

Project Name:

Address:

OUTDOOR DESIGN CONDITIONS

Weather station: Ronald Reagan AP

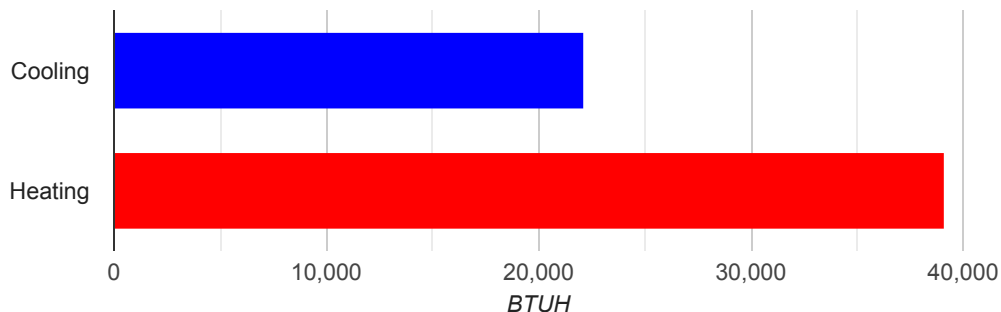
Summer Outdoor F:	92	Summer Indoor F:	76	Design Grains:	41	Daily Range:	Medium
Winter Outdoor F:	20	Winter Indoor F:	68	Cooling RH:	50	Elevation (Ft):	66

LOAD CALCULATION TOTALS

HVAC System: Gas Furnace

Heated square footage:	1,633	Heating BTUH:	39,063
Cooled square footage:	1,633	Cooling BTUH:	22,056
Heated volume (above grade CF):	14,694	CFM:	1,025
Cooled volume (above grade CF):	14,694	Sensible cooling:	20,296
Exposed wall area (SF):	2,083	Latent cooling:	1,760
		SHR:	0.92

Load Calculation



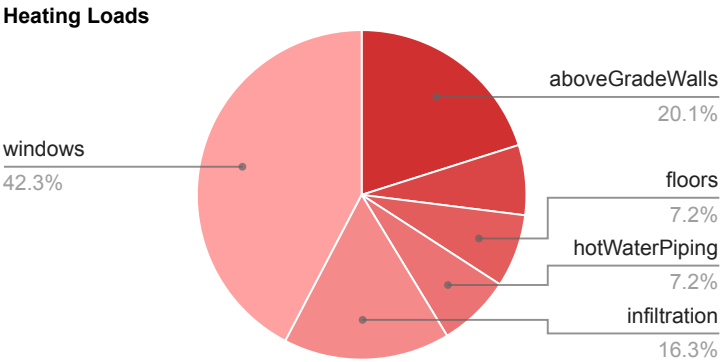
Approved ACCA MJ8 Calculations

Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building heat loss.

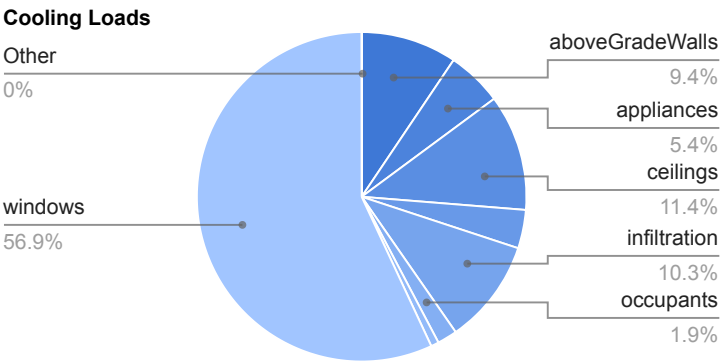


HEATING AND COOLING LOADS

HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	1,687.2	7,856
ceilings	1,190.1	2,685
floors	504.4	2,797
hotWaterPiping	0	2,803
infiltration	0	6,385
skylights	0	0
windows	396	16,537
Totals		39,063

