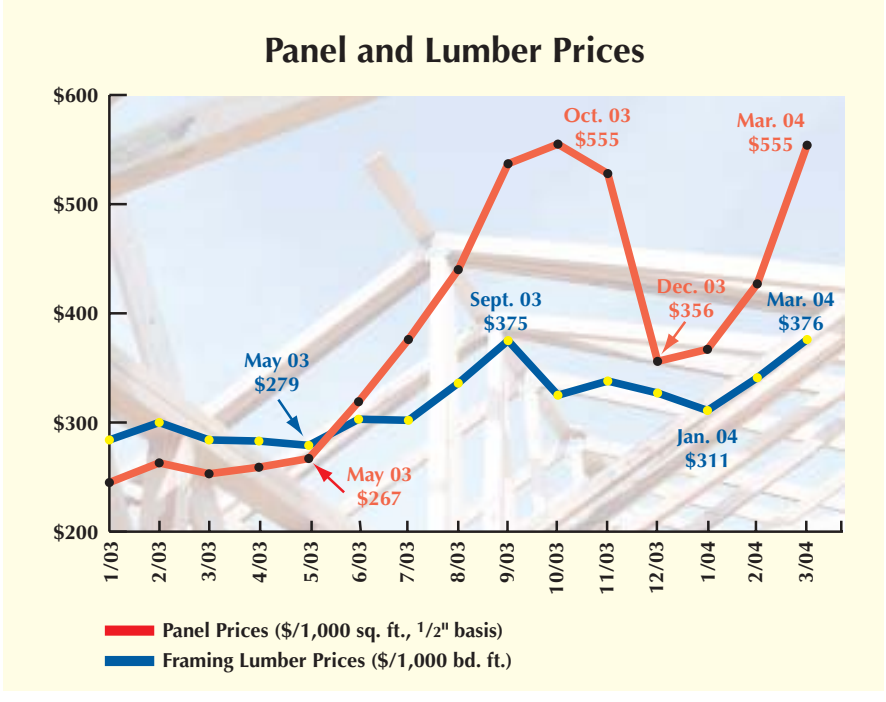
IN THE NEWS

EDITED BY TED CUSHMAN

Wood and Steel Deliver Double Price Whammy

Last fall's panel prices are back again

The new year has brought no relief from last year's astronomical lumber prices: Reflecting strong demand, plywood, OSB, and framing lumber prices bounced back to the records they set last summer and threatened to go even higher. With supplies still tight and capacity limited (especially for plywood and OSB), demand showed no sign of slackening. January home starts, while down from December, were 10% higher than the year before. And a strong year-end economy has experts hedging on earlier forecasts for a cooling housing market in 2004. NAHB economist David Seiders said in February, "If [interest rate hikes] fail to materialize, 2004 could equal or even surpass the record performances posted by the single-family housing market last year."



RANDOM LENGTHS

Builders who have switched to steel as a predictably priced alternative to wood are getting their own unpleasant surprise this year: With nations like China competing hard for limited global supplies of steel and scrap, steel prices are on a runaway train. "We're seeing increases of $30 to $40 a ton every month, and we expect that to continue," says construction estimator Bob Kovacs. "Reinforcing steel has gone up $120 a ton since the beginning of the year, and it will probably go up at least that much more by the end of the year." Price guarantees are a thing of the past, says Kovacs: "We're

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Minnesota Court Nixes Criminal Prosecutions for Unintentional Code Violations

Minnesota builders breathed a sigh of relief in January after the state supreme court overturned a lower court ruling that would have put a builder in jail for unintentional violations of the building code. The decision means that builders will be spared a whole new level of exposure to personal legal risk under a doctrine that would have held them criminally liable for code violations they were not aware of, or even mistakes made by subcontractors.

Violating the code is a misdemeanor in Minnesota. In 2001, builder John Arkell's company, Carriage Homes, pleaded guilty to charges filed by the city of Austin, and paid a $1,000 fine. The company had set some townhouse foundations at too low an elevation, resulting in drainage problems and puddles. Arkell himself, however, pleaded not guilty to charges filed against him personally. He didn't know that the site grading was wrong, he told the court; he had relied on

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Wood & Steel Deliver Price Whammy

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getting letters giving us until the end of the month to place an order on any previous project. Farther out than a month, they won't honor any quotes."

Scarier than high prices is the prospect that steel components may be unavailable when needed, throwing project schedules into chaos. "I haven't seen any real shortages yet,"

MATT MACAREWICH

says Kovacs. "But it depends on what you need. You can always get the common 25-gauge steel studs, but suppliers aren't keeping load-bearing 20-gauge or 16-gauge stuff on hand. They roll it as they need it."

