

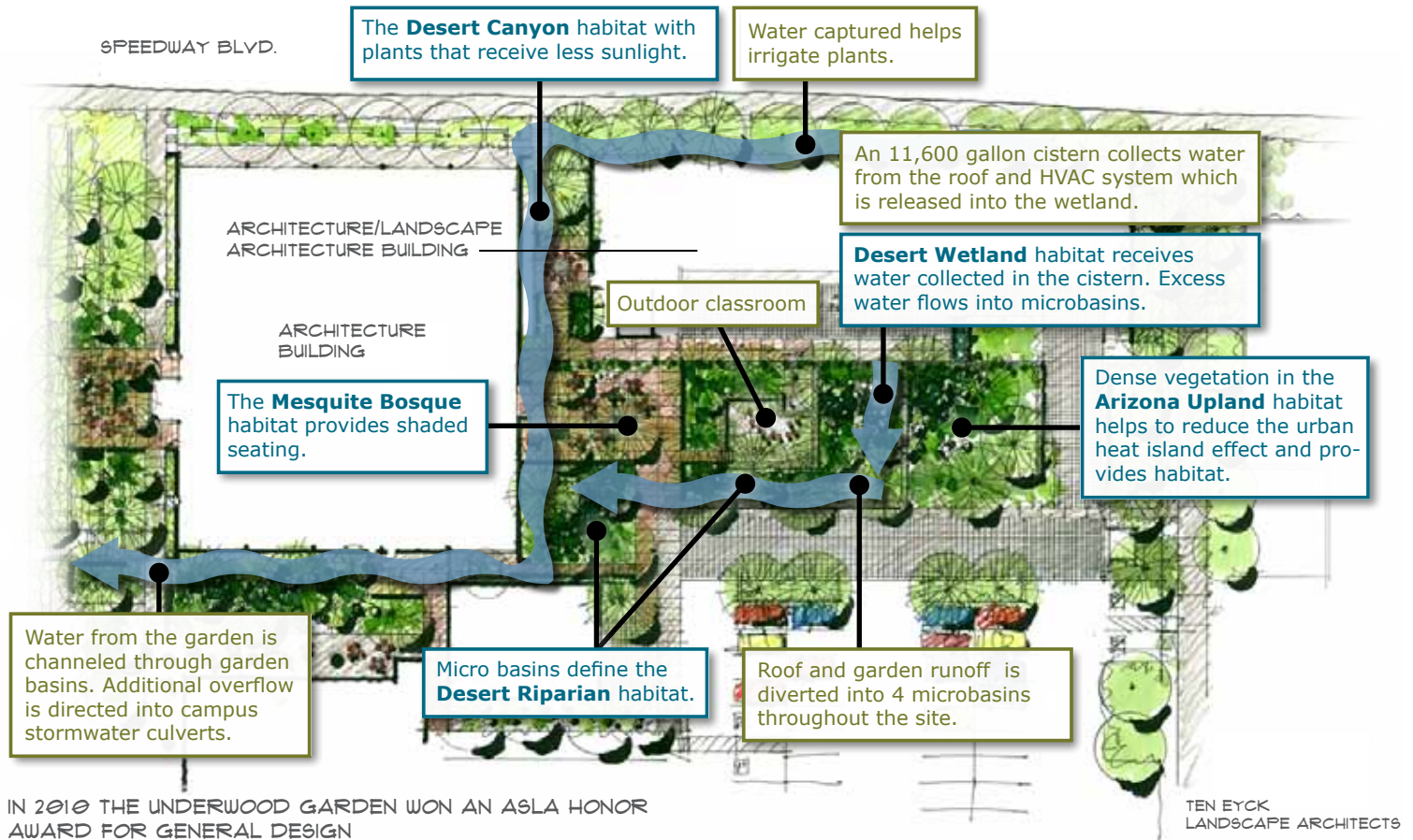
# UNDERWOOD FAMILY SONORAN LANDSCAPE LABORATORY

The Underwood Family Sonoran Landscape Laboratory was designed as a low cost, research oriented, educational public space focusing on water-conscious design solutions and creating urban wildlife habitat and biomass. From its inception, the development was based on a critical public university/private enterprise collaboration.

Ten Eyck Landscape Architects saw the parking lot runoff as an opportunity to create a new entry and garden/

outdoor classroom that would be a cleansing bio-sponge garden from adjacent run-off and discarded water.

The final design provides an accessible, sunken outdoor classroom of permeable stabilized granite which provides a place for study, building projects and gathering while detaining water during storm events. Steps up to a riparian pond are inscribed with a favorite poem of a long-time architecture professor.



## FIVE GUIDING PRINCIPLES

The Underwood Family Sonoran Landscape Laboratory has five guiding principles that it demonstrates.

### WATER SUSTAINABILITY

The garden harvests roof runoff, heating and air conditioning condensate or “sweat” of the building, and drinking fountain water into an 11,600 gal cistern. Total potable water savings is 230,000~ gal/year (about 10 avg. swimming pools) with a total of 83% reduction in potable water use. The ultimate goal is to have the landscape “living off of the waste of the building.”

### REDUCTION OF THE URBAN HEAT ISLAND EFFECT

Extensive tree canopies and the vertical trellis reduces daytime buildup of solar radiation in materials that retain heat and consequently release it into the night air. By quickly dispersing daytime heat the city is permitted to cool more quickly.

### REDUCTION OF URBAN FLOODING

Stormwater runoff is dramatically slowed from leaving the site through the use of 4 ‘microbasins’ and the use of ‘urbanite’ (construction rubble from the building renovation) placed in the ‘desert riparian’ area runoff channels. During storms the lower patio fills and slowly releases its 10,000 gallon capacity into the downstream portions of the garden.

### RECONNECTION WITH NATURE

In a former university parking lot a cooler summer and warmer winter environment has been created. An extraordinary urban niche has emerged through the installation of 5 habitats of the Sonoran Desert attracting a variety of plants and animals. The ‘desert wetland habitat’ (the pond area) is of particular note in the re-creation of the Sonoran Desert landscape. The constant presence of predators and prey suggest a healthy bio-diverse habitat.

### CREATION OF AN INTERPRETIVE OASIS

Simply experience the peace and tranquility of this place. Interpretive signage and web videos communicate the guiding principles and the designer’s intent. This garden is a gift to the college, the University of Arizona and to the people of Tucson through the generosity of the donors listed herein.



Water release during a storm event



Vegetation helps cool the adjacent building.



Students frequently use the garden.