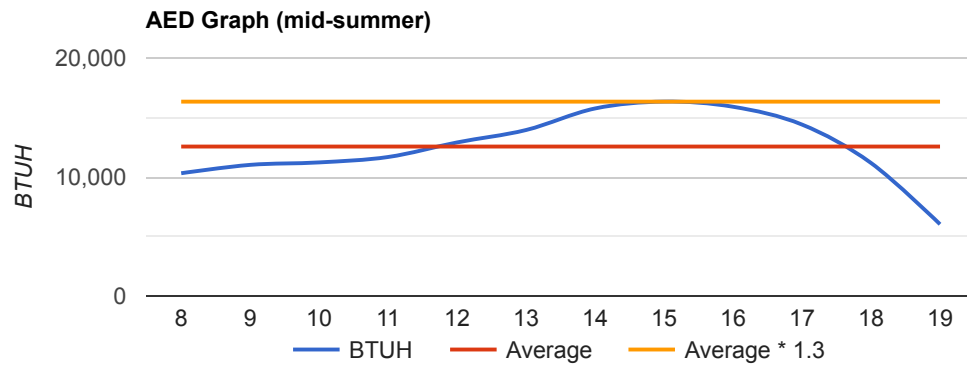


COOLING LOADS			
SECTION	AREA	SENSIBLE	LATENT
AEDExcursion	0	4	0
aboveGradeWalls	1,687.2	2,078	0
appliances	0	1,200	0
ceilings	1,190.1	2,517	0
floors	504.4	833	0
infiltration	0	877	1,390
occupants	0	230	200
plants	0	0	170
skylights	0	0	0
windows	396	12,555	0
Totals		20,296	1,760

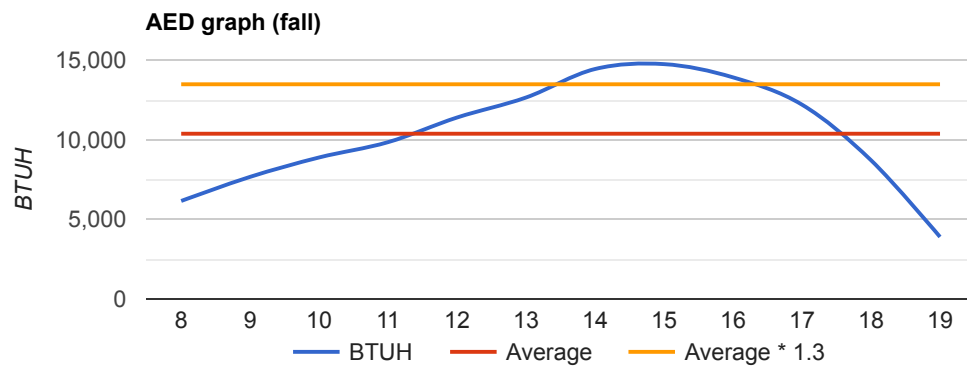


FENESTRATION LOADS

Warning (0): This application has glass areas that produced relatively large cooling loads for part of the day. Zoning may be required to overcome spikes in solar load for one or more rooms. A zoned system may be required, or some rooms may require zone control (provided by individual, motorized, thermostatically controlled dampers).



This graph represents hourly aggregate fenestration loads in mid-summer.



This graph represents hourly aggregate fenestration loads in October.

COMPONENT LOADS

ABOVE GRADE WALLS

Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	N 194	Heating BTUH: Cooling BTUH:	903 239
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	NE 257.5	Heating BTUH: Cooling BTUH:	1,199 317
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	SE 226.3	Heating BTUH: Cooling BTUH:	1,054 279
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	SW 269.9	Heating BTUH: Cooling BTUH:	1,257 332
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	NE 239.4	Heating BTUH: Cooling BTUH:	1,115 295
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	S 130.2	Heating BTUH: Cooling BTUH:	606 160
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	SW 232.2	Heating BTUH: Cooling BTUH:	1,081 286
Map trace wall Frame Wall, Wood framing, R-11 cavity insulation, Brick Veneer.	Construction nr: U Value:	12B-0b w 0.097	Exposure: Area:	NW 137.7	Heating BTUH: Cooling BTUH:	641 170

BELOW GRADE WALLS

There are no components for this section.

