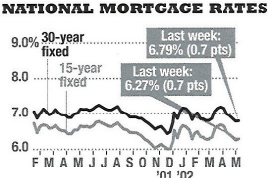


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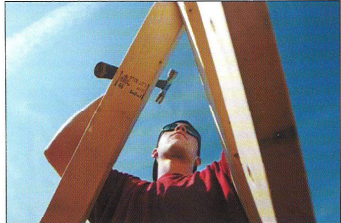
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PHASE  
5

IT'S EXCITING TO WATCH A HOLE IN THE GROUND BECOME SOMETHING RESEMBLING A HOUSE. IF THIS ONE COULD TALK, IT WOULD SAY . . .

THE HOUSE CHRONICLES





**ABOVE:** Brian Snyder of Belleville climbs to the top of the house to nail down braces for roof trusses.  
**RIGHT:** Two stories of wall framing may make a house look near done. But RDK's field general Don Cottrell says finishing this house will still take four more months. Cottrell is standing in what will be the two-story foyer. Above him are the bedroom walls.



Photos by GABRIEL B. TAIT/Detroit Free Press

## 'I'VE BEEN FRAMED'

JUDY ROSE  
REAL ESTATE WRITER



Of the six months it takes to build a new house, the most exciting six days are rough framing.

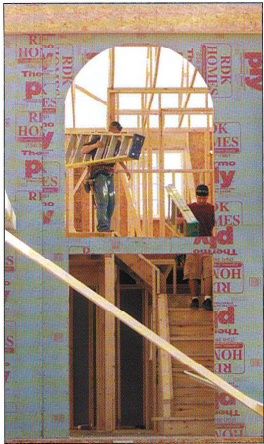
One Monday, your house is just a large hole in the ground with basement walls and a mud floor. The next Monday it towers over the landscape. *Shazzamm!*

For the House Chronicles — the Free Press spring and summer series that's watching RDK Homes build a house in Van Buren Township — one week earlier you'd have seen a flat field; Now in that spot there's a building 45 feet wide and 27½ feet tall. It looks enormous.

To most people who have a house built, this is a magic time — the first real look at what your house will be. Most typically you'll think it looks too big outside, too small inside. Both false images will fade as it's finished.

Suddenly, you can walk through the skeleton of your rooms — the foyer, the living room, the kitchen — framed in dimensional lumber.

At the house in Van Buren Township, we can admire the big family room with a side wall of windows and a tall studio ceiling. We can climb the staircase now to 5-foot-wide double doors off a balcony that leads to the large master bedroom. We can stand



where the cluster of pipes mark the future kitchen sink and see the view from our future kitchen window — similar big brick houses and their yards.

At this point most buyers say, "Wow! You'll be done so early," says RDK's Don Cottrell, who oversees field construction. "We have to tell them, 'No. It's going to be four more months.'"

It takes a long parade of skilled tradesfolk to turn this wood shell into



**LEFT:** Many pages of blueprints carry details of the frame that's emerging.  
**FAR LEFT:** A dramatic two-story arched entry distinguishes the front of this house — a wide front door topped with an arched window. The dramatic corner staircase is visible behind the doorway.

SEE THE DIFFERENT WAYS TO BUILD A FLOOR, 9H.  
OUR READERS REACT TO THE SERIES, 9H.

your home. Managing the parade is the job of the field superintendent — in this case Matt Kime, the youngest of the three sons who operate RDK Homes for their father, Bob Kime.

**Camera shy**

One recent Thursday in Van Buren Township — against the *pop-pop-pop!* of nail guns fastening roof trusses over the second story — the rough carpenter crew was in a snit, refusing to be photographed.

They were ticked because some wall structure was assembled at the lumber yard and sent to the site in large chunks. It's a practice you'll see more and more if you decide to have a house built.

