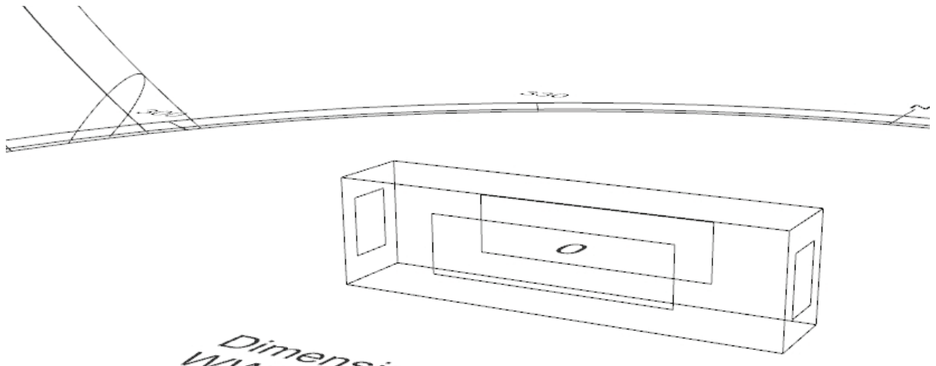
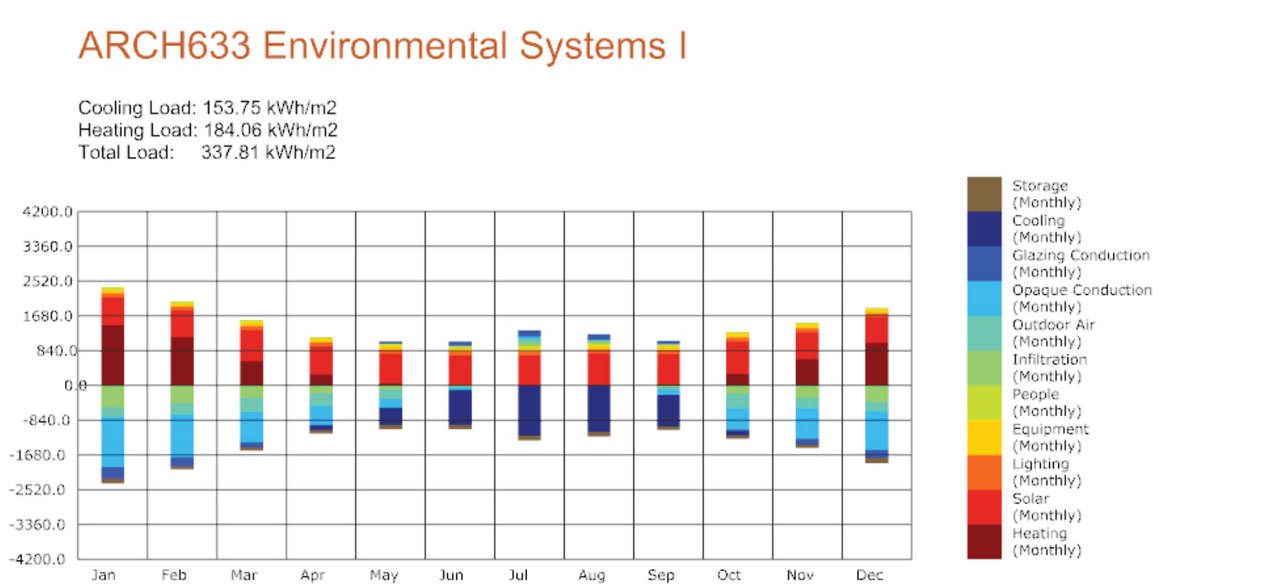
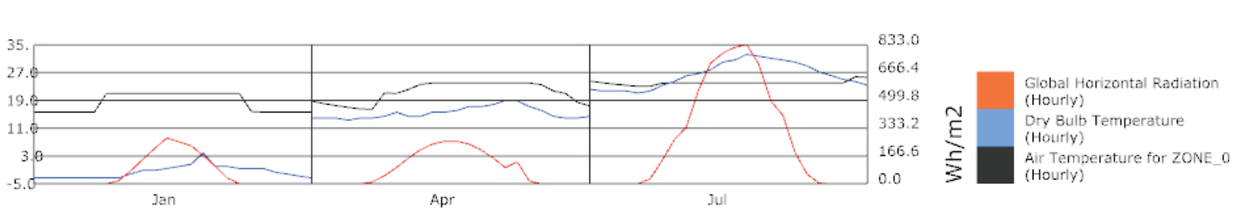






