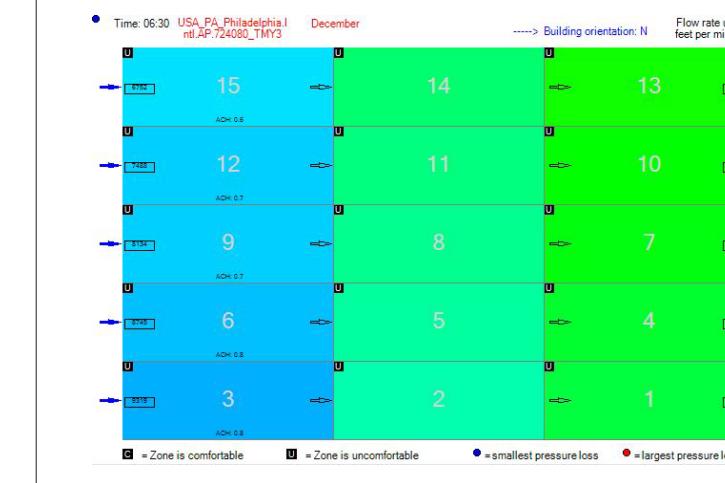


Environmental Systems

Project 8

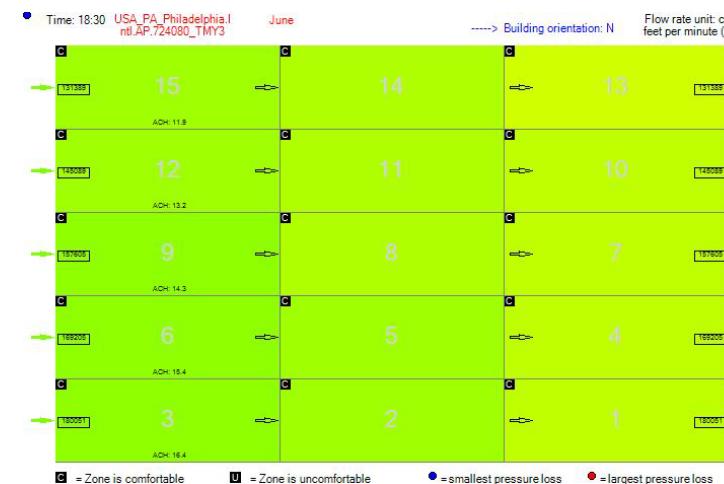
Fall 2017
ARCH 633



06:30



12:30



18:30

MARCH

JUNE

SEPTEMBER

DECEMBER



MARCH



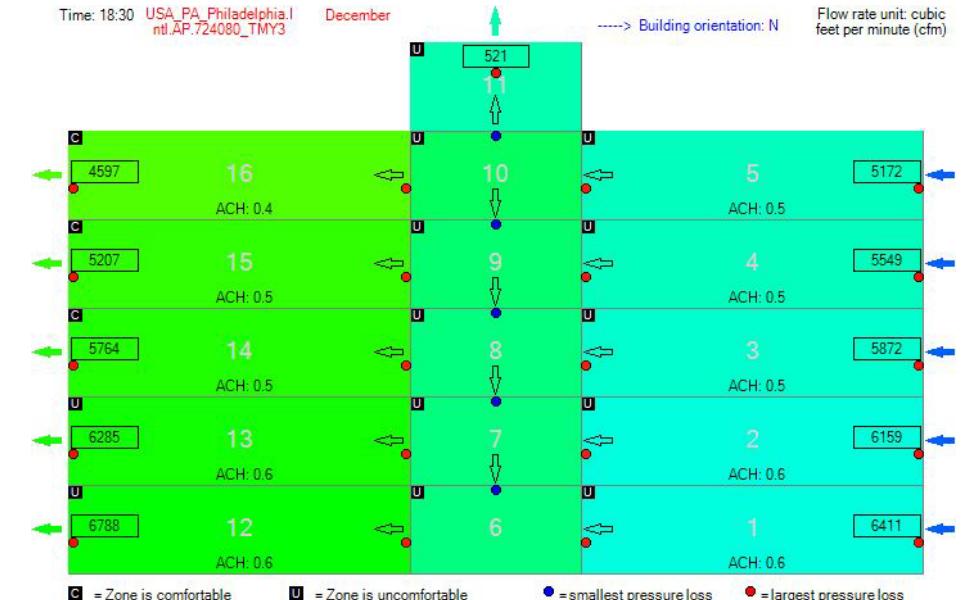
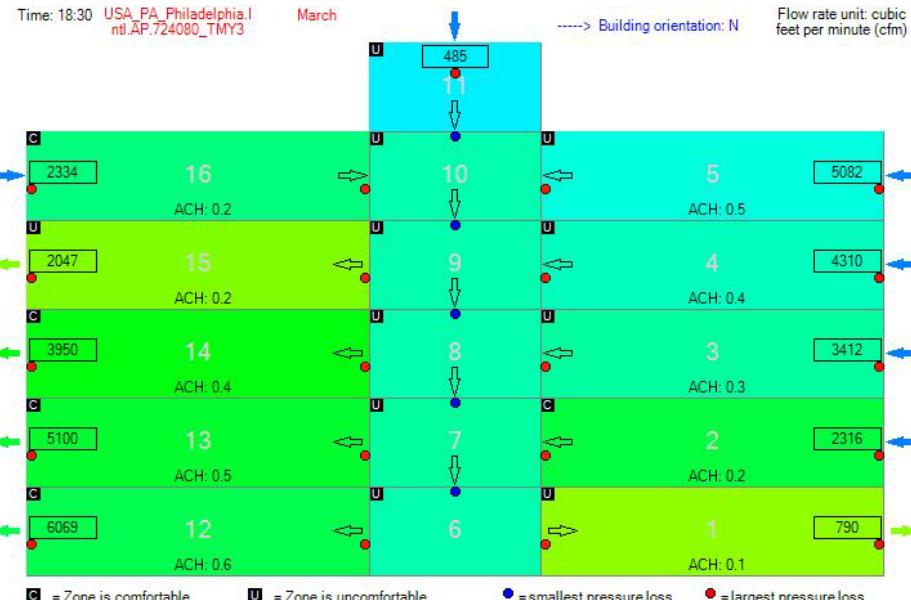
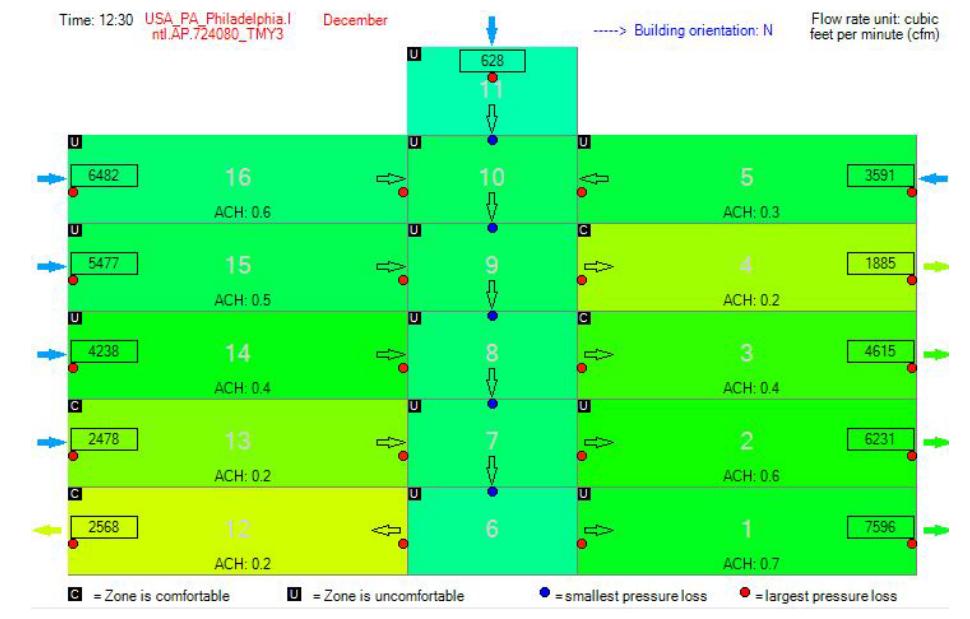
