Load Report

Manual J8 Load Calculation

Project #:0001

December 30, 2014

Project Information

Project #:

Name: 0001

Location:

Notes:

Manual J Load Summary

Total Heating: 38,598 Btu/hr Total Sensible: 0 Btu/hr Total Latent: 0 Btu/hr

Outdoor Conditions

Location:		Suffolk County AFB,New York
Elevation:		67 ft
Latitude:		40
	Heating	**Cooling**
Dry Bulb:	10.0 °F	83.0 °F
Daily Range:		Medium
Wet Bulb:		71.0 °F

Indoor Conditions

	Heating	**Cooling**
Room Temp:	68 - 70 °F	
Design Temp Diff:	60.0 °F	9.0 °F
Humidity:	40	50
Moisture Diff (Grains):		32.3

Infiltration

Method:	Blower Door
Stories:	1
Exposure Category:	Three or Four Exposures
Wind Shielding:	2 - Two Unshielded Exposures
Test Values (C/n):	0/0
Net Air Changes (Heat/Cool):	0.00 / 0.00
Net Flow (Heat/Cool):	0 cfm / 124 cfm

Ventilation

Num Occupants: 4

Heating		**Cooling**	
Type:	Outside Air	Type:	Outside Air
ACH:	0.35	ACH:	Infinity
Outside Air:	117 cfm	Outside Air:	0 cfm
Other Exhaust:	117 cfm	Other Exhaust:	121 cfm

Floorplan/Levels

Basement	1,423 ft²	Total Heated Area:	3,355 ft²
Main Floor	1,932 ft²	Total Cooled Area:	0 ft²

Length = ft Area = ft² Temperature = °F Flowrate = USGPM Heat Loss = Btu/hr Unit Heat Loss = Btu/hr·ft² Rv = hr·ft²·°F/btu
Head Loss = ft water RH = Radiant Floor Heating BB = Baseboard FA = Forced Air OTH = Other Heating SM = Snowmelt N = Not Heated

Created Using LoopCAD 2014 Uponor(US) (2/20/2015)
Version:5.0.0794 (Trial)

See end of report for important Notes and Disclaimers.

Constructions

Walls

Code	Description	R-Value	Area	Heating	Cooling
15C11-0m	Four Inch Concrete; Metal Framing; R-11 Insulation in 2 x 4 Stud Cavity; Plus Interior Finish	7	248	2,131	0
15C19-0w	Four Inch Concrete; Wood Framing; R-19 Insulation in 2 x 6 Stud Cavity; Plus Interior Finish	13	50	223	0
12F-6sw	Frame Wall or Partition; Stucco or Wood Siding; Wood Framing; R-21 Insulation in 2 x 6 Stud Cavity; Plus Interior Finish	21	1,357	3,907	0
12F-6sw	Frame Wall or Partition; Stucco or Wood Siding; Wood Framing; R-21 Insulation in 2 x 6 Stud Cavity; Plus Interior Finish	21	437	1,260	0

Below Grade Walls

Code	Description	R-Value	Area	Heating	Cooling
15C11-0m	Four Inch Concrete; Metal Framing; R-11 Insulation in 2 x 4 Stud Cavity; Plus Interior Finish	7	768	3,233	0
15C19-0w	Four Inch Concrete; Wood Framing; R-19 Insulation in 2 x 6 Stud Cavity; Plus Interior Finish	13	166	447	0

Doors

Code	Description	R-Value	Area	Heating	Cooling
11D	Wood Door with Solid Core	3	22	496	0
11D	Wood Door with Solid Core	3	20	468	0

Floors

Code	Description	R-Value	Area	Heating	Cooling
21A-24p		0	1,423	2,063	0
Quik Trak Above Sub-Floor, Pre-Assembled-r (leaky Crawl)	Quik Trak Above Sub-Floor, Pre-Assembled -	30	369	859	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	45	163	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	195	706	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	15	24	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	160	344	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	68	237	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	50	174	0

Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	84	140	0
Quik Trak Above Sub-Floor, Pre-Assembled-r (leaky Crawl)	Quik Trak Above Sub-Floor, Pre-Assembled -	30	187	454	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	143	291	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	85	173	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	132	294	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	62	91	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	203	516	0
Joist Trak Plates Below Sub-floor-r	Joist Trak Plates Below Sub-floor -	17	135	344	0

Ceilings

Code	Description	R-Value	Area	Heating	Cooling
16A-30ad	No radiant barrier over ceiling or same type of air space behind an attic knee wall; Materials: Asphalt Shingles(a), Metal(m), Wood Shakes(w), Tar / Gravel(x), Membrane(z), Tile, Slate or Concrete; Colors: Dark(d), Light(l), White(w);	31	2,438	4,648	0