"It gives the guy in the office more control," says middle son Brian Kime, who designs the houses. "Every house should come out the same, because

Please see HOUSE, Page 9H

## Tile wins, carpet loses in tinkering

By JUDY ROSE  
FREE PRESS REAL ESTATE WRITER

Where to cut? What to change? A last-minute upgrade of cabinets for our house — from standard oak to maple — added \$650 and created two problems. (Read the April 21 story about the cabinet upgrade online at [www.freep.com/realestate/chronicles.htm](http://www.freep.com/realestate/chronicles.htm).)

First, to stay within the budget for the House Chronicles, we had to cut \$650 from some other upgrade. Second, the kitchen's maple cabinets might clash with the oak floors.

With RDK Homes sales manager Greg Kime, we tore into the list of upgrades we'd put together three weeks earlier. Don't feel bad, Kime said, this is common among consum-

Please see CHOICES, Page 9H

**THE PROJECT SO FAR:**

Following a house through 12 phases as it's built in Van Buren Township, Free Press readers so far have watched while we picked a floor plan, chose \$21,225 in extras, excavated the site and poured the basement walls. Find those reports online at [www.freep.com/realestate/chronicles/htm](http://www.freep.com/realestate/chronicles/htm)

Today's phase features the fun part — the walls go up. Come back to the Free Press Sunday Real Estate section next Sunday, when workers will sheath the house's shell in shingles, brick and siding.

Sharp-eyed readers will spot a change in the little house illustration shown above. Today we show the garage placed on the left, not the right as in earlier installments. We're making the change to accurately reflect the builders' choice to reverse the floor plan from the original blueprints so the house fits better on its pie-shaped lot. Consumers should know that it's often easy to flip a house to the mirror image of its original floor plan. Those building new homes could do this if they wanted to gain a better view from the windows or a more accessible driveway.

- Phase 5. Today**  
**THE ROUGH FRAME**  
Outline in the sky, the skeleton emerges.
- Phase 6. May 19**  
**THE EXTERIOR SHEATH**  
The windows, the roof, the brick, the siding.
- Phase 7.**  
**BUNDLING UP**  
Insulation options — what you don't see pays off.
- Phase 8.**  
**THE SYSTEMS**  
Plumbing, electricity — choices you will live with.
- Phase 9.**  
**THE INSIDE SKIN**  
The drywall, the paint, the trim.
- Phase 10.**  
**THE INSTALLATIONS**  
Choosing countertops, floors and fixtures.
- Phase 11.**  
**THE SURROUNDINGS**  
Landscape, hardscape, patios and decks.
- Phase 12.**  
**THE FINALE**  
The walkthrough, the closing, the warranty, the keys.

**TIP: Floors are important**

Don't skimp on construction when it involves the stability of your floors. A sag in the subfloor can create a spot, for example, where your ceramic tile will crack repeatedly, even after you replace it with new tile.



# HOUSE | From hole to framed house in 6 dramatic days

From Page 1H

walls are built in a factory off our computer spears."

But the carpenters are a proud group who revel in the romantic concept that they can create a house from just a heap of boards. And this is a high-quality crew, Brian says — not only fast, but very good with details.

So sending them walls partly put together at the lumber yard is like sending Michael Andretti a race car with cruise control.

They believe they'll lose status if fellow carpenters see them photographed on a house that's partly prebuilt. So they climbed down from the rafters, walked to their trucks and drove away, returning to work after photographers left.

### Bundle of joists

So be it. New ways to streamline and standardize house building are an important trend that house buyers should know about.

One of the reasons the Free Press chose RDK Homes for the House Chronicles is that the company works with engineered woods, which will become more common in the future.

These new products are in addition to the simple wall sections assembled in the local lumber yard. Engineered woods are

made by national companies like Boise Cascade Corp.

They are pieces of house structure made not from conventional lumber, but from dense blends of smaller chunks of wood with heavy glue.

Take, for example, I-joists used in the House Chronicles home. These are very stable floor supports that replace traditional 2-by-10 or 2-by-12-inch lumber. They line up vertically 16 inches apart to support the plywood subfloors under our carpet or tile. (See the illustration on the right side of this page.)

