

# EIGHT-PENNY NEWS

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## BOCA Stair Rules Change

### Deeper Treads Trip Up Builders

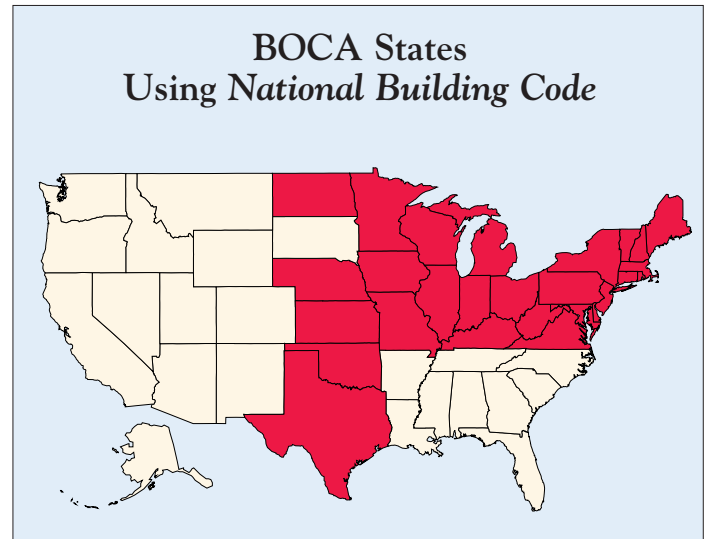
It may seem like a small matter: one inch on the width of a stair tread, half an inch on the height of a riser. But the amended stair requirements in the 1996 version of BOCA's *National Building Code* (NBC) have ignited no small argument.

The rule modification calls for stairs to have risers no higher than  $7\frac{3}{4}$  inches, with treads at least 10 inches deep (previous versions of the NBC allow  $8\frac{1}{4}$ -inch risers and 9-inch treads). National Association of Home Builders (NAHB) members of the BOCA stair committee

fought the change to no avail during the model code group's regular code amendment cycle. Now, many home builder associations are battling the adoption of the change by state and local authorities — with mixed success.

The builders say code officials haven't proven a need for the change, and warn that the new rule will add thousands of dollars to a typical home's cost. But BOCA committee members who support the new rules insist that shallower stairs are an important safety improvement and say that builders are exaggerating the cost.

The new requirements will eventually come to many



Builder associations in many areas covered by BOCA's National Building Code (shaded states) are fighting the 1996 version's stair-geometry rules.

areas covered by the BOCA code (see map). So builders should be aware of how the new stair requirements will

affect them.

### **Finding space for stairs.**

In a typical house with 8-foot  
*continued*

## BAD BACKFILL LANDS BUILDERS IN BIG TROUBLE

### Tragic Cases Highlight Common Problem

In a Florida subdivision, outraged homeowners hold street protests and sue their builder after their common backyard turns into a swampy sinkhole full of frogs and mosquitoes. The state contemplates criminal prosecution, and an engineer on the project commits suicide.

In a New Jersey multifamily complex, a child playing on the lawn falls into a fresh sinkhole and dies. After a second child is injured in a similar incident on another site developed by the same company, the state presses criminal charges. Company officers



ALAN FREAND/MIAMI HERALD

Old tires and other trash continue to float to the surface of this water-filled pit in what was once a neighborhood's common backyard, according to reports in the Miami Herald.

avoid jail time with a guilty plea, but the company is sentenced to three years probation and ordered to pay for repairs.

These stories — both true — are extreme examples of a frequent problem, caused by a common mistake. In both cases, sinkholes opened up

because builders buried debris on the construction site in place of proper fill.

Correctly placed and compacted structural fill can be stronger than natural soil, says geotechnical engineer Em Fluhr, but using the wrong fill material is a recipe for disaster. Fluhr is vice president of underwriting for Home Buyers Warranty, Inc., in Denver, Colo. His company's statistics show that soil settlement causes nearly 40% of structural claims against builders. While expansive natural soils cause problems in a few local areas, unsuitable fill material or improper fill compaction is a frequent culprit nationwide.

*continued*

## STATE BY STATE

**Florida.** A federal judge has tossed out Metro-Dade's minority set-aside program, which had reserved a certain portion of municipal construction contracts for minority- and women-owned businesses, reports the September 20 *Miami Herald*. The judge ruled that the program was not justified by a clearly demonstrated pattern of past discrimination.

