

# STRUCTURAL REPORT™

STRUCTURAL SYSTEMS AND BUILDING SAFETY NEWS

SIMPSON

Strong-Tie®

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## PRODUCT SPOTLIGHT

### A FASTENING SOLUTION YOU CAN COUNT ON

Fastening has never been as fast or as reliable. New automated screw fastening tools are replacing traditional nail guns for their speed, versatility and power. Simpson's Quik Drive line of auto-feed screw driving systems is designed to handle a wide-array of applications including subfloors, drywall, stair treads, wall plates and sheathing.



The superior holding power of screws is one of the main reason builders are switching from nails to screws. Floor squeaks are a common and costly callback on jobsites. Using screws instead of nails to secure subfloors helps reduce squeaks and subsequent callbacks.

"Since switching to Quik Drive, 98 percent of our callbacks due to loose floor boards are history," says J.R. Presley with G & G Construction in Charlotte, North Carolina.

Screws are also proving to be a good solution in high wind areas. In the Florida hurricanes of 2004, the loss of roof tiles from hips and ridges was a very common problem. Since then, Florida has provided new recommendations and code requirements that include specifying the use of screws to fasten hip and ridge tiles. Several types of Quik Drive screws have been added to the Miami-Dade County listing of approved roofing products. Loss of roof sheathing is also a concern in high wind areas. Simpson is currently working on guidelines on the use of Quik Drive screws for fastening roof decking to framing.

Holding power is not the only advantage of automated screw systems, speed and ease of use are other attractions. Quik Drive's

easy-loading screw strips, precise countersink adjustment and patented auto-advance mechanism save

installers hours on the job. The sleek tools are also easier on the back and knees. Their design allows users to drive screws standing up. The two-position ergonomic extension handle also offers stability and comfort.

Quik Drive's product line includes tools for composite decking, tile roofing, steel framing and fiber cement siding. Screws come in lengths up to 3 inches with various head, thread and point styles to accommodate most materials.

The complete Quik Drive product offering and specifications are featured in a new 56-page catalog available on our website, [strongtie.com](http://strongtie.com). For additional information or a product demonstration, contact your Simpson Strong-Tie representative or call 1-800-999-5099. ■



## CODE CORNER

### GULF COAST STATES ADOPT NEW CODES IN PREPARATION FOR REBUILDING

*Code Corner* is written by Simpson Strong-Tie Engineer, Randy Shackelford, PE.

When he's not attending code hearings, he can be reached at [rshackelford@strongtie.com](mailto:rshackelford@strongtie.com).

As we approach the anniversary of Hurricanes Katrina and Rita, the states of Louisiana and Mississippi are preparing for a massive rebuilding effort. New legislation is helping set the stage for the rebuilding process to ensure new structures have a better chance of withstanding the next big storm.

Last November, Louisiana passed a bill to adopt the wind and flood mitigation requirements prescribed by the 2003 International Residential Code (IRC) and the 2003 International Building Code (IBC). The legislation called for 11 of the

state's 64 parishes to comply with the new standards immediately. These parishes—Caldcasieu, Cameron, Iberia, Jefferson, Lafourche, Orleans, Plaquemines, St. Bernard, St. Tammany, Terrebonne, and Vermillion—which fall along the coastline, suffered the most damage from last year's hurricanes.

The new legislation went into effect December 29, 2005, for local governments and parishes already enforcing building codes. An additional 60 days were given to those without current local code enforcement. All new structures

throughout the state will need to comply with a new statewide building code beginning in 2007.

Parishes and local governments were given some flexibility in how they enforce the codes. They can continue with their existing method of plan review and inspection, establish their own method of plan review and inspection, or contract with certain third-party providers or with the State Fire Marshall to provide these services.

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**CODE CORNER** *(continued from page 1)*

**GULF COAST STATES ADOPT NEW CODES IN PREPARATION FOR REBUILDING**

The law also established a Louisiana State Uniform Construction Code Council, which will recommend building codes for statewide adoption later this year. In addition, the council will educate and certify building officials, so they can properly enforce these new requirements.

Earlier this year, Mississippi enacted a similar law. House Bill 1406 requires the counties of Jackson, Harrison, Hancock, Stone, Pearl River and all municipalities therein, to enforce, on an emergency basis, the wind and flood mitigation requirements outlined in the 2003 IRC and the IBC. However, the new law allows the Board of Supervisors of a county or the governing authorities of any municipality to choose not to enforce the emergency requirements.

The legislation also provides for the creation of a Mississippi Building Codes Council. The council is to adopt and amend the latest editions of the IBC, IRC, and other codes for electrical, plumbing, mechanical, fire and fuel gas by July 1, 2007.