In southeast Michigan's new homes, only about 20 percent of floors are supported by I-joists, estimates Chris Mello of Boise Cascade. But in more progressive building areas like the Pacific coast, he says, about half the new houses have them.

The three big arguments for I-joists are similar to the arguments for most engineered wood.

■ **The environment:** It takes a lot of very large, old trees to create a house full of 2-by-10 or 2-by-12 boards. The engineered wood equivalents are made from second- or third-growth "weed trees."

■ **Supply:** With the number of large, old trees declining, conventional lumber gets ever more ex-

## Sending the carpenters walls partly put together at the lumber yard is like sending Michael Andretti a race car with cruise control.

pensive at the same time carpenters complain the quality of lumber is going down. New tariffs on Canadian lumber are the latest squeeze on the availability of lumber.

■ **Quality:** Conventional lumber is delivered to your house with about a 19-percent water content, which dries to 8-10 percent. Meanwhile, it shrinks and shifts. I-joists are engineered stronger to start with and change little as they age. In addition, the criteria for I-joists are usually more exacting than for conventional lumber. I-joist floors are said to never sag or squeak.

■ **More pluses:** I-joists are half as heavy as lumber. They're usually purchased in ready-made lengths, not cut on the job, so there's less waste. Finally they're not often stolen from the work site. Theft, unfortunately, is a continuing problem when you're building a house.

What are the drawbacks? Engineered wood costs more, in this case 20 percent more than lumber. A few people are allergic to the glues.

Because I-joists are stronger than conventional lumber, some building codes let them be spaced wider than the conventional 16 inches on center — perhaps 20 inches, says Boise Cascade's Mello.

RDK doesn't do this, but a few builders do. Unless your floor has a very short span, you might not want the wider spacing, as it could negate the advantage of I-joists — a perfectly solid floor. It's one of the many construction details you can check when you're choosing your builder.

### It may be muddy

The frame for the House Chronicles house went up in a little more than six days. Besides the crew of rough carpenters, RDK employees Brian and Ron Snyder climbed up and nailed down braces for the roof trusses (see photos on Page 1H).

But those building a home should know that rain and mud can slow that progress a great deal. So can a complicated house structure.

Once the house is framed and roofed, rain is much less likely to slow the tradespeople, who mainly work inside.

You might be startled if you climb into your newly framed house to find the basement floor is still mud. That concrete floor can't be poured until all the water and sewer connections that will run under it are finished, which isn't scheduled until after the roof is on.

You might be frustrated as well to see the frame shoot up fast, then stall.

"Lots of times you'll get to see your first floor deck (the actual floor) go up in a day, then the first floor walls in a day," says Brian Kime. "Then your second-floor deck will go on in a day and the second-floor walls in a day."

But then it will take up to three days to build the roof, even with pre-engineered trusses, he says. "You can feel that things are grinding to a halt."

The huge, triangular trusses are the easy part. What's hard are the 4-by-8-foot boards that sheath the roof under the shingles.

"Getting the materials up to the roof is slow. You have to take one piece at a time," he says. "It's a dangerous job up there."

## HOW FLOORS ARE SUPPORTED

The three most common methods used to support a floor are traditional 2-by-10-inch or 2-by-12-inch lumber, engineered I-joists and floor trusses. Here is an under-the-floor look at the three kinds of supports.

### 2-BY-10-INCH LUMBER

Traditional floor joist, now 1 1/2 by 9 1/4 inches, used with 1-by-3-inch wood braces.

► **Frequency:** About 80 percent of subdivision houses in metro Detroit, less common in custom homes.

► **Pluses:** Least expensive, familiar to carpenters. Best used in houses not more than 24 or 28 feet from front to back.

► **Minuses:** Can change dimension as wood dries, stressing walls, increasing nail pops. More likely to squeak or bounce. Can require more supporting posts in a big basement. Requires the milling of large, mature trees. Often stolen from job sites.

