Structural Building Components

The Future of Framing

August 2011

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Lumber’s Perfect Storm
...and much more!
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You bring buildable framing solutions to your customers and to the homes they build. MiTek brings the tools to help you do it with even more precision and speed. Together, we deliver Buildability™. And with our new SAPPHIRE™ software suite, we're making sure it's even easier to build it into your customers' projects from the very beginning.

Whether your customers are lumber yards or builders, SAPPHIRE™ offers you tools to collaborate electronically and to help them design, estimate and build accurately and more cost effectively — all by leveraging YOUR expertise and YOUR 3-D models.

Talk to your local MiTek manager about how you can put Buildability to work for your business — for greater accuracy, greater efficiency and ultimately, stronger value-added partnerships.

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Portal is a cloud-based communication hub used to better integrate design, sales and production information.
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SAPPHIRE™ MXF Plug-in
For use with 3-D CAD software, the MiTek Exchange File format creates a 3-D file that can be imported into SAPPHIRE™ Structure with true dimensional fidelity.
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The mission of Structural Building Components Magazine (SBC) is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing structural building components. Further, SBC strives to ensure growth, continuity and increased professionalism in our industry, and to be the information conduit by staying abreast of leading-edge issues.

SBC’s editorial focus is geared toward the entire structural building component industry, which includes the membership of the Structural Building Components Association (SBCA). The opinions expressed in SBC are those of the authors and those quoted, and are not necessarily the opinions of Truss Publications or SBCA.

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Can you set up and build these 7 trusses, in twenty-three minutes, on your existing equipment?

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With WizardPDS® drop-in Channels™
Achieve full automation, zero set up time, and save money by retrofitting your existing truss fabrication equipment. WizardPDS® drop-in Channels™ will retrofit with virtually any truss assembly table; new, used or existing!

Old technology turned state-of-the-art with WizardPDS® drop-in Channels™

Save green. Retrofit. Think Green.

Editor’s Message
Cycle Time for Success

by Joe Hikel

In our business, it’s important to focus on what we actually do. Some think that we take field operations and move them to the more controlled environment of a plant. But we know it’s much more than that. I contend that component manufacturers (CMs) have to approach the entire process of making components as true manufacturers, with the customer’s top priority driving every step along the way.

Component manufacturing has improved incrementally with the advancement of automated equipment over the years. These advancements transformed businesses from long-run production shops to one-off custom job shops. This evolution requires CMs to concentrate on different priorities in the plant.

In the past, long production runs focused on reducing setup through batching, mainly because cutting and assembly setups took so long. Times certainly have changed. Equipment manufacturers decreased setup time with the adoption of computer numeric controlling (CNC) of component saws, linear saws, laser projection systems and automated jigging. These are great tools, but CMs only see the benefits if the plant’s focus shifts to match customers’ demands.

In my opinion, the new driver is cycle time, the amount of time required to process a production order from start to finish. Think about it, how many times does a field measurement or last-minute design change impact the ability to get components to customers when they need them? The key to compressing cycle time is changing the way work flows through the plant. The entire process is built around meeting the customer’s top priority. Since that need is ever changing, effective communication is essential. We have dedicated full-time customer service staff that communicates with customers every day to get an accurate read as to when they will need their product. Once you know the real need, you can look at the plant and find out how long it takes to get an order through and think about ways to compress that schedule. It’s a time to examine paradigms such as batch size and, in particular, how material flows through the plant.

Work-in-process inventory is the enemy of reduced cycle time. This adversary includes pulled lumber before cutting, cut lumber before assembly, and manufactured inventory before delivery. For example, a customer orders two of the same houses with a delivery of five days apart. The old paradigm would suggest that the CM manufacture both houses at the same time to save on setup cost. The new paradigm proposes that the houses be built separately right before they are delivered, meeting customer needs with a “just in time” mentality as efficiently as possible.

Another important factor in compressing cycle time lies in plant layout. In some plants, chords are cut on one saw and webs are cut on another, sometimes in separate buildings far away from where the trusses are assembled. The distance the material travels along with the varying speeds at which the two saws cut can lengthen the entire process. Sorting parts to different locations consumes time as well.

In our plant, we chose to use the concept of rapid material movement to attack cycle time. Each production line has its own saw that cuts both chords and webs. When the order completes cutting, all the parts are together and ready for assembly.
in one spot. The saws are very close to where assembly occurs, minimizing the distance the materials travel. The material moves in a straight line through the process.

