


SITE NAME: LECCO RIDGE				DATE: Dec-16				WINTER NATURAL AIR CHANGE RATE 0.307				HEAT LOSS AT °F. 72				CSA-F280-12			
BUILDER: GREENPARK HOMES				TYPE: JUNIPER 9				LO# 71354				SUMMER NATURAL AIR CHANGE RATE 0.105				HEAT GAIN AT °F. 14			
ROOM USE				MBR				BED-2				BED-3				BED-4			
EXP. WALL				36				15				33				38			
CLG. HT.				10				9				10				9			
FACTORS																			
GRS.WALL AREA				360				135				330				380			
GLAZING				LOSS GAIN				LOSS GAIN				LOSS GAIN				LOSS GAIN			
NORTH				17.9 15.8 0 0 0 0 9 161 143				15 268 238 0 0 0 0 0 0 0				7 125 111 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0			
EAST				17.9 41.4 0 0 0 0 0 0 0				0 0 0 0 48 857 1988 36 643 1491 0 0 0 0				0 0 0 0 0 0 0 11 196 456 0 0 0 0				0 0 0 0 0 0 0 7 125 173			
SOUTH				17.9 24.8 0 0 0 0 0 0 0				0 0 0 0 0 0 0 17 303 421 0 0 0 0				13 232 322 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0			
WEST				17.9 41.4 34 607 1408 18 321 746				0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0			
SKYLT.				30.6 101.2 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0 0				0 0 0 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				0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0			
NET EXPOSED WALL				2.6 0.5 326 853 165 225 589 114				120 314 61 282 738 143 327 856 165 56 147 28				113 296 57 133 348 67 74 194 37				133 348 67 74 194 37			
NET EXPOSED BSMT WALL ABOVE GR				3.3 0.6 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0			
EXPOSED CLG				1.4 0.7 315 434 216 169 219 109				265 365 182 233 321 160 261 360 179 147 203 101				216 298 148 114 157 78 180 248 123				180 248 123			
NO ATTIC EXPOSED CLG				2.2 1.1 0 0 0 0 28 63 31				0 0 0 0 18 40 20 30 67 33 0 0 0 0				0 0 0 0 0 0 0 0 0 0 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 0 251 550 106 0 0 0 0				111 243 47 0 0 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 0 0				0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 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 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0			
SUBTOTAL HT LOSS				1894 1353				947 2507				717 825				701 567			
SUB TOTAL HT GAIN				1789 1142				480 2417				2290 287				527 601			
LEVEL FACTOR / MULTIPLIER				0.20 0.32				0.20 0.32				0.20 0.32				0.20 0.32			
AIR CHANGE HEAT LOSS				615 439				307 814				233 268				228 184			
AIR CHANGE HEAT GAIN				161 103				43 218				26 47				54 30			
DUCT LOSS				0 0				0 332				0 95				0 0			
DUCT GAIN				0 0				0 372				0 31				0 0			
HEAT GAIN PEOPLE				240 2 480 0 0				1 240 1 240 1 240 0 0				0 1 240 0 1 240 0 0				0 0 0 0 0 0 0 0 0 0			
HEAT GAIN APPLIANCES/LIGHTS				845 845				845 845				845 845				845 845			
TOTAL HT LOSS BTU/H				2509 1792				1264 3652				2952 1045				1093 929			
TOTAL HT GAIN x 1.3 BTU/H				4257 1618				2090 5318				4655 447				2157 852			

