

SITE NAME: LECCO RIDGE

BUILDER: GREENPARK HOMES

TYPE: JUNIPER 12

GFA: 2992

DATE: Dec-16

LO# 71356

WINTER NATURAL AIR CHANGE RATE 0.307

HEAT LOSS ΔT°F. 72

CSA-F280-12

SUMMER NATURAL AIR CHANGE RATE 0.105

HEAT GAIN ΔT°F. 14

ENERGYSTAR

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-4			
			36	29	7	26	34	21	12	6			
			10	9	9	10	10	10	9	9			
FACTORS													
GRS.WALL AREA	LOSS	GAIN	360	261	63	280	340	210	108	54			
GLAZING	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN			
NORTH	17.9	15.8	0	0	0	0	0	0	0	0	0	0	0
EAST	17.9	41.4	0	0	0	20	357	828	48	857	1988	0	0
SOUTH	17.9	24.8	0	0	0	0	0	0	39	696	966	45	803
WEST	17.9	41.4	34	607	1408	24	428	994	0	0	0	0	0
SKYLT.	30.6	101.2	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
NET EXPOSED WALL	2.6	0.5	326	853	165	200	523	101	54	141	27	240	628
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.6	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.4	0.7	306	422	210	162	223	111	70	96	48	196	269
NO ATTIC EXPOSED CLG	2.2	1.1	0	0	0	28	63	31	0	0	0	32	72
EXPOSED FLOOR	2.2	0.4	0	0	0	0	0	0	195	428	83	0	0
BASEMENT/CRAWL HEAT LOSS			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
SUBTOTAL HT LOSS			1882	1898	398	1681	2529	1494	976	392			
SUB TOTAL HT GAIN			1783	2154	298	1166	3238	1327	853	335			
LEVEL FACTOR / MULTIPLIER	0.20	0.27	0.20	0.27	0.20	0.27	0.20	0.27	0.20	0.27	0.20	0.27	0.20
AIR CHANGE HEAT LOSS			514	519	109	469	691	408	267	107			
AIR CHANGE HEAT GAIN			121	146	20	79	219	90	68	23			
DUCT LOSS			0	0	0	214	0	0	124	0			
DUCT GAIN			0	0	0	218	0	0	91	0			
HEAT GAIN PEOPLE	240	2	480	0	0	1	240	1	240	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			692	0	0	692	692	692	0	0	0	0	0
TOTAL HT LOSS BTU/H			2398	2417	507	2365	3221	1903	1366	499			
TOTAL HT GAIN x 1.3 BTU/H			3998	2989	414	3113	6706	3053	1302	465			

**TOWN OF MILTON**  
**PLANNING AND DEVELOPMENT**  
**JUNIPER 12F MODEL**

**BUILDING: REVIEWED**  
**SCOTT SHERRIFFS** APR 11, 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

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**TOWN OF MILTON**  
**MAR 29, 2017**  
**JUNIPER 12F**  
**BUILDING DIVISION**

ROOM USE	EXP. WALL	CLG. HT.	LVDN	OFF	KT/FM	LAUN	WR	FOY				WOD	BAS
			26	48	78	8	28	18				38	176
			10	10	10	9	10	10				10	10
FACTORS													
GRS.WALL AREA	LOSS	GAIN	260	480	780	72	280	180				361	1258
GLAZING	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN		LOSS	GAIN
NORTH	17.9	15.8	0	0	0	17	303	269	11	196	174	10	179
EAST	17.9	41.4	0	0	0	0	0	0	0	0	0	16	286
SOUTH	17.9	24.8	46	821	1139	30	536	743	47	839	1164	0	0
WEST	17.9	41.4	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	30.6	101.2	0	0	0	93	1660	3852	0	0	0	0	0
DOORS	24.1	4.7	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	2.6	0.5	214	560	108	393	1028	199	640	1676	324	55	144
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.6	0	0	0	0	0	0	0	0	0	249	652
EXPOSED CLG	1.4	0.7	0	0	0	20	28	14	36	60	25	134	361
NO ATTIC EXPOSED CLG	2.2	1.1	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.2	0.4	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
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS			1381	2609	4223	744	1329	1296				228	761
SUB TOTAL HT GAIN			1248	2805	5365	444	393	716				147	7891
LEVEL FACTOR / MULTIPLIER	0.30	0.45	0.30	0.45	0.30	0.45	0.30	0.45	0.30	0.45		0.50	0.95
AIR CHANGE HEAT LOSS			826	1183	1916	203	603	588					8194
AIR CHANGE HEAT GAIN			84	190	363	30	27	48					44
DUCT LOSS			0	0	0	0	0	0					0
DUCT GAIN			0	0	0	0	0	0					0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			692	692	692	692	692	692	0	0	0	0	0
TOTAL HT LOSS BTU/H			2008	3792	6139	947	1932	1884				761	16085
TOTAL HT GAIN x 1.3 BTU/H			2631	4792	8345	1516	546	993				191	711

