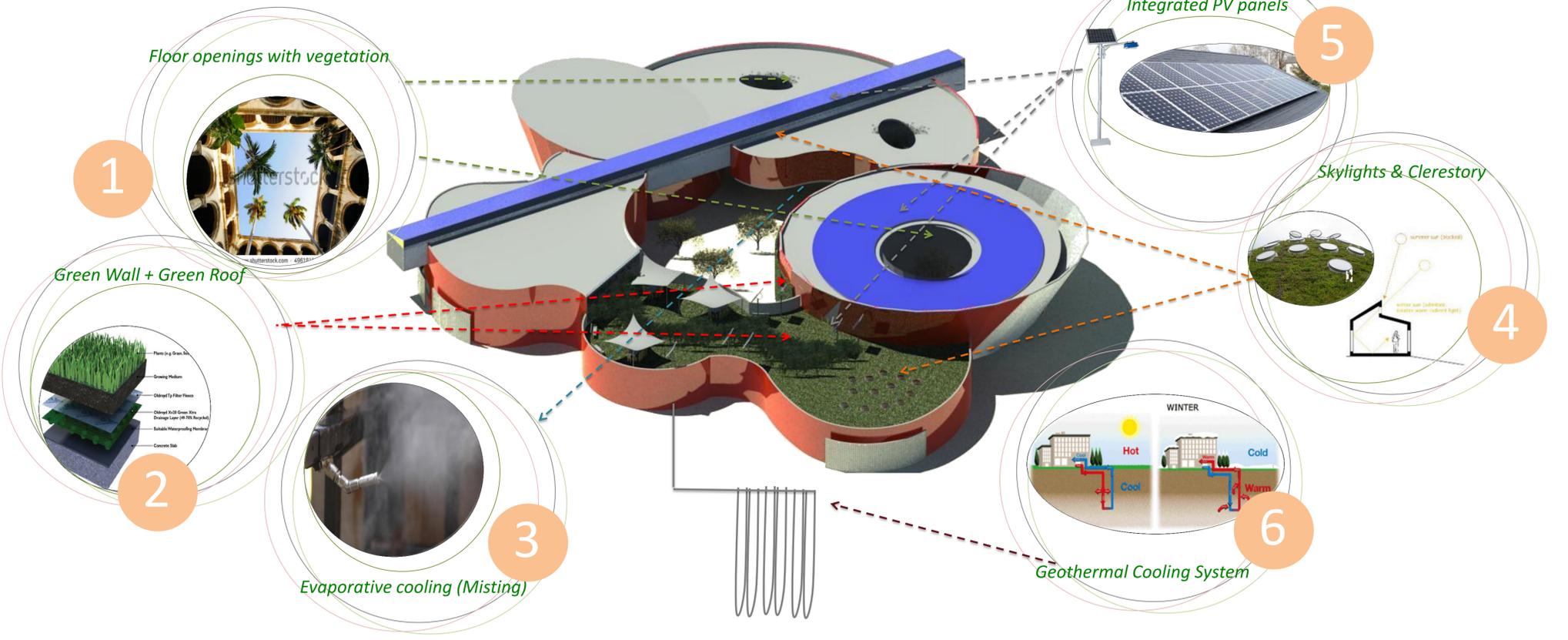


Environmental Strategies :



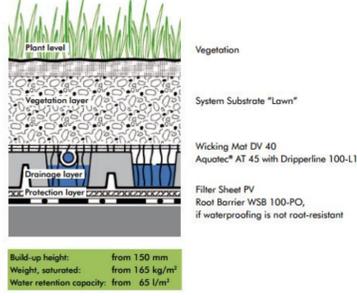
GREEN ROOF + GREEN WALL

GREEN ROOF

System designation	P1	P2	P3	P4
typical plants	sodium herbs	sodium perennials	perennials grasses shrubs	grasses shrubs trees
substrate soil mix	3"	4"	5"	6"
inertive soil mix	1.8"	1.8"	1.8"	1.8"
separation fabric	1"	1-1/2"	1-1/2"	1-1/2"
drainage mat	1/4"	1/4"	1/4"	1/4"
nominal thickness	4"	7"	10"	14"
dry weight	13 lbs/ft ²	21 lbs/ft ²	34 lbs/ft ²	51 lbs/ft ²
saturated weight	21 lbs/ft ²	34 lbs/ft ²	53 lbs/ft ²	79 lbs/ft ²
minimum slope	1:12	1:12	1:12	1:12
maximum slope	1:12	1:12	1:12	1:12
water retention	50%	60%	70%	80%

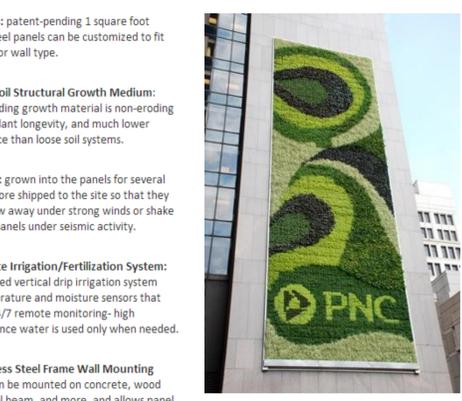
Green roofs are visually attractive. The variegated coloring of flowers, grasses, and wild herbs is more appealing than stark black or white monolithic surfaces. Green roofs can transform urban wastelands into urban gardens. Green roofs are energy-efficient. They are cool in the summer and can be as effective as white roofs in reducing the urban heat island effect. The thermal mass of the soil reduces heat gain and loss by averaging temperature extremes.

