

# THE ARCHITECT'S NEWSPAPER

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**SPECIAL  
AIA ISSUE**  
A LOOK AT INNOVATIONS IN  
AFFORDABLE HOUSING DESIGN  
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THE ARCHITECT'S NEWSPAPER MAY 02, 2007

HOUSE OF THE ISSUE > RAY KAPPE



Near the top of a bluff in Santa Monica is a three-level wood-and-steel house that bears the distinctive imprimatur of its well-known architect, Ray Kappe, the founder of SCI-Arc. Kappe's commitment to residential modernism—expressed here in tight, interlocking volumes and clean, clear cedar—has not lost its freshness or characteristic warmth. What you wouldn't guess about the 2,500-square-foot house is that its framework was fabricated as 12-foot-wide modules in the industrial enclave of Santa Fe Springs, southeast of downtown Los Angeles, and transported by flatbed truck to its present location. About a year ago, the 11 modules were hoisted into place in a single day. Three months later, after cork floors, plywood cabinets, and steel railings were installed, the house was done. "You take someone here and they don't know that it's a prefab," Kappe said. "They think it's steel welded on site."

The house, built by Santa Monica-based LivingHomes, is a demonstration model of what the company calls the "Ray Kappe 1" and its larger

sister, "Ray Kappe 2," both standardized houses based on a factory-built module. The demo model, like its standardized counterparts, is a marriage of two ideas—prefab and green—presently in vogue. It is also a hybrid of another sort, a cross between assembly-line and custom, with the prefab cedar-and-steel exterior outfitted with typical cut-to-fit interior and rooftop garden. Despite being 70 percent glass, the house was the first in the country to receive a LEED Platinum rating (LivingHomes expects the prefab models to receive a LEED Silver certification). Nearly every surface has an ecofriendly finish or material. The fireplace burns denatured alcohol instead of wood. Household appliances are powered by rooftop photovoltaic cells, and water is preheated by a solar collector. The concrete foundation pad contains fly ash, a byproduct of coal burning, and the kitchen countertops are made of postconsumer waste paper. The house cost more than \$300 per square foot—hardly the bargain one might expect from prefab. What

C.J. BERG / COURTESY RAY KAPPE

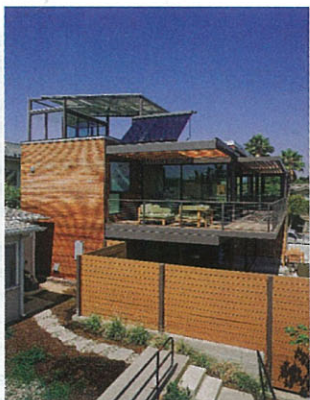
that buys, aside from the green elements, is Kappe's spatial choreography—notably expressed in his own mid-1960s wood-and-concrete home of intersecting floor plates with virtually no interior walls. "The reason this new house has my stamp is because it is based on my custom homes, which use a common system of differentiation," said Kappe. "I have repeatedly asked the question, 'How do you break the box and get spatial qualities?'"

The residence basically inverts its steep lot by cutting into the slope to form one level, then stepping back up to the original grade to create another platform. This maneuver allows dramatic changes in ceiling heights, which in turn define a suc-

cession of spaces, from living room to dining room to kitchen to study. Floating above is the second floor, which remains almost completely open to the ground floor. The drama is in the cascade of shifting levels, ceiling heights, sight lines,

and the light that pours in, even on a gloomy gray day, through the walls of thermally efficient glass and Polygal. In short, this is a signature Kappe house. **GREG GOLDIN**

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LEFT: TOM BONNER; RIGHT: C.J. BERG / COURTESY RAY KAPPE

**SUPER SIZED AND SUSTAINABLE** continued from front page architect Mark Gangi, was charged with creating two new museums near the foot of the new lake, the Center for Water Education and the Western Center for Archaeology and Paleontology. "We tried to honor the infrastructure," said Lehrer, describing the results as "primal, rudimentary, abstract, and simple."

The architects designed a complex that resembles the area's massive water structures, calling to mind a pumping station, a filtration center, or even the dam itself. At more than 60,000 square feet, the complex carries the architectural sophistication one might expect from new art museums.

The \$36 million project was funded by a combination of state, federal, and private money, and the Water District donated 23 acres of land. The Western Center for Archaeology and Paleontology, which opened in November 2006, houses a significant number of fossils and prehistoric artifacts discovered while digging the dam's foundations. Because of fundraising difficulties, construction was suspended on the Center for Water Education, though it is mostly complete. Lehrer hopes the museum, which is devoted to raising awareness of water-related issues, will be finished in another three to six months.

Arranged in a rectangular grid plan, the structures comprise a series of multi-story patterned steel boxes separated by slightly shorter glass curtain walls. They are divided by a large courtyard, which frames views of the nearby mountains. The courtyard's steel loggia are enclosed with a series of long, horizontally perforated metal screens. The screens filter the area's bright desert light, producing an effect that resembles shimmering water, while also generating dramatic linear shadows that move throughout the day.

The buildings' roofs are completely covered with dark photovoltaic tiles, placed over clear glass panels. The energy they provide can potentially reduce energy costs up to 50 percent over conventional construction. Lehrer said that despite initial hesitation, the museums eventually embraced sustainable building techniques, a natural choice given their ecological missions. Aside from the photovoltaic panels, green

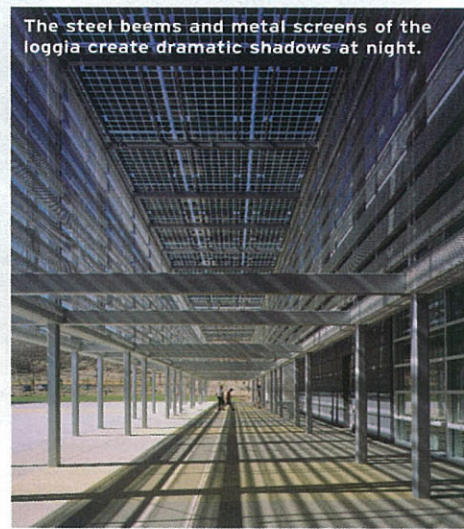
elements—which Lehrer said may garner the buildings a LEED Platinum certification—include radiant heating and cooling, digitally controlled electric systems, waterless urinals, insulated glass, insulated slab, native landscaping, and environmentally friendly paints and wallcoverings, to name a few.

Inside, the Western Center entry is a double-height public space with exhibitions introducing visitors to the region, its history, and its geology. A windowless black-box space features a theater (with boulders for seats), displays of prehistoric remains, and re-creations of woolly mammoth skeletons. Michigan-based Design Craftsmen created the exhibition design.

Other facilities, located behind the museum areas, include 10,000 square feet of storage, learning labs, a café, and administrative offices. Landscaping, which circles behind the buildings, was undertaken by Lehrer's wife, well-known designer Mia Lehrer. The grounds nestle around the museum with braided streams, native trees, and an undulating landscape of colored crushed granite and desert fauna.

While the complex is huge, it doesn't feel imposing. Capturing its surroundings' drama and scale, it is something completely new that still feels like it is in the right place.

**SL**



The steel beams and metal screens of the loggia create dramatic shadows at night.

BENNY CHAN / FOTOWORKS