.

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

Michael O'Rourke

RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

TOWN OF MILTON
PLANNING AND DEVELOPMENT
IVY 5 MODEL
BUILDING: REVIEWED
SCOTT SHERRIFFS
APR 7, 2017
PLANS EXAMINER DATE
Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: IVY 5	BUILDER: GREENPARK HOMES
SFQT: 2027	SITE: LECCO RIDGE
LO# 71716	

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	0	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

ATTACHMENT:	ATTACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	27333.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.4 ft
LENGTH: 51.0 ft	WIDTH: 24.0 ft	EXPOSED PERIMETER:	94.0 ft

2012 OBC - COMPLIANCE PACKAGE		Compliance Package ENERGYSTAR	
Component		Nominal	
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		20+3.6	
Basement Walls Minimum RSI (R)-Value		20	
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		ZONE 2	
Skylights Maximum U-Value		ZONE 2	
Space Heating Equipment Minimum AFUE		0.95	
HRV Minimum Efficiency		65%	
Domestic Hot Water Heater Minimum EF		90% TE	

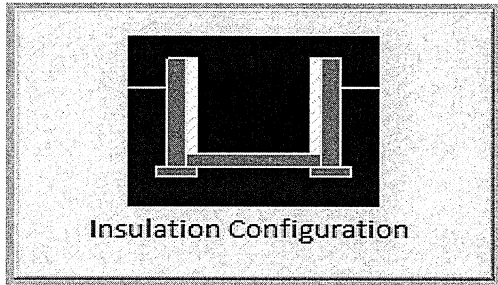
RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

Michael O'Rourke

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Milton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	15.5	 Insulation Configuration
Floor Width (m):	7.3	
Exposed Perimeter (m):	28.7	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.95	
Window Area (m ²):	1.1	
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):		857