TOTAL HEAT GAIN BTU/H:

41219

TONS: 3.43

LOSS DUE TO VENTILATION LOAD BTU/H: 2354

STRUCTURAL HEAT LOSS: 48210

TOTAL COMBINED HEAT LOSS BTU/H: 50564

SITE NAME: LECCO RIDGE  
BUILDER: GREENPARK HOMES

TYPE: JUNIPER 12

DATE: Dec-16

GFA: 2992 LO# 71356

HEATING CFM 1316 COOLING CFM 1316  
TOTAL HEAT LOSS 48,210 TOTAL HEAT GAIN 40,764  
AIR FLOW RATE CFM 27.3 AIR FLOW RATE CFM 32.28

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

~\*AMANA  
AMVC960804CNA 80  
FAN SPEED LOW 1316  
MEDLOW 0  
MEDIUM 1389  
MEDIUM HIGH 0  
HIGH 1396  
AFUE = 96.0 %  
INPUT (BTU/H) = 80,000  
OUTPUT (BTU/H) = 76,800  
DESIGN CFM = 1316  
CFM @ .6" E.S.P.  
TEMPERATURE RISE 54 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	13	8	5
R/A	0	0	4	3	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	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	ENS	BED-3	MBR	ENS-4	OFF	OFF	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	BED-4	LV/DN	BAS	BAS	BAS
RM LOSS MBH.	1.20	1.21	0.51	2.35	1.61	0.95	1.37	1.21	1.61	1.20	0.50	1.90	1.90	2.05	2.05	2.05	0.95	1.93	1.88	0.95	2.01	3.37	3.37	3.37
CFM PER RUN HEAT	33	33	14	64	44	26	37	33	44	33	14	52	52	56	56	56	26	53	51	26	55	92	92	92
RM GAIN MBH.	2.00	1.49	0.41	3.11	2.85	1.53	1.30	1.49	2.85	2.00	0.47	2.40	2.40	2.78	2.78	2.78	1.52	0.55	0.99	1.53	2.63	0.18	0.18	0.18
CFM PER RUN COOLING	65	48	13	100	92	49	42	48	92	65	15	77	77	90	90	90	49	18	32	49	85	6	6	6
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.16	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	0.16	0.16
ACTUAL DUCT LGH.	44	54	58	87	84	62	82	42	71	32	44	62	68	21	46	42	32	11	56	49	41	13	30	52
EQUIVALENT LENGTH	110	170	180	140	160	180	150	150	190	180	150	180	150	130	150	170	120	190	130	140	130	140	160	110
TOTAL EFFECTIVE LENGTH	154	224	238	227	244	242	232	192	261	212	194	242	218	151	196	212	152	201	186	189	171	153	190	162
ADJUSTED PRESSURE	0.11	0.08	0.07	0.07	0.07	0.07	0.07	0.09	0.06	0.08	0.09	0.07	0.08	0.11	0.08	0.08	0.11	0.09	0.09	0.09	0.09	0.11	0.09	0.1
ROUND DUCT SIZE	5	4	4	6	6	5	4	4	6	5	4	6	5	5	6	6	4	5	4	4	5	5	6	5
HEATING VELOCITY (ft/min)	242	379	161	326	224	191	424	379	224	242	161	265	382	411	286	286	298	389	585	298	404	675	469	675
COOLING VELOCITY (ft/min)	477	551	149	510	469	360	482	551	469	477	172	393	565	661	459	562	562	132	367	562	624	44	31	44
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10
TRUNK	D	C	B	A	A	B	A	D	B	D	C	B	A	D	C	C	D	D	B	C	C	D	C	B

