

SPECS

CATEGORY:

Extensive Industrial/Commercial

PROJECT:

EcoCenter, San Francisco, California,
1,100-square-foot green roof

AWARD RECIPIENT:

Habitat Gardens, San Francisco, California
(project manager, horticulturalist, designer)

DESIGN TEAM:

Architect – Toby Long
Waterproofing – HB Urethane Foam
Green Roof System – Opti-Green
Parapet Design – Evo Design



Image courtesy of Habitat Gardens

“BEING THAT IT IS SITUATED ATOP SAN FRANCISCO’S FIRST 100% OFF-GRID BUILDING, WE WANTED TO ENSURE THAT THE ECOCENTER’S GREEN ROOF WAS LOW MAINTENANCE. THE CLOSED-LOOP WATER SYSTEM HELPED TO ENSURE THAT THE GREEN ROOF CAN THRIVE WITHOUT RELYING ON CITY UTILITIES.”

Casey Lyon, founder, Habitat Gardens

A GREEN ROOF THAT DOES THE ENVIRONMENT JUSTICE

Literacy for Environmental Justice (LEJ) is an organization whose mission is to foster an understanding of the principles of environmental justice and urban sustainability in young people in order to promote the long-term health of communities. It was the recipient of a grant under the *American Recovery and Investment Act of 2009* (ARRA) and selected Habitat Gardens as the primary contractor to complete a major project at The EcoCenter at Heron’s Head Park in San Francisco, a 23-acre wetland park in Bayview Hunters Point. The work for the project consisted of installing two extensive living roofs (1100-square-feet in total) on the building. The project also integrated green infrastructure around the building in the form of permeable pathways, constructed wetlands as part of the building’s waste treatment system, and a rainwater catchment system at the building.

The green roof was designed to fit in with the surrounding environment at Bay View Hunter’s Point. The conditions on the EcoCenter roof are fairly harsh with high winds and sun exposure that dries out the growing media quickly. The vegetation consists of 39 plant species that are endemic to the SF Bay Area region with the goal to attract birds, bees and butterflies. The majority of the plants were sourced from LEJ’s own nursery. Since this is also San Francisco’s first 100% off-grid building, emphasis was given to creating a low-maintenance roof. Integrated water management principles were also implemented. Plants are all drought tolerant and the irrigation system (aided by two 5,000-gallon galvanized tanks) was designed as a closed-loop system in order to save water due to waste and runoff.

Recycled materials were used wherever possible. A capillary mat was installed on top of the foam roof to increase water storage and retention. Triangular drainage channels were placed on top of the capillary mat to carry excess water to roof drains or scuppers. The drainage channels would eventually be embedded in granular drainage media. The capillary mat was made from recycled polypropylene while the drainage channels were made from 100% post-consumer recycled content. The filter fabric and parapet filler were also created from recycled materials. Gravel was purchased from a local quarry just off the property, and rocks and driftwood were collected from Heron’s Head Park.

The EcoCenter is the first environmental justice education center in San Francisco. The roof is used as an education tool for the youth showcasing that plants that grow on the property can also grow on the roof. It has also served as a useful source of employment in the area. The installation created 31 new jobs, and many of the youths who helped to grow plants in the nursery now work as facility tour guides. ✱