Scenario 1

Parameters:

Window to Wall: N(0.3) W(0.3) S(0.3) E(0.3)

Blinds: T/F (F) Depth (N/A) Number(N/A)

Construction: Ext. Wall (R5.5)
Ext. Window (R0.7, SHGC 0.65) Ext. Roof (R9.2)
AirChangeHour(2)

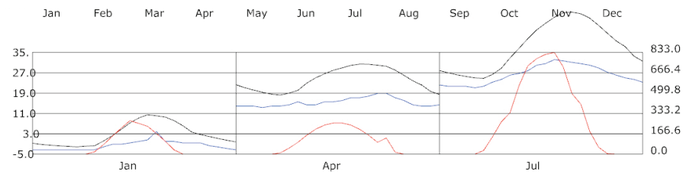
Thermal Mass: Existing Slab Construction

Conclusions:

Total Load: 337.81

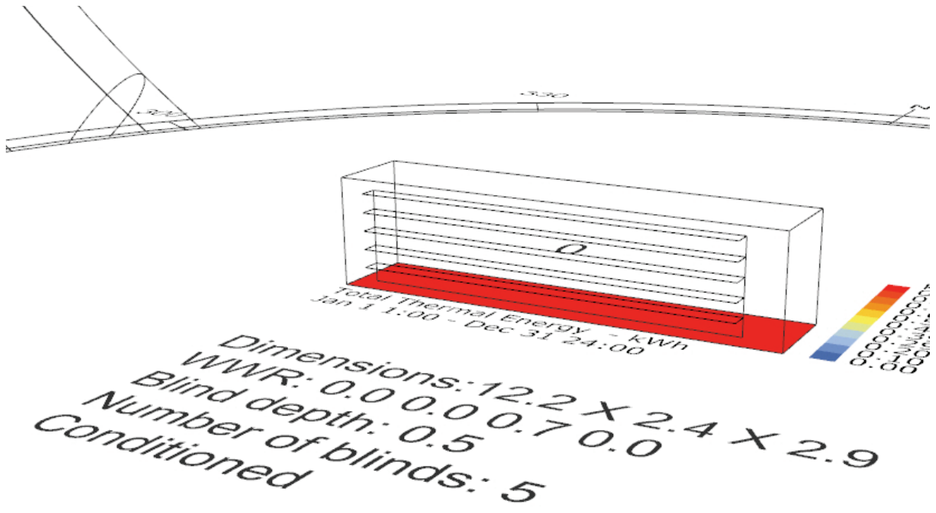
In this scenario, the structure is needing to be cooled greatly in the summer and heated greatly in the winter which indicates that the passive systems are not doing enough.

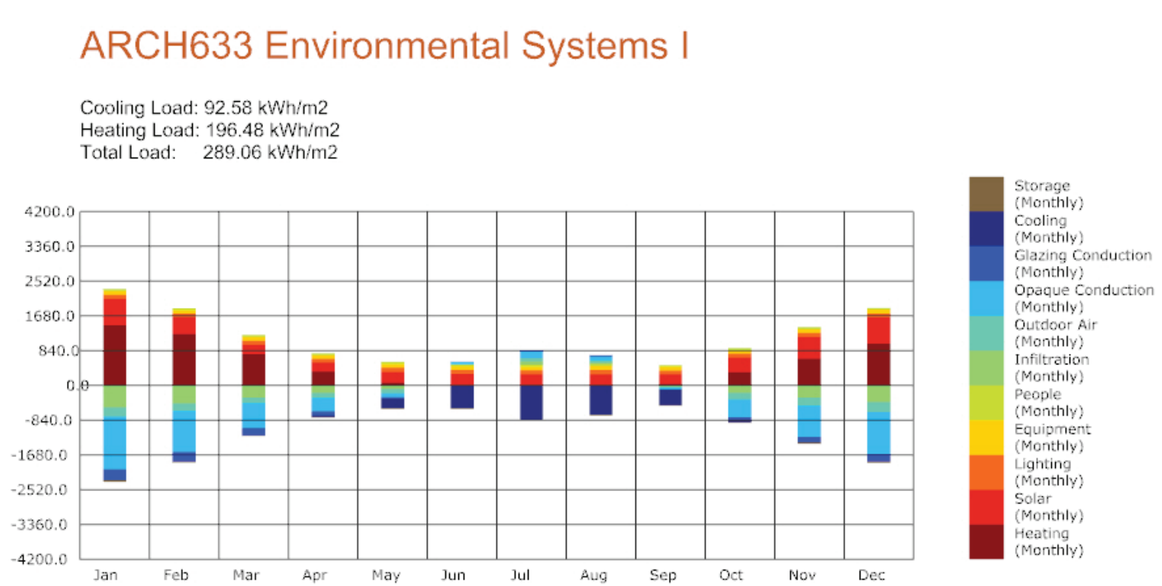
Container Temperature Range (No Systems):

