

Pete V. Domenici U.S. Courthouse

Sustainable Landscape Renovation

Albuquerque, New Mexico, U.S.A.

The Pete V. Domenici Courthouse Sustainable Landscape Renovation in Albuquerque, New Mexico, transformed a neglected public plaza into a showcase of sustainable landscape design. Set within a high desert transitional region, the two-star Sustainable Sites Initiative (SITES)-certified landscape features a creative reuse of materials, xeriscaping, and ecological stormwater management. The previous space, known as McClellan Park, used resources inefficiently and was disconnected from its surroundings. It was also full of impervious surfaces, overwatered but underused lawns, and ill-adapted plant materials. There was also concern that the water-intensive landscape was causing water-related damage to the parking structure located underneath the courthouse.

Landscape architects Rios Clementi Hale Studios viewed the landscape as a "selective quarry." 21,000 square feet of concrete sidewalks were removed and cut it into 10,000 8"x 16" blocks. 84 percent of these concrete blocks were reused and stacked to make seat-walls, which divide areas within the plaza. These walls provide seating while also directing site stormwater into a system of rain gardens. The reuse of concrete reduced the need for purchasing new materials, increased permeability across the site, and helped reduce the urban heat island effect. Had the concrete not been reused, 480 tons of it would have ended up in landfills, costing \$9,949 in landfill fees.

Due to the scarcity of water in the desert region and the intensity of storms when they occur, developing a comprehensive stormwater management strategy was complex. While the original courtyard, tens of thousands of gallons of untreated stormwater runoff used to drain into the city storm drain every month. Now, three strategies help to slow and move water

through the site: A new series of trench drains release water into rock-lined bioswales in the parking lot; trench drains direct water from the entry plaza to a rock garden designed for stormwater detention; and a series of terraced gardens slowly direct water through the south edge of the site. The designers also replaced existing lawn with native plantings. Any excess stormwater runoff is captured in two 16,000-gallon underground cisterns and used for irrigation. These measures combined have reduced the site's water use by more than 86 percent.

The courtyard uses drought-tolerant plants and 79 percent native plants. The 18 native species include Sunset Hyssop, Mescal Agave, Mormon Tea, Apache Plume, Modesto Ash, Red Yucca, Pineleaf Penstemon, and Soap-tree Yucca. Plants, which have attracted an array of urban wildlife, were grouped together by their water needs. Wet plants were placed at the base of sloped rain gardens, mimicking the regional Rio Grande Floodplain Bosque ecology, while drought-tolerant plants occupy higher ground. In addition to adding new regionally-adapted plants, the designers preserved 87 Honey Locust and Sycamore trees.

Capitalizing on Albuquerque's 300-plus days of annual sun, a 41,300-kilowatt hour (Kwh) array of solar panels was installed on the roof of the courthouse. These solar panels entirely power the upgraded LED lighting fixtures across the site.

Improved connections make the courthouse landscape more walkable. In place of former concrete sidewalks, ADA-accessible decomposed granite pathways have enhanced access and connected visitors. Honey locusts shade these new pathways, further encouraging strolling. At maturity, these trees will provide shade for

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43 percent of hardscape surfaces.

The new courtyard is rooted in the history of the place. The diagonal arrangement of landscape elements is derived from abstractions of Pueblo patterns, while stormwater management elements mimic the function and location of historic irrigation canals. An existing stone art piece created by artist Doug Hyde was relocated to fit within the new landscape design.

Project Resources

LEAD LANDSCAPE ARCHITECT

Rios Clementi Hale Studios:

Mark Rios, FAIA, FASLA

Samantha Harris, RLA, ASLA, LEED, AP

Mike Tramutola, RLA

Brent Jacobsen, RLA, ASLA

CLIENT

General Services Administration:

Leslie Shepherd, FAIA

Christian Gabriel, RLA, ASLA

Tim Widerman, Senior PM

Stuart Blakely, Property Manager

Christopher Adams, Operations Manager

Sam Lopez, Supervisory PM

Steve Kline, AIA

Keven Myles, PM, Sustainability Coordinator

Carrie Haman, CO

TENANT

United States District Courts:

Scott Ferguson, Facilities Supervisor

Lydia Piper, PM AIC - General Contractor

Tiffany Gaede

John Monteverdi

Lindsay Wright

LANDSCAPE CONTRACTOR

The Hilltop: Aaron Forrester

CIVIL, WATER RECLAMATION, PLUMBING

Biohabitats

Erin English, PE, LEED AP

Justin Lyon, PE, LEED AP, CGBP

Ryan Case Nicole Stern, RLA, LEED AP

LOCAL LANDSCAPE ARCHITECT / IRRIGATION DESIGN

Surroundings Studio

Faith Okuma, AICP, LEED AP, RLA

ARBORIST

Master Arborist: Bryan Suhr

LIGHTING

KGM

Mike Gehring, FAIA, IALD

Kris Sandheinrich, LC