Greening a New Museum

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Preparing to open the doors of a new museum is no small challenge. Committing the project to be as sustainable as possible makes the challenge no less daunting but even more exciting.

Sunnylands where legacy shapes the future.

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The Annenberg Foundation Trust at Sunnylands is in the midst of constructing the 17,000 square-foot Annenberg Center on 15 acres of land, including a nine-acre desert garden. At the same time, the Trust is preparing the adjacent property, including and historic house, golf course, and grounds, as a museum. The projects are set to open simultaneously on November 11, 2011. Both were recently selected as pilot projects by the Sustainable Sites Initiative, a partnership of the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center at The University of Texas at Austin, and the United States Botanic Garden. SITES is developing the first national rating system for sustainable landscapes.

Commitment to environmental stewardship was among the first decisions made in moving forward with this project. Each decision made regarding retrofitting the existing property and building the new facility focused on how new construction and change would affect the desert environment. At times, solutions were clear – the construction of a solar field to provide 100% of the electricity to the Annenberg Center. Other decisions were not so clear-cut. As a historic site, how could new green technologies be applied to a property designed and built in the 1960s?

Sunnylands was the 200-acre estate of Ambassador Walter and Leonore Annenberg. Designed by architect A. Quincy Jones with interiors by William Haines and Ted Graber, the 25,000 square-foot mid-century modern house is located in the middle of landscaped grounds including a private golf course. The Annenbergs lived here for approximately five months each year following its completion in 1966. In subsequent years, they entertained seven United States Presidents, British Royalty, international political figures, as well as cultural and entertainment icons at Sunnylands.

Originally designed as an oasis in the desert, Sunnylands reflects the 1960s understanding of creating landscapes in the desert that relied on the natural aquifer, feeding the Palm Springs area. The smaller number of residents were not faced with the prospect of brown outs and energy conservation. Today's concerns for the environment lead us to make different decisions. With a commitment based on the Annenberg belief in the ideals of a strong America, it seems only fitting that the most advanced efforts toward sustainability be used in the construction of the Annenberg Center and the retrofitting of the Sunnylands estate.

Sunnylands is a nearly pristine example of mid-century modern architecture. All efforts are being made to protect the historic value of the house and the cultural landscape surrounding it. A new tile roof is replacing the old one. The original concrete roof tiles were positioned on the house then painted. Periodic re-painting was required. The new tiles will have the color imbedded into the concrete. The cost savings of not repainting the roof is combined with the ecological responsibility of having to dispose of unused paint. Glass in the many floor-to-ceiling windows is being replaced with tempered or laminated safety glass. The new glass will assist in lowering the amount of sunlight entering the house, both protecting the contents while helping to reduce the electricity needed to keep temperatures to museum standards.

Care of the cultural landscape (green grounds, including the golf course) will be accomplished using hybrid and electric mowers, alternative fuel sources such as hydrogen and biodiesel, organic fertilizers and biological pest control, and an on-site composing center. Eleven lakes interconnect via concrete streams and spillways. The lakes store well-water prior to its being used for irrigation. The retrofitting of the lakes and the installation of a new-energy efficient pump system will assist in the reduction of water consumption. An added feature of the lake retrofit is the creation of habitat for fish and water fowl resulting from the addition of aquatic planters which will act as bio-filters, reducing the nutrient load in the system and the reliance on herbicides to control weeds and algae.

All 5,000+ trees will be irrigated independently of the grass and subsurface flood irrigation installed. Single sprinkler head control will have multiple hydro zones. Soil moisture monitoring technologies will provide a real time quantifiable picture of water use. The project proactively meets the specifications and requirements for reclaimed water five years ahead of the

implementation of a citywide plan.

The Annenberg Center is a new construction project being built adjacent to Sunnylands. It will offer exhibitions and programs highlighting the architecture, art collections, renowned visitors to Sunnylands, the philanthropic legacy of the Annenbergs, and how the Center embraces an ethic of environmental sensitivity. The building is expected to achieve LEED certification at a silver level. The planning and design of the entire project included concern for environmental stewardship. The energy efficient building, designed by Frederick Fisher and Partners, includes state-of-the-art temperature controls accessible to staff located off-site.

The nine-acre desert garden was a priority in the design of the Center and is a testament to the beauty of desert plants. The massing of the carefully selected plants create shaded walkways even in the desert heat. Texas ebonies have been planted to provide a wind buffer to the site, assisting in the reduction of desert blow sand. Water usage will not exceed 20% of the water district allotment for the landscape. The innovative irrigation system will push the limits of technology in both water distribution and management, allowing the landscape to be watered in its entirety through subsurface irrigation, minimizing evaporation and runoff. A system of soil moisture monitoring sensors have been installed providing a quantifiable view of water requirements, allowing the landscape to be irrigated on actual need and not on a predetermined schedule. Green waste generated through shrub and tree maintenance will be recycled to the adjacent composting site and reintroduced into the landscape in areas such as the understory of trees and the native landscape set-aside areas totaling over three acres of the site. This project-generated compost creates a rich organic fertilizer and a natural weed barrier, reducing the need for additional fertilizers and herbicides to maintain the property.

The on-site solar field will provide 100% of electricity needs. Expected expansion of the solar field within the next five years will mean providing 50% of all electricity needs to the adjacent estate. Heating and cooling take advantage of geothermal systems. Visitors participating in tours of the estate will travel from the Center on electric shuttles with reduced carbon emissions.

Within the building, the café will use natural, fresh, and local ingredients, served in biodegradable containers. Trash containers will be well-marked for recycling. The store will limit the use of bags and all paper products will be made from recycled and/or recyclable

materials. Electronic guestbooks will invite guests to record their visits. Promotional materials will be made available on-line and printing will take place on recycled and/or recyclable paper with a concern to environmentally-friendly inks.

Additional information on the project can be found at www.sunnylands.org. Information on the Sustainable Sites Initiative is available at www.sustainablesites.org.