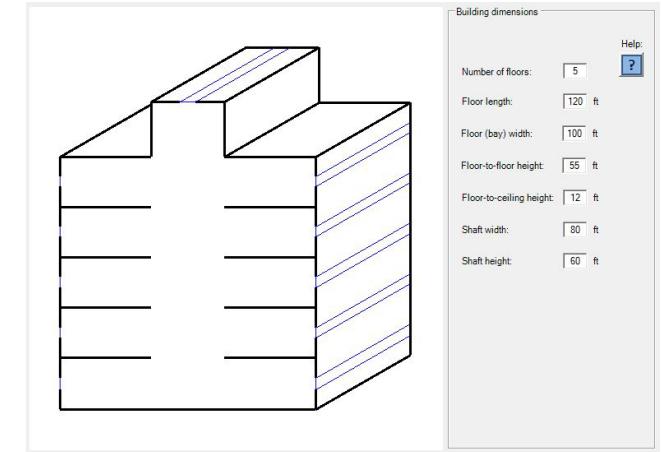
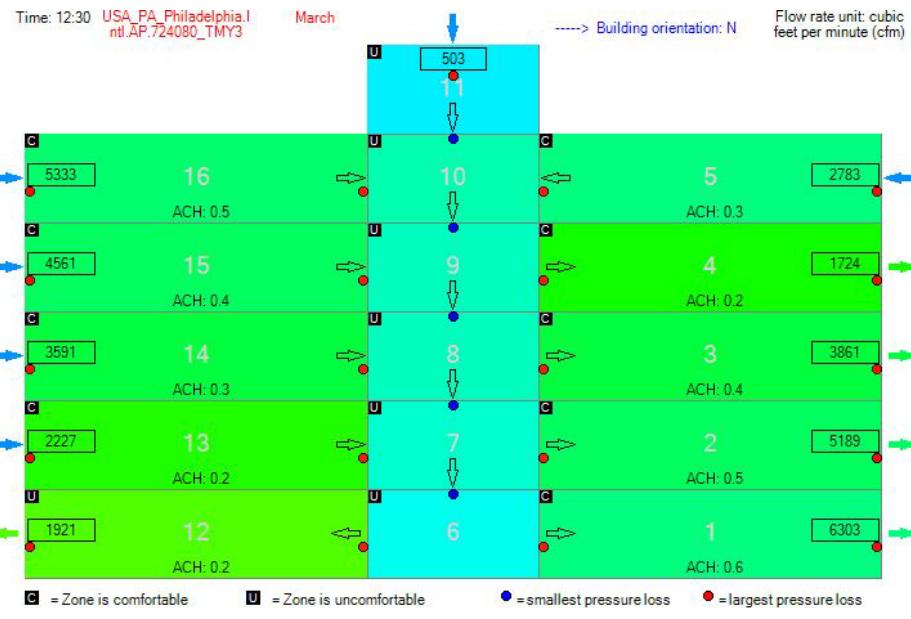
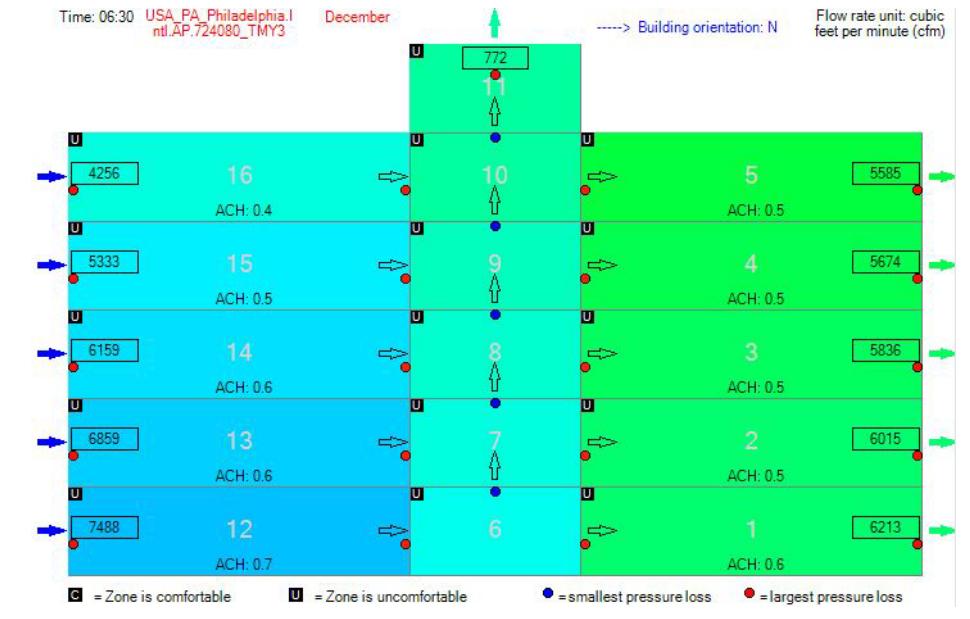
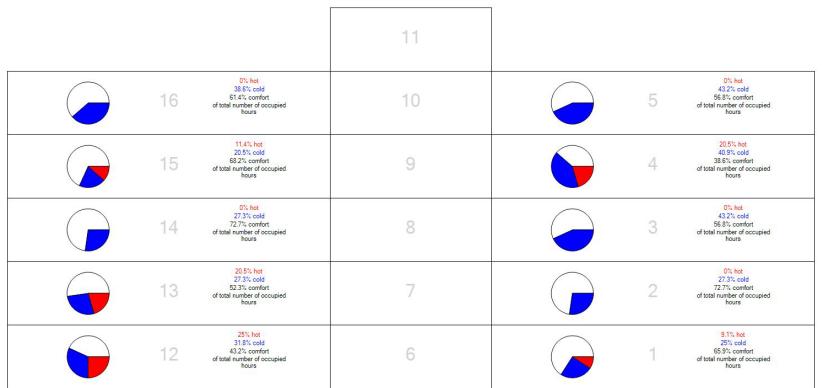
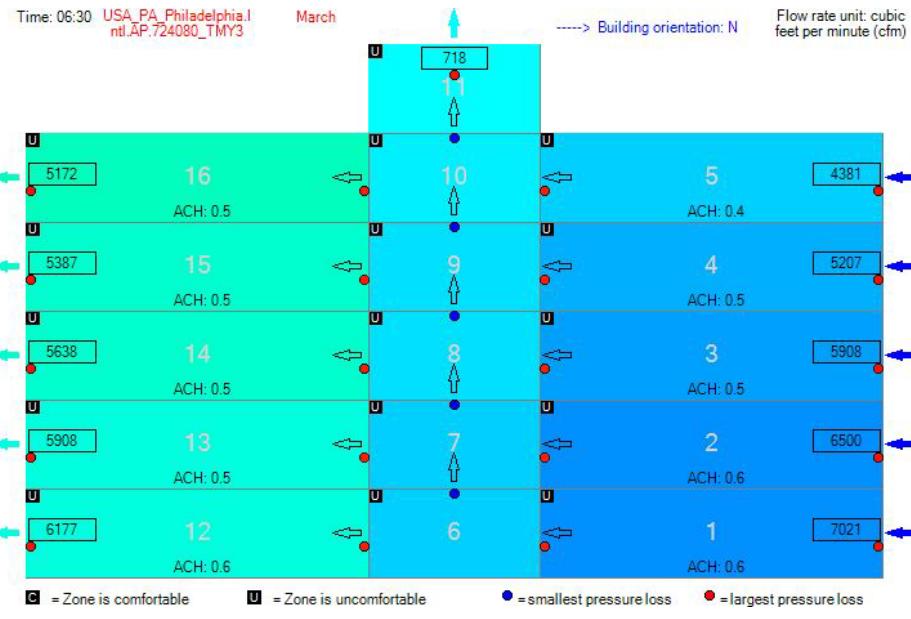
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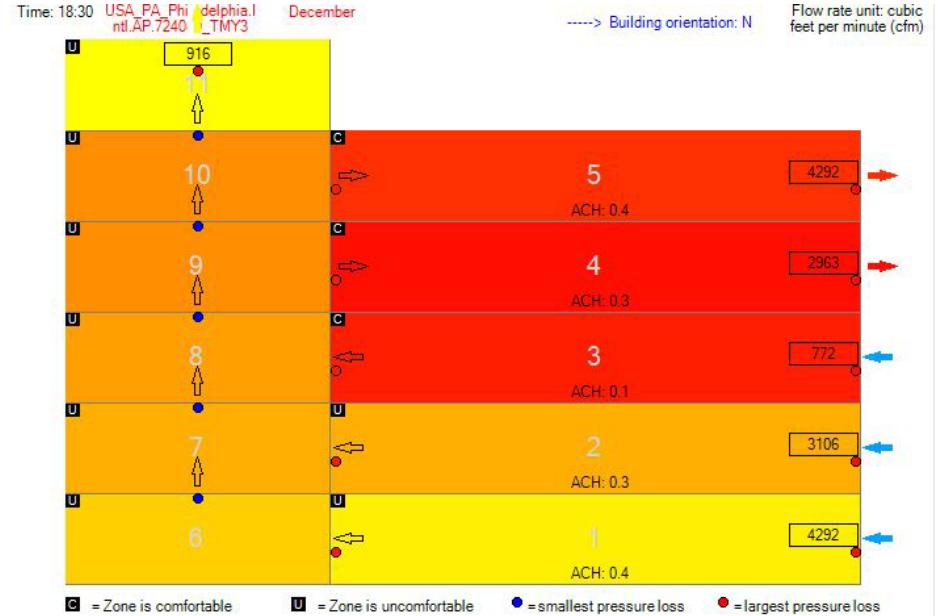
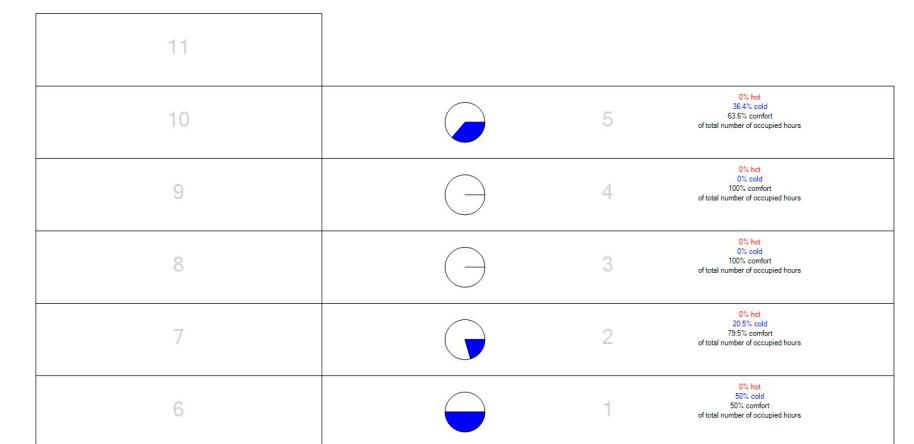
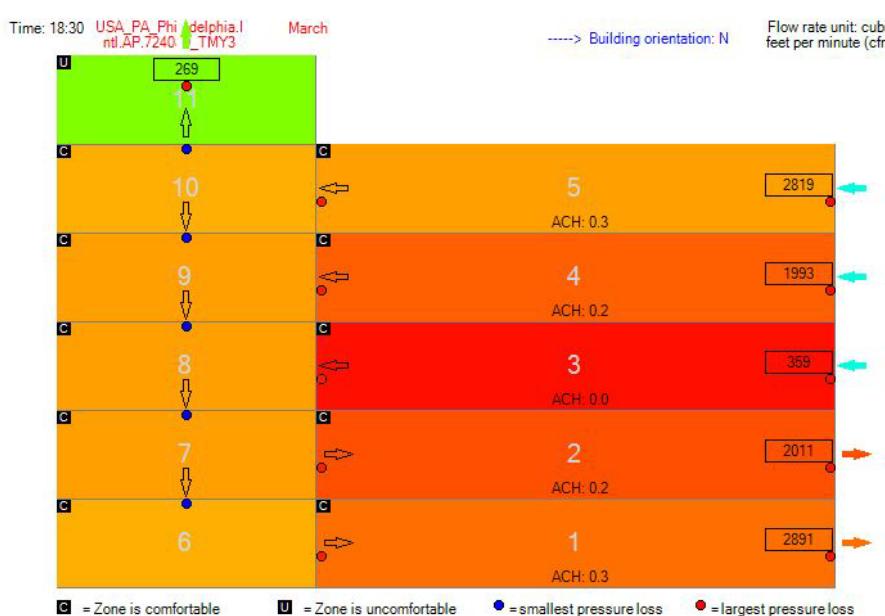