WINDOWS

Default small windows for wall id 5892341 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 N	U Value: SHGC:	0.87 0.67	Heating BTUH: Cooling BTUH:	501 232
Default medium windows for wall id 5892341 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 N	U Value: SHGC:	0.87 0.67	Heating BTUH: Cooling BTUH:	1,503 697
Default small windows for wall id 5892342 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 NE	U Value: SHGC:	0.87 0.67	Heating BTUH: Cooling BTUH:	501 289
Default medium windows for wall id 5892342 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 NE	U Value: SHGC:	0.87 0.67	Heating BTUH: Cooling BTUH:	501 289
Default large windows for wall id 5892342 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 NE	U Value: SHGC:	0.87 0.67	Heating BTUH: Cooling BTUH:	1,503 868
Default small windows for wall id 5892343 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 6 SE	U Value: SHGC:	0.87 0.67	Heating BTUH: Cooling BTUH:	251 239

WINDOWS					
Default medium windows for wall id 5892343 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 SE	U Value: SHGC:	0.87 0.67	Heating BTUH: 501 Cooling BTUH: 477
Default large windows for wall id 5892343 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 SE	U Value: SHGC:	0.87 0.67	Heating BTUH: 1,503 Cooling BTUH: 1,432
Default small windows for wall id 5892344 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 SW	U Value: SHGC:	0.87 0.67	Heating BTUH: 501 Cooling BTUH: 502
Default medium windows for wall id 5892344 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 SW	U Value: SHGC:	0.87 0.67	Heating BTUH: 501 Cooling BTUH: 502
Default large windows for wall id 5892344 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 SW	U Value: SHGC:	0.87 0.67	Heating BTUH: 1,503 Cooling BTUH: 1,507
Default small windows for wall id 5892274 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 6 NE	U Value: SHGC:	0.87 0.67	Heating BTUH: 251 Cooling BTUH: 138
Default medium windows for wall id 5892274 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 NE	U Value: SHGC:	0.87 0.67	Heating BTUH: 501 Cooling BTUH: 283
Default large windows for wall id 5892274 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 NE	U Value: SHGC:	0.87 0.67	Heating BTUH: 1,503 Cooling BTUH: 855
Default small windows for wall id 5892275 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 6 S	U Value: SHGC:	0.87 0.67	Heating BTUH: 251 Cooling BTUH: 208
Default medium windows for wall id 5892275 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 24 S	U Value: SHGC:	0.87 0.67	Heating BTUH: 1,002 Cooling BTUH: 845
Default small windows for wall id 5892276 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 6 SW	U Value: SHGC:	0.87 0.67	Heating BTUH: 251 Cooling BTUH: 241
Default medium windows for wall id 5892276 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 SW	U Value: SHGC:	0.87 0.67	Heating BTUH: 501 Cooling BTUH: 492
Default large windows for wall id 5892276 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 36 SW	U Value: SHGC:	0.87 0.67	Heating BTUH: 1,503 Cooling BTUH: 1,486
Default small windows for wall id 5892273 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 12 NW	U Value: SHGC:	0.87 0.67	Heating BTUH: 501 Cooling BTUH: 320
Default medium windows for wall id 5892273 Window, NFRC rated, Clear glass.	Construction nr: Area: Exposure:	1G 24 NW	U Value: SHGC:	0.87 0.67	Heating BTUH: 1,002 Cooling BTUH: 652

Window cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

CEILINGS					
Map trace generated ceiling Ceiling below roof joists, Asphalt shingles, Dark, R-21.	Construction nr: U Value:	18A-21 ad 0.047	Area:	515	Heating BTUH: 1,162 Cooling BTUH: 1,089
Map trace generated ceiling Ceiling below roof joists, Asphalt shingles, Dark, R-21.	Construction nr: U Value:	18A-21 ad 0.047	Area:	675.1	Heating BTUH: 1,523 Cooling BTUH: 1,428

SKYLIGHTS					
There are no components for this section.					

