

# EIGHT-PENNY NEWS

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## Cedar Shingle Shakeup: Grading Situation Clear as Mud

by Kathleen O'Brien

Several years back, you could order a bundle of No. 1 grade red cedar shingles and feel confident that you were buying a premium product. But now it's not so simple. Reports of inconsistent quality and doubts about grading practices have caused some builders to shy away from using cedar shingles and shakes.

Behind the scenes, this reflects a broader turmoil within the shingle grading industry. The International Conference of Building Officials (ICBO) has revoked the "evaluation report numbers" (known as "ER numbers") that certify many of the

grading agencies it used to endorse, and has now begun to issue numbers to individual mills — but only if they adopt stringent quality-control practices.

ICBO's move may eventually bring some order to the present chaos. But for now, it means that the grading stamps on many bundles may not mean much: Only four of the hundreds of mills producing shingles have received the code group's blessing so far.

**Questions about quality.** Has the quality of cedar shingles slipped? It depends whom you ask. Contractors in the Northwest, where

*continued*



*Builders should keep a close eye on quality while the shingle industry irons out its grading problems.*

## Tax Credit Drives Affordable Construction

Most of the old real-estate tax shelters vanished in the reforms of the late '80s. Along with them went the substantial stimulus they provided to

building activity. But one big write-off remains for investors: the credit for investment in affordable housing. The shelter is attracting lots of private

money from individuals, banks, and corporations, and the cash is flowing into community projects of all sizes in all 50 states.

How big is the impact? Well, when the tax credit was made permanent in the fall of 1993, multifamily starts nationwide doubled in one month. The National Association of Home Builders estimates that half of all apartment construction is now financed with help from the credit. In 1993, for example, \$420 million in tax credits stimulated \$2.2 billion in private investment in construction and renovation, producing more than 100,000 units of low-rent housing.

All this provides work for contractors. And since many

of the building and remodeling jobs funded are small projects run by local community groups and nonprofits, smaller construction companies are sharing in the work.

Large developers experienced in dealing with government agencies usually land the bigger jobs. Smaller companies often find work as subs on big projects, and they can sometimes compete well for prime contracts on the smaller rehab jobs. Once a company has established a good track record, it tends to get repeat business. If you'd like to get involved, checking with land trusts or community development groups in your area might turn

*continued*



*Rehab work funded by tax credits is keeping a lot of contractors busy.*

## STATE BY STATE

**Rhode Island.** The state's contractor registration law has changed this year. Under the changes, residential building permits can not be issued to any contractor who does not have a valid registration card. Members of licensed trades, like plumbers and electricians, will now be exempt from the registration law — but if they work outside the trade they are licensed for, they must register as contractors.

**Massachusetts.** The state Attorney General's office has brought its first-ever indictment against an employer for fraudulently avoiding workers comp premiums. The state charged a business owner with falsifying employee job descriptions and underreporting payroll to obtain a better price for comp insurance. If convicted on the fraud charge, the employer faces a \$10,000 fine and up to 5 years in jail.

**New York.** This year's legislative session in Albany has produced reform of the Real Property Transfer Gains Tax. Major elements include a two-year "builders exemption," deductibility of real property transfer taxes, and a longer "construction period" during which expenses may be claimed. A copy of the new tax law is available from the New York State Builders Association by calling 518/465-2492.

## Insulated Block Finds Niche in Northeast

Say "masonry wall" and most residential builders think of either a brick house, or the block wall of their third-grade classroom. But one innovative masonry-based wall system challenges those stereotypes. The *Sparfil Wall System* is built with insulated concrete blocks that are stacked dry and surface-bonded. At a cost on a par with 2x6 stud framing, Sparfil provides an R-25 wall with a two-hour fire rating. The material accepts nails readily, so it can be sided and trimmed out to look like any wood-framed house — but with thicker walls.

