



# Shipping houses: In more homes, components are built elsewhere

By EVAN PEREZ  
The Wall Street Journal

Partners of Jennifer and Brian Mitchell's dream home in Grand Blanc, Mich., started out in a factory 60 miles away. Workers at a former warehouse in Detroit poured concrete from overhead vats to form basement walls. Elsewhere in the plant, robots nailed sheets of plywood together over floor beams to make big eight-foot-wide sections of flooring.

Pulte Homes Inc., the largest U.S. homebuilder, based in Bloomfield Hills, Mich., trucked those parts, along with pre-fabricated interior and exterior walls, to the subdivision where the Mitchells had selected a lot. There, workers assembled the parts into a two-story, three-bedroom house that listed for \$150,000.

Builders call this kind of construction panelization, and it is becoming increasingly popular in the surging home-building industry. Pulte and many other large, traditional builders are increasingly turning to the technique because, they say, it saves time and money, and helps maintain a high quality of construction. One industry expert estimates that more than 10 percent of new houses now have some factory-built panelized parts up from practically nothing a decade ago.

Builders are often reluctant to say they are using this technique because of the drab, cookie-cutter image most people have of modular housing used in middle-class suburban developments. Modular housing, pioneered in William J. Levitt's boxy post-war houses of the 1940s and '50s, chiefly involved the preassembly of basic house framing at a factory, to be erected, then finished with drywall, wiring and plumbing on foundations already built at the site.

Panelization takes that concept further. Today, entire walls, including the studs, framing, and drywall, are assembled in factories. They can even be prewired for electricity before being trucked to the homesite for final assembly. Concrete basement walls can be poured and cured at factories to be pieced together on

*Builders call this kind of construction panelization, and it is becoming increasingly popular in the surging home-building industry.*

a building lot at the builder's (and often the weather's) convenience. Staircases, exterior walls, structural beams also can now be pre-fabricated.

Panelization has gained speed in part because the quality of such parts has vastly improved in recent years. But another factor driving the shift toward factory-built panels is the shortage of skilled labor on construction sites.

"There's a general recognition in the industry that the trades, the craftsmen in homebuilding, are not growing," says Mark O'Brien, Pulte's president and chief executive. "We have to go for quality and we have to get it from somewhere."

Pulte is expected to build 28,000 houses in the U.S. this year, up from 22,000 in 2001. Its panelization effort launched in Michigan, but the company plans gradually to expand that nationwide. It is building a second component factory in Virginia to supply its East Coast developments, and it plans a dozen more around the country. NVR Inc. of MacLean, Va., operates five factories supplying prefabricated staircases, roof trusses and walls to its developments in 18 regional markets.

Still, some homebuyers are turned off by the idea of factory-made parts. Yvonne Betts, a 48-year-old programmer at General Motors Corp., says she and her husband shopped around in developments by Pulte, and other big builders when they were house hunting but are going with a traditionally constructed house that doesn't use panelized parts. Their three-bedroom ranch house, also in Grand Blanc, cost about \$500,000 but is more cus-

tomized, she says. Even if pre-fab parts use modern technology, she still favors traditional methods.

Some builders, typically small local concerns, also are resisting the trend toward factory-built components.

"You take any master craftsman to one of these panelized, dollar-controlled developments and he will show you the compromises that have been made with materials, quality and finishes," said Rodney Rajala, a builder in Flint, Mich.

Eric Hauger, a carpenter for 16 years who has worked with big builders that use panelization, says factory-built walls are often thinner and have lower-quality wood products than what he uses in on-site building.

superior," he said. "We're not shortcutting on anything."

Factory-built panels may never win over everyone but they do meet established standards, said Mark Tebbets, Northeast service coordinator for Building Officials Code Administrators International, in Latham, N.Y., which lists building products that meet national building codes.

"Some of them outperform the old stick-built ways," he said. "People just have to step back and get the fear out of their minds"

That fear is one reason why the industry avoids words like "manufactured" or "prefabricated." Pulte has even renamed its panelization effort: Pulte Home Sciences.

*Today, entire walls, including the studs, framing and drywall, are assembled in factories. They can even be prewired for electricity before being trucked to the homesite for final assembly. Concrete basement walls can be poured and cured at factories to be pieced together on a building lot at the builder's (and often the weather's) convenience. Staircases, exterior walls, structural beams also can now be prefabricated.*

Yet Pulte and other big builders say panelization improves the quality of their houses.

"In our system, we've used premium materials that can stand up from an engineering perspective," says Chuck Chippero, president of Pulte's component factory division. Pulte even uses components in 5,500-square-foot, million-dollar homes, he said.

Thomas Argyris, senior vice president at Toll Brothers Inc., one of the nation's largest traditional builders, said it started using panelization in its luxury homes to improve quality and to protect premium materials from being degraded on job sites where they may be stolen or ruined by the elements. For example, he says Toll's factory-built wall panels are made with Douglas fir wall studs rather than spruce used by many other builders.

"The quality of our materials is

"Calling it prefab drives away customers," said Craig Stempowski, the company's operations development manager.

The image of assembly lines is the last thing builders such as Pulte want when they are charging as much as \$385,000 for suburban Detroit homes built with components. Toll Brothers, of Huntingdon Valley, Pa., produced a video for buyers of its million-dollar homes to explain the quality advantages of using panelization, even for a house's portico.