TYPE: IVY 5
LO# 71716RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

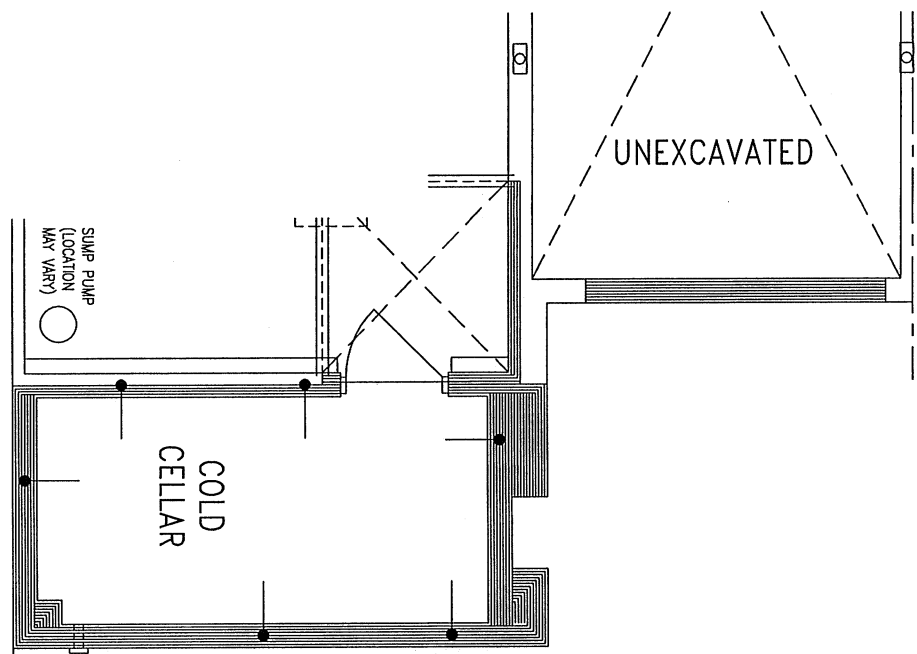
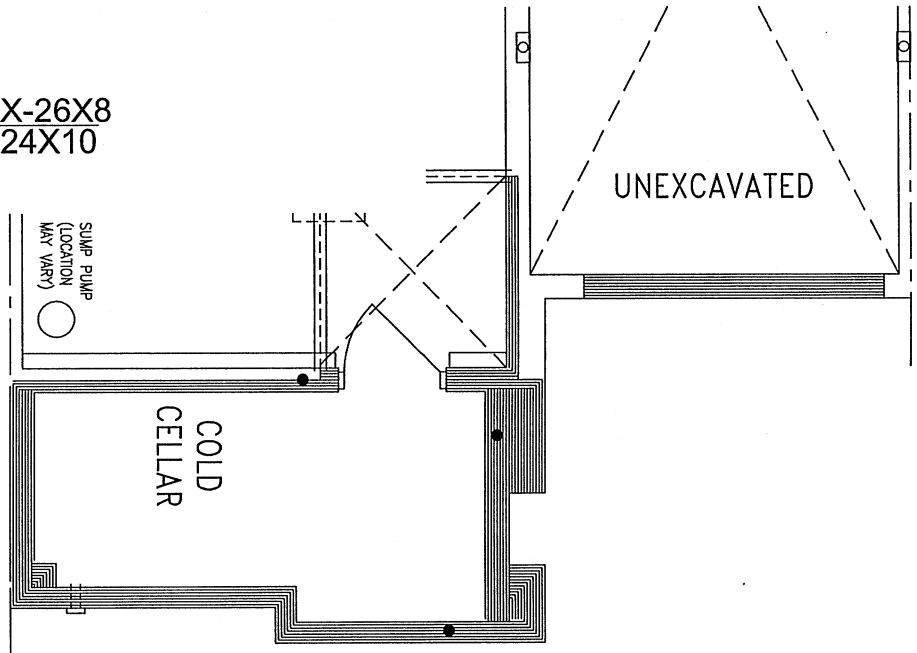
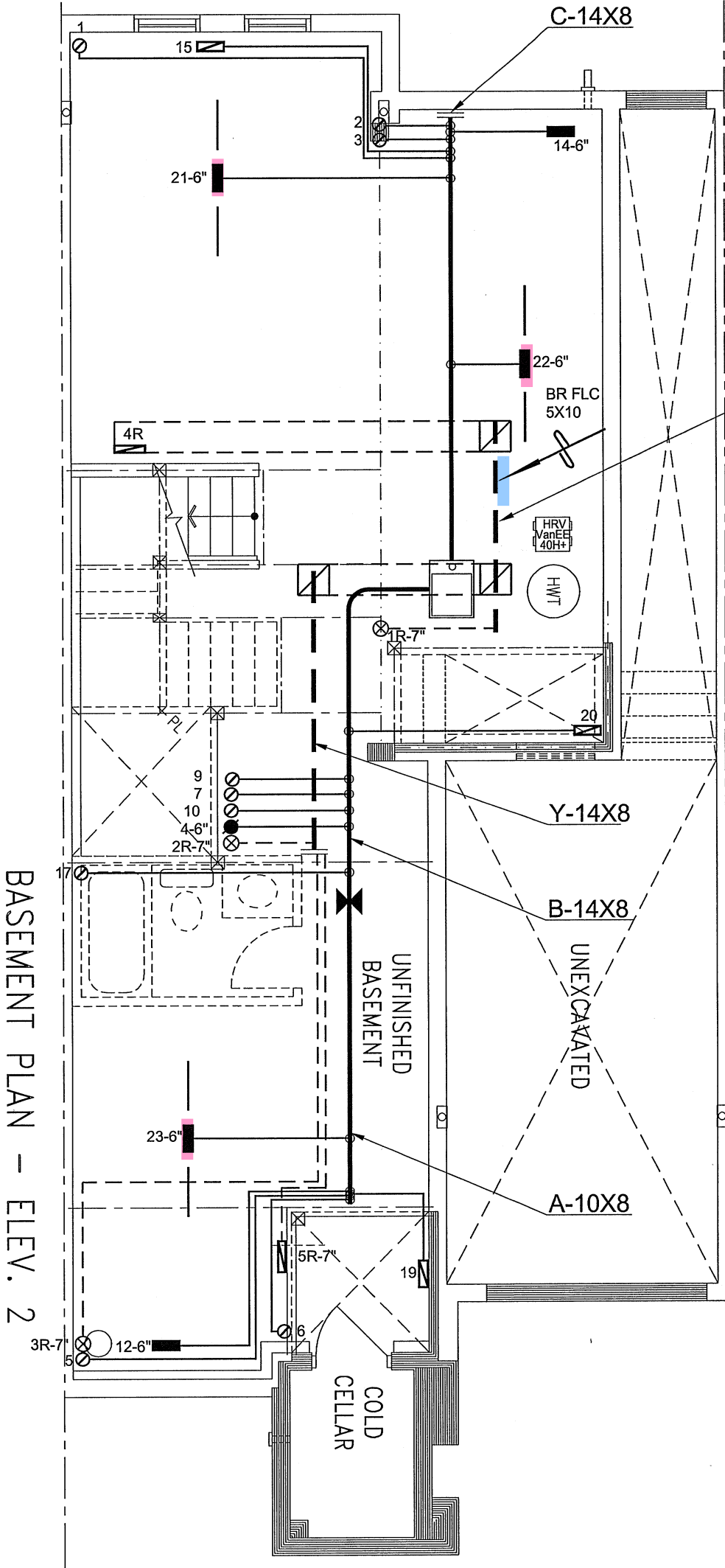
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Milton			
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):	6.58			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	774.0			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Attached (3.0 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	867.0 cm ²		
	3.00	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	40.6	40.6		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.265			
Cooling Air Leakage Rate (ACH/H):	0.089			

