



The Portico Group Announces Opening of Happy Hollow Park and Zoo – a Model of Sustainability and Green Design Building Practices – in San Jose, CA

FOR IMMEDIATE RELEASE — *San Jose, CA, March 2010*: The newly renovated \$72 million Happy Hollow Park and Zoo re-opens to the public on March 20, 2010 in San Jose. A team of interpretive planners, landscape architects, architects, and zoological exhibit designers from The Portico Group, a Seattle-based multidisciplinary design firm, provided comprehensive design services throughout the project. As an integrated park and zoo facility, the mission of Happy Hollow is to offer an affordable, sustainable, and conservation-centered outdoor adventure for children aged 2-10 and their families.

A city-owned and operated park and zoo, Happy Hollow occupies 13+ acres of the northwest corner of the frequently-used Kelly Park. San Jose voters funded its modernization and expansion in 2000 based upon a city-authored 1994 master plan. The Portico Group has been working on the Happy Hollow Park and Zoo since 2001, beginning with a strategy and phasing plan, followed by detailed design. Construction started in 2008, and the efforts of nearly 16 years will culminate in a grand public re-opening on March 20th.

The re-opened Happy Hollow focuses primarily on children's experiences of playing, learning, and having fun. Happy Hollow is a place full of landscape features, building forms, graphic icons, and vibrant colors that stimulate the senses and make it a unique and special place to visit. New features include the entry and plaza; a zoo comprised of the Double H Ranch, Lemur Woods, and Wallaby Walkabout; and an attractions area with Giggle Grove, Redwood Lookout, Pacific Fruit Express, Miners Maze, and a refurbished Danny the Dragon.

Sustainable Design Solutions

Assisted by sub-consultants Paladino and Company (green design), Stantec (mechanical), Sparling (electrical) and Nolte (civil), The Portico Group developed design approaches for sustainable landscapes and buildings. The palette of forms, spaces, materials, and systems at Happy Hollow also meets the City of San Jose's goal to build, own, and operate buildings and landscapes that seek to:

- Protect, conserve, and enhance the region's environmental resources
- Provide healthy work environments for staff and visitors
- Realize cost savings to city taxpayers through reduced utility costs associated with water, lighting, heating, and cooling

Sustainable design is the idea of creating landscapes and buildings that join the highest standards for quality of life with the least ecological consequences to the environment. Sustainable projects strive to reach five simple goals: conserve energy, manage waste use, enhance environment, integrate landscape, and safeguard water.

Through swales and porous asphalt concrete paving that slow the speed of surface run-off water, sustainable *landscape* design solutions at Happy Hollow focus on moderating the impact of storm water discharge into nearby Coyote Creek. The planting palette was developed to support children's experiences of the overall design theme, "Whimsical Woodland Adventure," and is native or adapted to the San Jose climate, soil, and sun characteristics. The walkways, play areas, rides, party circles, and buildings were specifically located to minimize the damage to many of the existing trees that provide shade and a cooling micro-climate for the children.



Sustainable *building* design solutions at Happy Hollow center around a built form that optimizes daylight and provides for natural ventilation, while minimizing summer solar heat gain and glare.

Building characteristics include:

- Low-slope green roof with generous overhangs
- ‘Pop-up’ clerestory that brings daylight into the center spaces and vents out hot interior air
- A multitude of view windows shaded by roof overhangs
- Window trickle vents that let in natural ventilation as controlled by the room occupants

Building systems include:

- Structural wall and roof framing using finger-jointed short wood pieces
- Two-pipe radiant flooring for heating or cooling
- Evaporative cooling for high-occupancy spaces (retail, concessions, and education)

Building materials include:

- Fiber cement board made from sand and recycled cement and cellulosic fibers
- Hay-bale wall construction at the education building

In addition to sustainable design, the City of San Jose was interested in following the U.S. Green Building Council (USGBC) design principles as formulated in the Leadership in Energy and Environmental Design (LEED™) rating system. LEED™ Certification by the USGBC is the leading way for the City to develop and measure green building and sustainable design practices. Happy Hollow is on track for a Silver rating in the LEED™ program and, if approved, it will be the first LEED™-certified zoo and attraction project in the country. LEED™ certification provides independent, third-party verification that a building project meets the highest green building and performance measures.