RUN #	25	26
ROOM NAME	BAS	BAS
RM LOSS MBH.	3.37	3.37
CFM PER RUN HEAT	92	92
RM GAIN MBH.	0.18	0.18
CFM PER RUN COOLING	6	6
ADJUSTED PRESSURE	0.16	0.16
ACTUAL DUCT LGH.	69	15
EQUIVALENT LENGTH	140	120
TOTAL EFFECTIVE LENGTH	209	135
ADJUSTED PRESSURE	0.08	0.12
ROUND DUCT SIZE	6	5
HEATING VELOCITY (ft/min)	469	675
COOLING VELOCITY (ft/min)	31	44
OUTLET GRILL SIZE	4X10	3X10
TRUNK	A	D

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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 A	289	0.07	9.1	10	x	8	520		TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.05	0	0	x	8	0
TRUNK B	568	0.06	12.2	18	x	8	568		TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.05	0	0	x	8	0
TRUNK C	900	0.06	14.5	24	x	8	675		TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.05	0	0	x	8	0
TRUNK D	1318	0.06	16.7	28	x	10	678		TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.05	0	0	x	8	0
TRUNK E	0	0.00	0	0	x	8	0		TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.05	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0		TRUNK L	0	0.00	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	1316	0.05	17.5	28	x	10	677
																	TRUNK Y	640	0.05	13.3	20	x	8	576
																	TRUNK Z	920	0.05	15.3	28	x	8	591
																	DROP	1316	0.05	17.5	24	x	12	658

RETURN AIR #	1	2	3	4	5	6	7								BR
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AIR VOLUME	200	175	125	135	155	175	155	0	0	0	0	0	0	0	196
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
ACTUAL DUCT LGH.	33	53	65	75	38	36	54	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	135	145	185	230	225	185	185	0	0	0	0	0	0	0	185
TOTAL EFFECTIVE LH	168	198	250	305	263	221	239	1	1	1	1	1	1	1	199
ADJUSTED PRESSURE	0.09	0.07	0.06	0.05	0.06	0.07	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.07
ROUND DUCT SIZE	7.5	7.5	6.9	7.5	7.5	7.5	7.5	0	0	0	0	0	0	0	7.9
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	14	14	0	0	0	0	0	0	0	24

TYPE: JUNIPER 12  
SITE NAME: LECCO RIDGE

LO # 71356

**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	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Kitchen & Bathrooms	<u>5</u> @ 10.6 cfm	<u>53</u> cfm
Other Rooms	<u>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Table 9.32.3.A.	TOTAL	<u>159.0</u> 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	<u>79.5</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>159</u>	cfm
Less Principal Ventil. Capacity	<u>86</u>	cfm
Required Supplemental Capacity	<u>73.0</u>	cfm

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

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	$\Delta T$ °F
86.0 CFM	72 F
X	X
FACTOR	% LOSS
1.08	0.35

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>
BATH	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-4	QTXEN050C	50	<input checked="" type="checkbox"/>
W/R	QTXEN050C	50	<input checked="" type="checkbox"/>

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 40H+	
<u>86</u> cfm high	<u>37</u> cfm low	
<u>65</u> % Sensible Efficiency	<input checked="" type="checkbox"/> HVI Approved	
@ 32 deg F ( 0 deg C)		