TYPE: IVY 5
LO# 71716RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

WOD CONDITION



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.

RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

TOWN OF MILTON
PLANNING AND DEVELOPMENT
IVY 5 MODEL
BUILDING: REVIEWED
SCOTT SHERRIFFS
APR 7, 2017
PLANS EXAMINER
DATE
Neither the issuance of a permit nor carrying out of
inspections by the Town of Milton relieves the owner from
full responsibility for compliance with the provisions of
the Ontario Building Code Act and the Ontario Building
Code, both as amended, as well as other applicable
statutes and regulations of the Province of Ontario,
By-laws of the Region of Halton and Town of Milton

CSA-F280-12

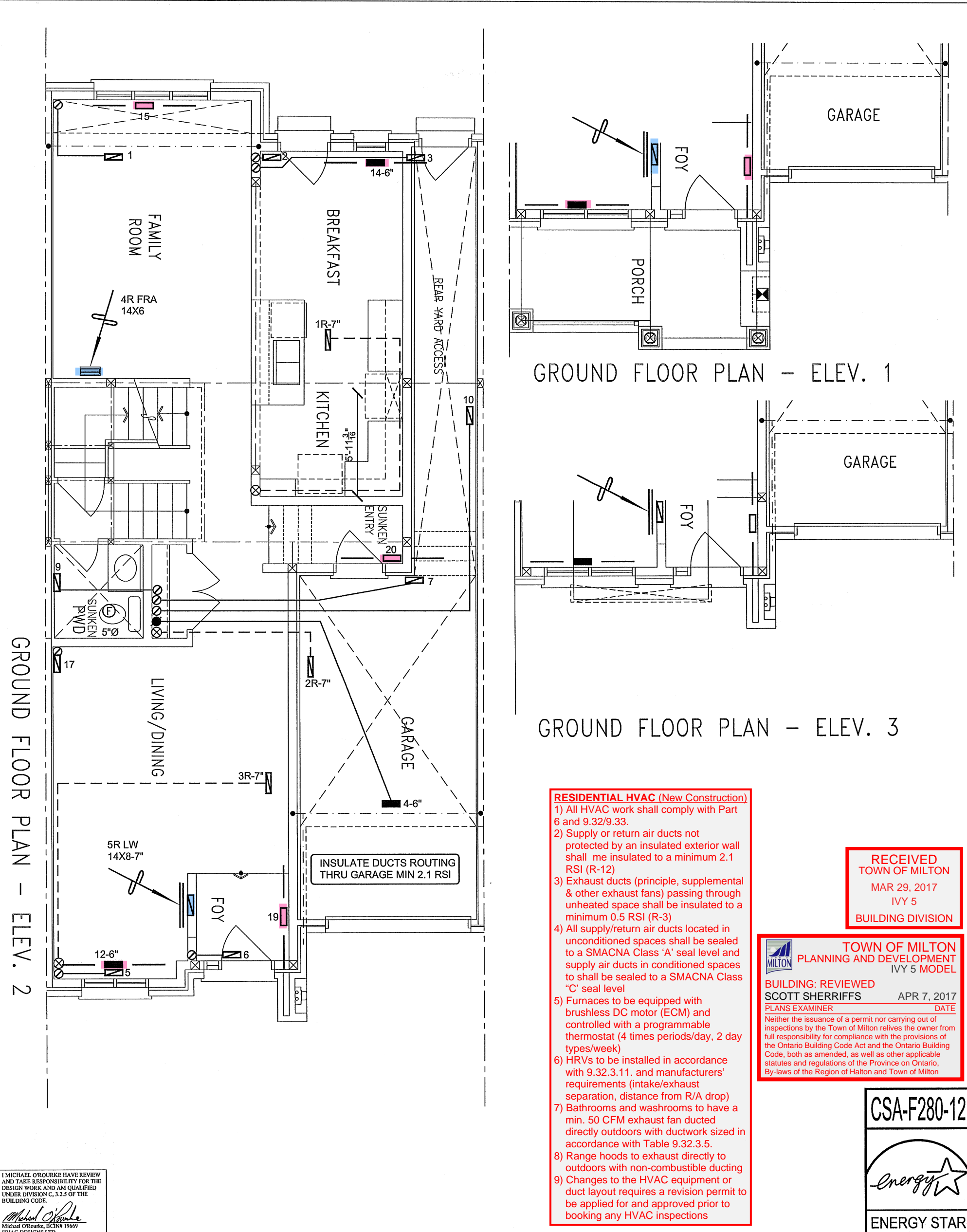


ENERGY STAR

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		

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client <div>GREENPARK HOMES</div>		<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 28277 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title <div>BASEMENT HEATING LAYOUT</div>	
Project Name <div>LECCO RIDGE MILTON, ONTARIO</div>			MAKE AMANA		3RD FLOOR				
			MODEL AMEC960402BNA-40		2ND FLOOR 10 3 3				
			INPUT 40 MBTU/H		1ST FLOOR 5 2 2				
			OUTPUT 38.4 MBTU/H		BASEMENT 3 1 0				
IVY 52027 sqft		COOLING 2.0 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/2017		
		FAN SPEED 890 cfm @ 0.6" w.c.					Scale 3/16" = 1'-0"		
							BCIN# 19669		
							LO# 71716		



- RESIDENTIAL HVAC (New Construction)**
- 1) All HVAC work shall comply with Part 6 and 9.32/9.33.
 - 2) Supply or return air ducts not protected by an insulated exterior wall shall be insulated to a minimum 2.1 RSI (R-12)
 - 3) Exhaust ducts (principle, supplemental & other exhaust fans) passing through unheated space shall be insulated to a minimum 0.5 RSI (R-3)
 - 4) All supply/return air ducts located in unconditioned spaces shall be sealed to a SMACNA Class 'A' seal level and supply air ducts in conditioned spaces to shall be sealed to a SMACNA Class 'C' seal level
 - 5) Furnaces to be equipped with brushless DC motor (ECM) and controlled with a programmable thermostat (4 times periods/day, 2 day types/week)
 - 6) HRVs to be installed in accordance with 9.32.3.11. and manufacturers' requirements (intake/exhaust separation, distance from R/A drop)
 - 7) Bathrooms and washrooms to have a min. 50 CFM exhaust fan ducted directly outdoors with ductwork sized in accordance with Table 9.32.3.5.
 - 8) Range hoods to exhaust directly to outdoors with non-combustible ducting
 - 9) Changes to the HVAC equipment or duct layout requires a revision permit to be applied for and approved prior to booking any HVAC inspections

RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

TOWN OF MILTON
PLANNING AND DEVELOPMENT
IVY 5 MODEL

BUILDING: REVIEWED
SCOTT SHERRIFFS APR 7, 2017
PLANS EXAMINER DATE

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

CSA-F280-12



ENERGY STAR

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.