Steel framing: "No guarantees." House framing is an uncommon use for steel, and California steel-framing pro Matt Macarewich says, "They're telling us we'll have to wait four to six weeks for load-bearing stuff, like our 12- and 14- and 16-gauge floor joist material. And then, even when it comes, it could cost as much as 20% more than today's price quote. Nobody's giving you guarantees right now."

Macarewich believes steel can stay competitive with wood. "Our material cost is still less with steel than for a wood frame, and our labor costs are going down as more people get into steel framing and we get better tools and techniques." But he says adapting to unstable markets is a new challenge.

"Steel guys are not used to volatility the way the lumber industry is," Macarewich explains. "Wood framers will switch from sawn lumber to wood I-joists or LVLs if they need to. Steel framing offers options too, but it's so new that people aren't familiar with them. We have a job now where the builder can't get the 12-gauge joists he needs, because he thought he could just walk in and buy them when he wanted them. I suggested that by using 15-gauge or 18-gauge pieces, doubled up back to back, he could achieve the same load. He had never even considered that."

Substituting materials on commercial jobs can be tricky, notes Bob Kovacs. "Usually, anything but a nonbearing partition has to be engineered. If you want to deviate from the shop drawings, you'll need a letter from the engineer."

To avoid getting burned by fast-changing job costs, says Kovacs, contractors will have to stay alert. "They have to stay in touch with their suppliers and keep updating their pricing. You can't use a number from the last job. If you lock yourself in, you can really get hurt." And Kovacs advises contractors to take a close look at their contracts: "You need to include a clause that covers you for material cost increases if the contract is not signed within 30 days, or whatever period your supplier is willing to cover you for."

Minnesota Court

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subcontractors to do the work and on a site engineer to supervise.

But the trial judge ruled that the building code was a "public welfare statute," like laws prohibiting possession of hand grenades or dangerous chemicals, and that Arkell was personally culpable for the acts of his corporation and its subcontractors. When Arkell was convicted, the judge sentenced him to a 90-day jail term and took up a homeowner association request for a $250,000 restitution.

In overturning the conviction and punishment, Justice James Gilbert wrote for the high court, "Classifying the building code as a public welfare statute for criminal prosecutions would set a dangerous precedent." Codes are ambiguous, he noted, and local officials have broad leeway to interpret them. "The legislature has not even imposed the state building code on a statewide basis," he remarked, "which may lead to uneven, disparate enforcement." Even the misdemeanor charges were confusing and vague, said Gilbert: "The complaint remains unclear as to the exact nature of the offense with which Arkell is being charged. The city appears to alternate between, on the one hand, charging Arkell with a plain violation of the building code and, on the other hand, a failure to correct the violation once it was cited."

Builders welcomed the decision. "If you want to call a builder a criminal," said attorney Charles Schoenwetter, who represents the Builders Association of Minnesota, "you ought to have to prove intent."

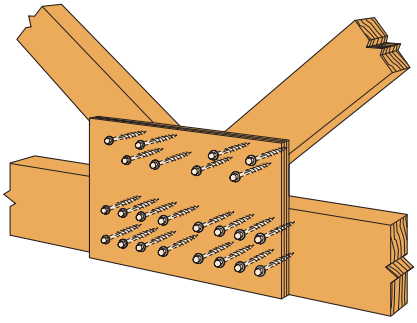
Load-Rated Screws Aid in Truss Repair

If you ask structural engineers from the wood truss industry how to fix broken trusses, they'll only tell you one rule: Don't even think about altering or patching a wood truss without instructions from the designer — and they mean it.

So why is there a drawing of a screw-and-plywood truss patch, and the words, "Repairing truss members: Simple, easy, low cost, strong," in recent ads for Simpson Strong-Tie's Strong-Drive screws? Well, if you're hoping to substitute a page of generic instructions for your truss supplier's engineering, think again. That's not the idea, says Mark Crawford, Simpson Strong-Tie's manager of engineering research and development.

Crawford was fresh from a conference at the Truss Plate Institute when he spoke with *JLC* about applications for the Strong-Drive screw. "Any time you have a broken truss," he said, "the contractor or the framer should not make the repair decisions. You have to involve the truss company's designer."

But Crawford said the new screws have made both the engineer's job and the contractor's job easier. "I spent seven years in the truss industry as an engineer," he said, "and I did a lot of truss repairs myself. We didn't have this screw then. It has some great advantages: You don't have to predrill, and you get significantly higher loads with the screws than with nails. Also, we have long lengths, so you can go through all the plies. It's a popular product."