Automated equipment focused on reducing setup won’t show the expected return on investment if the lumber doesn’t get to the right place at the right time. What good does it do to have a saw that will set up in seconds on a jig that changes quickly with automation if the proper parts are not there at the right time? Go out and watch your production and see how many times the saws are not cutting because the proper material hasn’t arrived yet or assembly stations are not producing because the cut parts and plates are not there.

Last but not least, in order to be more responsive to customers, we have to develop a culture that embraces the opportunity to perform:

• If a CM is used to telling customers that the lead time is two weeks, how does that team respond to an opportunity that requires a quicker turnaround?

• When an urgent request comes in, is it viewed as a pain-in-the-neck rush job?

• Is the salesperson looked down upon because he or she created an rush job?

We will talk about this subject in further detail at the lean manufacturing panel discussion at BCMC. I hope to see you there and hear your ideas.

SBC Magazine encourages the participation of its readers in developing content for future issues. Do you have an article idea for a future issue or a topic that you would like to see covered? Email your thoughts and ideas to editor@sbcmag.info.

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Editor’s Message

Continued from page 7

Here are my predictions:

1. Buyers will purchase homes to “live in” rather than to sell later for profit.

2. Successful fabricators will be involved in the design development stage.

3. Roof systems will be used as rainwater and daylight harvesting collectors as well as a renewably energy system supports.

4. Truss systems will be “open” to accommodate high-tech mechanical, plumbing, and lighting equipment (raised-heel, 2x6 chords and very few webs, long runs of RAL platforms, etc.).

5. Energy ratings on homes will become the norm, much like the mile sticker on a car.

6. The “Conventional Construction” code compliance path will become obsolete (it’s losing anyway).

7. Financing will consider the value of sophisticated front-loaded design work, which can significantly reduce construction costs, rather than just appraise homes at a dollar-per-square-foot number.

8. Operating costs, such as energy and water costs that can be greatly reduced through plan design, will be part of the loan origination process, along with taxes and insurance.

9. Buyers will purchase homes to “live in” rather than to sell later for profit.

10. Owners will be provided a Building Information Modeling (BIM) style of meticulously detailed drawings to accommodate forward planning and remodeling. Components will allow for flexible partition modifications and interior remodeling as needs change forward three years, add about six more titles to my resume and tour Platinum and seven Gold Certified LEED homes (all 11 built without FSC certified wood)—this is where I’m coming from now.

Here are my predictions:

1. Home will get smaller with convertible and less traditional floor plans and elevations.

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The terms “plywood” and “OSB” are often used interchangeably, but it’s important to know the difference when making a truss repair.

The building codes prohibit the cutting, notching, drilling, or otherwise altering of truss members without written approval from a registered design professional. When specifying the material in a repair detail, the Building Designer or Truss Designer has a number of options including plywood or oriented strand board (OSB) gussets, metal nail-on plates, lumber scabs or repair frames. The following question examines two commonly-used products.

**Question**

Which is better to use for truss repairs, plywood or OSB?

**Answer**

Plywood and OSB are two types of wood structural panel products commonly specified and used to repair damaged joints in metal plate connected wood trusses. There are several factors to consider before deciding which product to use.

First, everyone involved in the repair process needs to understand the differences between the two products. The 2009 International Building Code® (IBC) defines plywood as: A wood structural panel comprised of layers of wood veneer arranged in cross-aligned layers. The plies are bonded with waterproof adhesive that cures on application of heat and pressure.

Similarly, the IBC defines OSB as: Oriented strand board (OSB). A mat-formed wood structural panel comprised of cross-aligned layers with surface layers normally arranged in the long panel direction and bonded with waterproof adhesive.

It’s not uncommon to hear people refer to a wood structural panel as “plywood,” but after further discussion it’s clear they’re actually talking about OSB. Make sure there is a clear understanding of the product and its actual properties.

Another design capacity to consider is dowel bearing strength, which determines the allowable lateral resistance provided by the nails, screws or bolts that attach the wood structural panel to the truss. Table 11.3.2B of the National Design Specification® for Wood Construction (NDS®) lists the dowel bearing strengths for various wood structural panels (see Table 3). All grades of OSB Structural 1 and Marine plywood are assigned the same dowel bearing strength, whereas all “other grades” of plywood have a lower dowel bearing strength. Since the majority of plywood used for construction applications in the U.S. is NOT Structural 1 or Marine, lower lateral resistance values (i.e., more fasteners) typically must be used for a repair using plywood than for one using OSB.

