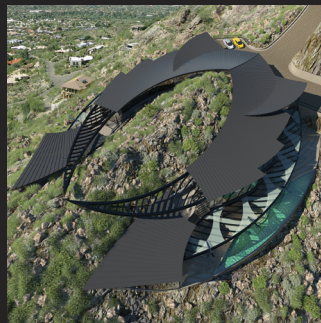


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Sustainability: A Truly Holistic Approach

By Jerry Meek

Building a custom home focused on reaching the highest standard of sustainability requires your construction team to be especially mindful of a variety of green building guidelines, especially when looking to attain LEED, Scottsdale Green Building Program or Net Zero Energy status.

The new residential chapter of the 2012 International Energy Conservation Code (IECC) is an important directive for Arizona architects, designers, engineers, and custom homebuilders. According to the new code, homes should incorporate best practices for added insulation, tighter building and thermal envelopes, improved ventilation ducts, upgraded windows, and increased efficient lighting. Both the Energy Efficient Codes Coalition and the U.S. Department of Energy's Building Energy Codes Project agreed that the requirements for green building outlined in the new code boost energy savings by 30% over the 2006 IECC.

"True sustainability pertains to a holistic system that maintains its own capacity by using techniques that allow for continual reuse of resources."

Before you consider the new code in greater depth, first determine your desired outcome. As you evaluate energy consumption, the highest priority is not simply to install energy saving measures that dampen the amount of energy usage. To be truly efficient and raise the bar on sustainability, your green building measures should be focused on preventing the use of energy in the first place. This is accomplished by an integrated and comprehensive approach by a knowledgeable and insightful team involving your architect, general contractor, engineers, and design team.

Building technologies to be considered in attaining optimal sustainability include improved construction and inspection techniques to achieve more efficient walls, foundations and roofs, high-performance windows and doors; day-lighting while minimizing cooling loads; and architectural coatings that scatter and reflect ultraviolet, visible, and near-infrared radiation to reduce solar gain, or that minimize unwanted heat loss.

System components such as heating, ventilation, and air conditioning (HVAC); lighting; and appliances all make a significant contribution to overall building energy use. Intelligent buildings, which apply a range of integrated, microprocessor-based measurement and control technologies to improve the home environment and functionality for occupants, can help to reduce energy load.

Rather than focus on each individual subsystem and technological component, the emphasis in building a sustainable custom home should be on an integrated view of overall building performance. While considering all phases from pre-design to maintenance and operation, your aim is to create a holistic outline of the tools and systems that can contribute to a truly energy efficient home design and construction process.

*Jerry Meek is President of Desert Star Construction
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