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May 2006

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34 Tricky Design Job Showcases Pioneer Truss Company's Creativity

by Emily Patterson Discover how one component manufacturer got creative in order to conquer an ethnic mausoleum's unprecedented design challenge.





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50 Automation Straight Talk: Where to Start by Jerry Koskovich, P.E. Read about the conversation that planted the seeds for the automated component saw and just how much time it can shave off set-ups.

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WCMA, BMC West Host Tour for Fire Service Leadership

by Libby Maurer

The fire service took an educational tour of one component manufacturer's facility to find out how trusses are designed and manufactured.



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# SBC Advertisers invest in the growth of the structural building components industry!



Component design technology has advanced by leaps and bounds over the last few decades!

uring the more than 20 years that I've been in the industry, I've certainly seen many design and engineering advancements. Looking back on two decades of innovations in truss design, you can mark numerous milestones in the structural building components industry. But in order to make the most of every advancement, we still need to rely on good old-fashioned component design skills. Coupled with design expertise, technology will take the industry to the next level.

After coming out of the shop, one of my first jobs as a truss technician in the mid-'80s was working on the Sun computer, some of the leading technology at the time from Gang-Nail. Back then if the design called for something other than a standard truss, technicians had to input-line by line-the lengths, bearing locations and any concentrated loads on a truss. In fact, they also had to have the knowledge to manually load any girders in the truss system. It may sound like a tedious process today, but that technology was a breakthrough then, considering we still had to draw the original layouts by hand before entering the data into the computer.

Computer design technology has certainly advanced by leaps and bounds since then. While the technician's job will always be one of the most difficult and stressful in the industry, software advancements have helped minimize some of those challenges. The advent of the two-dimensional layout function in design software revolutionized the design process. Gone are the days of inputting jobs line by line. Today's software automatically figures the application and the flow of loads, allows the technician to put in wall planes and specify hangers, and offers many other streamlining techniques. Technology has given designers the tremendous advantage of being able to optimize webs on a job, creating an efficient, cost-effective design, not to mention fewer lines to type in manually.

Such technological and engineering advancements have added a greater level of speed, efficiency and accuracy to the design process, along with the ability to better meet customers' needs for design flexibility. With this progress, jobs have become more and more complex, and "standard" truss designs have nearly fallen by the wayside. Along with the ability to design more complex roof systems, technology gives us the capability to take designs to the next level and spec in a wide range of products from wall panels to steel trusses. Plus, with the emergence of whole house design, we are on the verge of being able to design the entire structure-from the peak of the roof down to the footers.

In the midst of so many advancements, it's important for component manufacturers not to lose the expertise that came with the hands-on designing of years past. When we designed components by hand, technicians had to understand everything about how the loads were distributed onto a truss. Technicians not only had to understand load application, they had to know how to calculate the distribution of loads by hand. Today's software automatically applies the loads. Likewise, technology has made truss optimization much easier for technicians. In the past, it worked to a technician's advantage to truly understand how to optimize a truss because it meant not having to input so many lines of computer design code. Now, Continued on page 8

#### at a glance

- Back in the '80s, truss technicians had to input the lengths, bearing locations and any concentrated loads on a truss other than a standard truss.
- □ Today's truss design software helps streamline truss technicians' work, but fundamental design, engineering and building code concepts are still important.
- Design technology gives us the capability to take designs to the next level and spec in a wide range of products from wall panels to steel trusses.
- The time has come to embrace all structural building component materials.

# Technology & Old-fashioned Design Skills: The Perfect Combination for Success

#### by Don Groom

#### Editor's Message Continued from page 7

the process is so automated that the software webs a truss in the desired fashion, and adding webs can be accomplished with the click of a button. This process is so user-friendly that it's often easy to create a truss that is over-designed and more costly than it needs to be.

As component manufacturers, we have to ensure that our technicians understand and can perform good old-fashioned number crunching. That's one reason why I'm so passionate and supportive of WTCA's Truss Technician Training (TTT). TTT provides a solid foundation of the design, engineering and building code fundamentals that virtually anyone working in a technical job in our industry can benefit from. While today's technicians don't have to sit down and draw layouts by hand, they need to understand what they're inputting in design software. They may not have to write out and solve every calculation on paper, but they need the training to understand and recognize if a calculation or specification is off or if there's a glitch in the system. Technicians also need to understand how to optimize a truss to create the best and most efficient design for the customer. As an industry, our challenge is to train technicians so they know the ins and outs of truss design and can identify if a job is over-designed or underdesigned, whether certain webs are needed, or if it's loaded correctly. Today's software is amazing and surely will continue to make our jobs easier, but it's important that we take responsibility and truly understand how the truss design process works.