Skylight cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

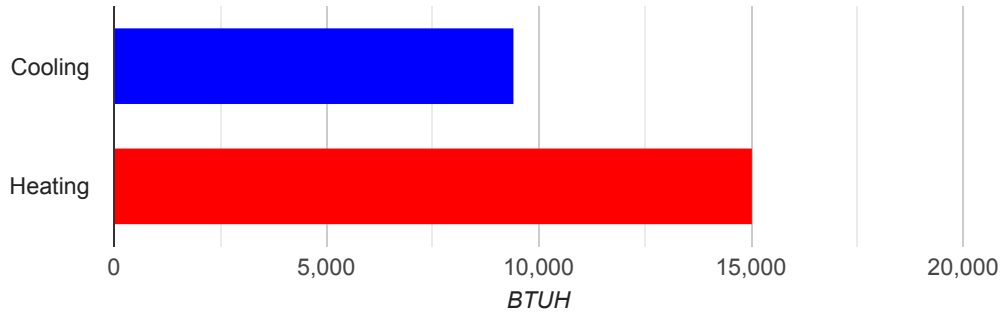
DOORS					
There are no components for this section.					
FLOORS					
Map trace generated floor Floor over enclosed unconditioned crawl space or basement, no floor insulation, Carpet or hardwood.	Construction nr: 19A-0cp Area: 504.4		Heating U Value:0.295 Cooling U Value:0.295		Heating BTUH: 2,797 Cooling BTUH: 833 F Value: N/A
VENTILATION					
There are no components for this section.					
HOT WATER PIPING					
1/2 inch Copper; None	F-Value: 0.35		Length: 65	Heating BTUH: 2,803	
DUCTS					
There are no components for this section.					
INFILTRATION					
Leakage Category: Average		NCFM Heating: 138 NCFM Cooling: 57		Heating BTUH: 6,385 Sensible BTUH: 877 Latent BTUH: 1,390	
BLOWER MOTOR					
There are no components for this section.					
WINTER HUMIDIFICATION					
There are no components for this section.					
OCCUPANTS					
Nr. Occupants: 1		Sensible BTUH: 230		Latent BTUH: 200	
APPLIANCES					
Small kitchen: 1,200 BTUH		Quantity:		Sensible BTUH: 1,200 Latent BTUH:	
PLANTS					
Plant Size: small		Quantity: 3		Latent BTUH: 30	
Plant Size: medium		Quantity: 4		Latent BTUH: 80	
Plant Size: large		Quantity: 2		Latent BTUH: 60	

ROOM DETAIL

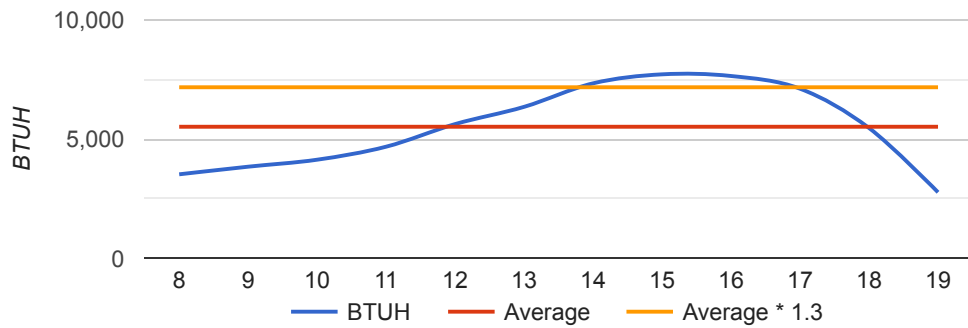
Room name: second floor

Heated square footage:	596	Total Cooling BTUH:	9,396
Cooled square footage:	596	Total Heating BTUH:	15,032
Heated volume (above grade CF):	5,364	CFM:	443
Cooled volume (above grade CF):	5,364		
Exposed wall area (SF):	914		