ROOM USE				LV/DN				OFF				KT/FM				LAUN				W/R				FOY																WOD				BAS							
EXP. WALL				21				37				75				21				10				33																38				194							
CLG. HT.				10				10				10				11				10				10																10				10							
FACTORS																																																			
GRS.WALL AREA				210				370				750				231				100				330																361				1375							
GLAZING				LOSS GAIN				LOSS GAIN				LOSS GAIN				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	9	161	143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	161	143													
EAST				17.9	41.4	0	0	0	0	39	696	1615	0	0	0	0	0	0	0	0	0	0	0	0	0	20	357	828	0	0	0	0	0	0	0	0	0	0													
SOUTH				17.9	24.8	38	678	941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
WEST				17.9	41.4	0	0	0	0	0	0	0	105	1874	4349	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
SKYLT.				30.6	101.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	20	481	93	0	0	0	0	0	0	20	481	93	0	0	0	0	0	0	20	481	93														
NET EXPOSED WALL				2.6	0.5	172	460	87	331	866	167	645	1688	326	202	529	102	100	262	51	290	769	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
NET EXPOSED BSMT WALL ABOVE GR				3.3	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	228	761	147														
EXPOSED CLG				1.4	0.7	0	0	0	0	0	0	10	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
NO ATTIC EXPOSED CLG				2.2	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	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				0																				6696							
SLAB ON GRADE HEAT LOSS				0				0				0				0				0				0																				0							
SUBTOTAL HT LOSS				1128				1562				3576				1170				262				1597																761				8899							
SUB TOTAL HT GAIN				1028				1783				4682				338				51				1068																147				538							
LEVEL FACTOR / MULTIPLIER				0.30 0.61				0.30 0.61				0.30 0.61				0.30 0.61				0.30 0.61				0.30 0.61																0.50 0.99											
AIR CHANGE HEAT LOSS				694				961				2199				720				161				982																				9525							
AIR CHANGE HEAT GAIN				93				160				421				30				6				96																				62							
DUCT LOSS				0				0				0				0				0				0																				0							
DUCT GAIN				0				0				0				0				0				0																				0							
HEAT GAIN PEOPLE				240				0				1				240				1				0				0				0				0				0				0				0			
HEAT GAIN APPLIANCES/LIGHTS				845				845				845				845				0				0																				0							
TOTAL HT LOSS BTU/H				1822				2523				5774				1890				423				2579																761				18425							
TOTAL HT GAIN x 1.3 BTU/H				2555				3624				8045				1889				72				1514																191				779							



TOWN OF MILTON

PLANNING AND DEVELOPMENT

JUNIPER 9 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

RECEIVED

TOWN OF MILTON

MAR 29, 2017

JUNIPER 9

BUILDING DIVISION

SITE NAME: LECCO RIDGE
BUILDER: GREENPARK HOMES

TYPE: JUNIPER 9

DATE: Dec-16

GFA: 3481 LO# 71354

HEATING CFM 1316 COOLING CFM 1316
TOTAL HEAT LOSS 50,173 TOTAL HEAT GAIN 40,535
AIR FLOW RATE CFM 26.23 AIR FLOW RATE CFM 32.47

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	5	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	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	ENS	BED-2	BED-3	BED-4	BATH	BED-3	BED-4	MBR	ENS-2	LV/DN	OFF	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	ENS-4	BED-5	BAS	BAS	BAS
RM LOSS MBH.	1.25	0.90	0.90	1.25	1.83	1.48	1.05	1.83	1.48	1.25	0.75	1.82	2.52	1.92	1.92	1.92	1.89	0.42	2.58	0.93	1.09	3.84	3.84	3.84
CFM PER RUN HEAT	33	23	23	33	48	39	27	48	39	33	20	48	66	50	50	50	50	11	68	24	29	101	101	101
RM GAIN MBH.	2.13	0.81	0.81	2.09	2.66	2.33	0.45	2.66	2.33	2.13	0.47	2.55	3.62	2.68	2.68	2.68	1.89	0.07	1.51	0.85	2.16	0.19	0.19	0.19
CFM PER RUN COOLING	69	26	26	68	86	76	15	86	76	69	15	83	118	87	87	87	61	2	49	28	70	6	6	6
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	27	59	43	47	47	75	51	50	66	41	21	39	59	22	31	39	44	19	45	65	50	38	18	13
EQUIVALENT LENGTH	160	150	120	160	120	160	160	130	130	130	170	140	140	150	140	110	110	140	130	140	150	100	110	150
TOTAL EFFECTIVE LENGTH	187	209	163	207	167	235	211	180	196	171	191	179	199	172	171	149	154	159	175	205	200	138	128	163
ADJUSTED PRESSURE	0.09	0.08	0.11	0.08	0.1	0.07	0.08	0.09	0.09	0.1	0.09	0.09	0.08	0.09	0.09	0.11	0.11	0.11	0.1	0.08	0.09	0.12	0.13	0.1
ROUND DUCT SIZE	5	4	4	5	5	6	4	5	5	5	4	5	6	5	5	5	5	4	5	4	5	5	5	6
HEATING VELOCITY (ft/min)	242	264	264	242	352	199	310	352	286	242	229	352	337	367	367	367	367	126	499	275	213	742	742	515
COOLING VELOCITY (ft/min)	507	298	298	499	631	388	172	631	558	507	172	609	602	639	639	639	448	23	360	321	514	44	44	31
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10
TRUNK	B	A	B	A	D	C	D	D	C	B	B	D	C	B	A	A	A	D	C	C	D	A	B	D