LOCATION OF INSTALLATION	
Lot:	
Township:	
Address:	
Roll #	

**RECEIVED  
TOWN OF MILTON  
MAR 29, 2017  
JUNIPER 12F  
BUILDING DIVISION**

BUILDER:		TOWN OF MILTON PLANNING AND DEVELOPMENT JUNIPER 12F MODEL	
Name:	GR	DATE	APR 11, 2017
Address:		PLANS EXAMINER	SCOTT SHERRIFFS
City:		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	
Telephone #:			

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:	December-16

**HEAT LOSS AND GAIN SUMMARY SHEET**

MODEL: JUNIPER 12	BUILDER: GREENPARK HOMES
SFQT: 2992	SITE: LECCO RIDGE
LO# 71356	

**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:	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):	41260.5	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.5 ft
LENGTH: 38.0 ft	WIDTH: 50.0 ft	EXPOSED PERIMETER:	176.0 ft

**2012 OBC - COMPLIANCE PACKAGE**

Component	Compliance Package ENERGYSTAR
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 + 5
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

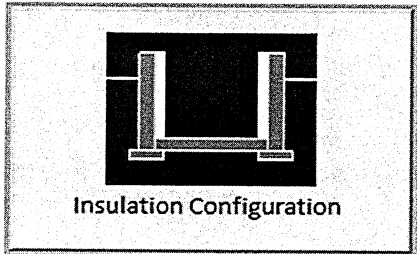
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BUILDING DIVISION

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):	11.6	
Floor Width (m):	15.2	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.9	
Depth Below Grade (m):	2.0	
Window Area (m <sup>2</sup> ):	0.8	
Door Area (m <sup>2</sup> ):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	1719	

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# 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):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m <sup>3</sup> ):	1168.4			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1557.5 cm <sup>2</sup>		
	3.57	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):	0.307			
Cooling Air Leakage Rate (ACH/H):	0.105			