The basic units of a Sparfil wall are full-dimension 16-inch block, 8 or 12 inches deep, machined on top and bottom to allow precise dry-stacking, a process in which blocks are laid up without mortar, then surface-bonded with a fiberglass-reinforced mortar coat. Small polystyrene beads in the blocks raise the R-value to R-12 for a 12-inch-thick wall, or R-25 with polystyrene core inserts. The foam beads lower the compressive strength of the block compared with con-



*The Sparfil Wall System allows one-step construction of a fire-rated structural wall, complete with insulation and air barrier.*

ventional units, but the assembled wall is stronger than a conventional masonry wall, says New York City architect Ray Nelson. "Once you get the surface bonded, it has tensile strength," he explained. "You can pick up a whole section of wall with a crane."

Affordable Homes Inc., of New York City, is using Sparfil for 1,000 units under construction in Brooklyn. Nelson, who is designing the one- to six-family buildings for the project, is enthusiastic about Sparfil. "It goes up in one step," he said. "My insulation is there, my plaster is there. You give it a decorative coat on the outside, a quick spackle job on the inside, and you're done." And he likes the energy performance of the finished walls: "It gives me a perfect air

barrier — I can completely control my ventilation."

According to Nelson, construction goes quickly, even with unskilled labor. "If you're smart enough to maintain plumb and level, you can lay these blocks," he said. "A worker can surface-bond 350 blocks a day."

Tigan Gilbert of Gilbert Block, in Laconia, N.H., which manufactures Sparfil blocks under license, says it's hard to sell the product in his area for below-ground use, even though it makes a good finished basement. "You're talking two or three times the cost," he said — \$8,500 on a typical house foundation, compared with \$3,500 for poured concrete. "But above grade," says Gilbert, "the cost is a wash." For information, call Sparfil's Allan Griffiths at 813/963-3794. □

## When Does an Employee Need a CDL?

The Commercial Motor Vehicle Act, passed by the federal government in 1986, requires each state to pass its own act in compliance with the federal act. Under the law, anyone who operates a commercial vehicle must have a Commercial Driver's License (CDL). Both new and experienced drivers, whether paid or volunteer, need a CDL to drive the following vehicles:

- A vehicle with a gross weight of more than 26,000 pounds
- A vehicle designed to carry

16 or more people

- Certain vehicles used to transport hazardous materials

Each state has its own procedures for issuing CDLs to its residents, but a CDL from any state is good in any other state.

The driver of a car, pickup truck, or a light van only needs a CDL if the vehicle is hauling hazardous materials. If the vehicle is carrying a large fuel tank or explosives, for instance, it must display warning placards and a CDL is required.

When in doubt, check with your state's Motor Vehicle Department.

If you need to move someone else's vehicle on a job site, look for the warning placards and check the vehicle's gross weight (on a label inside the driver's side door). A minor accident could be a major headache if the driver isn't licensed for that vehicle. Depending on the state, the unlicensed driver could be presumed to be at fault, and could lose his regular driver's license. □

# Critics Assail Water Heater Proposal

If you couldn't buy electric water heaters, what would you use instead? Gas? Electric heat pumps? The Department of Energy (DOE) says either one would be better — in fact, it wants to outlaw electric resistance hot water heaters within four years. DOE has proposed requiring electric water heaters to have an Energy Factor (EF) of over 1.6, meaning the units would put out more heat energy than the electrical energy they consumed. Heat pump water heaters could meet this



The \$600 Crispaire heat-pump water heater uses 60% less electricity than a standard electric tank.

standard, but electric resistance water heaters can't.

The proposal has drawn strong reactions from both sides. Predictably, gas companies like the idea, since most customers would probably switch to gas. Electric utilities oppose it, because they would lose the steady income provided by millions of people who heat water with electricity. But the utilities aren't alone — in three days of public comment on the proposed new regulation, DOE heard testimony from 80 groups opposed to the

new rule. The National Association of Home Builders joined forces with organizations like the American Association of Retired People and the National Black Caucus of State Legislators to speak against the rule — even Wendy's came out against it. Only two witnesses spoke in favor.

