

PRE

FAB

BY ALLISON ARIEFF AND BRYAN BURKHART



## Tilt-Up Slab House

David Hertz, Syndesis

Location: Venice, California

"I've always felt that there wasn't a whole lot of challenge in just doing a building out of sticks," explains architect David Hertz. "It seemed an inefficient way to construct a building. There are so many stages. Once you have the frame up, then you virtually deconstruct it by drilling it to handle the plumbing and electrical. Then you go through a laborious and imperfect process of applying sheets of drywall, which again are individualized pieces with joints and seams that you're trying to disguise. And then going through all the scaffolding and ladder work. With a panelized or pre-manufactured system, you have far more control. There is much more interest in this project because of the tectonics involved, of learning this new building system, and of putting it together in these prefabricated pieces. That's where the thrill and challenge was, and I think that's what makes the house unique among other contemporary buildings."

David Hertz's innovative Tilt-Up Slab House in Venice, California, was designed in response to a set of difficult conditions. The lot was tiny—just 32 feet wide by 80 feet long—and on the corner of a narrow alley. The structure needed to house a couple, their two teenage children, and one grandparent. And the budget was \$270,000.

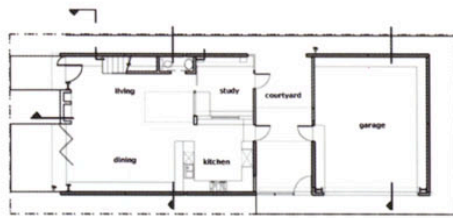
"Given the confines of such a small lot, the volume was going to have to be a box, because that was simply the most efficient way to work within the building envelope. But because of the confluence of the narrow alleys and the lack of any views, I was really confronted with 'what am I going to do with this large blank wall?'" Hertz recalls. "If it's just stucco it ultimately doesn't have much interest. And wood in this area is impractical because there's a lot of moisture, dry rot, mold, a lot of termites." Concrete panels were the perfect solution. The house requires minimal maintenance because there's no painting involved and no layers to waterproof. And Hertz adds, "Cars routinely used to hit the house because of its location on this narrow alleyway, so its durability is a plus."

The tilt-up concrete methodology is the most economical way to enclose space on a large scale. That's why it is so ubiquitous for warehouses.



"Because of the confluence of the narrow alleys and the lack of any views, I was really confronted with 'what am I going to do with this large blank wall?'" Hertz recalls. Tilt-up concrete construction offered itself up as the most practical solution.





FIRST FLOOR PLAN



SECOND FLOOR PLAN

Hertz's design used fourteen six-inch-thick tilt-up white concrete panels that faced each other along the longitudinal edges of the site in order to create an elongated interior space. Eleven panels were poured off-site and then hauled in by truck; the remaining three were poured on-site and then placed in position by connecting them to the structural steel. The process took just ten hours. "It's not so much its form—it needed to be a big volume—but it's fascinating that the building arrives on a truck and is assembled," says Hertz. "That has a lot of appeal to me as something innovative and requires a certain amount of education in terms of reexamining the way buildings go together. The beauty of a panelized system is that you're actually designing the module. There's a more honest statement of what the material is throughout and that's especially evident when you're talking about a slab of concrete. You're very clear about what the material is. And it goes up much more quickly and can be more economical in a lot of ways."

To provide privacy and quiet for the inhabitants in a bustling neighborhood, windows were kept to a minimum. An internal ten-foot courtyard separates the garage building from the house. Natural light and ventilation enter the house through the almost entirely glazed front façade and

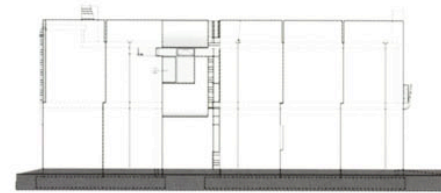


Hertz's design consisted of fourteen six-inch-thick tilt-up concrete panels facing each other along the longitudinal edges of the site, which composed an elongated interior space. The structure was erected in just ten hours.



through the double-height atrium at the house's center that culminates in an operable skylight. Radiant heating in the concrete floors, powered through the rooftop solar panels, allows the house to maintain ideal interior living conditions with a minimum requirement of outside energy. The result is a highly individualized house that utilizes the materials of commercial or industrial use. The costs are lowered, freeing up funds for finishing and details.

Hertz is not particularly interested in creating mass-produced housing. Instead, he is excited by the potential of prefabricated building techniques for custom projects. He disagrees with the prevailing perceptions of the low quality and poor design of prefabrication. The real limitation, he believes, "is that one has to appreciate the aesthetic. An engine block has a certain beauty to it and it was never conscious or by design; it was pure function. What I find quite beautiful is the honest statement of the parts. For those who are looking for integrity and an honest statement of construction and materials—well, these prefab wall systems can offer that."

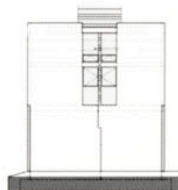


WEST ELEVATION

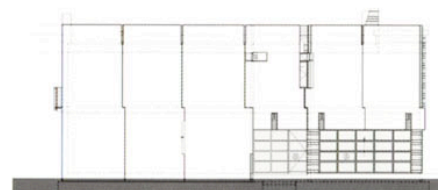
The house sits on a noisy and active corner lot, so windows were kept to a minimum. Natural light and ventilation come in almost entirely through the house's front façade and through a double-height atrium.



SOUTH ELEVATION



NORTH ELEVATION



EAST ELEVATION