TYPE: JUNIPER 12  
LO# 71356RECEIVED  
TOWN OF MILTON  
MAR 29, 2017  
JUNIPER 12F  
BUILDING DIVISION



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



TOWN OF MILTON  
PLANNING AND DEVELOPMENT  
JUNIPER 12F MODEL

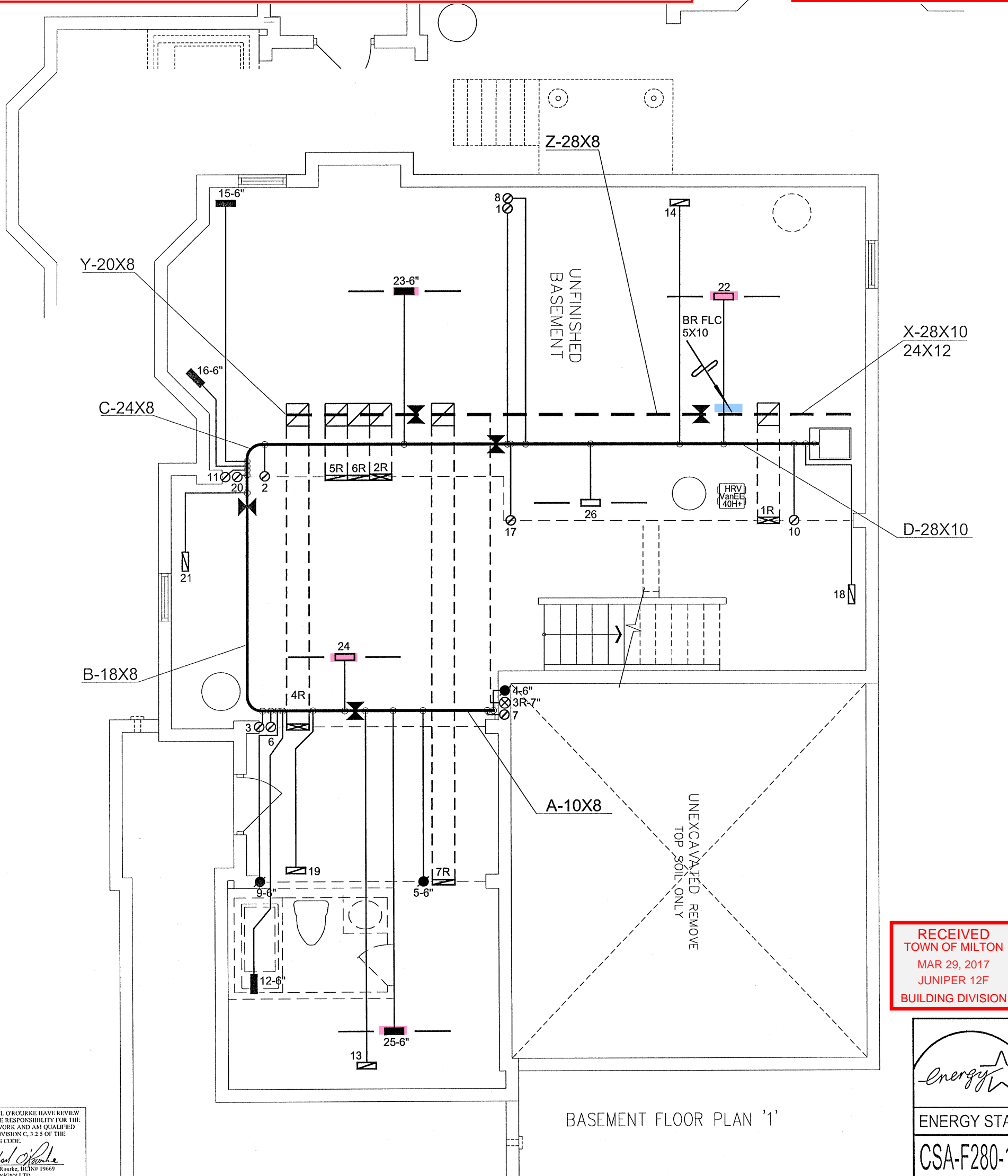
BUILDING: REVIEWED  
SCOTT SHERRIFFS

APR 11, 2017

PLANS EXAMINER

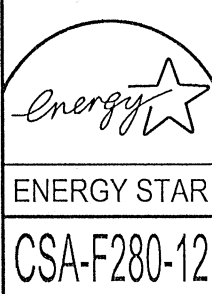
DATE

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



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.