Up-front cost was the main objection. You can buy an ordinary electric water heater for less than \$200. Gas units run from \$300 to \$800 or more, depending on the model, and the cheapest heat pump water heater on the market today costs around \$600, not including the water storage tank.

Installation costs raise the tab. Gas water heaters need a gas supply and exhaust venting. Some heat pumps also need venting, as well as a drain for condensate, and heat pumps take up more space than conventional electric water heaters. All this complicates floor planning, especially in apartment buildings.

Heat pumps are the cheapest water heaters to run, on average. But in cold climates, they run less efficiently, and sometimes rob house heat to heat water. Critics argued that more complicated heat pump installations in cold climates would not save enough energy to pay for the investment.

Observers say the outcry will probably convince DOE to modify its proposal. One possibility is a regulation that would set two standards, one for resistance water heaters and one for heat pumps, with a tougher standard to be phased in over time. □

## FROM WHAT WE GATHER

**Almost all Americans want to be homeowners**, a recent survey confirms. Eighty-six percent of respondents to a government survey said they would rather own than rent. And with mortgage rates low and the economy up, most are optimistic about their chances: 76% said home ownership is within their reach, as compared with 46% in 1992. Only 15% said this was a bad time to buy a home.

**Energy Design Update now has an online service.** The newsletter from Cutter Information Corp., which provides in-depth coverage of building-related energy topics, is now available electronically to modem-equipped computer owners. "Energy Design Online" will provide a database of energy-related articles from periodicals (including *JLC*), a products database, and a database of professional abstracts. Billboard forums will host discussions on energy topics. An Internet gateway will allow users to send and receive electronic mail worldwide. To hook up, instruct your modem to dial 212/662-0388 at any speed up to 14.4k with ANSI or VT100 terminal emulation. From there, just follow instructions. If you need technical assistance, call 212/662-7428.

**Here's your chance to visit Russia.** The Citizens Democracy Corps (CDC) is looking for volunteers to help the new nations of the former communist bloc get their homebuilding industries on the free-enterprise track. People with experience and expertise in building, business management, or construction materials are needed as advisors to fledgling private companies. For information, contact CDC at 1735 I St. N.W., Suite 720, Washington, DC 20006; 800/394-1945.

**Need technical info on brick construction?** An automated fax line at the Brick Institute of America is set up to fax out items from the institute's extensive library of Technical Notes within minutes. Each reference note covers a particular topic and explains accepted practice in detail, complete with illustrations, charts, and tables. Also available is a series of Builder's Notes concerning brick. To order a fax, dial 703/620-1200 and answer the recorded prompts. For help, call the Brick Institute at 703/620-0010 and ask for Norm Farley.

**People in California are putting a lot of money into building materials — literally.** According to the Los Angeles Times, the Federal Reserve Bank in L.A. is looking for ways to get rid of the 1,100 tons of shredded-up old banknotes it produces each year. To help, Gridcore Systems International is trying the almighty buck as an ingredient in its molded fiber panels, and two California roofing manufacturers are putting dollars into their fire-resistant shingles.

## Deducting Expenses in the Home Office

Last month I talked about who can deduct home office expenses. Assuming your home office qualifies for the deduction, the rules for calculating deductions are specific.

**Direct expenses of doing business** are deductible in full, just as they would be in an office outside the home. For instance, salaries, supplies, advertising, and charges for business phone calls are fully deductible as ordinary business costs. (Your basic phone service is deductible only if your office has its own separate line — not if the home and office share a line.)

**Expenses that benefit only the residential part of the house** — say, repairs to the master bath — are not deductible.

**Expenses that directly benefit just the home office** are fully deductible. For instance, painting or repairing the office, but not the rest of the house, is a deductible business expense.

**Expenses that apply to both the office and the rest of the property** have to be allocated — split into office and non-office parts. Only the calculated office portion is deductible. Property taxes, mortgage interest, rent, insurance, general repairs, security systems, depreciation, and utilities such as electric power and heat are costs that must be allocated.