**Louisiana.** Builders who have paid real estate taxes on unsold lots, spec houses, or homes under construction are eligible for a state tax refund, retroactive to 1992, because of a Department of Revenue and Taxation ruling in a test case filed by the Home Builder's Association of Greater New Orleans. The ruling applies the state's inventory tax credit program to builders' inventory, including real estate held for resale. For information, call the HBA office at 504/837-2700.

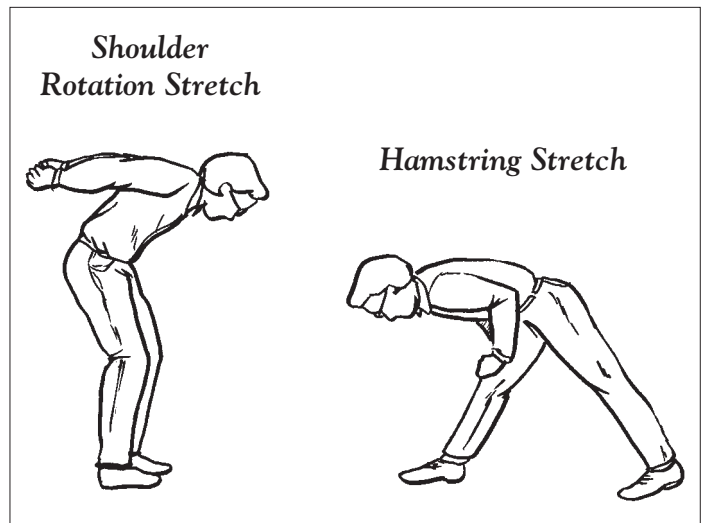
**Maryland.** The Baltimore County Council is considering a proposal to permanently freeze development in areas served by overcrowded schools, according to the September 16 *Baltimore Sun*. Developers could qualify for exemptions to the freeze by paying to build school additions, donating land for school sites, or paying a per-home waiver fee.

## Stretching Routine Brings Benefits, Say Workers

Most workers know how to stretch out a job. However, they may have to be taught how to stretch out their muscles before starting a job. A recent study found that it's worth teaching workers correct stretching methods — at least, that's what the workers say.

Hundreds of construction workers at a western Oregon project who participated in their company's "Flex-N-Stretch" program reported the positive results in a survey conducted by University of Oregon professor Steve Hecker and ergonomics expert Billy Gibbens. The stretching program, developed and marketed by Washington kinesiologist Vern Allers, consists of a set of prescribed stretching exercises. Allers trained all the foremen on the job site in the stretching techniques. The foremen were then told to train all the workers and make sure they did the stretches.

"The workers love it," says Gibbens. Hecker goes on, "People told us it was a good



Fifteen easy exercises like the shoulder rotation stretch (left) and hamstring stretch (right) help workers stay flexible during stressful work, says physical therapy expert Vern Allers.

way to start the day. It made them more alert, and also made them more aware of the risks of musculoskeletal injuries. While the exercise program did not eliminate injuries, it made them less serious."

But Gibbens and Hecker say no one has established conclusively whether this kind of morning warmup actually reduces injury rates.

"This isn't the be-all and end-all," says Hecker. Awareness of strains on the body is probably the program's biggest benefit, he notes, adding: "If you don't change the nature of the task, this is going to have a minimal effect." For information on Allers's *Flex-N-Stretch* program, call Columbia Rehabilitation, Inc. (360/425-2782). □

## TAX TALK: NEW OPTION FOR HEALTH COVERAGE

by Martha Myron

If you're paying a lot for health insurance, consider a new alternative: the Medical Savings Account (MSA). The government is testing the idea starting in 1997, but only for the first 750,000 individuals who apply.

An MSA is a tax-free savings account like an IRA — money you put into it, and interest it earns, aren't taxed. But instead of saving for retirement, you save for medical expenses.

To be eligible, you have to carry a health insurance plan

with a high deductible (\$1,500 to \$2,250 for single persons, \$3,000 to \$4,500 for families). Any medical expenses that are less than the deductible, you pay out of the MSA. Withdrawals for any other reason are taxed as income — but with an added penalty. If you don't have expenses, you can let the MSA keep growing.

Your cost savings could be big. High-deductible health plans are much cheaper than ones with low deductibles. The insurance will cover

major health-care needs, but for those little expenses, it's your own money you're spending — an incentive to stay healthy.

