



The two-story Southwestern-style home in Paradise Valley is the first in town to get LEED certification. It was built by Desert Star Construction. PHOTOS BY MARK BOISCLAIR



This photovoltaic array is set away from the home rather than on the roof. The solar cells are used to generate electricity for the home, casita and guesthouse.

New home is 1st in PV with green rating



Real Estate
PETER CORBETT
 The Arizona Republic

Luxury homes generally are not thought of as being green homes because of their size and the high energy demand to heat and cool dozens of rooms.

But a new home in Paradise Valley was certified last month by the U.S. Green Building Council under its Leadership in Energy and Environmental Design program, or LEED, which rates homes and buildings based on their sustainable construction and design practices.

Scottsdale-based Desert Star Construction built the home, which is Paradise Valley's first LEED-certified

new home.

"We're part of a new era," Desert Star President Jerry Meek said of the green luxury home. "I hope we're just the tip of the sword."

The green-building project includes a main home, guesthouse and casita. It features solar water heating, photovoltaic panels to generate electricity, high-efficiency LED lighting, low-flow plumbing fixtures and a separate irrigation system that uses treated water and in-line fertilizer to reduce water usage.

The homeowners did not want to be identified nor did they want the

size of the home and location disclosed.

Small homes encouraged

The size of a home is one of many factors that the U.S. Green Building Council weighs in its LEED-rating system. Points are deducted for overly large homes under the rationale that they use additional building materials and cost more to heat and cool.

The council considers a standard five-bedroom home to be 2,800 square feet.

In the Paradise Valley project, the

main house is LEED-certified, the lowest rating, while the guesthouse has a gold rating and the casita a platinum rating, the highest level for the most sustainable homes.

Meek said the green-building measures added about 1 percent to the overall cost of the home, but the return on that investment should occur within four years in savings of energy and water usage.

Desert Star, which also did the LEED-certified remodeling project on the El Chorro Lodge restaurant,

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installed highly efficient LED lights in the new green home.

An automated system uses motion detectors to turn off lights in empty rooms and can set the brightness at various levels. The lights are set to operate at 90 percent of maximum brightness, which can double the life of the bulbs, Meek said.

Hard floors, little carpeting

To improve indoor air quality, hard floor surfaces are used for 90 percent of the space with only 10 percent covered with carpeting. Some types of carpeting emit harmful vapors.

The irrigation system is designed to reduce water usage by 67 percent, according to Meek.

The builder also boxed and reused every tree on the site and a tennis court was reused as a foundation for one of the buildings.

Meek works with his son Jeremy and a design team on Desert Star's green-building projects.

Jeremy Meek has a construction management degree from Arizona State University and a master's degree in engi-

neering and sustainable development from the University of Cambridge in England and is LEED-accredited by the U.S. Green Building Council.

"We're just doing what's smart in creating a better living environment that uses less energy and create fewer carbon emissions," he said.

Desert Star, in business since 1978, builds about six to eight homes per year. About 40 percent of its work is on small commercial projects.

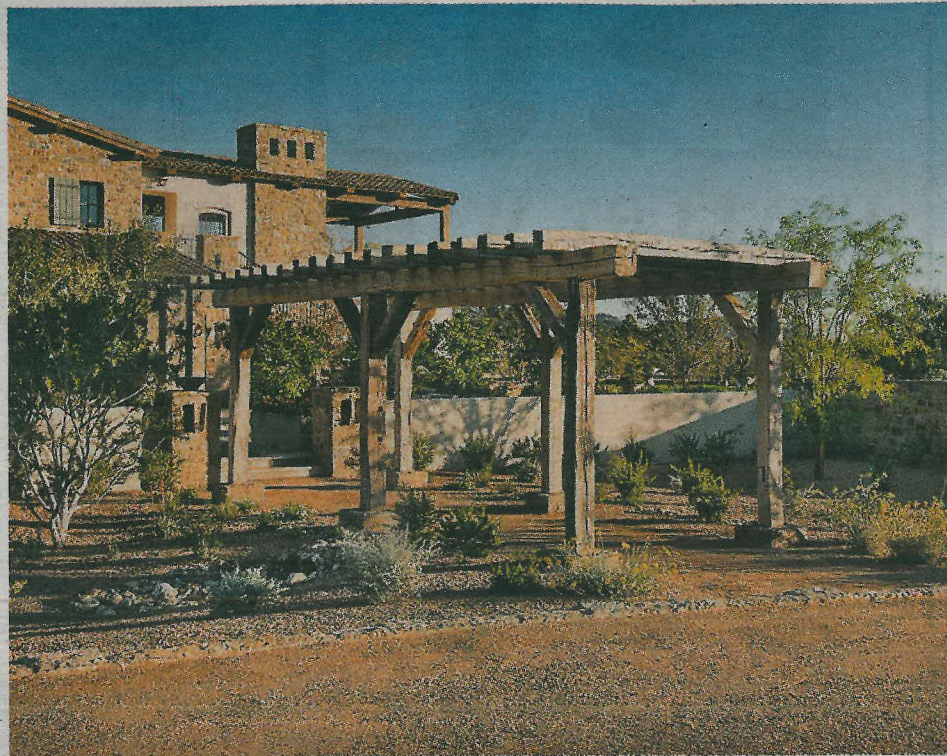
One of its most recent projects is a green home under construction in Silverleaf at DC Ranch. It will feature a geothermal system for heating and cooling the home that will rely on eight wells that are 350 feet deep, Meek said.

The success of the green-building projects is ultimately dependent on the clients, that they understand and embrace the sustainable-building practices, Meek added.

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A pergola on the grounds of the Paradise Valley home leads to a gate on the side of the house, built on the site of a teardown. Trees on the site were boxed during construction and reused in the desert landscaping. MARK BOISCLAIR