Sister Cities Park
Logan Square, 18th St & The Benjamin Franklin Parkway, Philadelphia

Site Context

Sister Cities Park is located in what was once known as Northwest Square, one of William Penn’s original five squares, later renamed Logan Square. The $5.2 million renovation transformed a 1.3 acre barren site into a richly planted and welcoming green public space offering a variety of amenities for children, residents, visitors and office workers. The design of the Park blends urban and natural elements that are found in the woodlands of southeastern Pennsylvania.

Project Overview

A 2,500 square foot intensive green roof blankets the building at houses a café and visitor center. The roof was planted with native grasses, shrubs and perennials, while the building’s outer walls of Emerson limestone pay tribute to Wissahickon mica schist. The roof helps reduce air temperature, smog, stormwater runoff and dust. Geothermal heating a cooling helps moderate extreme temperatures. During the process of designing the park, researchers uncovered literature that indicated the potential for historic burials. Further investigation uncovered more than 60 18th century graves. After further archeological studies and investigation, the design team and Center City District redesigned the utility locations and depth of the foundations to protect the integrity of the burials on the site.

Sustainable Practices

Water- The 2,500 square foot green roof is capable of completely absorbing the typical one-inch downpour, or 7,500 gallons of water. The roof is planted with low-growing native plants such as blue switch grass, little spire Russian sage, prairie dropseed, little bluestem, hybrid sedum, and gro-low fragrant sumac. In addition, the green roof minimizes heat-island effect, fosters biodiversity and habitat creation, and increases the roof insulation. The Park is fully planted with native plants that offer seasonal interest and support stormwater management; because they are native to the region, these plants have limited demand for water and reduce the need for irrigation. These plants include American cranberry bush, highbush blueberry, foamflower, wild columbine, Piedmont rhododendron, and turtlehead.

Natural Landscaping- Eight mature trees were protected during construction. After construction the Park was fully planted with a complement of native plants typical of the Wissahickon Valley. Shrubs planted include Dwarf Fothergilla, Shamrock Inkberry Holly, Piedmont Rhododendron, Gro Lo Fragrant Sumac, Highbush Blueberry, and American Cranberry Bush. Herbaceous perennials used were Wild Columbine, Turtlehead, Beard-Tongue, Black Snakeroot, and Foamflower. Native grasses planted in the green roof were also used throughout the Park. In addition, 53 trees were planted, including Valley Forge American Elm, Columbia Planeteer, Red Maple, Black Birch, Sassafras, River Birch, and Fragrant Snowbell. The Children’s Discovery Garden is inspired by the Wissahickon Valley ecosystem and was built with local mica schist.
Sustainable Practices Cont.

Materials Selection and Construction- A palette of natural materials defines the texture of the pavilion that houses the café and visitor center. The interior ceiling of the building is made of Western red cedar while the building’s outer walls of Emerson limestone pay tribute to Wissahickon mica schist. The wood ceiling and polished concrete floor extend outward from the building’s interior into the plaza beyond. An efficient ground source geothermal heat pump provides ground-temperature water that utilizes the earth’s constant temperature for heating and cooling, thus reducing energy use. Deep overhands on the south and west facades of the building provide solar shading for warm seasons, minimizing summer heat gain. Skylights penetrate the structure’s massive green roof, bringing natural direct sunlight into the building. The Pavilion’s prominent cantilevered roof structure and highly transparent structural glass blur the divide between interior and exterior spaces. The pond constructed in the Children’s Discovery Garden cools breezes to maximize the effectiveness of passive natural ventilation. The fountain paying tribute to Philadelphia’s 10 sister cities provides evaporative cooling.

Connecting People to Nature- Connected to the café pavilion by a terrace, the Children’s Discovery Garden occupies the northeast corner of Sister Cities Park and aims to engage children in a natural play environment inspired by the Wissahickon Valley ecosystem. Throughout the warm weather months, children are drawn to the fountain and boat pond area, and run up and down the “mountain” in the Discovery Garden. An accessible path winds its way from the boat pond up the hill. Along the path, children encounter opportunities for play based on themes of nature. Thickets of thin woody trees, boulders, logs and “fallen” tree trunks line a path to the top of the hill with sitting areas overlooking the boat pond and terrace. This area contains a mist fountain and forms the beginning of the stream. Alternate routes down the hill are provided through a small “secret” path that emerges at the boat pond. The boat pond doubles as a place to splash and cool off on a hot summer’s day. The fountain, embedded in bluestone, on the opposite side of the pavilion has 10 spouts and serves as a place for children to gleefully run about, especially when the weather is hot. In partnership with the Academy of Natural Sciences of Drexel University, the Center City District has programmed nature studies in the Park. Programming in the fall has continued to draw large groups who enjoy the play space in the middle of the City.

Operations and Maintenance- The intensive green roof minimizes heat-island effect and provides additional roof insulation. An efficient ground source heat pump delivers the ground temperature to the building where exchangers either heat or cool above or below this temperature, effecting an anticipated 30% reduction in heating and cooling costs. Native plants in the landscape and on the roof have little water demand, and irrigation zones can be managed for turf that has more intensive water needs.

Environmental Stewardship Messaging- Signage at the Children’s Discovery Garden teaches about local geology and flora. In partnership with the Academy of Natural Sciences of Drexel University (ANSDU), the Center City District (CCD) offered a weekly nature program for children throughout the summer. In addition, on July 14, with a variety of partners, CCD hosted an outdoor educational playtime, “Celebrate Wind & Water.” At this festival of learning, ANSDU used a model of the Schuylkill River and Delaware River watersheds to explore what happens to the water we use every day and how we can help keep the water clean. Also, the Fairmount Water Works Interpretive Center showed how water wheels work and how the chemical makeup of water can be tested. The neighboring Friends Select School, a Quaker institution with 530 students, utilizes the park to teach students about nature. The Milk & Honey Café’s menu is focused on serving seasonally available, locally produced foods and produce, many of which are organic.

Information provided by: Linda Harris, Center City District (2013)