You can also contribute to your employees' MSAs without withholding taxes. But individuals aren't eligible for the MSA tax break if they're covered by any other, lower-deductible, health insurance policy. □

*Martha Myron is a certified public accountant practicing in Concord, N.H.*

# Masonite Lawsuit Verdict

Jury Sides With Homeowners

An Alabama jury has returned a verdict against Masonite Corporation in a federal class-action suit over hardboard siding failures, lawyers for the plaintiffs said on September 13. Attorneys Richard Dorman and John Crowder, representing homeowners, say the decision is a victory for their side. A spokesman for Masonite,

eration the siding's utility and its risk of failure."

The technical wording of the five questions is important because they were designed to reflect product liability law in all the 50 states. According to Dorman and Crowder, the "Yes" verdict on four questions means Masonite can be held liable for damages in most of the U.S.; however,



An Alabama federal jury judged Masonite hardboard siding "not fit for the purpose" and "unreasonably prone to failure," according to a Masonite press release. Proceedings to award damages are pending.

however, told JLC that the fight is far from finished. Court proceedings to award money damages are not yet scheduled.

The jury was handed five questions about Masonite siding. They answered four of the questions "Yes," agreeing with the plaintiffs that Masonite hardboard siding "fails to meet the reasonable expectations of an ordinary consumer," that it "is unreasonably prone to failure," that it "is not fit for the ordinary purposes for its intended use as an exterior siding product," and that "an ordinary prudent company making exterior siding, being fully aware of the risk of product failure, would not have put Masonite hardboard siding on the market."

However, the jury answered "No" to a more complicated question: whether the siding is "unreasonably prone to failure as designed, taking into consid-

the "No" answer to the remaining question leaves the issue in doubt in parts of the country. "There are slight nuances in the laws," said Crowder. "There are probably a dozen states where the result is uncertain."

Masonite spokesman Russ Adams said, "It's a mixed result. Is that enough for a suit that's supposed to be a nationwide class-action suit? They're not sure what they've got." A Masonite press release stated, "We expect this litigation to continue for some time to come."

Regardless of the final outcome, builders won't collect damages from this suit: Unless you are also the building owner, the verdict doesn't apply to you.

For information on the class-action suit, call the McWright Jackson law firm at 334/432-3444. For Masonite customer service, call 800/257-7885. □

## FROM WHAT WE GATHER

**Watch out for isocyanates in the workplace,** warns a recent alert from the National Institute for Occupational Safety and Health (NIOSH). Most exposures occur in industrial settings, but spray-applying urethane foam or urethane finishes at a building site could also expose workers. The chemicals can cause pneumonia-like symptoms or trigger severe asthma attacks in previously exposed individuals. Respirators aren't the solution, unless they supply pure air from an uncontaminated source. For the full report, call NIOSH at 800/356-4674 and ask for publication 96-111.

**Good carpenters may be hard to find,** but there are plenty of unemployed actors around, according to the July 16 Los Angeles Times. Southern California builders are hiring some of the local talent as "human directionals" — wearing flamboyant costumes and bearing signs, they encourage passing motorists to visit model homes and new developments. The best earn up to \$18 an hour for their performances, which can include ballet moves and jazz dance.

**Diesel construction equipment will cost more** but stink less under an agreement between the U.S. Environmental Protection Agency (EPA) and engine manufacturers, reports the September 19 Los Angeles Times. The unusual voluntary deal, which will be phased in from 1999 to 2008, will cut emissions from each new engine by as much as two-thirds. The EPA predicts the investment in antipollution technology will raise the prices of items like backhoes and dozers by a few hundred dollars apiece.

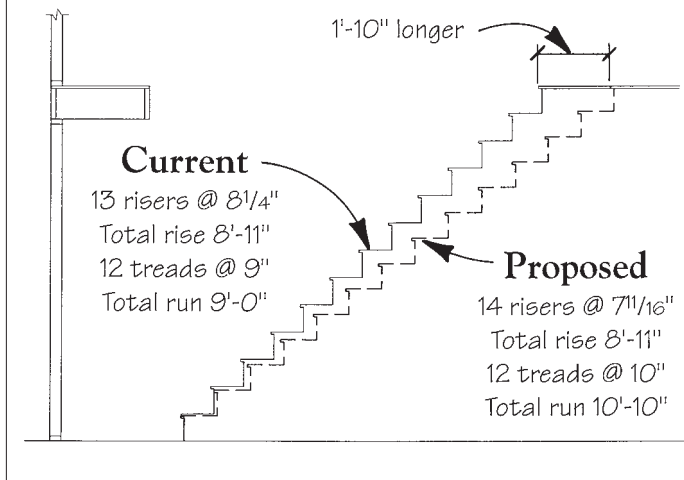
**Shortages of asphalt shingles** developed in the Plains states this fall, caused by a building boom and a heavy hailstorm season, according to press reports. Roofers were often forced to wait weeks for shingle deliveries because of reduced warehouse inventories. Manufacturers say they won't be able to rebuild stocks until the winter slowdown.

