SAN DIEGO NATURAL HISTORY MUSEUM AWARDED PRESTIGIOUS LEED® for EXISTING BUILDINGS: OPERATIONS & MAINTENANCE GREEN BUILDING CERTIFICATION

The Oldest LEED-EB: O&M-certified Museum in the Nation

December 17, San Diego — The San Diego Natural History Museum announced today that it has been awarded LEED for Existing Buildings: Operations & Maintenance (LEED-EB: O&M) Certification, established by the U.S. Green Building Council and verified by the Green Building Certification Institute. LEED (Leadership in Energy & Environmental Design) is the nation’s preeminent program for the design, construction and operation of high-performance green buildings.

Built in 1933, and expanded in 2001, the San Diego Natural History Museum is believed to be the oldest LEED-EB: O&M-certified museum in the nation (among reporting projects) and first in California to certify under LEED for Existing Buildings: Operations & Maintenance. In the San Diego area, LEED-certified science/nature and art museum buildings include the San Elijo Lagoon Nature Center, The Center for Reproduction of Endangered Species at the San Diego Zoo, and the Lux Art Institute in Encinitas, CA.— each of which earned LEED for New Construction (LEED-NC) certification. The San Diego Natural History Museum is the only museum in San Diego County, and the first in Balboa Park to achieve LEED-EB: O&M certification.

“Balboa Park has embarked on an initiative to bring the Park into environmental balance by 2015,” said City of San Diego Councilmember Todd Gloria. “The Natural History Museum’s LEED certification is a tangible milestone toward that goal.”

Committed to operating a facility and organization that demonstrates the importance of conserving natural resources, the San Diego Natural History Museum achieved LEED certification for efficiency in energy use, lighting, water and material use as well as
incorporating a variety of sustainable strategies. The project was led by Shawn Whisman and Rusty Gehm of the Museum’s Building Operations team, with direction from George Brooks-Gonyer, COO and CFO.

“Buildings are a prime example of how human systems integrate with natural systems,” said Rick Fedrizzi, president, CEO and founding chair of the U.S. Green Building Council. “The San Diego Natural History Museum project efficiently uses our natural resources and makes an immediate, positive import on our planet, which will tremendously benefit future generations.”

The process of LEED certification for the San Diego Natural History Museum started in early 2007 and completed in June 2009. During that time, sustainable policies and management plans were written, energy-performance data collected, and occupant surveys conducted.

Says Brooks-Gonyer, “The Museum got a kick start to pursue LEED certification when we committed to creating the Dead Sea Scrolls exhibition to be held at the Museum in 2007. To qualify for having the scrolls on exhibition, the building needed upgrades to meet the requirements of the Israel Antiquities Authority. These included upgrading the air quality, controlling air moisture, air temperature, and air volume. These upgrades resulted in a substantial upgrade of the Museum’s mechanical systems.”

The Museum’s next step is education so that all staff members and visitors to the Museum will understand what it means to operate, maintain and thrive in a green building. Involvement by all participants not only involves responsibility, but it can be fun and interesting as well, added Brooks-Gonyer.

The Museum’s LEED certification project was a team effort managed by Christina Sarkees, CID, LEED AP of Zagrodnik + Thomas Architects; Tom Reichert, Heather Shopplein and Jay Bradley of E&A Engineering/Engineered Mechanical Services Inc. (EMSI) oversaw mechanical and energy performance; Keith Schneringer of WAXIE Sanitary Supply, green cleaning consultation, and San Diego Gas & Electric (SDG&E) assisted with data compilation and research.

**Zagrodnik + Thomas Architects (ZTA)**

Christina Sarkees acted as manager, coordinator and interpreter for the project team in understanding the elements of the rating system, the importance of considering interactions among the prerequisites and credits and guidance through the LEED application process. She has been a LEED Accredited Professional (AP) for six years, and has a firm understanding of green-building practices and principles. ZTA has seven LEED APs on staff. ZTA is an award-winning architectural and interior design firm, located in San Diego’s North Park, that focuses on sustainable social architecture, with a long track record of work with non-profit organizations. ZTA recently assisted the County of San Diego in achieving LEED-NC Platinum certification for the San Elijo Lagoon Visitor Center.
Engineered Mechanical Services, Inc. and E&A Engineering were responsible for the Energy and Atmosphere (EA) and Indoor Environmental Quality (EQ) portion of the rating system. Out of the certification EA and EQ accounted for four prerequisites and 13 credits. The challenge presented by the San Diego Natural History Museum is that it has over 13 different areas; within these areas there are 130 zones, each with its own unique temperature requirements and five areas with precise humidity and CO₂ monitoring. The Museum’s situation required individual analysis of each system serving the areas. After implementation of the new Honeywell control system and other mechanical upgrades, the Museum is feeling the effect of a comfortable environment and a reduction of energy consumption upwards of 20% that will result in a payback of two years or less and ongoing energy savings.

WAXIE Sanitary Supply was responsible for the Green Cleaning credits for the project, which accounted for one prerequisite and seven credits toward certification. The primary challenges were in identifying potential areas for improvement, and in creating the appropriate formats to document the cleaning effectiveness of the custodial operations and measure the percentage of green product purchases for the Museum. It was also necessary for the Museum to create green-cleaning policies and procedures; the resulting low-environmental-impact, high-performance, green-cleaning program augments the mission and vision of the Museum by focusing attention on how to better reduce the health and environmental impacts associated with the cleaning function.

Keith Schneringer commented, “The process went smoothly working with the Museum’s dedicated and experienced custodial staff who were already using a majority of the green cleaning products that contributed to certification, and who were already cleaning the facility at a high level.” As a result of the evaluation process using tools developed for WAXIE’s GPS® Green Partner Support Program, over 75% of the products purchased to clean the Museum during the performance period were green.

Said Shawn Whisman, LEED project leader for the Museum, “By taking these steps to reduce the potential for contributing to aquatic toxicity and urban runoff, and to increase the potential for contributing to water conservation and improved indoor environmental quality, the Museum will be in a better position to offer a clean and pleasant learning environment for its patrons and employees going forward.”

SDG&E analyzed six years of energy-usage data to reduce and optimize the Museum’s future energy consumption. They coordinated light and water surveys to ensure the most efficient energy usage, as well as employee surveys to track their use of alternative transportation, among other such data.

Nationally, there only three LEED-certified natural history museums: The California Academy of Sciences in San Francisco, the Water+Life Museums in Hemet, CA, and the Carnegie Mellon Museum of Natural History in Pittsburg. The Getty Museum in Los Angeles is also LEED certified for Existing Building under an earlier version of LEED-EB.
Celebrating its 135th year, the San Diego Natural History Museum is the second oldest scientific institution in California; third west of the Mississippi. A binational museum, its mission is to interpret the natural world through research, education, and exhibits; to promote understanding of the evolution and diversity of southern California and the peninsula of Baja California and to inspire in all a respect for nature and the environment. Located in Balboa Park at the intersection of Village Place and Park Blvd., the Museum is open daily except for Thanksgiving and Christmas. Phone: 619.232.3821. Website: www.sdnhm.org.

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EDITOR’S NOTE: contact dwillett@sdnhm.org for high- and low-res building images.