The building codes allow documentation and load information for wood structural panels used in typical roof, floor and wall sheathing applications. For truss repairs, specific design capacities, such as allowable tensile strength and shear contributions, are required. Design capacities for various panel grades and span ratings are qualified with panel testing and grading agencies (e.g., APA–The Engineered Wood Association, TECO). These tables show there are generally only slight differences between the design capacities for structural plywood and OSB for a given span rating. An exception, however, occurs with shear-through-the-thickness capacities, where OSB provides considerably higher values. Based on this difference, if a truss repair specifies only OSB, plywood should not be substituted without written permission from the registered design professional who prepared the truss design repair drawing.

To pose a question for this column, call the SBCA technical department at 608/274-4849 or email technical@sbcmag.info.
room. Galaxy. Slate. Iconia. iPad. Unless you're a technology enthusiast, it likely wouldn't recognize the products these names refer to (except for perhaps the last one). They are all the latest and greatest tablet computers produced by the computing industry, and they offer a very simple, yet seductive advantage to the business community: mobility. For you, mobility translates into easier sales, quicker response times, more effective repairs, better marketing, streamlined manufacturing processes and, most importantly, more efficient communication and collaboration.

This emerging technology holds a great deal of promise, and while the tablets can't beam you from one place to another (yet), their capabilities would make Captain Kirk and his Enterprise crew hang their heads in shame. Let's take a look at how these lightweight devices are helping your peers do business easier, faster and with style.

Making the Sale

With the housing market the way it is, everyone is in sales. With a tablet computer in hand, you and your sales team can take them on the road to show photos of recent or relevant projects accomplished in the past, showcase how you approach their building design and framing plans, and even review truss design drawings. “With my tablet in hand, I never feel unprepared during framing plans, and even review truss design drawings. Showcase how you approach their building design and have everything I need with me at my fingertips.” At a sales representative for Simpson Strong-Tie. “I always need to be prepared to answer questions. That’s why many office users are taking their tablet computers to meetings instead of a huge binder of brochures that quickly could get out of date. The tablet computer can also be indispensable to your sales force in between meetings. The calendar function on the tablet makes it easy to keep track of contacts and appointments and instantly map travel routes in between meetings. As you expand the geography of your sales market, your sales personnel are likely going to be traveling to new and strange locations. Having access to the cellular 3G network ensures they can locate where they are and where they need to go.

Finally, the tablet allows the whole sales process to be paperless. No more scraps of paper with notes, names and figures jotted down only to be lost on the truck bed floor on the way back to the office. Most tablet computers have powerful note taking software that allows you to write directly on the screen with a stylus, which you can then immediately email to yourself and the home office. Orders can begin to be processed within minutes after a meeting concludes!

“Connectivity is the key,” shared Barry Dixon, CEO of TrueHouse. “Now your office can go anywhere. Your truck is your office. Your home is your office.”

Improving the Jobsite Visit

The tablet computer can be a very powerful tool at the jobsite as well. Need to look at a bracing detail? You can pull up the BCSI reference you need. Wondering about the placement of a fastener? You can pull up the building documents, and zoom in on the area you are working on. You can even pull up the CAD drawings, render them in 3D and rotate around a complicated connection to see it from all angles. You can’t do that with paper blueprints!

“It’s also very helpful for us with our building information modeling process,” explained Mike Kozlowski, President of Apex Technology. “We can walk through the jobsite with a complete set of construction documents on the tablet and note the type and location of every piece of hardware and note it immediately in the software. It has significantly increased the efficiency of our audits and helps ensure the optimizations in the plans are being followed.”

Again, the note- and photo-taking features of the tablet allow anyone to walk around your jobsite, take notes and pictures, and immediately email them to those who need it, whether it’s the truss technicians, the sales team, or management. With that kind of connectivity to the home office, complicated framing issues can be answered in a matter of minutes, possibly saving crucial hours or days of delay.

Take truss repairs, for example. “The ideal scenario is one where the damage is noted before the building inspector shows up,” said Dixon. “You can take a picture of the break, email it to the truss designer; he can consult the drawings, devise a fix and email it back to you.” The framers can then do the repair right then and there, avoiding costly delays associated with a failed inspection. Having this electronic record also allows management to track trends in truss repairs for quality control purposes. Your drivers can also use a tablet computer with great effect. They can photograph and immediately catalog damage to components during transport and delivery, register deliveries and make notes on everything from construction to jobsite conditions. This information can then be reported immediately to management, and allow for real-time tracking of shipments and related issues.

