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GREEN BUILDING & DESIGN
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interior motive

How the
IIA is
facilitating
widespread
creation of
healthier
spaces,
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FEATURES

new spaces for a new school p. 48

New York-based Lyn Rice Architects browses the menu of architectural possibilities for myriad solutions that—through a client-oriented process of open exchange—allow pragmatic and conceptual issues to mix, mingle, and form distinct, nontraditional results.

expansion theory p. 54

The International Interior Design Association has thousands of professional and student members committed to the vision of better and healthier spaces. Executive Vice President and CEO Cheryl Durst, Honorary FIIDA, LEED AP, leads a dynamic professional network dedicated to the highest standards.

in good hands p. 63

Driven by competitive market conditions, operating expenses, and regional legislation, three of the world's largest commercial-portfolio managers are aggressively pursuing Energy Star ratings and LEED certification for existing commercial office buildings in the United States.



CASA BELLA VERDE

Briana Alhadeff turns the expertise she's gained through a successful design firm toward her own net-zero home

location

El Dorado Hills, CA

estimated completion

early 2011

size

7,500 square feet (including a 1,500-square-foot guest house)

INTERIOR DESIGNER AND GREEN CONSULTANT Briana Alhadeff spent years helping other people design green homes before she decided it was time to build her own. The result of that decision was Casa Bella Verde, a net-zero home that Alhadeff will both live in and use as a demonstration of what's possible with sustainable design and technology.

"I've always been interested in sustainable architecture, design, and construction and have spent the past 17 years looking at the technology that could help us preserve our planet's natural resources through sustainable homebuilding," says Alhadeff, owner of California design firm Bella Verde Consulting, based out of El Dorado Hills. "When I've designed projects for clients in the past, there have always been restrictions, so I couldn't include all of the green features that I would have liked."

In building Casa Bella Verde, which means "beautiful green home" in Spanish, that all changed. "This was my chance to select the perfect site for the home, as well as incorporate all of the green features that I've ever wanted," she says, mentioning that she worked closely with architect Nicholas Niki-foruk on the house's design. Even here, with its basic design, Alhadeff wanted to take the home to a new level and incorporate every possible aspect of green design and building technology.

She chose a site for Casa Bella Verde that promoted the use of solar and wind power. "The 40-acre parcel is situated on one of the highest peaks in the area, which is perfect for solar and wind power generation," she says. "I positioned the house in a natural clearing, free of obstructions, in order to maximize the solar and wind potential."

PREVIOUS PAGE: Artist rendering of the soon-to-be-completed 7,500-square-foot house. RIGHT: Steel reinforcements for the floor joists have been custom cut and assembled on site. BELOW: Bracing is added to provide the opportunity for straightening and leveling of the walls, to provide the scaffolding during construction, and to provide support while the walls are being filled with concrete.



“Because Casa Bella Verde was my own home, I had the freedom to incorporate every aspect of green-building technology into the design, which allowed me to take sustainable design to a whole new level.”

—Briana Alhadeff, Homeowner & Project Director, Bella Verde Consulting



Then there's the construction. Entirely wood-free, the house will be built of IntegraSpec insulating concrete forms (ICFs), which perform at an R-50 factor (compared to traditional homes, which perform at R-12 to R-20 factors). ICFs aren't just about energy efficiency. “Not one tree has been cut down to build this house, and due to the durable nature of concrete and steel this house will still be here over 1,000 years from now,” Alhadeff says. “Now that's true sustainability.”

Casa Bella Verde's heating and cooling will be provided by a geo-exchange system tied to a Watts radiant floor system. Energy will be provided by 95 rooftop solar panels and a WE Power vertical-axis wind turbine. Casa Bella Verde's water system is also unique. Well water is supplemented by an 80,000-gallon ICF cistern used for harvesting rainwater, which will then be used to replace evaporated water in the swimming pool and water

plants in the rooftop garden. Moreover, every drop of water, after being used in the house, will be purified through a sophisticated water-treatment facility and sent out again to irrigate the property. “In some instances, we'll actually use the water three times, thanks to Sloan's new Aqus product, which we're installing in our bathrooms,” Alhadeff notes. “After we wash our hands, the water will be filtered and sanitized, then sent to the toilet's tank for flushing, at which point it will be purified again and sent out to be used to irrigate the plants on the property.” Other green features include a Broan HRV unit, which replaces fresh air in the home every three hours; whole-house HEPA filtration; Energy Star appliances and windows; LED lighting; paperless drywall; VOC-free finishes; a rooftop garden; and recycling receptacles. Alhadeff notes that it was also important to incorporate home controls to facilitate the functioning of Casa Bella Verde's

green features. “Controls play an important role in making a home more energy efficient,” she says. “Our Vantage controls will actually tell us how much electricity our home is consuming at any given moment and, with the touch of a button, gives us the ability to instantly make modifications throughout the house to lower our energy consumption.”

When Casa Bella Verde is finished—likely early 2011—Alhadeff will offer architects and homebuilders the opportunity to tour the home and talk to manufacturer representatives about the technology used in it. “My goal with Casa Bella Verde is to physically demonstrate to architects, engineers, and homebuilders the various green features that are available to them and how they can incorporate these sustainable features into the homes that they design and build,” she says. “Because the whole idea is to promote a new era of sustainability.” —by Julie Schaeffer