



# Concrete for the Masses

*Historically confined to custom projects, concrete homes now find their way into large developments*

By Jeff McClellan and Ed Carter

Imagine 50 acres of land in a prime residential market. Then picture those 50 acres being gradually filled by utility lines, roads, and new homes—new concrete homes.

Such a development would be a beautiful sight for the concrete industry, which has historically witnessed concrete homes as occasional custom jobs. Many concrete-home builders dream of a major project that would offer an efficient repeating rhythm for their work. Unfortunately that concrete-home subdivision remains an elusive dream for most.

But for a few it's becoming reality.

Small concrete-home subdivisions—most often made with ICFs—have begun to appear: 12 homes on the west coast, 16 on the east coast, 17 in the midwest. And they've been joined by at least two major

developments, rising like bookends on either side of the United States.

Two hours north of Palm Beach, FL, Mercedes Homes has poured more than 1,000 concrete homes, with removable forms, in a dozen developments since 2001. And near Palm Springs, CA, more than 150 ICF homes are taking shape in the Rio del Sol community.

"It's caught on," says Kirk Malone, with Mercedes Homes. "We open subdivisions and we can sell them out in a month."

Joe Morreale, with the Villages at Rio del Sol, says his marketing strategy is about selling a lifestyle with improved energy efficiency, lower insurance costs, and fireproofing, all at a competitive price. "We're actually doing a modified custom home and doing it on a production scale," he says.

## The Sun Shines on Concrete

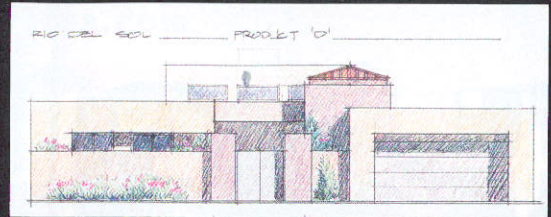
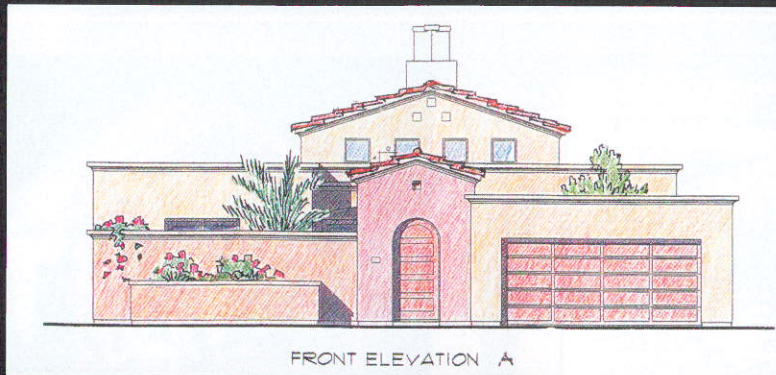
In the Sunshine State, hurricanes threaten frequently, making durable concrete block the building material of choice. But a few years ago, Mercedes Homes, the seventh largest builder in Florida, decided that inefficiencies with the concrete-block process justified their experimenting with other methods.

"We were looking for a stronger, more energy-efficient house, a more green building process," says Malone, corporate vice president for construction with Mercedes. After experimenting with tilt-up and ICF construction, Mercedes settled on poured walls with Precise removable forms.

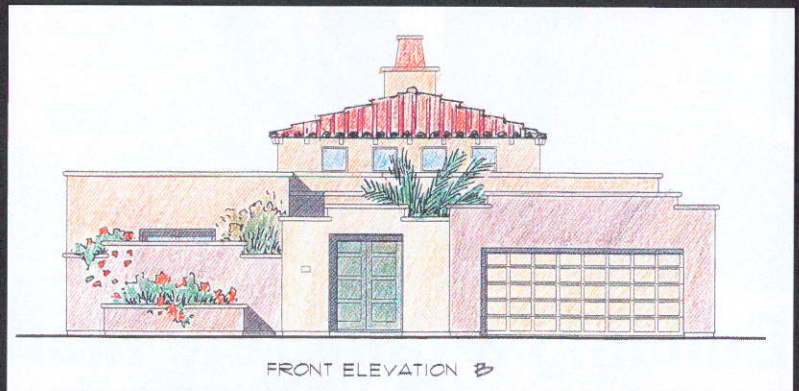
The change has produced real benefits in the construction process, says Malone. Their biggest concerns in construction with block were the variables of cycle time and waste. Now, he says, "We can control that. There is no waste, and we reduce the cycle time by 10 to 15 days on average."