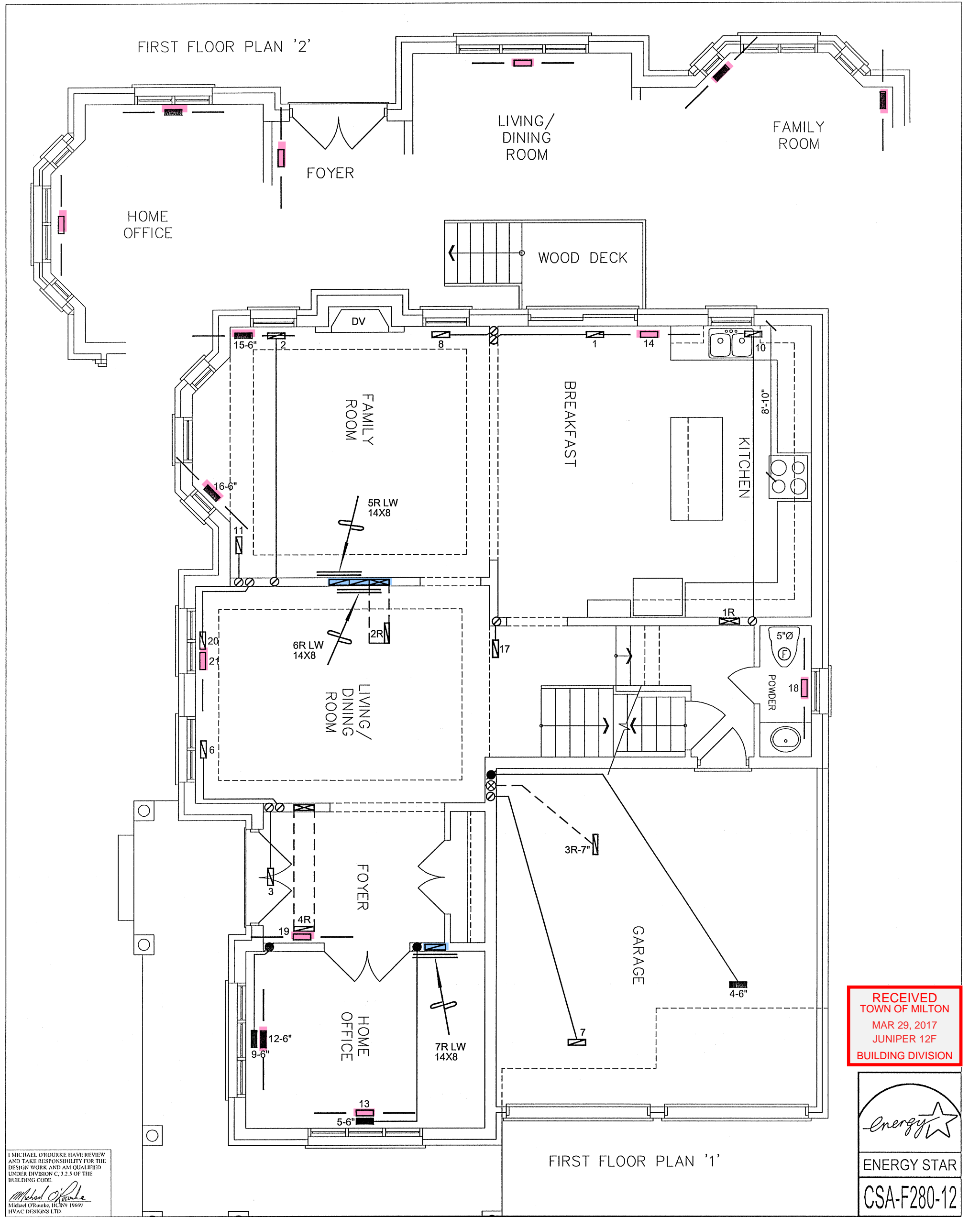
RECEIVED  
TOWN OF MILTON  
MAR 29, 2017  
JUNIPER 12F  
BUILDING DIVISION



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		

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.

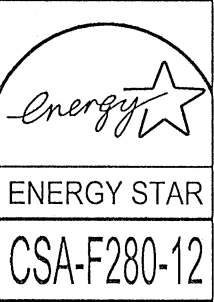
Client GREENPARK HOMES		<div></div> <div>375 Finley Ave - Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div>		HEAT LOSS 50564 BTU/H		# OF RUNS		S/A		R/A		FANS		Sheet Title	
Project Name LECCO RIDGE MILTON, ONTARIO				UNIT DATA		3RD FLOOR					BASEMENT HEATING LAYOUT				
				MAKE AMANA		2ND FLOOR		13	4	5					
				MODEL AMVC960804CNA		1ST FLOOR		8	3	2					
JUNIPER 12      2976 sqft		INPUT 80		MBTU/H		BASEMENT		5	1	0	Date DEC/2016				
		OUTPUT 76.8		MBTU/H		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									
		COOLING 3.5		TONS											
		FAN SPEED 1316		cfm @ 0.5" w.c.											
		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.						Scale 3/16" = 1'-0"		BCIN# 19669					
								LO#		71356					