Green building design elements (by LEED scorecard category) at Happy Hollow Park and Zoo include:

Sustainable sites

- Best-practice standards for site sedimentation and erosion control
- Adjacent access to public transportation and bicycle racks for the public and staff
- Storm water systems that convey rain water runoff from paving and building roofs to on-site, planted swales that cleanse and percolate water into the ground.
- Green roofs planted with native sedums that absorb rain water (minimize storm water runoff), create insect habitat, reflect solar radiation, and minimize maintenance and replacement as compared to other types of roofs
- Buildings and structures located outside of Coyote Creek flood plain
- Parking area located on top of a former waste landfill

Water efficiency

- Implementation of high-efficiency irrigation systems using below-ground drip lines and bubblers to reduce water usage by 50% and to solely use the City’s reclaimed water in lieu of potable water
- Installation of low-flow toilet fixtures and electronic sensors to reduce potable water use by 30%

Energy and atmosphere

- Best-practice operations and maintenance plans for building mechanical systems commissioning, energy performance, and the zero-use of chlorofluorocarbons (CFC) in refrigerants



- Energy cost reduction to 20% below the projected costs per ASHRAE and the California Title 24 energy codes
- Additional mechanical systems commissioning to ensure correct operations and to identify potential improvements for better energy performance
- Zero-use of ozone depleting hydro chlorofluorocarbons (HCFC) and halon chemicals in building systems

Materials and resources

- Locations and collection bins for recycling paper, glass, plastic, and metals
- 95% of the weight of construction waste redirected to recycling centers
- 10% of the total weight of all building materials used on the project consists of recycled materials
- 20% of the building materials manufactured within 500 miles of San Jose

Indoor environmental quality

- Minimum indoor air quality performance standards to maintain the health and welfare of the occupants, prohibit exposure of occupants to tobacco smoke, and provide carbon dioxide sensors
- Protection of the buildings systems and filters from contamination of construction waste, particles, and moisture; building systems and filters flushed out with 100% outside air prior to occupancy
- Use of low-emitting volatile organic compounds (VOCs) in adhesives, sealants, and paints
- Individual occupants control thermal, ventilation, and lighting to support optimum health, productivity, and comfort conditions
- Windows that provide views between indoor and outdoor environments, as well as introduce daylight into the occupied areas of the building

Innovation and design process

- Comprehensive green building signage program built into the educational interpretive signage plan
- Nineteen leaf-shaped signs identifying and explaining key green building features, including green roofs, use of reclaimed water, run-off water collection, hay-bale building construction with a viewing window, radiant flooring, natural ventilation, and habitat creation for beneficial insects and native wildlife
- Self-guided and staff-guided tours of the green building designs and the numerous conservation efforts
- Published tour brochure and an online virtual tour
- Integrated pest management (IPM) plan that uses the least toxic chemical pesticides with minimal implementation only in targeted locations and for targeted species
- Site buildings and utility infrastructure designed by LEED™ accredited professionals

Project Team

Prime Consultant:

The Portico Group

Other Consultants:

FA Architects with Wyatt Design Group, Inc.

Nolte Associates, Inc.

Stantec

Sparling

Coughlin Porter Lundeen, Inc.

Oppenheim Lewis, Inc.

THE
PORTICO
GROUP



Paladino & Company
Partners By Design
Clevenger Associates
Denise Duffy & Associates

About The Portico Group

As an interdisciplinary firm, The Portico Group capitalizes on the inspiration found in collaboration. Our work expresses our place-based approach to design, which is linked to the physical, environmental and cultural characteristics of the project location. The Portico Group specializes in projects that infuse meaning into the relationship between the built and natural environments.

This work includes:

- Zoos & Aquaria
- Public Gardens
- Museums & Visitor Centers
- Parks & Recreation

To accomplish this, our practice merges the disciplines of Architecture, Landscape Architecture, and Interpretive Design. Providing master planning, programming, design and construction observation to mission-driven clients around the world, The Portico Group was founded in Seattle, Washington and is currently celebrating 25 years of design.

Media Contact

Leigh Tucker, Marketing Manager
ltucker@porticogroup.com
T: 206.621.2196
F: 206.621.2199

porticogroup.com