

Santa Clarita Transit Maintenance Facility Earns LEED® Gold Rating from U.S. Green Building Council

Straw-bale building envelope highlights list of sustainable design innovations in HOK-designed project.

Santa Clarita, CA (Vocus) January 3, 2007 -- The new City of Santa Clarita Transit Maintenance Facility, designed by HOK (www.hoksustainabledesign.com), has been certified a LEED® Gold building by the U.S. Green Building Council. Through an unconventional use of materials, the project has become one of the first LEED-certified straw-bale buildings in the world. The LEED (Leadership in Energy and Environmental Design) Green Building Rating System is a voluntary, national standard for developing high-performance, sustainable buildings.

In an effort to improve air quality in the Santa Clarita Valley, the City of Santa Clarita's municipal transit system decided to convert its entire bus fleet from diesel to Compressed Natural Gas (CNG), a conversion that required a modern maintenance headquarters. Completed in May 2006, the new facility includes a 22,000-square-foot administration building, 25,000-square-foot maintenance building, bus wash facility, CNG fueling island for City buses, and publicly accessible CNG fueling station. The \$20-million project is designed to accommodate more than 150 buses and nearly 160 staff, with room for future expansion.

Consistent with its effort to operate in an environmentally conscious manner, the City sought to achieve the highest LEED rating possible within budget. The integrated design team, consisting of the owner, architect, MEP engineering consultant and landscape architect, determined that straw-bale construction, an uncommon technique generally used in residential development, would best meet the City's needs.

Although highly innovative today, straw-bale construction was pioneered more than a century ago. Its durability, resistance to burning and pest infestation, and high insulation value make straw bales one of the most efficient, cost-effective building materials for one- and two-story applications.

The Santa Clarita building envelope is constructed of straw bales with a lime plaster layer on both the interior and exterior. This creates an efficient, super insulated building perimeter to complement the large day-night temperature swings of the surrounding desert climate.

"Straw-bale construction may be a rediscovered technology, but it is appropriate and sustainable by today's standards. When combined with more recent technologies such as under-floor air distribution, high-performance glazing, and daylighting--as it is in this project--it can be part of a powerful strategy for creating an energy and resource-efficient building," said HOK's Charles Smith, Senior Project Manager. "We were able to exceed California Energy Efficiency Standards by over 40 percent."

"Straw-bale construction opens up the possibility of a whole new aesthetic as well. It's one in which only essential materials are needed to render form while achieving a cost- and energy-efficient building and promoting a healthier indoor environment--the basis of a sustainable design."

Not only does the technique save on the use of traditional, non-renewable materials, it also provides the added environmental benefit of reducing the quantity of straw burned. In California, readily available and inexpensive rice straw is a waste product of the grain farming industry. Until recently, the burning of rice straw was the



single largest contributor to air pollution in the state.

Additional sustainable features of the building include: skylights and clerestory daylighting, a well-insulated "cool" roof with deep overhangs to shade clerestories and protect straw-bale walls from moisture, on-site stormwater collection and treatment, water-efficient plumbing fixtures, a gray water reclamation system, an under-floor air system, water-source heat pumps, a courtyard and native plant garden, 25% fly ash paving, and efficient use of local, recycled materials. The project's less-is-more approach has resulted in a facility with a high level of sustainability on a budget consistent with conventional buildings of the same type and size.

"Recognition from the USGBC is an honor to receive because it acknowledges our City's commitment to environmental stewardship and social responsibility. Each year our City strives to reduce operating costs and conserve our natural resources to create a cleaner, healthier Santa Clarita," commented City Mayor Marsha McLean.

The Santa Clarita Transit Maintenance Facility represents HOK's 12th project to earn LEED recognition from the U.S. Green Building Council.

HOK (www.hok.com) is a global architectural firm that specializes in planning, design and delivery solutions for buildings and communities. Through its collaborative network of 24 offices worldwide, the firm serves diverse clients within the corporate, commercial, public and institutional markets. HOK is committed to developing resources and expertise to help lead the world toward sustainable communities and building environments. Founded in 1955, the firm's expertise includes architecture, engineering, interiors, planning, lighting, graphics, facilities planning and assessment, and construction services.

Established by the U.S. Green Building Council, the LEED Green Building Rating System is a voluntary, national standard for developing high-performance, sustainable buildings. It provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED promotes strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

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