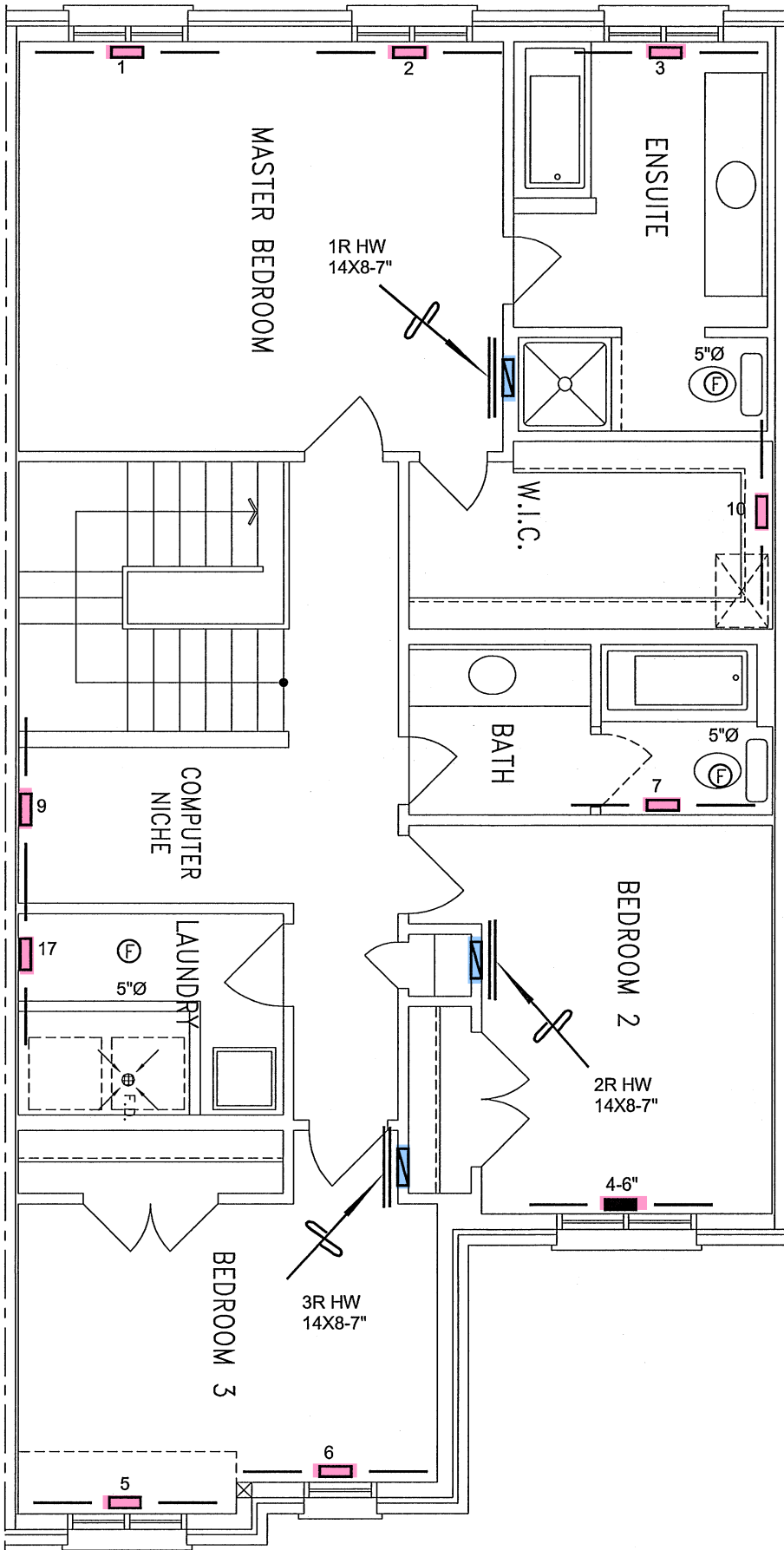
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	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		