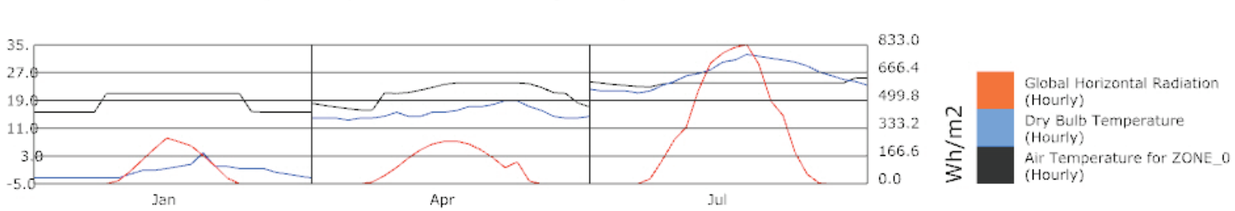


Summer: 25-50°C

Winter: -2-11°C







Scenario 2

Parameters:

Window to Wall: N(0) W(0) S(0.7) E(0)

Blinds: T/F (T) Depth (0.5) Number(5)

Construction: Ext. Wall (R5.5)
Ext. Window (R0.7, SHGC 0.65) Ext. Roof (R9.2)
AirChangeHour(2)

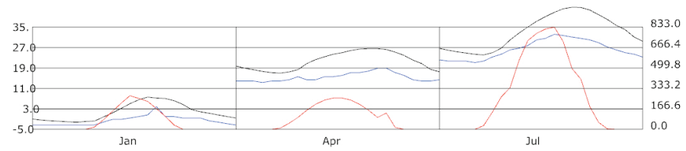
Thermal Mass: Existing Slab Construction

Conclusions:

Total Load: 289.06

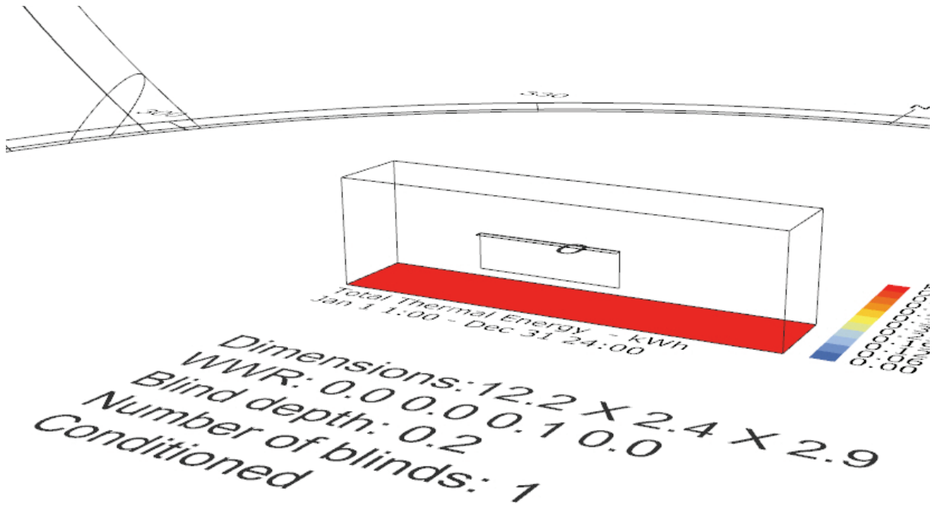
The addition of shades has lessened the amount of solar gain during the summer months but has little effect on the need to heat during the winter months.