These design and engineering advancements have done much more than help individual component manufacturers' technical departments become more efficient; these advancements have transformed the entire industry on a global scale and taken it into the next level of sophistication. Looking at all the design and engineering advancements that have helped bring this industry to where it is today illustrates how much the structural building components industry has changed over the years. The capabilities that software gives us to input a wide range of products—from wall panels to I-Joists to steel trusses—affects more than the designs we create for our customers. This expanded offering of products changes the very face of the industry itself as our customers demand us to design with all types of components.

The time has come to embrace all structural building component materials because the most economic structural framing solution will prevail in the marketplace. We have asked our association to be a leader in providing support to all component manufacturers as the market evolves and more and varied structural building component solutions become commonplace. Our association's recent name change to "WTCA – Representing the Structural Building Components Industry" reflects the industry's marketplace evolution. The name change doesn't simply include the components available today but also the products and design and engineering advancements that are sure to develop down the road 20 and even 30 years from now. SBC

**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.



Publisher Truss Publications, Inc. 6300 Enterprise Lane • Suite 200 • Madison, WI 53719 Phone: 608/310-6706 • Fax: 608/271-7006 trusspubs@sbcmag.info • www.sbcmag.info

Editor Donald Groom Stark Truss Company, Inc. • dgroom@sbcmag.info

Art Director Melinda Caldwell 608/310-6729 • mcaldwell@sbcmag.info

Managing Editor & Circulation Director Libby Maurer 608/310-6724 • Imaurer@sbcmag.info

Editorial Assistant & Staff Writer Emmy Thorson-Hanson 608/310-6702 • ethorson-hanson@sbcmaq.info

Advertising Manager & Editorial Review Suzi Grundahl 608/310-6710 • sgrundahl@sbcmag.info

Advertising Sales & Marketing Peggy Pichette 608/310-6723 • ppichette@sbcmag.info Jan Pauli

608/310-6746 • jpauli@sbcmag.info

Kirk Grundahl 608/274-2345 • kgrundahl@sbcmag.info

Staff Writers for April Molly E. Butz • Emily Patterson • Marisa Peters Sean D. Shields • Anna L. Stamm Stephanie Watrud • Jim Vogt

Accountant Mike Younglove 608/310-6714 • myounglove@sbcmag.info

Computer Systems Administrator Jay Edgar 608/310-6712 • jedgar@sbcmag.info

Send all ad materials, insertion orders, contracts & payments to: Truss Publications, Inc. 6300 Enterprise Lane • Suite 200 Madison, WI 53719 Phone: 608/310-6706 • Fax: 608/271-7006 trusspubs@sbcmaq.info • www.sbcmaq.info

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 WTCA – Representing the Structural Building Components Industry. The opinions expressed in *SBC* are those of the authors and those quoted, and are not necessarily the opinions of Truss Publications or WTCA.

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# Publisher's Message

**Design & Engineering:** The Pulse of the Industry

"The greatest challenge to any thinker is stating the problem in a way that will allow a solution." -Bertrand Russell

by Libby Maurer

ne theme is consistent when it comes to design and engineering in this industry: year after year, advances in technology have enabled manufacturers to up the ante on truss design. Increased design capabilities mean more options for customers, and more options mean happier customers. In this issue, we salute the advances in design and engineering that have allowed building components to become the future of framing.

When Chris Lenauer contacted SBC staff in August 2005 with pictures from his company's recent design feat, we couldn't believe our eyes. Always looking for challenging jobs to showcase its design creativity, Pioneer Truss enthusiastically took on a job to design and manufacture trusses for a mausoleum commissioned by the Mid-America Buddhist Association. Though the structure was small, the effort it took to design and build the trusses with ultimate precision was not. In fact, Pioneer assembled a small army of strategists to tackle the project. Turn to page 34 to find out how technology played a major role in the company's success.

In Human Faces, we examine the advantages of building relationships with industry groups. In the case of the Southern Nevada Component Manufacturers Association (a chapter of WTCA), issues surrounding design responsibilities have been effectively worked through thanks to the chapter's relationship with a structural engineering group. It's a perfect example of how every chapter should facilitate the lines of communication with industry professionals and reap the benefits of an open forum debate on critical issues.

