

WINTERGREEN

Volume 5, Issue 10

April 2004

A monthly update on Steven Winter Associates, Inc.'s work in the realm of Energy Efficient, Sustainable, and High-Performance Buildings

Visit the First LEED-Rated Museum in the U.S.

The **Mark Twain House Museum Center** in Hartford, Connecticut (rendering at right) received recognition this month for being the first LEED-rated museum in the nation and the first LEED-rated building of any kind in Connecticut. The new museum center was designed by **Robert A.M. Stern Architects** of New York. Most of the heating and cooling



Courtesy of the Mark Twain House Museum

in the building was provided by geothermal wells drilled on the site. The overall energy efficiency of the HVAC system is nearly 29% greater than a system designed to meet the local building code, while local materials from within a 500-mile radius were selected to reduce transportation energy costs. Another green strategy was the use of fly-ash concrete to reduce the additional heat of hydration resulting from Portland cement-based concrete. An energy analysis of the building was conducted by Steven Winter Associates, Inc. (SWA), in which projected energy use for a base-case building as designed, and a LEED alternative design were compared. The LEED design featured an improvement in building envelope; better performing lighting; and efficient heating, ventilation and air-conditioning systems. The DOE-2.1E computer model showed how the museum center would save more than 29% in regulated energy costs as compared to ASHRAE 90.1-1999.

Making Lakes to Conserve Water



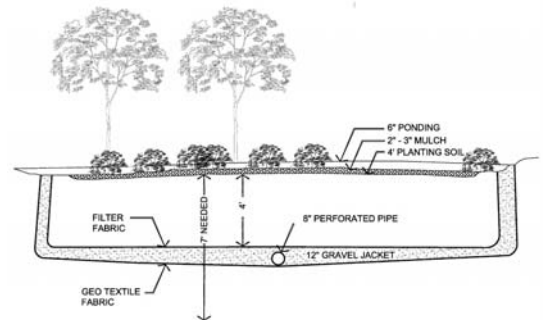
Nearly 300 people attended the annual real estate forum "Ask the Experts" at Lakewood Ranch in Sarasota, Florida on April 8. This year's theme: Green building. Featured at the forum were Robert J. Bruss (the nation's most widely published real estate columnist); Katherine Salant, (syndicated columnist on real estate and design); Matt Ross of Eco-\$mart Inc. (a consulting firm and product distributor for green construction); and SWA's own Bill Zoeller (an architect who specializes in residential green design strategies). Zoeller fielded questions on the green building strategies employed at the 28,000-acre Lakewood Ranch development, including energy conservation, waste management, indoor air quality, site and land use, and sustainable material selection. One of the innovative water conservation strategies that Zoeller spoke about was the use of man-made lakes as central sources for a project-wide non-potable irrigation system. These interconnected lakes collect and hold rain water and are designed to mimic the natural water-ways in west central Florida, including habitat creation for native plant and animal species. In the case of Lake-wood Ranch, this strategy allows the development to have a "neutral impact" on the county's potable water supply by recharging the aquifer at levels greater or equal to the amount of water removed.

New York Builds Sustainably for Public Education

SWA is helping the **New York State Department of Environmental Conservation (DEC)** to attain the goals set forth in Executive Order 111 (which requires buildings of 20,000 gross square feet or larger to meet the criteria for a certified LEED rating and to surpass the state's Energy Conservation Construction Code by 20% in energy efficiency).

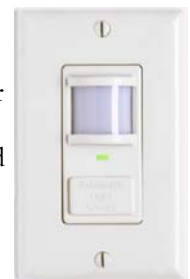
Working with the New York State Energy Research and Development Authority (NYSERDA)

SWA is helping the project team to bring the proposed DEC's Region 3 Regional Office Building Expansion in New Paltz towards achieving a LEED Gold rating. The project team includes **DEC's Bureau of Design and Construction, Stein White Nelligan Architects, Edwards & Zuck** as mechanical engineers, and others. The 32,000-square-foot building primarily houses administrative functions, but will also serve as a public education facility, illustrating energy efficiency, green principles, and sustainable strategies. The building will be a teacher in itself. For example, it will sport under-floor air delivery; roof monitors; two-story stair atria; high recycled-content materials and those manufactured locally; daylight dimming; low-water landscaping; preferred parking for carpooling; and bio-filter storm-water management. This last feature will consist of a grass pre-filter strip that can withstand ponding, with sub-layers of gravel and geotextile fabric (detail above). When the water infiltrates the bio-filter, nutrients such as nitrogen and phosphorous (which typically promote algae growth and eutrophication of bodies of water) are stripped. Construction documents are now being completed and the project will go out to public bid. Stay tuned for other upcoming DEC projects.



How Efficient is Your Multifamily Building?

SWA, sponsored by the **New York State Energy Research and Development Authority (NYSERDA)**, is developing a three- to four-day training program that will prepare multifamily building operators for certification by the **Building Performance Institute (BPI)**. These courses and the certification will ensure a level of knowledge that should allow building operators to prevent or quickly respond to an array of problems that crop up in multifamily buildings every day. The training covers building science; HVAC; DHW; electricity/water usage; health and safety; and record keeping. All classes will have an emphasis on health and safety, comfort, durability, and resource efficiency. For example, students will learn about low-energy lighting alternatives, such as newer-generation fluorescents or light and motion control sensors to reduce wasted light. Motion control sensors, such as the WSD-PDT wall sensor pictured above, are most effective in common areas such as laundry rooms and maintenance closets--areas where lights are often left on. In order to meet the individual needs of building owners, training sessions will be held on-site and will feature hands-on training with the equipment used in the building. Completing the course and becoming certified will make the participating building operators eligible for rebates from NYSERDA for a portion of the program cost. For more information contact SWA's Andy Padian at: padian@swinter.com, or at 212-564-5800.



For more information
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