### ENGINEERED I-JOISTS

Very high-density OSB (oriented strand board) braced in two 2-by-3-inch strips of black spruce.

► **Frequency:** Less than 20 percent of metro Detroit subdivision houses, more common in custom homes.

► **Pluses:** Very stable; doesn't change dimension, creating less squeak, bounce, wall shifting. Can carry longer spans with fewer basement posts. Uses small, second-growth "weed trees." Little job-site waste because I-joists are ordered to fit.

► **Minuses:** Costs about 20 percent more than 2-by-10 joists.

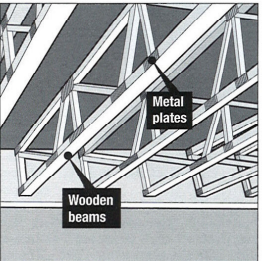
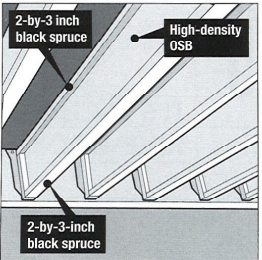
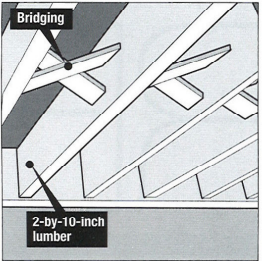
### FLOOR TRUSSES

A supporting structure built from wooden beams, bars and ties, with corners often secured by metal plates.

► **Frequency:** Less than 5 percent in metro Detroit, most often used in large, repeating structures like apartment houses or condos, or in expensive custom homes.

► **Pluses:** Extremely stable. Light weight for its strength. Plumbing and heating can pass through without holes being cut out. No job-site waste; rarely stolen.

► **Minuses:** Costs twice as much as an I-joist. Each truss must be custom built.



Sources: Boise Cascade and Free Press research

F.S. FLUKER/Detroit Free Press



GABRIEL B. TAIT/Detroit Free Press

The house is taking shape. Talking out front are RDK Homes' field superintendent Matt Kime, Chris Mello of Boise Cascade Corp., which supplied the I-joists for the floor, and John Vredevelde of 84 Lumber Co., a national chain lumber store that preassembled panels for the exterior walls.

# CHOICES | The ins and outs of last-minute changes

From Page 1H

ers who contract to have their homes built.

First, we tackled the kitchen's oak floor, an upgrade for \$1,900. With maple cabinets now, should we pick maple floors? No, that cost even more — \$2,650 — and we might feel "over-mapled," Kime said.

Cut back to standard vinyl? Not in this house, where the floors sweep from the foyer through the kitchen with no obvious break.

Choose 12-inch ceramic tile? It had been our first choice anyway — a sweep of tile from the foyer through the kitchen would blend good looks and function. As Kime pointed out, tile stands up better than wood to the wear a floor gets in a kitchen and eating nook.

But it cost even more than oak — \$3,000 vs. \$1,900. We bit the pen hard and said yes. "Maple and tile — that looks real nice," Kime

said. We think so, too. But that's another \$1,100 over budget for a total of \$1,750.

Now what to cut? Three recessed lights in the family room overhang were easy (saving \$450). We cut the upgraded carpet to a lesser upgrade (saving \$775), and took Kime's advice to keep the upgraded pad, for a thicker feel at less cost.

We were still over budget by \$525 when we moved to picking colors (which will be featured in Installment 10) and that stirred some new issues.

The standard dishwasher didn't come in the color we picked for appliances. To avoid one off-colored appliance, we had to take the upgrade. It's probably a quieter dishwasher anyway. Add \$275 — now \$800 over budget.

Back to the carpet. We cut to standard this time, still keeping the upgraded pad (saving \$925). We were below budget now by

\$125.

Next, picking ceramic tile for the bathroom, we learned we'd missed an important fact earlier. The floor was tile by the toilet but carpet by the tub. We'd carpeted a bathroom once, and that was once too often. Extending the tile added \$500.