Maximizing Your Meetings

The handwriting recognition software on the tablet computers today is one reason why many office users are taking their tablet computers to meetings instead of a traditional notebook. The ability to immediately email those notes, and keep electronic to-do lists that can be constantly updated, is a good reason to move beyond pen and paper.

The tablet computer can also increase the productivity of meetings in taking collaboration to the next level. “iPad has a white board application,” said Kozlowski. “We can have designers in our office drawing ideas out, and our designer in Ecuador can “Connectivity is the key,” shared Barry Dixon, CEO of TrueHouse. “Now your office can go anywhere. Your truck is your office. Your home is your office.”

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Tablets
Continued from pg 13
follow right along with them, adding his own changes to the drawings in real time.” Adobe’s Acrobat software has powerful mark-up capabilities while sharing pdf files, too.

Having a tablet can also make file sharing a breeze, and can even facilitate an impromptu PowerPoint presentation. Granted, the screen size limits the number of people who can crowd around to view it, but most tablets can connect easily to a projector in case the audience is large.

Having the tablet on hand can also make the time in between meetings more productive. On a plane, space is at a premium, so the smaller size of the tablet computer is ideal for cramped spaces. The extended battery life of most tablets (they average around 10 hours), their ability to immediately turn on and off without long boot times, and, again, their Internet connectivity through 3G cellular service, make them ideal for travel.

“I take it everywhere I go,” shared Jerry Vulgaris, President of Smart Components. “If I have a little downtime between meetings or while waiting for a plane, it’s much easier to keep up with email because you can see the whole picture and view attachments, as opposed to being limited to text on your smart phone.”

Monitoring Manufacturing
While tablet computers are not new technology in the realm of manufacturing, the touch-screen user interfaces of tablet computers open the door for various business analytic software solutions to help manufacturers capture and address quality control issues at the point of failure.

Some manufacturing companies have a tablet computer with every forklift. The cameras on the tablets allow for scanning bar codes to do real-time tracking of material throughput and inventory levels. Knowing what your company’s machines and labor are doing at all times, combined with emails or text alerts that are sent when problems arise, means less downtime, more accountability and the ability to be proactive instead of reactive, making for more efficient management of resources.

Not only that, having a tablet computer allows managers to leave the confines of their office and still track these things, whether they are on the road, at a sales meeting (or an SBCA function).

Marketing 2.0
One inventive way to use the tablet computer is in the area of marketing. “We are working with our builder clients and encouraging them to put all their collateral advertising materials online,” explained Dixon. Traditionally, builders have relied on third-party marketing firms to create their brochures and print them, but every time they made a change to the plans because it wasn’t selling well, they’d have to throw all the old brochures out. What a waste.

If they stick with electronic brochures, any change they make to the building plans can quickly be reflected in their marketing. Imagine all their potential homebuyer clients walking around with the blueprints of their new home on their iPhones.

Dixon added, “At this point, everyone becomes a tool of sale for a house. The framer can use a software application on a tablet computer to render the building plans in 3D, so they can walk someone through the house long before construction is completed.”

It certainly gives you a glimpse of the future.

Capitalizing on Communication
Again, mobility is the key advantage with tablet computers.

“You Are The Experts
When it comes to real world structural framing solutions, you know what works. You provide buildable framing solutions to your customers and the projects they build. You bring Buildability to the project by supplying components that work, components that come together in the most accurate and efficient way possible for you and for the builder. Increase Throughput and Quality with Vitrek Technology. Better Building Solutions for you and your customer.

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• Identify mis-cut and improperly selected materials instantly to reduce rework and waste
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TrussView enables you to:
• Can be used with or without laser projection systems and/or Matchpoint PLANX™ Automated Jigging Systems
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• Eliminates paper controls
• Can remotely operate lasers and PLANX reducing jigging errors.
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Tablets • Continued from page 14

“The 3G cellular connection allows you to have access to email and files on your server virtually everywhere,” said Vulgaris. “The funny thing is I use my Android phone as a Wi-Fi device to provide the Internet connection for my Apple iPad, all while pulling up Microsoft files from my HP servers back at the office. It’s amazing how all the technology works together.”