The adoption of these state building code requirements has led to new guidelines for high wind areas. Both Louisiana and Mississippi's legislation reference the IRC for the construction of new homes, however, the structural provisions in the IRC are not intended for high wind areas. In areas where the design windspeed exceeds 110 miles per hour, the IRC requires that dwellings either be designed using the IBC or ASCE 7, or that a prescriptive manual be used.

One of the prescriptive manuals referenced in the IRC is the SBCCI SSTD 10-99, the Standard for Hurricane Resistant Residential Construction. While this manual is still available from the International Code Council, it's considered an outdated document. It's based on the Standard Building Code wind loads, which use the fastest-mile measurement of wind. Newer codes, including the IRC, use the three-second gust measurement of wind.

***The forecast for the 2006 season is twice the normal average—17 named storms, 9 hurricanes, and 5 major hurricanes (Category 3-5) are predicted.***

Furthermore, the manual does not address wind speeds exceeding 130 miles per hour.

To resolve this issue, the Institute for Business and Home Safety (IBHS) has updated this document to the newer wind speeds, including adding requirements for winds up to 140 miles per hour. Complimentary copies of this new document, entitled The IBHS Guidelines for Hurricane Resistant Residential Construction, are being distributed to building officials and builders in the Gulf Coast with the support of Simpson Strong-Tie and other manufacturers and industry groups.

ICC has also begun to update SSTD 10 using a consensus process. For the last year, a committee of building officials, manufacturers

and other interested parties has been working to revise this standard. Its release is scheduled for February 2007.

Finally, the Federal Emergency Management Agency (FEMA) recently published a series of new Hurricane Katrina Flood Recovery Maps. These maps provide new Advisory Base Flood Elevations, which update the Base Flood Elevations in the 25-year-old Flood Insurance

Rate Maps. The Base Flood Elevation is the height of floodwaters that have a one percent chance of being equaled or exceeded in a given year. This height is significant because it should be set high enough to prevent damage from future floods, but not so high as to cause undue financial hardship in having to elevate structures to this height. In addition,

this height helps determine whether it's more cost-effective to rebuild and elevate an existing damaged structure or demolish it completely.

These latest code updates and legislative bills are helping to prepare the Gulf Coast region for the next round of storms. As Governor Kathleen Babineaux Blanco stated in a special address to the Louisiana State Legislature last November, "We must take the bold step of setting a minimum statewide standard to ensure the homes and businesses we rebuild are prepared to withstand the next hurricane. We will urge jurisdictions, especially those along the coast, to set even higher standards. Better building codes will also help home- and business-owners get the insurance they need to rebuild." ■

**ATTENDANCE DOUBLES AT NATIONAL HURRICANE CONFERENCE**

The annual National Hurricane Conference held last April in Orlando attracted more than 2,000 attendees, twice the number from the year prior. The recent devastation caused by Rita and Katrina, as well as two high-profile presenters, drew the large crowd. Max Mayfield, director of the National Hurricane Center, recapped last year's hurricane season while Homeland Security Secretary Michael Chertoff discussed the importance of planning and preparedness.

During the three-day conference, several presenters, who had surveyed damage from last year's hurricanes, offered their insight. They emphasized the need for stronger building codes, proper inspection and building higher to accommodate for flood events. Providing education for those areas now adopting more stringent standards was also identified as a need.

The conference forecast for the 2006 hurricane season is twice the normal average—17 named storms, 9 hurricanes, and 5 major hurricanes (Category 3-5) are predicted. The probability of a major hurricane making landfall along the U.S. coastline this year is 81 percent, whereas the average is 52 percent.

While there is agreement that the U.S. is currently experiencing its highest number of storms in recent history, there is much debate as to whether global warming is affecting hurricane activity and intensity. While some researchers point to the recent increase in hurricanes to support the greenhouse effect, others predict that the current 30-year cycle of warming oceans will end in the next five to 10 years.

Next year's conference will be held April 2-6 in New Orleans. For more information, visit [www.hurricanemeeting.com](http://www.hurricanemeeting.com).

**CONTINUING EDUCATION & EVENTS**

**NORTHEAST**

**Engineers, Architects, Building Officials & Contractors**  
Hoffman Estates, Illinois Tuesday, August 9  
Grand Rapids, Michigan Tuesday, August 22  
Louisville, Kentucky Wednesday, September 13  
Portsmouth, New Hampshire Wednesday, September 27

**High Wind Workshops for Architects & Engineers**  
Riverhead, New York Wednesday, October 4  
New London, Connecticut Thursday, October 5

**Workshops for Builders & Contractors**  
Columbus, Ohio Tuesday, October 3

**SOUTHEAST**

**Builders, Contractors, and Developers**  
McKinney, Texas Wednesday, August 30  
Jacksonville, Florida Friday, September 29