Meanwhile, we puzzled over the glass-top electric cooktop so popular with home buyers today. Serious cooks whom we know dislike it. For \$100 we switched to gas — now \$475 over budget.

What's left to cut? It seemed like a smart investment in resale value to keep plumbing in the basement for a future bathroom. So did the showy glass front door.

We really liked the handsome bay in the dining room, the two eyeball lights we kept over the fireplace and the sharp gourmet kitchen. We weren't willing to let them go.

Back to the carpet. This time

we cut to a standard pad (saving \$550). Now we're \$75 below budget. As the ever-agreeable Kime pointed out, it'll be the first thing replaced in the house anyway. But now we have to stop tinkering. Otherwise we'll be down to a bare plywood floor.

Contact JUDY ROSE at 313-222-6614 or rose@freepress.com.

## READERS REACT TO THE HOUSE CHRONICLES SERIES

Free Press readers love to second-guess decisions we've made in the House Chronicles. Here are brief excerpts from scores of messages we've received:

### (On choosing cabinets and floors)

"Reading your comments about making changes at the buzzer, (which said the House Chronicles didn't want to combine maple cabinets with oak floors): We recently remodeled our kitchen with maple cabinets and contrasting oak floors (stained ginger). In our opinion, the results are beautiful." — Bill and Joan Berry, Livonia

### (On constructing the basement)

"Today, through the addition of a retardant to the mix, the concrete in the truck can be 'put to sleep' for eight hours or more and then reawakened with another additive. Consequently, concrete can and is being delivered to sites much farther away than the 45-minute drive you mention in your article." — Rein Nomm for the Michigan Concrete Association

"I was amazed to read 'quality control (while pouring a basement) is up to your contractor and the building inspector.' I have co-authored a book . . . and I can tell you that customers who do not worry about quality frequently end up with problems." — Jim Banks, Cincinnati

"Your current series . . . should be a big help to anyone new to these things. While I agree that the heat lost through the walls during the winter is considerable, I believe that a greater need for insulation is during the summer. Basement walls are cooled by the surrounding earth, cooling the basement air below the dew point of the outside air,

which is warm and moist. With insulated walls, the basement air is warmer and the dampness problems are eliminated or decreased." — Robert W. Price, Rosecommon

"You overlooked the first step in the excavation process, that being the land surveyor's role in staking the lot and basement corners and setting the finished grade so the excavator knows where and how deep to dig." — Adam J. Suhonen, Redford

### (On the House Chronicles floor plans)

"What happens if someone gets injured or sick and cannot go upstairs? There is no way for that person to take a bath or shower on the main floor and no easy way to add one." — Alison Walters, (who spent three weeks on crutches after a skiing accident.)

"As a designer and residential builder, I was glad to see your article touched briefly on testing room sizes . . . to determine the size table that could fit in the dining room. Testing the width . . . reveals that the table and chairs will be the only furniture. There's no room for the typical china hutch or buffet." — Susan B. Kennedy, Grosse Pointe

"The laundry room should be on the second floor where most of the laundry is generated. Put it in the loft area backing to the wet wall in the bathroom. We did this 14 years ago when we built our house and it is wonderful. Make the dining room larger by widening. Perhaps the bay should be on the perpendicular wall to widen. This series is interesting and fun." — Margaret Eichner, Commerce Township

Have something to add to the discussion? E-mail us at realestate@freepress.com.

## KEY INDEX RATES

Here are end-of-the-week numbers for several indexes lenders use to determine mortgage rates:

|                       |                                 |
|-----------------------|---------------------------------|
| Prime rate: 4.75      | 6-month CD: 1.53                |
| 6-month T-bill: 1.850 | Fannie Mae 30-year commitments: |
| 1-year T-bill: 2.33   | 30-day: 6.70      60-day: 6.80  |

Source: Dow Jones Latitude