RUN #	25	26
ROOM NAME	BAS	BAS
RM LOSS MBH.	3.84	3.84
CFM PER RUN HEAT	101	101
RM GAIN MBH.	0.19	0.19
CFM PER RUN COOLING	6	6
ADJUSTED PRESSURE	0.16	0.16
ACTUAL DUCT LGH.	37	49
EQUIVALENT LENGTH	120	140
TOTAL EFFECTIVE LENGTH	157	189
ADJUSTED PRESSURE	0.1	0.09
ROUND DUCT SIZE	6	6
HEATING VELOCITY (ft/min)	515	515
COOLING VELOCITY (ft/min)	31	31
OUTLET GRILL SIZE	4X10	4X10
TRUNK	D	C

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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	307	0.08	9	10	x	8	553	TRUNK G	0	0.00	0	0	x	8	0	0	0	0	0
TRUNK B	567	0.08	11.3	16	x	8	638	TRUNK H	0	0.00	0	0	x	8	0	0	0	0	0
TRUNK C	337	0.07	9.6	10	x	8	607	TRUNK I	0	0.00	0	0	x	8	0	0	0	0	0
TRUNK D	750	0.07	13	20	x	8	675	TRUNK J	0	0.00	0	0	x	8	0	0	0	0	0
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	x	8	0	0	0	0	0
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0	0	0	0	0
RETURN AIR #	1	2	3	4	5	6	7							BR					
AIR VOLUME	135	85	175	85	175	345	85	0	0	0	0	0	0	0	231				
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.	42	58	57	59	22	24	54	1	1	1	1	1	1	1	14				
EQUIVALENT LENGTH	230	185	160	195	185	225	205	0	0	0	0	0	0	0	145				
TOTAL EFFECTIVE LH	272	243	217	254	207	249	259	1	1	1	1	1	1	1	159				
ADJUSTED PRESSURE	0.05	0.06	0.07	0.06	0.07	0.06	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.09				
ROUND DUCT SIZE	7.5	6	7.5	6	7.5	10.1	6	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				
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
INLET GRILL SIZE	14	14	14	14	14	30	14	0	0	0	0	0	0	0	24				

TYPE: JUNIPER 9
SITE NAME: LECCO RIDGE

LO # 71354

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>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Kitchen & Bathrooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Other Rooms	<u>5</u> @ 10.6 cfm	<u>53.0</u> cfm
Table 9.32.3.A.	TOTAL	<u>201.4</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>95.4</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>201.4</u>	cfm
Less Principal Ventil. Capacity	<u>96</u>	cfm
Required Supplemental Capacity	<u>105.4</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 50H
Location:	BSMT
<u>96.0</u> cfm	<u>3.0</u> sones
<input checked="" type="checkbox"/>	HVI Approved

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

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>
BATH	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>
W/R	QTXEN050C	50	<input checked="" type="checkbox"/>

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 50H	
<u>96</u> cfm high	<u>47</u> cfm low	
<u>66</u> % Sensible Efficiency	<input checked="" type="checkbox"/>	HVI Approved
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Cd
Township	Pl
Address	
Roll #	