The IRS provides two ways to calculate the split between home and office portions of allocated expenses. First, you can divide the area used for business by the total area of the house. If you use 150 square feet of a 1,500-sq. ft. home for your office, for example, a tenth of the given expense can be deducted. The second way is to divide the number of rooms used for the office by the total number of rooms. This is allowed only if the room sizes are similar. In that case, if you used one room of a six-room house for office space, a sixth of your home costs could be deducted from business income.

In the case of utilities, a specific allocation may be appropriate. If the office takes up only 10% of the building, but uses 25% of the electricity, then 25% of the electric bill can be allocated as a business expense — if you can document how much the office uses. A separate meter for the office gives the best proof, but a comparison between annual electric bills before and after the office was established should satisfy the IRS. If you have no supporting documentation, allocate the utility bills on a square-foot basis.

As always, consult a tax professional before you claim any deduction.

*Stuart Lerman is owner of Lerman and Associates, a full-service accounting firm in Bloomingdale, Ill.*

## Is the Roofer in Your Future a Robot?

Look! Up on the roof! Is it a Zamboni? Is it a Cuisinart? No, it's "Rapid Roofer," the roofing robot!

This new device is essentially a roofing nailgun in a frame on wheels. Guided by tracks, it shuttles back and forth on the roof with a load of shingles, doing what shinglers do. Every 45 minutes it stops to reload (with help from a human operator).

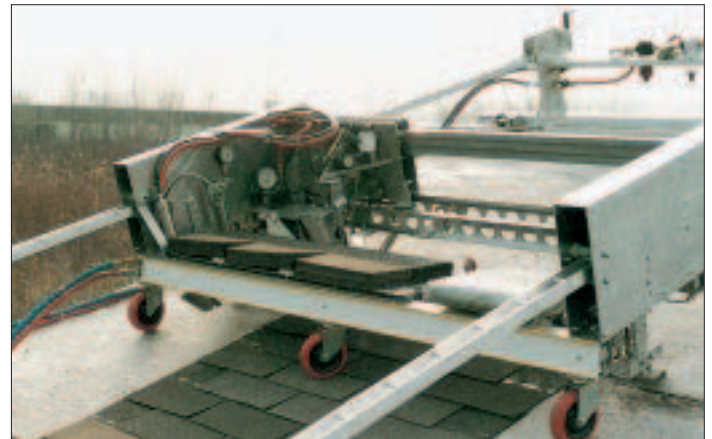
The machine won't do ends, valleys, around obstructions, or the extreme top or bottom of the roof — its human helper has to do that. But according to Rod Burton, president of Automated Construction Machinery of Columbus, Ohio, on the right

type of roof, one man and one robot working together can lay five or six squares an hour all day long.

Nails and shingles are included in the rental package, if the renter wants them. Burton claims that cost savings with the "materials included" option cut the robot rental charge down to almost nothing.

The roofing robot doesn't need comp or unemployment insurance, and it doesn't smoke, drink, or spit tobacco juice on the customer's sidewalk. On the other hand, it won't laugh at your jokes, either.

When they make one you can send out for coffee, we'll buy it. □



*Automated Construction Machinery's Rapid Roofer robot has nothing but shingling on its mechanical mind.*

### Tax Credit, continued

up some work. Or you could call your state's Housing Finance Agency and ask where organizations handling tax credit work advertise for bids in your state.

Most funding for each project comes from private sources, with just enough tax-credit funding to make the project viable. Large nonprofit groups collect money from big investors and channel it to

local groups in the form of equity investments. The credits are spread among the states on the basis of population, and a committee in each state decides which projects will be eligible for the credit.

Programs range from apartments for the homeless in urban centers to disaster rebuilding in Florida and California. But the common element is affordability. Most units are occupied by working families with modest incomes. □

## Cedar Shingle, *continued*

cedar shingles and shakes have always been popular, give varying answers. Seattle contractor Gerald Burke's opinion is that No. 1 Premium-grade cedar shingles aren't what they used to be. "They are not as wide, there is more curling, and it can be hard to tell which side is which," says Burke. "The quality is not consistent." He's turned to composite and synthetic shakes.