**Some electric baseboard heaters** produced in the 1970s and 1980s by the Square D Company of Palatine, Ill., are being voluntarily recalled. Deteriorating insulation on a wire inside the units can create a risk of fire or electric shock. The units can be identified by a brown and white label on the bottom left side of the heater, bearing the brand name "Square D" or "Nelco Corporation." For details, call Square D at 800/666-7557.

**Looking for a cement mason or plasterer trainee?** Try calling the Job Corps, a federally funded training program that teaches basic job skills to young people. Call 800/424-5111, or check out the Job Corps Web site at <http://members.aol.com/j4jobs>.



## New Stair Rules vs. Old



Wider treads and shorter risers mean a stair built to the new BOCA standard will be 22 inches longer.

### Stair Rules, continued

ceilings and 2x10 floor joists, changing from the old BOCA rule to the 1996 version means using 14 risers and 13 treads instead of 13 risers and 12 treads (see drawing). Using 10-inch treads would create a total stair run almost 2 feet longer per staircase.

In some houses, finding room for that extra 2 feet is a puzzle. In a sample town-house plan provided by the St. Louis Home Builders Association, the entire build-

ing would have to be lengthened by 1 foot 10 inches, at a cost conservatively estimated at more than \$2,000 per unit. Multiplying that figure out over hundreds of thousands of units, builders conclude that the cost of the BOCA revision could easily top the billion-dollar mark.

But this total figure may be exaggerated. In larger homes, many builders already provide stairs at least as generous as the new BOCA rules require. Code administrator Jim Ryan, of Overland Park, Kan., measured more than 40 staircases

during the town's "Parade of Homes" builder's show and found only one stair with risers higher than 8 inches (the average riser was under 7 1/2 inches). Treads in show homes averaged 10 1/2 inches wide, with the smallest treads being 9 1/2 inches.

Those high-end show homes, however, probably don't reflect the space constraints in lower-priced homes. Modular-home manufacturers, for example, who have to ship narrow units because of highway restrictions, oppose the new stair rule vehemently. Under the old rules, a staircase can just squeeze in across a 12-foot-wide module. A staircase complying with the new rule would have to run along the length of the module to fit, but the remaining space in the room would then be only 8 feet wide — too narrow to use.

### Stock plan review.

Contractors who build from stock plans should also anticipate problems. Building designer Brad Johnson of LifeStyle, Inc., in Minneapolis, Minn., says the plans his company creates for nationwide sale are drawn to conform with

ICBO's *Uniform Building Code (UBC)*, not BOCA's *NBC*. "We design to our regional standards," says Johnson. "If local standards are different, the buyer is responsible for any modifications in the field."

Johnson estimates that 60% of LifeStyle's stock plans would be affected by a change in stair rules: "If you add a foot of length to the stairs, that is going to affect wall locations, stair locations, lighting, doors, headspace, and so on." Handling these complications at the plan review stage will be a headache, but that's better than discovering the violation when your building is inspected.

**Making a virtue of necessity.** It could take years for the new BOCA standard to work its way onto the local books, but builders can make the best of the situation by using stairs as a selling point. A nice staircase is a good place to show off your crew's carpentry skills. And it couldn't hurt to point out to customers that the wide stairs you're building for them will make life easier for children and old people, and could very well add to their home's resale value. □



New Jersey firefighters labor unsuccessfully to rescue a child from a sinkhole in the lawn of a townhouse complex. The builder pleaded guilty to criminal charges in a later case, according to the Newark Star-Ledger.

### Bad Backfill, continued

Builders who buy developed lots don't always know what's under the surface, Fluhr observes: "Many times a developer will develop a piece of land and years will pass, and the fact that some fill was involved gets lost in history."

But ignorance of what the developer did won't get a builder off the hook if there's a disaster, says Fluhr. He recommends that every builder "perform due diligence" — ask the developer or land seller to produce test results from engineering inspections done

when structural fill was placed.

If you can't get the records, Fluhr says you should have a soils engineer take test borings to make sure the soil at the site is buildable. Tests could reveal either insufficient compaction or buried debris: "If you're drilling and it brings up chunks of wood, that's a telltale sign."

Is it worth it? Well, a geotechnical investigation could cost from \$200 to \$1,000, says Fluhr — but the typical cost of repairing damage caused by soil settlement is \$40,000 to \$60,000 per house. □