BUILDER:		GR
Name:	SCOTT SHERRIFFS	
Address:		
City:		
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

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

TOWN OF MILTON
PLANNING AND DEVELOPMENT
JUNIPER 9 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

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: JUNIPER 9	BUILDER: GREENPARK HOMES
SFQT: 3481	LO# 71354
	SITE: LECCO RIDGE

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):	47967.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.5 ft
LENGTH: 59.0 ft	WIDTH: 38.0 ft	EXPOSED PERIMETER:	194.0 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

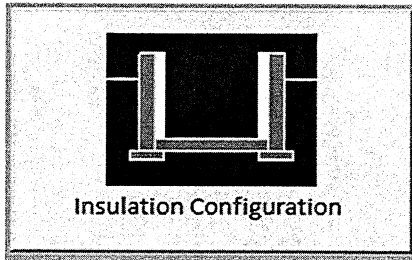
RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

INDIVIDUAL BCIN: 19669

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):	18.0	 Insulation Configuration
Floor Width (m):	11.6	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.9	
Depth Below Grade (m):	2.0	
Window Area (m ²):	0.8	
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):	1962	

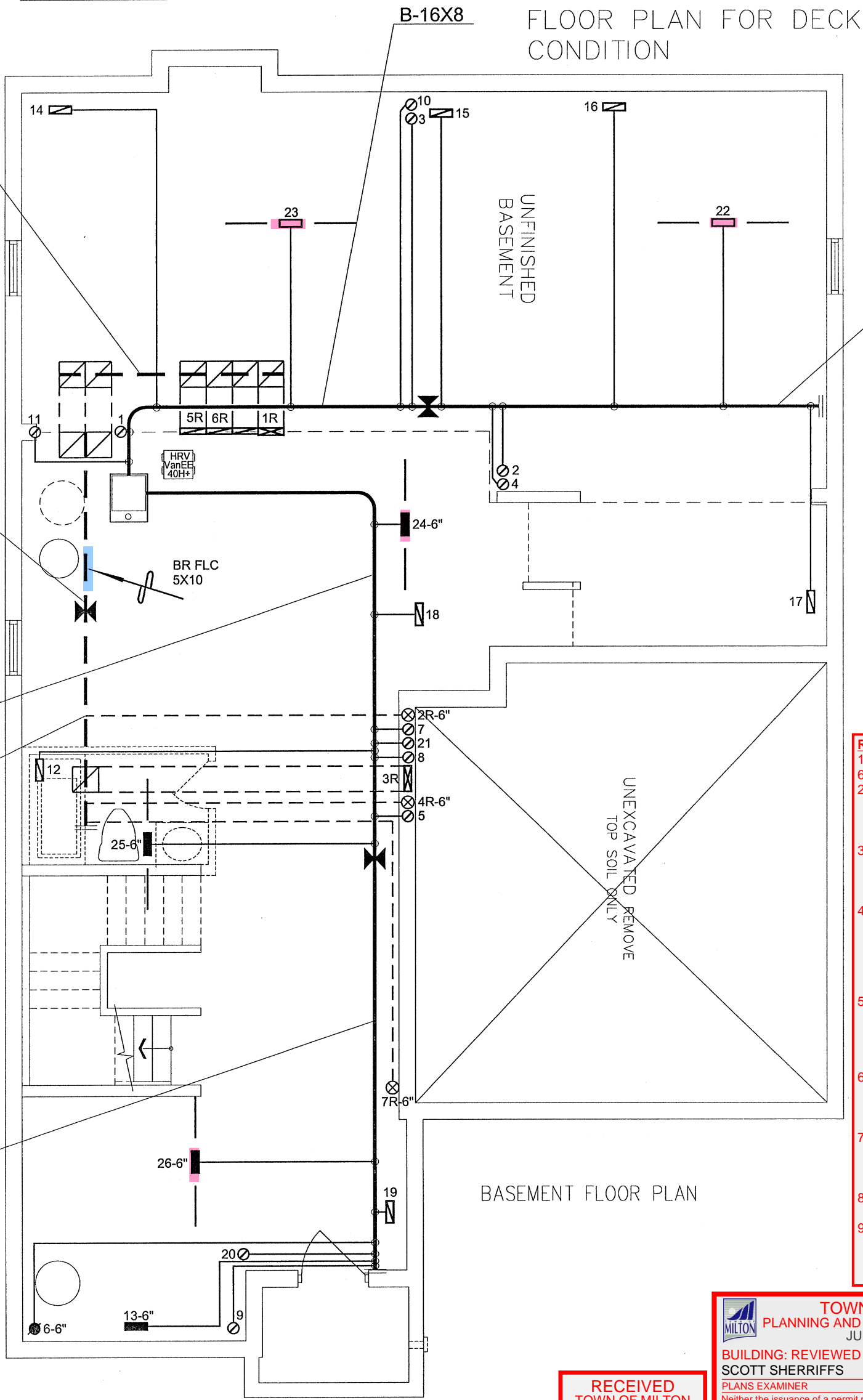
TYPE: JUNIPER 9
LO# 71354RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1358.3			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1810.6 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	45.3	45.3		
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 9
LO# 71354RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
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