Glazing

Windows

Code	Description	Exposure	R-Value	SHGC	Area	Heating	Cooling
1D-rw	Double pane operable window or sliding glass door, with Reflective Glass - Wood, Wood with Metal Clad or Vinyl Framing, Inside (10%), 1'-3", 1'-3" above.	W	3	0.18	40	744	0
2Af	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.60 - Insulated Fiberglass Framing, Inside (10%), 0'-6", 0'-2" above.	W	2	0.56	4	109	0
2Af	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.60 - Insulated Fiberglass Framing, Inside (10%), 0'-6", 0'-2" above.	S	2	0.56	8	218	0
2Af	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.60 - Insulated Fiberglass Framing, Inside (10%), 0'-6", 0'-2" above.	E	2	0.56	8	218	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (100%), Inside (10%), 1'-3", 8' above.	S	2	0.31	7	185	0

4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (70%), Inside (10%), 1'-3", 2'-6" above.	S	2	0.31	7	185	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (70%), Inside (10%), 1'-3", 1'-3" above.	S	2	0.31	7	185	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, Inside (10%), 4', 1'-3" above.	E	2	0.31	5	130	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, Outside (10%), 1'-3", 1'-3" above.	W	2	0.31	24	677	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, Inside (10%), 1'-3", 1'-3" above.	E	2	0.31	2	70	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (70%), Inside (10%), 1'-3", 1'-3" above.	W	2	0.31	21	582	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (50%), 1'-3", 1'-3" above.	E	2	0.31	28	776	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (50%), Inside (10%), 1'-3", 1'-3" above.	E	2	0.31	28	776	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, Inside (10%), 0'-4", 1'-3" above.	E	2	0.31	5	130	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (100%), Inside (10%), 1'-3", 1'-3" above.	E	2	0.31	41	1,163	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (90%), Inside (10%), 1'-3", 1'-3" above.	W	2	0.31	9	246	0

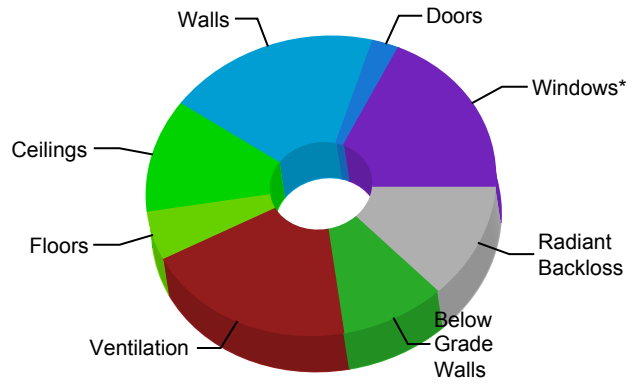
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (90%), Inside (10%), 1'-3", 8' above.	N	2	0.31	8	217	0
4A-5w	Operable window or sliding glass door, with Emissivity of Low-e coating = 0.05 on surface 2 - Wood, Wood with Metal Clad or Vinyl Framing, DrapesLow (50%), Inside (10%), 1'-3", 1'-3" above.	W	2	0.31	21	582	0

Load Breakdown

Name	Heating	Sensible	Latent
Windows*	7,193	0	
Skylights*	0	0	
Doors	964	0	
Walls	7,520	0	
Below Grade Walls	3,680		
Ceilings	4,648	0	
Floors	2,063	0	
Infiltration	0	0	0
Internal		0	0
Other	0		
Duct Loads	0	0	0
Ventilation	7,720	0	0
Humidification	0		
Piping Load	0		
Radiant Backloss	4,809		
Blower Heat		0	
AED*		0	
Total	38,598	0	0

*Average Load Procedure

Heating Load Breakdown



Heating Zones

Zone	Area	Room Temp	Total Load
Zone 101	556	70	7,027
Zone 201	1,018	70	12,444
Zone 202	358	70	5,978
Zone 203	1,423	68	13,149

Heating Rooms

Room	Area	Room Temp	Total Load
Basement (new floorplan to be designed)	1,378	68	12,478
Bathroom (existing)	45	68	671
Closet	14	70	90
Dining Room	174	70	2,073
Foyer	69	70	1,064
Hallway	84	70	639
Kid's Bath	62	70	530
Kid's Bedoom 2 Closet	15	70	136
Kid's Bedroom 1 Closet	160	70	2,222
Kid's Bedroom 2	132	70	1,887
Kitchen	338	70	4,040
Laundry	56	70	830
Laundry Closet	18	70	172
Living Room	240	70	4,078
Master Bath	118	70	1,900
Master Bedroom	228	70	2,990
Powder Room	30	70	435
TV Room	187	70	2,301
TV Room Closet	9	70	61

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