**Introduction to High Wind Design & Construction**  
Jacksonville, Florida Wednesday, October 18

**Designing for High Wind Construction**  
Jacksonville, Florida Wednesday, October 19

**Introduction to Simpson Anchor Systems**  
Jacksonville, Florida Wednesday, September 13

**Effective Selling with Simpson Anchor Systems**  
Jacksonville, Florida Thursday, September 14

**SOUTHEAST (continued)**

**Introduction to Quik Drive**  
McKinney, Texas Tuesday, August 29

**Designing for Multi-Story Wood Frame Construction**  
Jacksonville, Florida Thursday, September 28

**NORTHWEST**

**General Connector Technology – for All Audiences**  
Salt Lake City, Utah Wednesday, October 11

**Building Officials & Inspectors**  
Stockton, California Wednesday, September 13

**Engineers, Architects & Specifiers**  
Stockton, California Wednesday, October 4

**SOUTHWEST**

**Design Professionals**  
Brea, California Thursday, October 5

**Contractors, Builders & Developers**  
Brea, California Thursday, September 14

**Introduction to Simpson Anchor Systems**  
Brea, California Thursday, September 21

**2006 Connector Workshop**  
Santa Barbara, California Thursday, August 10

*For more information regarding workshop content and for a complete schedule, visit the Workshops and Training section of our website at [www.strongtie.com/workshops](http://www.strongtie.com/workshops).*

**NEWS UPDATE**

**CAL POLY AND SIMPSON STRONG-TIE CELEBRATE GROUNDBREAKING OF THE CENTER FOR CONSTRUCTION EXCELLENCE**

Cal Poly's College of Architecture and Environmental Design in San Luis Obispo, California will have a new home to help prepare future design professionals and construction managers. The Center for Construction Excellence broke ground in May with the help of several contributors. Simpson, a long-time supporter of the college and its curriculum, donated \$500,000 to fund the center's two-story demonstration laboratory.



The Simpson Strong-Tie Materials Demonstration Lab will help support hands-on learning and provide interdisciplinary training by focusing on the entire building process from planning and design to engineering and construction. "We believe the new lab will add a 'real-world' element to the curriculum, which will give students an advantage as they enter the job market," said Dave Bastian, branch manager for Simpson Strong-Tie's Brea, California, facility.

"Our partnership with Simpson Strong-Tie over the years has paid real dividends to students in the department and the college – the commitment to build this unique lab is just the latest chapter in our ongoing partnership," said Al Hauck, Cal Poly's Construction Management Department Head.

The demonstration lab is just one part of Cal Poly's new state-of-the-art facility. The 58,000 square foot building will also house lecture space, additional labs, classrooms and offices. Completion of Cal Poly's Center for Construction Excellence is expected summer 2008. For more information about the project, visit [www.caed.calpoly.edu](http://www.caed.calpoly.edu). ■

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## 50TH ANNIVERSARY UPDATE

### STRONG ROOTS AND NEW CONNECTIONS



*As we celebrate our 50th anniversary, we would like to recognize some of the customers who continue to contribute to our business and the building industry.*

When Simpson Strong-Tie customer Randy Parker, P.E., graduated from college 27 years ago, building homes was a different trade. “Homes were built a lot differently back then,” Parker remembers. “Today there is so much open space for people to enjoy inside their homes. People also expect more from the building materials they use and continue to look for new possibilities in home construction.”

Parker’s nearly 30-year career has ranged from residential construction to railroads and aerospace. “The key is to not over-design and become complacent. The pride I have in my work comes from simply creating an end-product that looks great and meets codes, all at the most reasonable cost.”

Like others in his field, Parker is drawn to civil engineering because he can enjoy an element of creativity while making a contribution to the industry. And as such, he appreciates product lines that allow for more efficient construction and aesthetic consistency throughout the home. “Simpson has established itself as a solid company with innovative products and great technical support.

The future is continuing to improve the quality of work, so that we can keep people safe.”

Safety is important to Parker who calls Wichita, Kansas, home. “A beautiful, clear day with 30-mph winds is nothing unusual for Kansas,” explains Parker. High winds and the risk of uplift keep him challenged as an engineer. “That’s where Simpson comes in. Connecting timber with steel allows for the transfer of load, and as a result, homes become safer. Hurricane Katrina reinforced the importance of these connections, and continuing to find new engineering and product solutions. When the worst happens, Simpson products help homes withstand the damage of a storm and make for easier repairs afterward.”

Last year’s hurricane season inevitably will bring change to the building industry, but according to Parker, some things will never change. “Wood is a renewable resource and steel is recyclable,” he says, “therefore, building with timber and connecting it with steel will continue to be the best method of home building for the next fifty years.” ■



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## STRUCTURALREPORT

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