Weight kg/m ²	Height mm
dry	95
water saturated	140
minimum	100
4	25
99	165



GREEN WALL

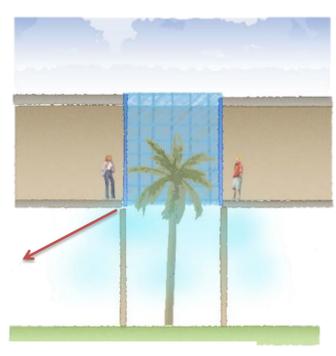
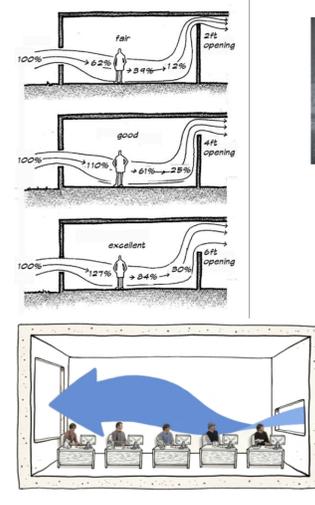
- 1 Panels: patent-pending 1 square foot stainless steel panels can be customized to fit any design or wall type.
- 2 Non-Soil Structural Growth Medium: patent-pending growth material is non-eroding to ensure plant longevity, and much lower maintenance than loose soil systems.
- 3 Plants: grown into the panels for several months before shipped to the site so that they will not blow away under strong winds or shake out of the panels under seismic activity.
- 4 Remote Irrigation/Fertilization System: computerized vertical drip irrigation system with temperature and moisture sensors that allow for 24/7 remote monitoring- high efficiency since water is used only when needed.
- 5 Stainless Steel Frame Wall Mounting System: can be mounted on concrete, wood frame, steel beam, and more, and allows panel removal for inspection as needed.



Green walls are found most often in urban environments where the plants reduce overall temperatures of the building. "The primary cause of heat build-up in cities is insolation, the absorption of solar radiation by roads and buildings in the city and the storage of this heat in the building material and its subsequent re-radiation."

EVAPORATIVE COOLING SYSTEM (MISTING)

If the inlet air is taken from the side of the building facing away from the sun, and is drawn over a cooling pond or spray of mist or through large areas of vegetation, it can end up several degrees cooler than outside air temperature by the time it enters occupied spaces.

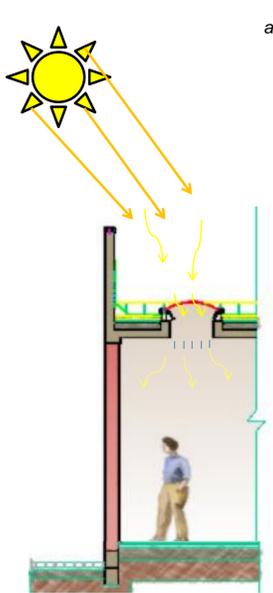


Pairing a large outlet with a small inlet increases incoming wind speed.

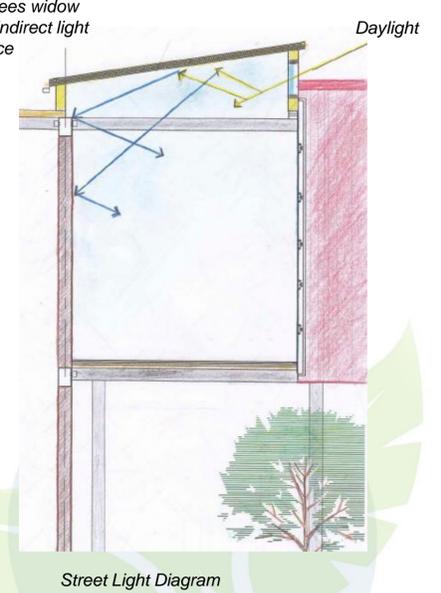


Wind direction to provide evaporative cooling

SKYLIGHTS & CLERESTORY



Roof scoop sees widow and becomes indirect light source



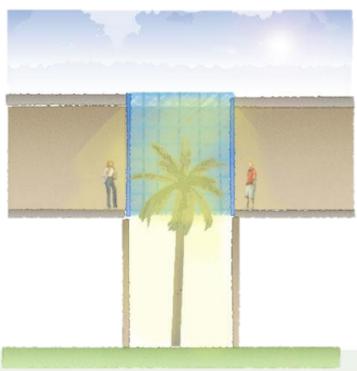
Street Light Diagram

Skylights: diffuse the direct beam sunlight striking it, sending the light down into the room below in many directions, producing a softer, more uniform illumination. It can remove that gloomy feeling when rooms are inadequately illuminated.

Clerestory: It is high windows above eye level. The purpose is to bring outside light. The direct sunlight reflected by the surface then the light is reaches indirect to provide soft and more comfortable light.

FLOOR OPENINGS WITH VEGETATION

Floor openings provide diffuse natural light that enter into the space to light them up with soft light. In addition, vegetation is added to enhance the view inside the building and provide the feeling of outside connection to inside



As seen in 3D floor opening with vegetation can be seen in the first floor as the opening extend from the floor till the Roof to get max benefit from the daylight and trees view.