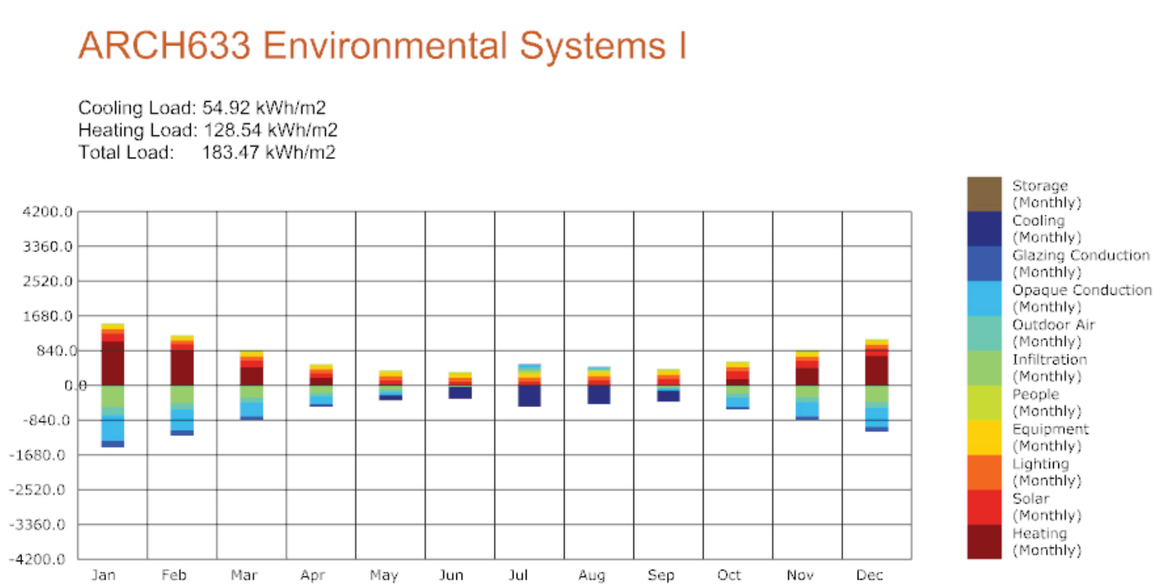
Container Temperature Range (No Systems):

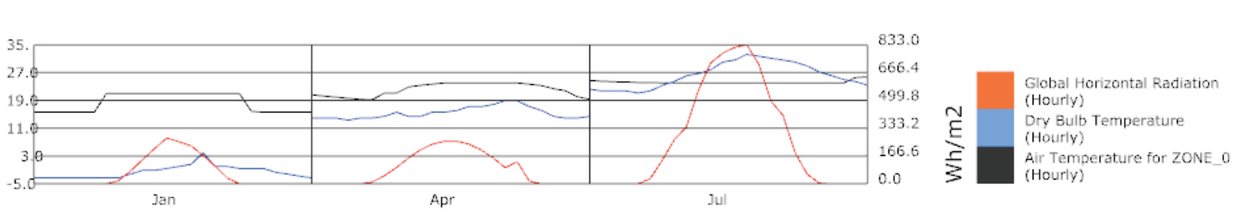


Summer: 25-40°C

Winter: -3-7°C







Scenario 3

Parameters:

Window to Wall: N(0) W(0) S(0.1) E(0)

Blinds: T/F (T) Depth (0.2) Number(1)

Construction: Ext. Wall (R34.4)
Ext. Window (R1, SHGC 0.7) Ext. Roof (R34.4)
AirChangeHour(2)

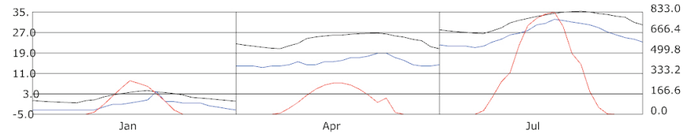
Thermal Mass: +8 Inches Concrete

Conclusions:

Total Load: 183.47

The parameter that seems to have the largest effect on the loads is the window to wall ratio. The thermal mass has little effect on the need to heat the building during winter. The shading offers relief during the summer but does little to help during the winter. The main issue here is still heating the building against the cold winter climate.

Container Temperature Range (No Systems):



Summer: 27-35°C

Winter: -1-5°C