While tablet computers are not currently designed to replace phones, Kozlowski and his team have found a useful workaround. “We have a design lead in another state who makes calls through another state who makes calls through the tablet computer doesn’t need to be there. “We have a design lead in another state who makes calls through the tablet computer doesn’t need to be there. With increased use of “cloud-based” technology, which is virtually accessed from anyplace you can get a server-based connection, the tablet computer can go everywhere you go, give you access to every file you need, and allow you to communicate in a variety of ways to address challenges as they arise no matter where you happen to be at the moment. High quality of service, delivered in a timely manner, is a key way to differentiate yourself and thrive in this competitive marketplace. Tablet computing can be a pivotal tool to get you to have access to email and files on your server virtually everywhere,” said Vulgaris. “The funny thing is I use my Android phone as a Wi-Fi device to provide the Internet connection for my Apple iPad, all while pulling up Microsoft files from my HP servers back at the office. It’s amazing how all the technology works together.”

While tablet computers are not currently designed to replace phones, Kozlowski and his team have found a useful workaround. “We have a design lead in another state who makes calls through the tablet computer doesn’t need to be there. With increased use of “cloud-based” servers (the act of storing your files on a server based at an offsite location) and using remote desktop capabilities, the tablet computer doesn’t need to store a single file. Any document can be accessed from anywhere you can get cell phone coverage, which is virtually everywhere in this country.

“My tablet computer is the epitome of connectivity,” said Kozlowski. “Smart phones have similar features, but are such a distant second due to size and portability.”

Conclusion

Depending on your feelings about technology, the new tablet computers are either sleek and sexy, or downright frightening. But it’s hard to argue against their versatility and potential to transform the way in which business is done in this industry.

“At first, I just got my tablet for fun,” laughed Vulgaris. “But as I got to use it, I realized how many business applications were being created every day. This is a powerful tool.”

“I’m hooked,” echoed Dixon. “About 75 percent of my computer time is now spent on my tablet.” The tablet computer can go everywhere you go, give you access to every file you need, and allow you to communicate in a variety of ways to address challenges as they arise no matter where you happen to be at the moment. High quality of service, delivered in a timely manner, is a key way to differentiate yourself and thrive in this competitive marketplace. Tablet computing can be a pivotal tool to get you there. SBC

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Keeping Members on Their Toes

This year’s BCMC Build project will build not one but two single-family homes with help from partners Habitat for Humanity and El Lilly. Just one block apart, the two-story Taft home and the one-story Harrison home (see graphics at right) will be framed by BCMC Build volunteers within a two-day timeframe, showcasing the benefits of component construction.

“Signing up to do two houses allows more people to participate. But it will also take a tremendous amount of planning and organization,” said Steve Shroder, BCMC Build Co-Chair and Vice President Manufacturing Design for ProBuild. “I think it’ll be good for the show and good for the industry.”

In addition to expanding the scope to two houses, BCMC Build is also launching new events to help raise money for the project. Members can burn rubber on the race course and have some friendly competition while supporting the industry’s efforts to give back to the Indianapolis community.

• BCMC Build 5K Run/Walk: After BCMC Build, attendees will put on their running shoes for this run/walk along Indianapolis’ historic White River canal.
• BCMC Tri-tacular: Teams will compete in a tricycle relay race held on the show floor.
• BCMC Poker Run: Participants will visit exhibitor booths to trade in tickets for playing cards and turn in their hand at the BCMC Build booth. The player with the best hand wins!

To learn more about these events, visit bcmchome.com. Details about the floor plans, recipient families, and in-kind and monetary donation needs are available at bcmcbuild.com/about.php.

Economic Forecast:
Mark Vitasce, senior economist at Wells Fargo

For reader service, go to www.sbcmag.info/bcmc.htm

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Lumber’s Perfect Storm

Remember back, if you can, to the last time this country’s housing market’s sluggishness resembled what we’re experiencing today. From 1988-1992, the U.S. experienced an economic recession. It wasn’t nearly as profound or protracted as our current situation, but nonetheless many of you probably remember (or have been told) how bad the housing market was. Housing starts experienced a 46 percent drop over that timespan. When housing recovered swiftly from 1992 through 1994, lumber prices skyrocketed.

In large part, the imbalance between available supply and the sudden large demand was due to curtailed production during the recession. It took time for many of the mothballed mills to be brought back online. However, there was another factor at play: the spotted owl. In 1990, the U.S. Fish and Wildlife Service placed the Northern Spotted Owl under the protection of the Endangered Species Act, and in 1992 put 6.9 million acres of prime softwood forests in the Pacific Northwest on the do-not-cut list, just as the demand for that lumber was being realized.