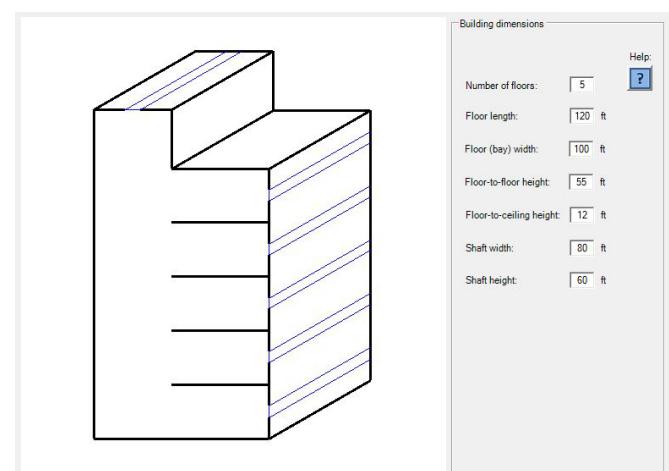
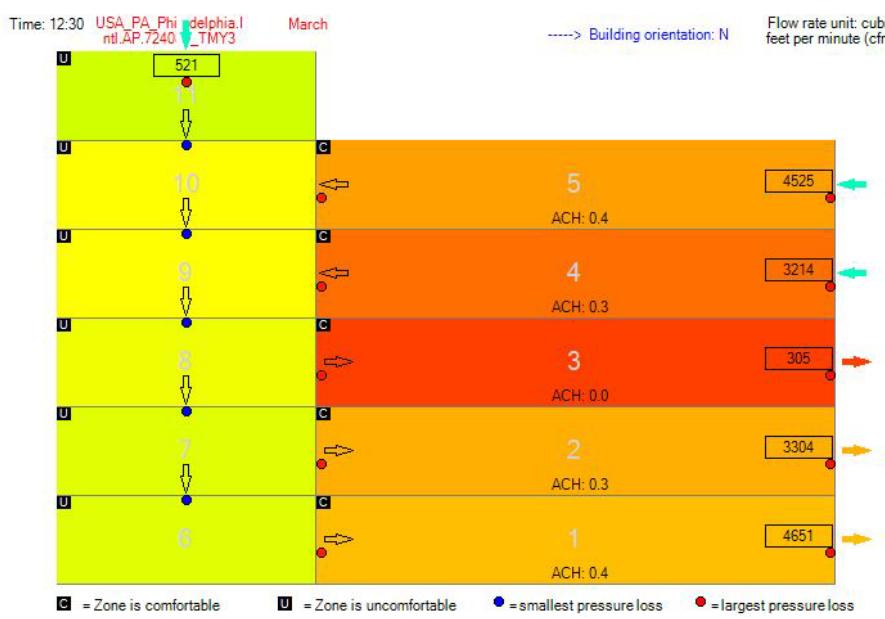
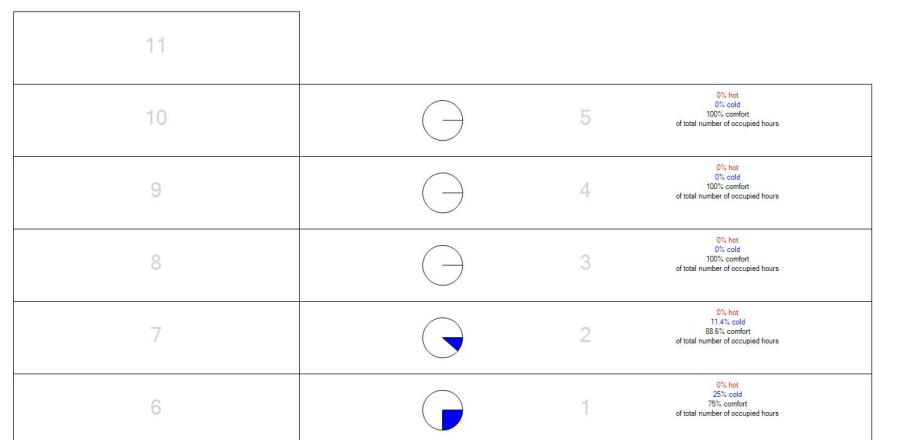
DECEMBER



MARCH

DECEMBER

DESIGN OPTION 1



MARCH

DECEMBER

DESIGN OPTION 2

As a result, Meyerson Hall by itself was seen to not be comfortable in the months around March and December when it is usually colder and the levels of comfort decreases drastically in comparison to the building's thermal comfort in the months around June and September when there is a relatively high thermal comfort due to the cross ventilation that occurs on the lower part of the windows that are operable at the studio level

The first design included the addition of a central atrium for the wind to move between the space with reducing the windows and the operable area of the openings.

The second design included a chimney towards the warmer side of the building to increase the radiation that gets into the building. When the building is over heated due to radiation, the introduction of a thermal mass that takes in the heat and releases it at night through the night cooling process for the building to release the heat at night. This allowed for a much more thermal comfort levels throughout the months which were not.

Final Result

Increasing the sun radiation in the building with the help of a side chimney or an atrium can allow for a better wind circulation within the building.