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.

TOWN OF MILTON
PLANNING AND DEVELOPMENT
JUNIPER 9 MODEL

BUILDING: REVIEWED
SCOTT SHERRIFFS
APR 11, 2017
PLANS EXAMINER DATE

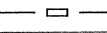



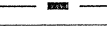



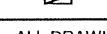



Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of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

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

Energy 

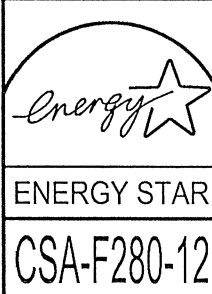
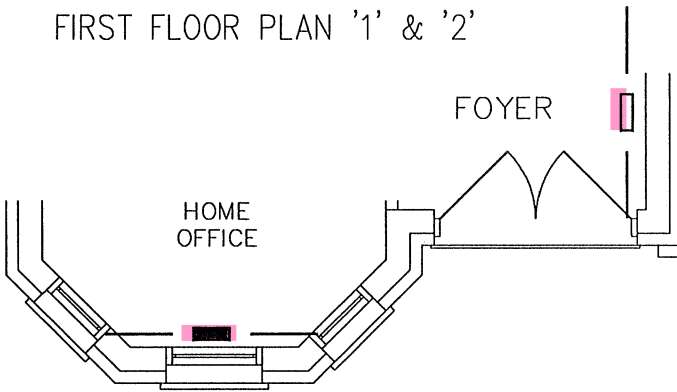
ENERGY STAR

CSA-F280-12

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		<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 52725 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title		
GREENPARK HOMES			MAKE	AMANA	3RD FLOOR				BASEMENT HEATING LAYOUT	
Project Name			MODEL	AMVC960804CNA	2ND FLOOR	13	5	5	Date	
LECCO RIDGE MILTON, ONTARIO			INPUT	80 MBTU/H	1ST FLOOR	8	2	2	DEC/2016	
JUNIPER 9			OUTPUT	76.8 MBTU/H	BASEMENT	5	1	0	Scale	
3481 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				3/16" = 1'-0"	
			FAN SPEED	1316 cfm @ 0.5" w.c.					BCIN# 19669	
									LO# 71354	



Client				Sheet Title
GREENPARK HOMES	375 Finley Ave - Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacadesigns.ca Web: www.hvacadesigns.ca Specializing in Residential Mechanical Design Services		BUILDING: REVIEWED SCOTT SHERRIFFS APR 11, 2017 <u>PLANS EXAMINER</u> <u>DATE</u> 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	FIRST FLOOR HEATING LAYOUT
Project Name LECCO RIDGE MILTON, ONTARIO	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.			Date DEC/2016
JUNIPER 9 3481 sqft				Scale 3/16" = 1'-0"
				BCIN# 19669
				LO# 71354

