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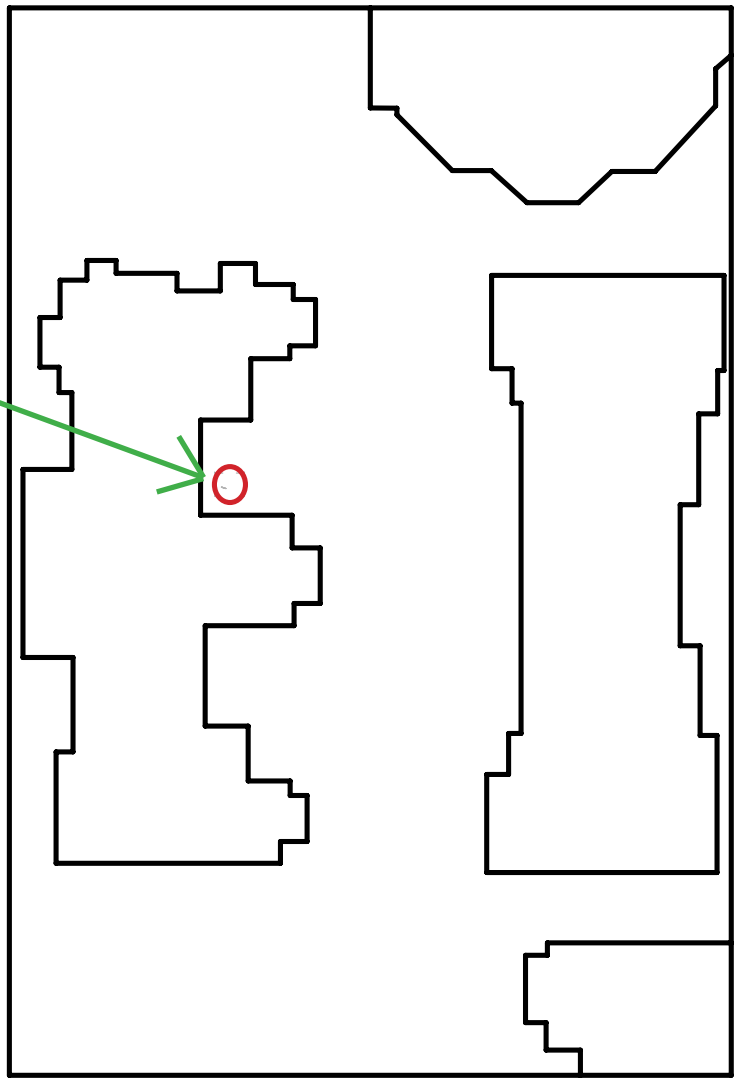
ARCH 633
ANNUAL COMFORT MAP

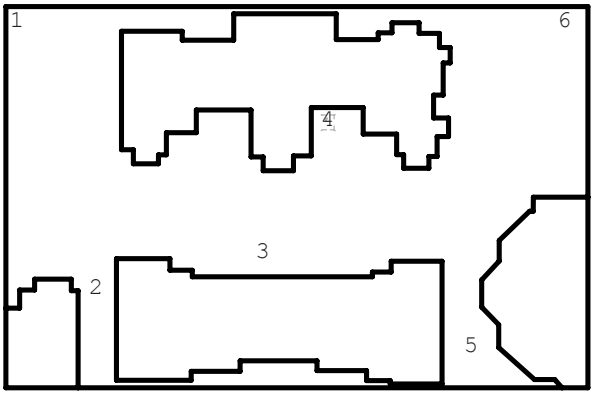
LOCATION: HOUSTON HALL

MOST COMFORTABLE LOCATION I.E BEST SPOT TO LOCATE THE OUTDOOR SEATS



WHAT WAS THE THINKING PROCESS TO FIND THE BEST LOCATION?

I picked 6 very different spots and ran simulations to fid out out which spot was more comfortable.



WHAT IS THE DIFFERENCE BETWEEN BEST AND WORST LOCATION?

The best location had a comfort level of 40.97% with heat stress of 3.11% and cold stress of 34.66% while the worst location had a comfort level of 36.75% with a heat stress of 11.993% and cold stress of 32.98%. thsi shows that the worst location (location 6) has sgnificantly more heat that the best (location 4) due to the shading provided by the buildings in location 4.

WHAT ARE THE EFFECTIVE PARAMETERS THAT MAKES THE BEST LOCATION PERFORM BETTER THAN OTHER SPOTS?

The key parameter is less radiation. There is a lot of shading in the best location provided by that building around it which reduces the surface temperature. There is also adequate amounts of wind that cools the spot on hot days.

WHAT ARE THE MAIN LIMITATIONS OF THE CURRENT SIMULATION METHOD FOR MY STUDY?

The biggest limitation to the simulation method is the degree of assumption that has to take place. Based on past simulations/data/study etc of houston hall, i have a general knowledge of where the comfortable spots are. So I then random pick a point in that general area with the assumption that that point would reflect the entire area around it. But it is possible that the best location id a few feet away from where I picked. A better simulation would scan the entire area and be able pick out the best spot for me.