

## Many decks need work, inspectors say

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From the elevated deck in his backyard in Troy, Ill., Bruce King could see lights from emergency vehicles swarming to a house across the lake.

The owner of the house, Susan Hoover, had thrown a party the night of July 23. Sixteen people were milling about on her deck when the structure pulled away from the back of the house, in the 900 block of Lakewood Court.

Luckily, no one was beneath the deck when it came down. The worst injury was a broken ankle.

Hoover's deck had a problem. King's has the same one. And they're not alone.

Housing inspectors across the region acknowledge that many older decks are inadequately built and improperly maintained.

Common problems include nails that pull out, boards that warp, loose guardrails, and posts that sit directly on top of dirt, where they are prone to rotting, rather than being anchored to a concrete footing.

Hoover's deck measured 12 feet by 16 feet. A well-built structure of that size should have easily handled the weight of 16 people. But her deck had been attached with nails to the back of the house, about eight feet above a walk-out basement.

King's own deck, built in 1985, is attached the same way.

"I don't usually get many people on my deck. After what happened over there, I don't plan to," said King, 54, a business consultant who lives in the 900 block of Long Branch Road.

King said he was considering reinforcing his deck with bolts.

Industry experts estimate that as many as 3 million homeowners add decks to their homes each year. Most municipalities require that new decks follow safety guidelines that include attaching them to houses with bolts, rather than nails. The codes also dictate the width of joists and posts, the manner in which supports are anchored at ground level, the types of woods used, and other elements.

Codes call for decks to hold 40 pounds per square foot, allowing a 10-by-10-foot deck to hold 4,000 pounds. Such a deck should safely hold 22 people weighing an average of 175 pounds each.

In most cases, the onus is on individual homeowners to look for safety hazards.

In Troy, new decks are carefully inspected, said the city's building inspector, Keith Frey. But Frey said the city does not have the manpower to monitor older decks, or even to inspect them when homes are sold.

"Right now, the city is not involved in inspecting houses when they change ownership," Frey said. "I wish we could, but we're undermanned for that."

Frey added, however, that most financial institutions require an inspection by some agency.

In the village of Glen Carbon, however, rental ordinances require inspections of older decks and porches.

"We watch out in particular for rotting boards and posts or railings that are missing spindles, or spindles that are more than four inches apart," said Will Shashack, who has worked as an inspector for the village for 29 years.

And while Glen Carbon officials do not routinely inspect old decks, they will require repairs anytime they happen to see anything amiss, Shashack said.

St. Louis County requires permits for all new decks, said Garry Earls, the county's director of public works and highways.

St. Louis County does not require older decks to be retrofitted to meet current codes, but starting Oct. 1, the county will begin inspecting all rental properties, including their decks, porches and balconies.

"We would perform the inspection to be sure that the property at least meets the construction standards that were in place at the time the structure was built," Earls said.

The average wood deck lasts about 10 to 15 years. Decks made of new composite materials may last indefinitely, but the material may be three times more expensive than wood.

Even older decks can be used safely if they are properly maintained, experts say.

That includes replacing loose nails with screws, or bigger nails, and applying a wood sealant every few years.

Another common mistake, even on well-built decks, are revisions to them that add too much weight, said Jeff Stehman, building and zoning supervisor for O'Fallon, Ill.

"That's the biggest problem we run into," Stehman said. "A guy wants a roof over his deck, with screening on the side. You're adding considerable weight there, and snow load has to be figured on top of that in the winter."

Inspectors advise anyone who has doubts about the safety of their deck to call their city officials, or to have an engineer inspect it.

What to watch for

Decks, porches and balconies may collapse if they are not properly constructed or if they are old. Common hazards are decks attached to buildings with nails, which work loose over time. Decks should be attached using proper anchors or bolts. Other safety hazards to watch for:

Split or rotting wood.

Wobbly handrails or guardrails.

Loose, missing or rusting anchors, nails or screws.

Missing, damaged or loose support beams and planking.

Poor end support of the porch deck, joists or girders.

Excessive movement of the porch when walked on.

[/Source: *International Code Council*]

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