Mercedes began the new process slowly in 2001, pouring a few houses a week, then one house a day while they refined the process. As sales proved the popularity of the homes and as they refined the process, they stepped up the pace to two, three, and now four homes a day.

The system runs like a well-oiled machine, says Vince Heuser, manager of Solid Wall Systems, a Mercedes subsidiary that does all of the concrete work on the new homes, which are typically about 2,000 sf. In the first day, a two-man crew ties all the steel for the house in about four hours. Day two is



**SELLING ENERGY EFFICIENCY** and storm resistance, Mercedes Homes (left) has had great success with poured-wall construction in Florida. In less than three years the company has built more than 1,000 concrete homes in a dozen developments. Meanwhile, the first major ICF development in the country is beginning construction on the other side of the continent. California's Villages at Rio del Sol (right) is projected to include 160 ICF homes.



set aside for inspection, and on day three a five-man crew sets and pours the house. A six-man crew strips the forms in four hours on the fourth day. With about 45 employees in various crew combinations, they can move quickly on multiple houses.

And they need the speed. When they began their first subdivision, says Heuser, "we couldn't build them fast enough."

Malone says that the first phase of the first subdivision sold 120 units in two or three months. Before phase two opened, about half of the homes were reserved, and they sold out in 45 days.

"The strength and energy marketing strategy works pretty well," says Malone. "We don't even have to push it that hard. It sells itself."

Due to the success of its poured-wall homes, Mercedes has devoted its Melbourne, FL, division to the process, and the company is introducing poured walls into its Orlando and Jacksonville, FL, divisions. Malone indicates that there has been no market resistance in Melbourne and Orlando, traditionally concrete-block markets, but Jacksonville, a wood-frame market, is proving to be more difficult.

### A Golden Market for ICFs

"The extreme heat of Southern California takes its toll on local residents' energy bills," says Morreale, general contractor for the Villages at Rio del Sol. "Cooling a 2,800-sf house—the average size of a Rio del Sol home—can run \$600 to \$700 a month. By using ICFs, we expect our residents will save a minimum of 50%."

Located in Cathedral City, in the California desert near Palm Springs, Rio del Sol residents will be grateful for the energy efficiency. Morreale says they'll also appreciate the noise-reduction qualities of ICFs. With the high property values in the Golden State, Rio del Sol planners have designed a fairly high-density development (an average of 5.5 homes per acre), where the exterior wall of one home serves as the courtyard wall of the neighboring residence.

Morreale says his project involves the largest number of ICF homes in a single development in the country. In all, 160 of the 270 homes in the Villages at Rio del Sol will be built with ICFs. Construction began in fall 2003 with the erection of six model homes; in January, four or five crews will begin production.

The process is planned for efficiency, beginning with marking all interior and exterior walls at once. These lines will then be coated for protection, and crews will put up the exterior ICF walls, bracing them on the outside. Another crew will erect movable scaffolding, used to pour the concrete. Meanwhile the framing crew will preframe smaller walls, "so that literally the next day they come in and stack the entire house," says Morreale. With this system, Morreale says they can form and pour in four days and complete the framing in two to three more days.

Although the project isn't into the selling phase yet, Morreale says he's received a lot of interest from potential buyers, some of whom, like the city clerk, have learned about the project through the planning process. Others showing interest are people who have lost homes in the recent Southern California fires.

He attributes the popularity of concrete homes to the strengths of the building material. "It's got so much benefit to the end user," he says. "There are a lot of things that come to the client when they purchase something like this that are not indigenous to stick frame houses." ■