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RECEIVED  
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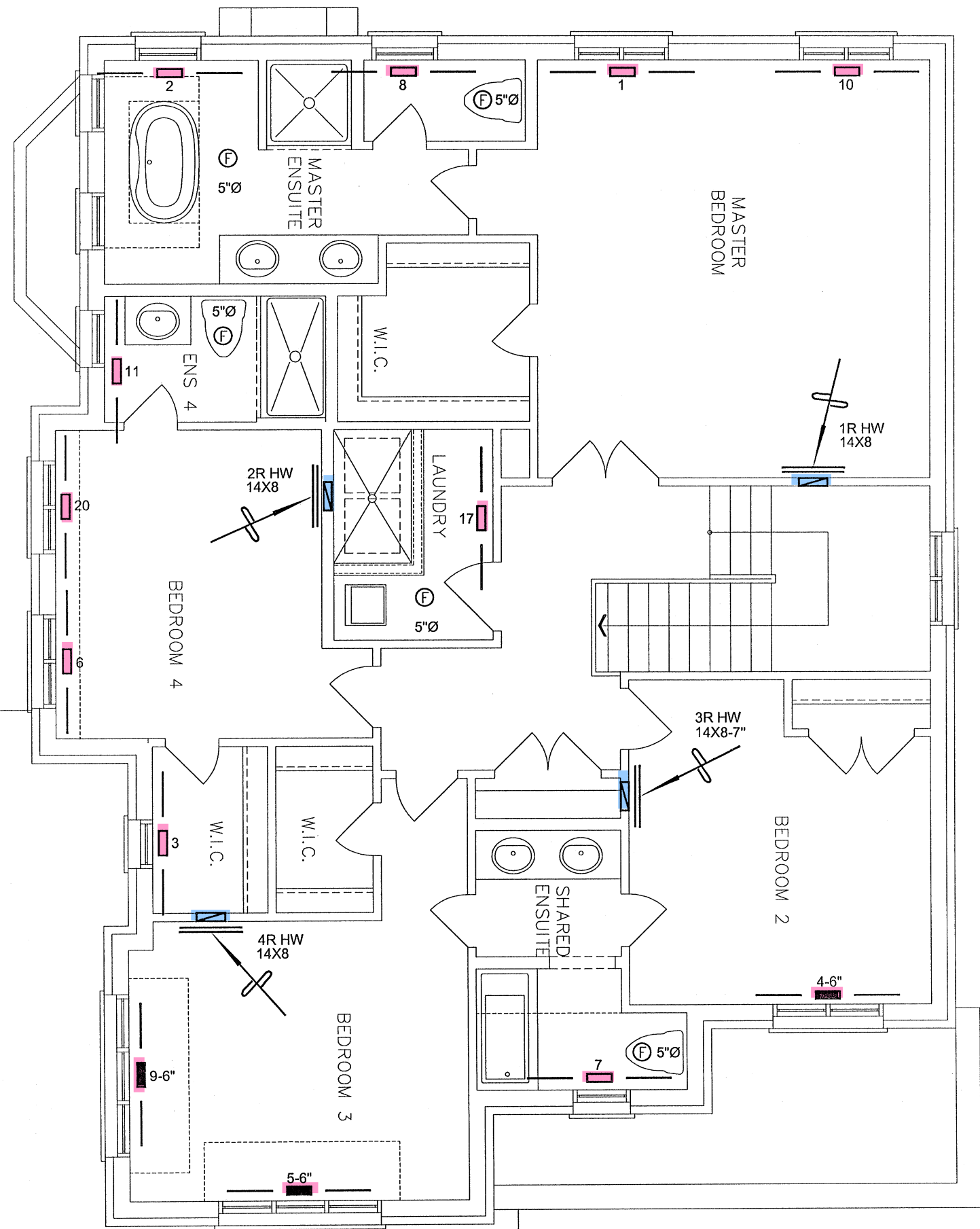
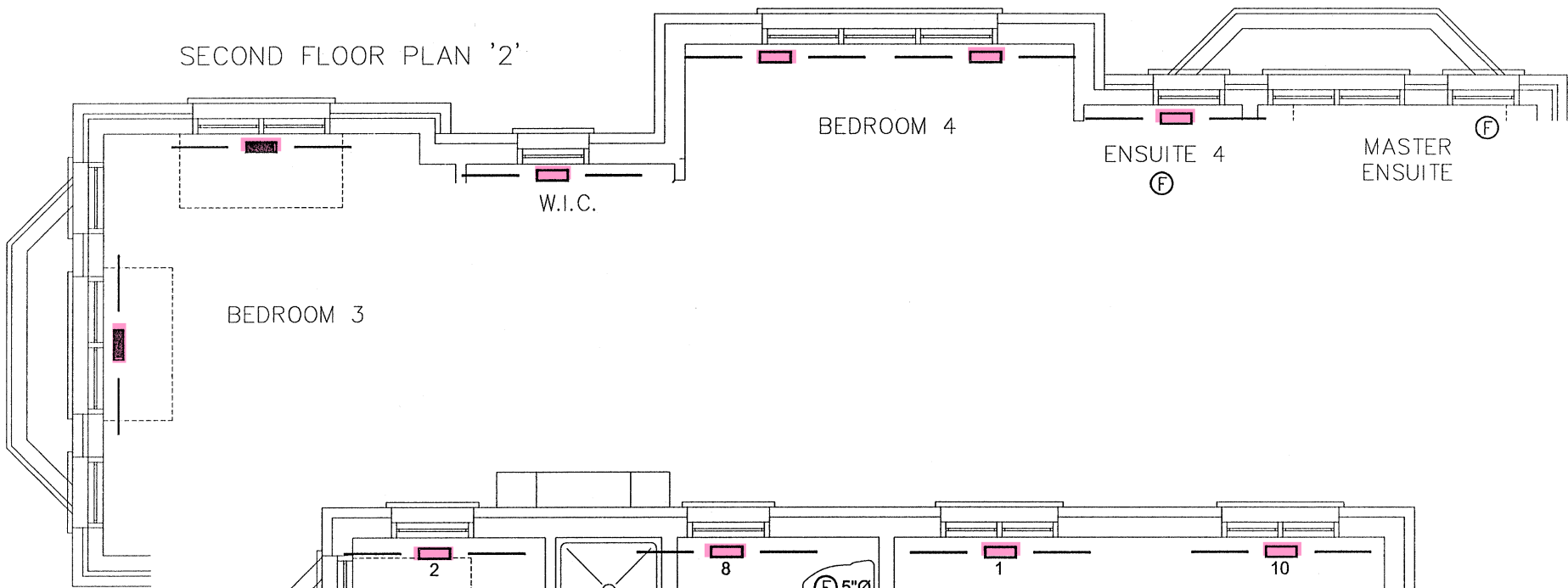
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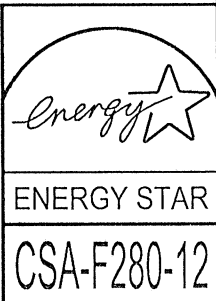
Client <div>GREENPARK HOMES</div>		<div><div>375 Finley Ave - Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div></div>	<div><div>TOWN OF MILTON PLANNING AND DEVELOPMENT JUNIPER 12F MODEL</div><div>BUILDING: REVIEWED SCOTT SHERRIFFS      APR 11, 2017 PLANS EXAMINER      DATE</div><div>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</div></div>	Sheet Title <div>FIRST FLOOR HEATING LAYOUT</div>	
Project Name <div>LECCO RIDGE MILTON, ONTARIO</div>				Date DEC/2016	Scale 3/16" = 1'-0"
JUNIPER 12      2976 sqft				BCIN# 19669	
			LO#	71356	



SECOND FLOOR PLAN '2'



SECOND FLOOR PLAN '1'



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HVAC LEGEND								3.		
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Client <b>GREENPARK HOMES</b>		 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.	 <b>TOWN OF MILTON</b> PLANNING AND DEVELOPMENT JUNIPER 12F MODEL <b>BUILDING: REVIEWED</b> SCOTT SHERRIFFS APR 11, 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	Sheet Title <b>SECOND FLOOR HEATING LAYOUT</b>	
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JUNIPER 12 2976 sqft				Date DEC/2016	
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