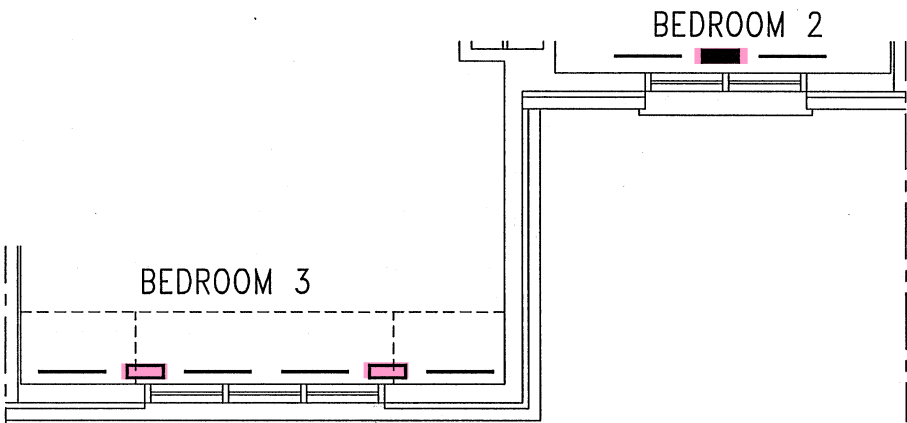
ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client GREENPARK 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 LECCO RIDGE MILTON, ONTARIO			Date JAN/2017	
IVY 5			Scale 3/16" = 1'-0"	
2027 sqft			BCIN# 19669	
			LO#	71716

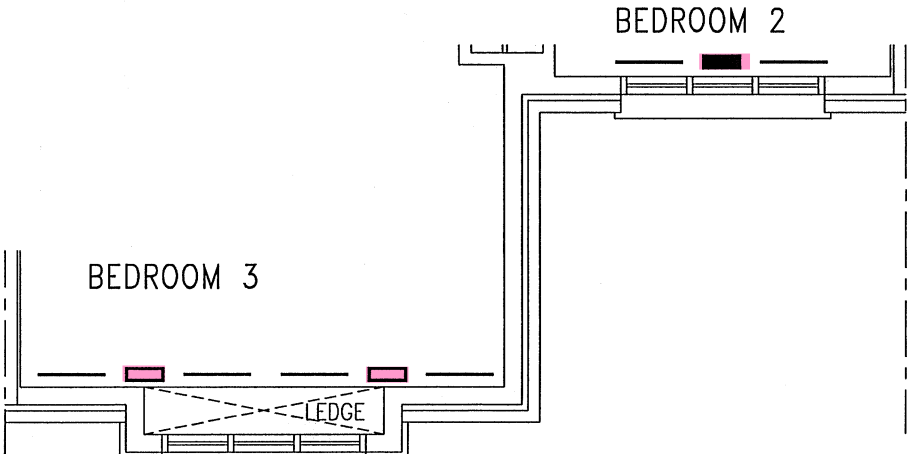
SECOND FLOOR PLAN - ELEV. 2



SECOND FLOOR PLAN - ELEV. 1



SECOND FLOOR PLAN - ELEV. 3



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, BCIN# 19669
HVAC DESIGNS LTD.

RECEIVED
TOWN OF MILTON
MAR 29, 2017
IVY 5
BUILDING DIVISION

TOWN OF MILTON
PLANNING AND DEVELOPMENT
IVY 5 MODEL
BUILDING: REVIEWED
SCOTT SHERRIFFS
APR 7, 2017
PLANS EXAMINER
DATE
Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

CSA-F280-12



ENERGY STAR

HVAC LEGEND						3.		
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	
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	
REVISIONS								
No.	Description	Date						

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client
GREENPARK HOMES
Project Name
LECCO RIDGE
MILTON, ONTARIO
IVY 5
2027 sqft

HVAC DESIGNS 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.

Sheet Title
SECOND FLOOR
HEATING
LAYOUT
Date
JAN/2017
Scale
3/16" = 1'-0"
BCIN# 19669
LO# 71716