SIMPSON STRONG-TIE

For an engineer, designing a workable truss patch is a straightforward process, says Crawford. Truss suppliers provide shop drawings for each truss that show the calculated load on each member, and Simpson publishes allowable loads per screw based on company testing. "Trusses are mostly made up of axial force members — straight tension or compression," explains Crawford. "For most repairs, the designer can simply take the total force in that broken member and divide it by the allowable load per screw, and figure out how many screws to use."

Simple — but complicated, says New Jersey structural engineer Mike Pierce. "A contractor or carpenter might say, 'Hey, it's just a 2x4 — why can't I just fix it?" commented Pierce. "But a wood truss is more than just a mess of 2x4s. It's an engineered system of components. If one component is altered, it affects the entire engineered system. The placement of those individual members, the angle, and the manner of connecting them are all very important."

And there's more to the strength of a patch than the allowable load per screw, Pierce notes: "For a framer in the field, it's not all that easy to know whether to use 1/2-inch plywood or 3/4-inch, or full inch-and-a-half sawn lumber. Or how far apart to space the screws, in what pattern, how close to the edge of the wood — and you have to consider the wood grain, and the angle of the screw."

But Pierce agrees that the screws can ease the job. "I've specified them many times," he says. "They're very well accepted. With nails, as the wood shrinks, it will pull away from the nail. You've got pullout resistance with a screw that is much greater, and they are a lot faster than bolts."

OFFCUTS

Arid Southern California's Metropolitan Water District plans to fund water-conserving upgrades for at least 80 model homes, according to a press release. The cooperative of 26 member cities and agencies imports water for 18 million people from Northern California and the Colorado River basin, and growth is straining the limited supply. Cooperating with builders to put frugal irrigation systems, appliances, and fixtures in model homes will "show the public how water conservation has evolved from the brick-in-the-toilet-tank days," said Water District CEO Ronald Gastelum.

Responding to a "passionate argument" from Atlanta builders, NAHB's executive board has voted to bring the 2007 and 2008 Builders' Show back to Atlanta's World Congress Center, after all, as agreed previously in a contract with the city, according to the *Atlanta Business Journal*. The meeting has grown so large since the deal was inked in the 1980s that organizers fear the Atlanta facilities won't hold the crowds. But faced with losing a $200 million shot in the arm, the city threatened a lawsuit. Said an NAHB spokesperson, "If we're tight, we're tight."

Scrap Tires Prove Useful in Septic Fields

American drivers discard 250 million tires a year, creating an ongoing disposal problem. Recycling technology is gaining ground; for example, the EPA's Region Six website reports that Texas recycled more old tires in 2002 than it created. But the push is still on for new and better ways to reuse tires.

One idea with big potential is substituting tire chips for gravel in the treatment trenches of onsite sewage disposal systems. It's a win all around, reports Caigan MacKenzie in the fall 2003 *Small Flows Quarterly*: It cuts costs, it works well in service, and it uses up a lot of old tires.

Tire chips are a third as dense as gravel, and that makes them cheaper to handle. Septic installer Bob Ardoyn, of Waycross, Ga., told *Small Flows* that with tire chips, he spends less on maintenance, fuel, and driving time. "A job requiring 75 tons of gravel can be done with 25 tons of tire chips," said Ardoyn. "My profits doubled when I made the switch."

And installers like Ardoyn can get rid of a lot of tires. "An average system with five 60-foot lines would use 1,400 to 1,500 used tires," Arkansas Department of Health official Carl Graves told *Small Flows*. One Georgia firm processes ten million tires a year, two thirds of them destined for septic trenches. "Based on the average drainfield size, 4,600 septic tanks would totally eliminate the five million tires discarded in Alabama in 1999," said Ardoyn.

A companion technical article in the fall 2003 *Small Flows Quarterly* lays to rest any doubts about the practice. Compaction of chips in service has proven not to be a problem, according to Barbara Grimes, Ph.D., and two colleagues. Treatment is effective as systems age, Grimes noted. Systems eight years old or older were found to support "healthy and diverse ecosystems" that could break down waste as well as a gravel system or better. And research into the possibility that buried tire chips might release chemicals has found that, in fact, the reverse may be true: In several studies, tire chips seem to have purified water by absorbing chemicals like naphthalene, toluene, and mercury.

For more information, contact the National Small Flows Clearinghouse (800/624-8301, www.nesc.wvu.edu/nsfc).

PHOTO COURTESY OF TIM WARREN

Tire chips are an excellent substitute for gravel in septic trenches, providing equivalent or better performance at lower cost, according to the *Small Flows Quarterly*. An average septic system might use up 1,500 scrap tires, according to experts.

