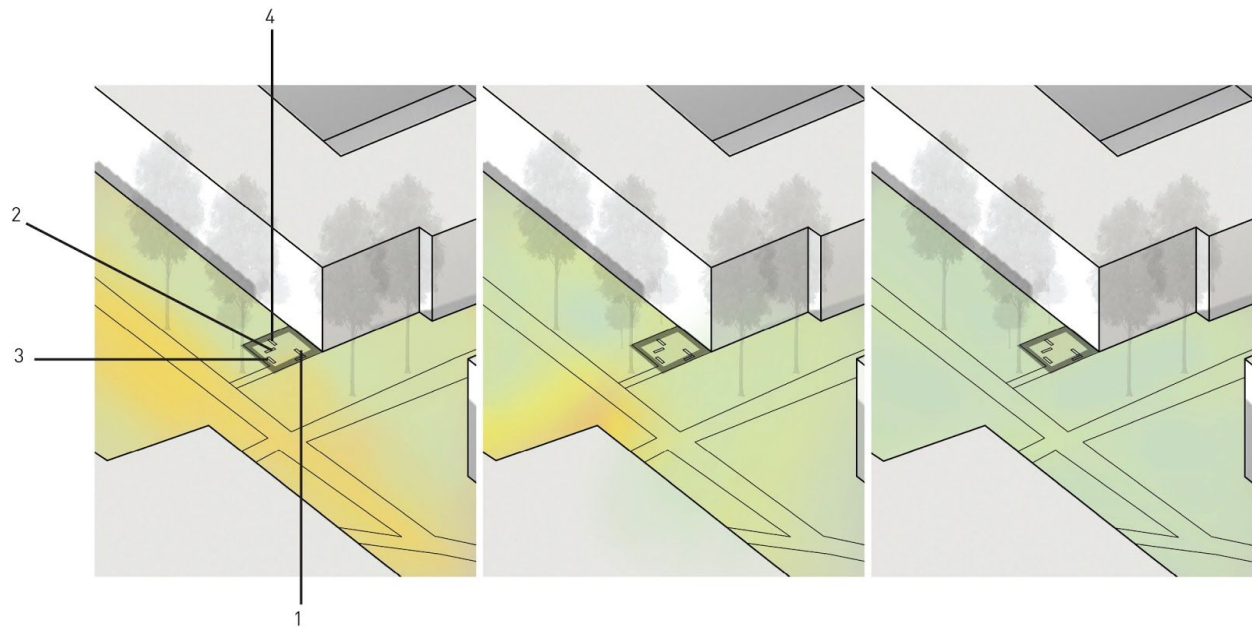


**Location:** West courtyard at entrance, 107 Towne Building, Philadelphia, PA 19104

**Date:** 09/10/2017




**Times:** 3:30PM, 6:00PM, 7:30PM

	3:30 pm	6 pm	7:15 pm
Temperature Weather Station (F)	74 °F	72 °F	70 °F
Temperature (F)	70 °F	68 °F	67 °F
Relative Humidity Weather Station	40%	40%	41%
Relative Humidity	41%	40%	47%
Wind Speed	1.1 m/s	.8 m/s	.5 m/s



Bench 1 Temp	94 °F	74 .5°F	69.6°F
Bench 2 Temp	92 °F	75.2°F	69.3°F
Bench 3 Temp	93.6 °F	74 .5°F	70.3°F
Bench 4 Temp	96.3°F	74 .7°F	69.1°F
Ground Temp	85.4 °F	77.1°F	71.8°F

1.

3:30 PM	6:00 PM	7:30 PM
		
<p>This area shifted from partly cloudy (as shown here) and partially sunny. However, shading from the surrounding tree canopy allowed variations in comfort. Two people stopped to take advantage of the vegetation and canopy along the breezeway.</p>	<p>The western buildings created plenty of shade along the corridor as the sun began to set. The temperature started to cool down and people became more transient. One person stood near the fenced area, although not seated, passersby were aware that the area proves to be a good location for pause.</p>	<p>The sun was almost fully set very little surface area was being warmed. As the temperature was cooling down more, the less people were engaging with the space. As shown, the area is now almost covered in shade and there was no one within the space.</p>

2. Design proposals

- a. We found that the area was comfortably shaded by the placement of buildings, the materials used were of an appropriate thermal mass for the summer and the vegetation surrounding the space helped to mediate the wind and sun. We propose to enlarge the sitting area to accommodate more inhabitants while maintaining a proportional level of vegetation.
- b. During the earlier part of the day, the sun exceeds the height of the southern buildings and aims directly at the south-facing bench along the face of the building. We propose that this seat be treated with a shading device to provide cooling of the surface and prevent discomfort from direct glare.

3. The temperature and humidity varied by a few digits across the local and station readings and the weather file. During all three times, the recordings from the station were lower than the local reading, a difference of 1-2 degrees. The data in the weather file recorded similar temperatures and humidity to the station readings but higher levels of wind speed than the locally measured data (a difference of up to 10 mph).
4. During the summer, the north side of the site will be warmer as a result of sunlight from the south. The center of the site and the wall to the north will be warmest as the pavement and brick absorb the heat and radiate it back. The perimeter of the site, bordered by bushes will be cooler. The benches facing the south will remain uncomfortable. The temperature of the wooden benches may not be as problematic as the direct sunlight, causing the general area to be warmer. The benches to the south of the site, face north, are partially shrouded by shade from a nearby tree. These benches may be more desirable for activity during the summer at times of the day when the sun's rays do not reach them. Inversely, during the winter when the temperature is hospitable enough for any outdoor thermal comfort, the benches facing south, on sunny days, will foster the most activity if there is not a direct wind from the south.