Most lumber analysts currently predict a similar “perfect storm” imbalance between the global supply of softwood lumber and demand to strike sometime between 2013-2015. To boil down why they predict this, and to understand how tenuous this prediction is, we have to look at three key factors: recent changes in the forestry landscape in North America, rising demand of China and other offshore markets, and U.S. housing starts.

Changes in the Playing Field
The timber harvesting and processing industry in North America has changed dramatically over the past decade, which plays a significant role in setting the stage for the next lumber shortage crisis. In the past, most timberlands were owned by integrated forest products companies (think Weyerhaeuser), which not only owned and grew timberlands, they harvested those lands to feed their own mills, and somehow even managed to build material distribution facilities to drive demand for their product.

Over time, those integrated companies have sold their North American land holdings to a number of new timberland companies, especially timberland management organizations (TIMOs). Dennis Neilson, Director of the international forest industry advisory and publishing firm, DANA Limited, says, “These new timberland owners are chasing log exports to China and other Asian countries and, in many cases, ignoring the needs of domestic mills and their ability to pay on the spot market.”

In other words, without the need to feed their own production infrastructure, these TIMOs are free to export as much product as they want, if the price is right. Neilson added, “China’s mills are able to pay much more for logs currently than U.S. mills due to a number of factors. They are more flexible in the species, grades and sizes of lumber they output, and they are offering just-in-time deliveries with high prices in China.”

Drop Off in Supply
According to international lumber forecaster Wood Markets’ annual report Billion Board Foot Club, for the past three years only 11 companies reported producing over 1 billion board feet (bbf) of lumber. By way of comparison, at the height in 2006, twice as many (22) companies exceeded that amount of production. Of those 11 companies, five are based in Canada; four are in the U.S., one in Europe, and one in South America. There are signs of life, however. Together, they accounted for 23.3 bbf in 2010, a net increase of 2.5 bbf over 2009. Those 11 companies recorded an average increase of 12 percent over the past year.

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The bigger problem with the beetle kill is yet to be felt, however. Gerry Van Leeuen, Vice President of Wood Markets, explained, “By 2015-2016, all of the unharvested trees killed by the pine beetle will be unusable. B.C. alone will lose approximately 40 percent of its interior timber supply for lumber production.” In the end, they will only be able to harvest approximately 40 percent of the timber killed by the beetle. Van Leeuen added, “that decrease in supply will mirror the effect the spotted owl caused to timber supply in the U.S. Pacific Northwest in 1992.”

China’s Voracious Appetite
Given Canada’s predicament of overharvesting to combat the beetle infestation while North American demand is at an all-time low, coupled with the fact that a portion of that lumber is unusable for many traditional uses, the meteoric rise in China’s demand for wood fiber could not have come at a better time. It’s also been quite a boon for U.S. timber producers, as you can see in Chart 2.

If China’s economic growth continues on its steady track, and the government remains committed to fulfilling its pledge to build 35 million low-income homes over the next five years, in addition to the 25-35 million regular private residences, and other global markets show moderate increases in their construction rates as well, demand for softwood lumber will likely outstrip the available supply very quickly. As mentioned previously, supply will be severely constrained in British Columbia due to losses of salvageable timber from the beetle kill, and most of Canada will likely see a decrease in lumber production as provincial governments look to reduce stumpage and return harvest levels to 100-year sustainable levels.
OSHA Has New Residential Fall Protection Rules!

What kind of energy bill might an owner receive the first year in a LEED Platinum home? Try a $50 surplus! Originally featured in the May 2010 issue of SBC, this Habitat for Humanity home in Sacramento, CA, includes raised heel trusses that accommodate a tankless water heater and fresh air ducting. Notably, the home achieved LEED Platinum status without using any FSC certified wood. Building designer and engineer of record Norm Scheel (Norm Scheel Structural Engineering), who also served as the project “energy consultant” and LEED Accredited Professional, reports that, “the electric bill for the [first] year is a $50 credit. No cost to the owner for electricity for the year. She could have used $50 more. Pretty cool, huh?”

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Inadequately braced and sheathed truss systems used associated with falls. A falling worker attached to an inadequately braced and sheathed truss system could cause all the trusses in the system to collapse in a domino effect.

Stresses trusses are not designed to serve as fall protection anchorage

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References OSHA requirements regarding fall protection equipment
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The good news is that bringing the residential construction industry together with better software is just the start – defining new smarter ways of working together is the natural next step. The best news... *the system is available today!* See Instinct for yourself at BCMC in Indianapolis!

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