The huge potential savings from panelization makes it likely to gain sway in the industry. Pulte



## Our Reputation is Difficult to Stain. Nothing Repels Dirt and Stains Like a Gulistan STAINMASTER Carpet.

As America's premier manufacturer of quality STAINMASTER carpet, Gulistan has earned a reputation for making carpet that lasts longer because it stays cleaner.

Thanks to DuPont's Advanced Teflon Repel System, a unique technology that resists stains, your Gulistan STAINMASTER Carpet stays

cleaner because of specially treated fibers that reduce the ability of dirt and spills to stick and penetrate.

Best of all, Gulistan's brand of durable, high performance carpet comes in dozens of colors and a variety of styles including friezes, textures, luxurious plushes, exquisite patterned loops and beautifully finished sculptured effects.

If you're looking for luxurious carpet that's made to last then come in today and select the Gulistan STAINMASTER carpet that's right for your home.



## NORTHERN FLOOR & TILE SERVICES, INC.

435 Grandview Parkway • Traverse City, MI 49684 • 231-947-8410

FREE ESTIMATES EASY PARKING

## When paint pulls off the surface

By MORRIS AND JAMES CAREY  
The Associated Press

Q. I painted my formerly stained front door with gloss exterior latex and the paint sticks to the rubber door weather stripping. In fact, it pulls the paint right off of the door. It also seems like it never dries. I sanded the door before I painted it until the surface was dull. What is the solution?

A. Sounds like the latex paint is not compatible with the previously stained finish, or the door wasn't properly prepared for the fresh coat of paint. In either case, you probably aren't going to like our answer, but we hope that you will see the value in the long run.

For a long-lasting, nonstick finish, we suggest that you start from scratch. Sand off the gloss-exterior latex-paint finish right down to the previously stained surface. Apply a coat of high-quality oil-base primer and touch-sand it smooth, when dry. Vacuum the dust and apply two thin coats of high-quality oil-base enamel in the luster of your choice.

Although you could again use latex paint, we suggest that you use an oil-base finish. Oil-base paint is more abrasion-resistant, is easier to keep clean and will cling to your entry door.

While we prefer oil-base for all interior doors and trim, you can get away with using latex

provided that the surface is properly prepared and you use good quality paint. The fact that it is sticking leads us to believe that the quality of the paint might be a question or it was applied too thickly. In either case, a light sanding application of a thin coat of finish should do the trick. Be certain that none of the doors are closed until the paint has had an opportunity to fully dry (usually takes at least a week). This might mean removing the weather stripping until the paint has dried.

"I just got a new computer and your website was bookmarked shortly after I got online."

- L.W., Traverse City

www.record-eagle.com



Five-day weather forecasts always up-to-the-minute

www.record-eagle.com



## Custom Picture Framing

DeYoung's

234 E. Front St. Traverse City 946-8021

HM/1015.673476

## Those loose shutters kept me up 'til 2 am!

Yeah, we can fix that. Handyman Connection.



Nothing brings a smile to your face like taking care of those nagging home repairs. From updating your bathroom, to painting your family room, to repairing that crack in the wall, Handyman Connection can handle it all. Plus, all work is done by

experienced craftsmen and guaranteed for one year. So, stop worrying. Call Handyman Connection today for an appointment that fits your schedule.

### RETIRED CRAFTSMEN AND OTHER EXPERTS®

Offer low cost home repairs & remodeling  
Work you can trust guaranteed for 1 year  
For Free information Call our Hotline:  
(231) 947-3573 or TOLL FREE 1-877-899-9369

## Handyman CONNECTIONS

Repair your state of mind

- Guaranteed In Writing For One Year
- Over 600,000 Satisfied Customers
- Insured and Bonded

<p>Handyman</p> <p>SAVE \$15 on any work over \$50</p> <p>Offer Expires 11/29/02 RE</p>	<p>Handyman</p> <p>SAVE \$25 on any work over \$100</p> <p>Offer Expires 11/29/02 RE</p>	<p>Handyman</p> <p>SAVE \$50 on any work over \$250</p> <p>Offer Expires 11/29/02 RE</p>	<p>Handyman</p> <p>SAVE \$100 on any work over \$750</p> <p>Offer Expires 11/29/02 RE</p>
---	--	--	---



## "The Best Investment We've Ever Made!"

We hear that a lot. Many customers wish they'd installed an energy-efficient Trane heating and cooling system sooner. A new Trane system from GeoFurnace can pay for itself and more by providing substantial energy savings, whisper-quiet operation, greater comfort and increased property value. Call GeoFurnace today for your Free Energy Analysis. You'll be glad you did.

We are entering our busiest season, where we'll be at full speed. So your opportunity to get a new system installed quickly diminishes each day you delay. No decision or cash needed. Find out which system meets your needs free, with no obligation at all. The sooner you call, the sooner you start saving money on your heating bills this winter.

And Right Now, Finance a Trane System and Make No Payments For Six Months Plus Get a Free 10-Year Extended Warranty!



TRANE

## Better Systems • Better Service

# GEOFURNACE

### HEATING & COOLING, LLC

886 US 31 South • Traverse City 943-1000 www.geofurnace.com

Find out how much money you can save this winter with a Trane air-source heat pump



**PRO Maintenance**  
of Traverse City

- Fall Clean Ups
- Debris Hauling
- Care Taking Year-Round
- Snow Removal & Roof Shoveling
- Commercial & Residential

4 Season Maintenance - Fully Insured - "DEPENDABLE" Free Estimates (231) 313-0615 John K. Rollert