Ledger Failure Causes Deck Collapse

On September 13, more than 20 people were injured in Narragansett, R.I., when a deck separated from a house during a party. Anthony Santilli, a Narragansett building official, says rot due to water intrusion behind the ledger and overloading of the deck were the main reasons for the collapse.

The 480-square-foot pressure-treated deck was built about 20 years ago, according to Santilli, and had wrapped around two sides of a 1970s raised ranch located some 400 feet from a Rhode Island Sound beach. "It had great footings," Santilli says. "It was well built, even overbuilt. The span was 11 feet 8 inches with 2x10 joists 13 inches to 14 inches on center. The deck stayed together when it came down, like it was on a hinge."

Santilli says the ledger was attached with 16d common nails, as was common in the 1980s, though there were also some lag bolts. The ledger was flashed, but still, over the years, water — especially salt water — got behind the ledger, leading to the rot that caused the ledger to give way.

Overloading — 60 to 70 people were possibly on the deck — was also to blame for the failure, according to Santilli.

But was the deck overloaded? Because the ledger was compromised, the answer would have to be yes; however, it's not easy to overload a structurally sound, code-compliant deck.

To meet code, a deck must be able to withstand a 40-pound design live load per square foot. A code-compliant 480-square-foot deck, for example, should therefore be able to handle a total live load capacity of 19,200 pounds (480 sq. ft. x 40 lb./sq. ft.).

Frank Woeste, a professor emeritus at Virginia Polytechnic Institute and State University and a wood construction and engineering consultant, points out that if you assume 60 people weighing an average of 160 pounds each were on the Narragansett deck, the total weight on that deck would have been 9,600 pounds. That's a live load of 20 pounds per square foot — only half the load the deck should have been able to withstand. — *Laurie Elden*

Deck Design Contest Ushers in Partnership Between Remodeling Show and Deck Expo

Five crews built five outstanding decks for the Deck Design Contest at Hanley Wood's Remodeling Show in Baltimore in September. Azek, A.E.R.T. (MoistureShield), DryJoist, Tamko, Tiger Claw, and Viance sponsored the competition, and the decks were built by Maryland Deck & Hot Tubs, Westminster, Md.; the Holloway Company, Sterling, Va.; T.W. Ellis, Baldwin, Md.; T&A Contractors, Burtonsville, Md.; and Exteriors Plus, Terryville, Conn.

A panel of judges reviewed the decks, and based on overall design, chose as Best in Show the deck sponsored by Tiger Claw and Viance and built by Exteriors Plus.

The contest signaled the upcoming co-location of Deck Expo and the Remodeling Show. The first combined Deck Expo and Remodeling Show will be held in Indianapolis in November 2009. — *Andy Engel*

2008 Shows & Events

November 15–20
International Pool | Spa | Patio Expo
Hanley Wood Exhibitions*
Las Vegas
888/869-8522
poolspapatio.com

December 8–10
Northwest Builders Show
Master Builders Association of King and Snohomish Counties
Bellevue, Wash.
425/451-7920
northwestbuildersshow.com

2009 Shows & Events

January 20–23
International Builders' Show & NextBuild
National Association of Home Builders
Las Vegas
800/967-8619
buildersshow.com

March 11–12
Midwest Builders Show
Home Builders Association of Greater Chicago
Rosemont, Ill.
630/627-7575
midwestbuildersshow.com

March 18–21
Hearth, Patio & Barbeque Expo
Hearth, Patio & Barbecue Association
Reno, Nev.
703/522-0086
hpbexpo.com

October 27–30
DeckExpo 2009
Co-located with the Remodeling Show
Hanley Wood Exhibitions*
Indianapolis
deckexpo.com
972/536-6300

*Hanley Wood Exhibitions is owned by Hanley Wood, which also owns *Professional Deck Builder.*

New lead-paint rules issued by the EPA in March apply to renovation and repair projects that disturb at least 20 square feet of lead paint on the exterior or at least 6 square feet on the interior of housing built before 1978. The first of those rules goes into effect December 22 and requires contractors working on such projects to give occupants the new EPA pamphlet "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools." New regulations that address training, certification, and safe work practices will go into effect April 22, 2010. The occupant pamphlet and a pamphlet designed to help contractors comply with the new rules — "Small Entity Compliance Guide to Renovate Right" — are available free at epa.gov/lead/pubs/renovation.htm.

Archadeck and Outdoor Lighting Perspectives have merged to form a parent company called Outdoor Living Brands. According to Scott Zide, chief operating officer of the new company, existing franchise agreements won't change, and franchises will continue to use the Archadeck and Outdoor Lighting Perspectives brand names.

It is illegal, under an amendment to the Lacey Act passed in May, "to import, export, transport, sell, receive, acquire, or purchase" illegally harvested wood. Starting December 15, lumber importers in the United States will be required to submit a declaration including the scientific name of the lumber imported, its quantity and value, and the name of the originating country. That provision of the act won't be enforced, however, until April 1, 2009, by which date U.S. Customs and Border Protection expects to have an electronic system in place to collect the declarations.

Correct Building Products, maker of CorrectDeck composite decking and railing, has laid off one-third of its 75 employees, according to a recent article at *MaineToday.com*. Mike Descoteaux, marketing manager at the Biddeford, Maine-based company, attributed the layoffs to normal seasonal fluctuations in demand and "cutbacks in orders as a result of uncertainty at the distributor levels."

Doing the math to build stairs leaves a lot of room for small errors to grow into big problems. EZ Stairs has simplified the process with its free, Web-based stair calculator (ez-stairs.com). After you input information in five easy steps, the program provides a printable view of the finished stringer, cut dimensions, and a materials list. ❖