Others, such as Peter Anderson of Bay Pacific Construction in Gig Harbor, Wash., believe there are good-quality shingles available — at a price. "If you buy lower grade, you'll get lower quality, and you'll have bad experiences," Anderson said. "But a good-quality product with good care will result in a long life and a good look." Lauren Litzie of Conner Development in Bellevue, Wash., agrees: "We've used the same grade and the same supplier for some time and have had no problems," she said.

Amid the conflicting opinions, there's not much hard data on red cedar shingle or shake quality. Terry Hiley of U.S. Forest Products Lab in Madison, Wis., says the lab hasn't tested red cedar for durability in 15 or 20 years. The agency receives about six calls a year reporting "horror stories" of shake roof failures, Hiley says, but the number of such calls hasn't really increased in the last ten years.

Those who believe that shake quality has been dropping point to timber supply problems as the culprit. They say that environmental restrictions have made old growth cedar scarce, forcing mills to use younger trees and squeeze more from each log. But Don Meucci of the Cedar Shake and Shingle Bureau in Bellevue, Wash., rejects that argument, noting that most

shingles and shakes come from trees downed by natural causes, or cut and left on the ground in clear-cutting operations many decades ago. Meucci says that including such "salvage" wood, the Western forest can supply cedar for the next 100 years.

According to Meucci, irregular grading practices are the source of cedar's reputation problems. "Not all grade No. 1's are created equal," he said, suggesting that some mills are putting a No. 1 grade on shingles that should be marked No. 2 or No. 3. "Since many builders buy on price and do not look closely enough at the source of the



*Cedar shingles are still plentiful, but quality varies from mill to mill, and grading has been inconsistent.*

grading label, they'll get a bad batch, and conclude *all* cedar is bad quality."

**Grading agencies lose certification.** Meucci's criticism was directed at mills that don't belong to his group. But in the continuing grading shake-up, his organization, which was the largest grading agency for red cedar shingles and shakes, has met the same fate as many others: They've lost their independent certification.

Patrick McCullen, manager of ICBO's Field Services Group, told *JLC* that the agency has revoked the evaluation report numbers from several quality-control programs, including that of the Bellevue-based Cedar Shake

and Shingle Bureau, because "these quality-control programs were not effective in preventing mills from applying labels bearing the ICBO ER number label to bundles not complying with the UBC standards." Revoking an agency's ER number amounts to voiding its certification.

The only grading agencies ICBO currently recognizes are Warnock Hersey (WH) and Northwestern Red Cedar (both of British Columbia) and Timber Products Inspection (TPI) of Georgia. WH and TPI are also recognized with a National Evaluation Report number.

Until recently, ICBO let

product still carries the Warnock Hersey stamp.

Steve Harris, a technical assistant at WH, says ICBO's policy change has resulted in tougher auditing of the individual mills ICBO recognizes. "For a mill to keep its own ER number," he says, "it must undergo regular auditing to assure that it is adhering to its own quality-control procedure." So in addition to inspecting bundles weekly, WH inspectors now audit paperwork. "If the mill's quality-control manual says the saws are to be changed every two hours, the paperwork should show they are actually doing that," says Harris.

McCullen admits ICBO's new requirements may be complicating the picture right now, but he believes the situation will improve as more mills are certified. He predicts that confidence in the ER number will grow. "Building officials will be looking for the report number," said McCullen, although under ICBO's optional program, building officials are always free to approve a material regardless of whether it bears an ICBO ER number.

Harris thinks quality is actually getting better, saying recent changes have weeded out a lot of questionable mills. "The mills that are left are committed to quality — they have to be," he says.

Until the dust settles, contractors should be careful what they buy. Many roofing contractors say they prefer to work with smaller mills, because they can keep better tabs on quality. Warnock Hersey's Harris echoed the advice of contractors we talked to: "Know your source, know the mill, and make sure the product is certified by an accredited grading agency." Until more mills get accredited, it's buyer beware. □