OFFCUTS

Atlanta home builders are proposing new impact fees to fund work on the city's troubled sewer system, reports the *Atlanta Business Chronicle*. Builders are still pressing a two-year-old lawsuit against the city over Atlanta's existing impact fee collections, which they say are unfair because funds collected are directed to areas not affected by the projects paying the fees. But the builders say they would be satisfied if the fee system were used to pay for improved sewers along with the type of work the fees currently support. HBA official Chris Burke said, "Money applied to water and sewer is money well spent."

An Audubon Society study says a trend toward larger homes on larger lots is speeding up the loss of open space, reports the *Boston Globe*. Home builders told the paper that regulations and local resistance to space-conserving high-density development are making the problem worse. Instead of pursuing the uncertain, expensive, and tedious process of getting an exception to lot restrictions, builders opt for "McMansions" that conform to existing limits, state HBA president Greg Spier told the *Globe*. "The only way to get our money back [for mandated site improvements] is to build large homes," said Spier.

Maine lawmakers are working on a bill to establish the state's first statewide building code, says the Associated Press. The measure would make adoption of the code by towns voluntary. About 80 cities and towns in Maine already have building codes.

OFFCUTS

Homeowners leveled sharp criticisms at New Jersey's state-sponsored home warranty program during January hearings held by the State Commission of Investigation, reports the *Newark Star-Ledger*. Complaining that the complicated system was run by out-of-state companies who impede legitimate claims, witnesses charged that supposedly impartial arbitrators maintained cozy relationships with builders. But William Connolly, head of the state's codes and standards agency, defended the system, pointing to recoveries totaling more than $50 million since the program began in 1978. Complaints represented a tiny percentage of homeowners out of 240,000 warranties in force, said Connolly.

The Cleveland, Ohio, chapter of the National Association of the Remodeling Industry is backing contractor licensing legislation proposed by Ohio Attorney General Jim Petro and state representative Jim Trakas, according to press reports. Trakas's bill would set up a new Contractor Registration Board, with all home improvement contractors and salespeople required to register and show proof of $300,000 liability insurance coverage. Unlicensed contractors, or those convicted of fraud, could face fines up to $2,500 and a possible 6- to 12-month jail term.

Slim Chances Seen for Slimmed-Down Energy Bill

Arizona Senator John McCain calls it "rancid pork." Public Citizen, the consumer watchdog group, says it would "result in elimination of virtually all consumer protections for electricity ratepayers," creating a power industry run by "unregulated, monopolist, mega-giant utility owners." And a report produced for New Hampshire's deficit-hawk Senator John Sununu by the U.S. Energy Information Office described its likely effect on energy production, consumption, imports, and prices as "negligible" (no more than a 1% drop in oil imports by the year 2025). But it's back: With its grab-bag of tax breaks cut by about half, and a controversial provision dropped that would have protected oil companies from legal liability related to the gasoline additive MBTE, the omnibus energy bill that failed by two votes in the Senate last fall is slated to come before the senators again this spring. Hoping to avoid another mad rush by members to hitch their own pet tax incentives to the train, Senate leaders Bill Frist (the Kentucky Republican) and Tom Dashiell (the South Dakota Democrat) have agreed to bring the bill straight to the Senate floor, allowing no amendments and bypassing the Energy and Natural Resources Committee that would ordinarily get first whack.

If the bill survives to become law, there would be a few tidbits for energy-efficient builders tucked in among the billions in breaks for the coal, nuclear, oil, and electric industries. Chief among the home energy provisions:

- a tax credit (payable to the builder) of $1,000 for each new home rated to use 30% less energy than an energy-code-compliant house, and $2,000 if the house is rated at 50% better than code
- credits of $50 to $150 for energy-efficient appliances
- a credit of 10% on up to $3,000 worth of energy-conserving modifications to existing homes, for a total incentive of $300 per job

The money isn't much, but for the more cost-effective energy improvements, it could make a difference. Sealing an existing crawlspace, for instance, can cut energy use drastically in some houses. "The tax credit would be perfect for our foil-faced foam insulation products," said Herb Reffert, a product rep from Dow Chemical. "Insulating an existing crawlspace is one of the few ways you can save 30% over code for an affordable price." (Crawlspace expert Jeff Tooley, however, cautions that sealing up an existing home's crawlspace is a tricky proposition. "There are a lot more ways to get in trouble sealing an existing crawlspace than building a sealed crawlspace for a new home," he said. "You can't just block up the vents and go away, unless you want the floor to rot.")

You also shouldn't hold your breath while you wait for the energy credits to become law. The energy bill can't pass the House without the gas-additive lawsuit protection for oil companies, and it can't pass the Senate with it, said one Senate staffer: "Both bodies may lob modified energy bills back and forth, since neither side wants the energy bill to die on its doorstep. I hate to sound cynical, but with a short and congested election-year session of Congress underway, time is not an ally to getting energy legislation of any sort passed. But anything is possible here, so stay tuned."