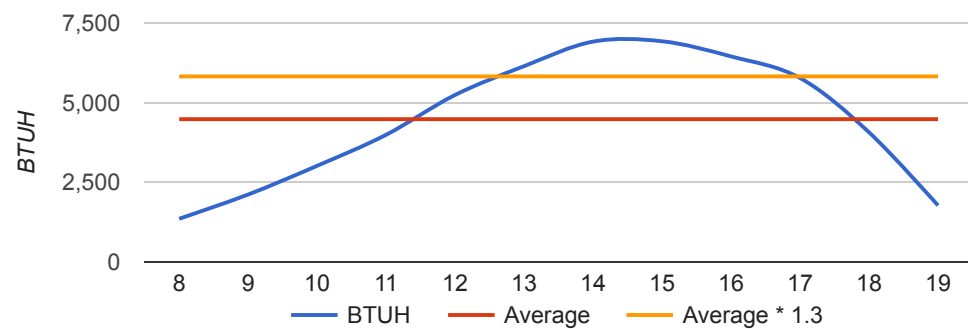
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

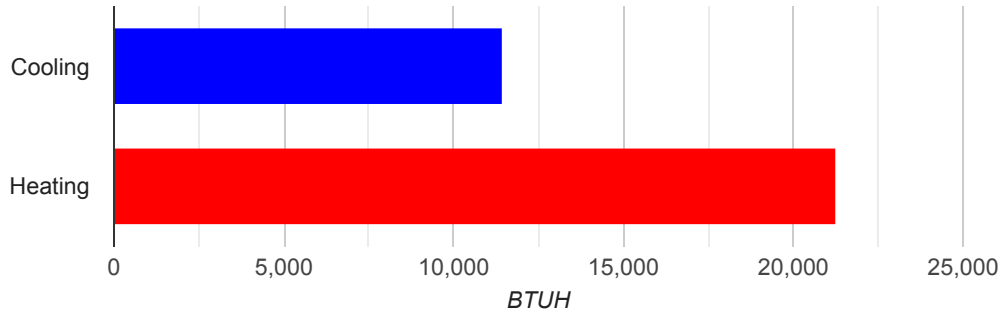


ROOM DETAIL

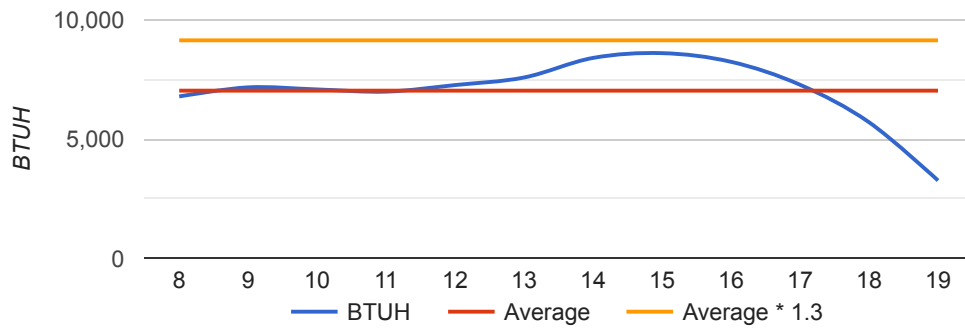
Room name: First Floor

Heated square footage:	1,037	Total Cooling BTUH:	11,398
Cooled square footage:	1,037	Total Heating BTUH:	21,228
Heated volume (above grade CF):	9,330	CFM:	536
Cooled volume (above grade CF):	9,330		
Exposed wall area (SF):	1,170		

Load Calculation



AED Graph (mid-summer)



AED graph (fall)