In the same vein, this issue's WTCA Update explains what the new edition of BCSI 1-03 will contain. Updates to the booklet's temporary and permanent bracing information contained in sections B2 and B3 are scheduled to undergo significant changes. Don't miss out on this sneak preview of what to expect when the new version of BCSI is released later this year.

at a glance

- □ This issue of *SBC Magazine* is devoted to design and engineering advancements.
- □ The cover story highlights a design challenge that Pioneer Truss couldn't pass up. Though the structure was small, the effort it took to design and build the trusses with ultimate precision for it was not.
- □ In February, BMC West graciously welcomed members of the fire service to its facility in the Portland area. Attendees seemed most impressed with the truss design software and the overall level of professionalism displayed during the tour.

Several months ago, select members of the fire service embarked on a component manufacturing facility plant tour. Headed up by the Western Component Manufacturers Association (a chapter of WTCA), member manufacturer BMC West of the Portland area graciously welcomed the group to its facility. The fire service seemed most impressed with the truss design software and the overall level of professionalism displayed during the tour. When the day was done, relationships had formed and the walls between the two groups were beginning to crumble. While it was agreed that one firefighter death that occurs as a result of building collapse is one too many, it was also agreed that the solution lies in increased training about building structures. We wait enthusiastically for the fire service's call to help with curriculum development. See page 56 for a recap of the tour.

Finally, a few months ago Molly Butz caught up with John Meeks, the "grandfather of bracing." Still conducting forensic engineering work in South Florida, Meeks shows no signs of slowing down as he prepares to celebrate a big birthday. What turned this engineer on to assume the role of bracing crusader for the wood truss industry? Turn to page 44 to find out! SBC















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What happens to the design of a truss when purlins are specified instead of plywood or OSB sheathing?

by WTCA Staff

he on-center spacing for roof trusses determines how a roof system should be braced and installed. Trusses used in residential and commercial roofs are most often spaced at 24 inches on-center (Figure 1) while trusses used in agricultural or post frame buildings are spaced at 48 inches on-center or often greater (Figure 2). Building Component Safety Information (BCSI) section B2 provides temporary bracing and handling guidance for trusses spaced up to 24 inches on-center and section B10 provides for wide on-center trusses used in post frame buildings. The bracing and installation differences depend on how the top chord of the truss will be permanently braced—by roof sheathing or by purlins.



Figure 1. Roof trusses with directly applied roof sheathing like ply- Figure 2. Roof trusses with wood purlins and a metal clad roof. wood or OSB.

#### Question

Answer

Does a truss design change when purlins are used instead of roof sheathing?

#### at a glance

- □ BCSI-B2 provides temporary bracing guidance for trusses spaced up to 24 inches on-center.
- BCSI-B10 offers temporary bracing guidance for wide on-center trusses such as those used in post frame buildings.
- Truss Designers note on Truss Design Drawings that truss top chords must be laterally braced by the roof sheathing to prevent the top chord from buckling.
- U When purlins are specified, check with the Truss Designer to determine the maximum unbraced length of the top chord between purlins to avoid top chord buckling.

Most Building Designers will opt for plywood or OSB roof sheathing for top chords when the on-center spacing of the trusses is close enough to warrant it. Building Designers may use the IBC section 2304.7 on structural roof panels to determine allowable spans and loads and use section 2304.9 to determine fastener sizes and spacing. (Visit **Support Docs** at <u>www.sbcmag.info</u> to view these sections.)

The phrase "structural roof panel" means plywood or OSB sheets are attached directly to the top chord providing continuous lateral support along the length of the chord. Even when fasteners are spaced up to 12 inches on-center as permitted for the interior of panels according to IBC section 2304.9, the support for the top chord is considered continuous. The Truss Designer assumes the support is provided and is sufficient to hold the truss firmly in position so that it will not buckle under load. Truss Design Drawings contain notes stating this is the case. Some examples of notes are "top chord shall have properly attached structural panels," "it is assumed the top chord is laterally braced by the roof sheathing" or "top chord is permanently sheathed."

# Sheathed roof

#### $\ell$ = length of unbraced top chord

When purlins are specified instead of structural panels, there are unbraced sections of top chord between purlins (Figure 3). There are limits to how long these unbraced sections can be, based on the design load and lumber species, size and grade. Some Truss Design Drawings will indicate what the maximum unbraced length (in other words purlin spacing) can be, but this is by no means an attempt to perform roof diaphragm design on the project. The National Frame Builders Association (NFBA) is developing a design procedure for metal clad wood framed roofs that should be able to assist Building Designers in completing roof diaphragm design more effectively. Gary Anderson, an agricultural engineering professor at South Dakota State University, is work-

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Figure 3. Sheathed roofs provide continuous lateral support along the top chord when the length of unbraced top chord is 12 inches or less.

ing on the NFBA design procedure. He will present his initial research findings at the Frame Building Expo, February 28 -March 2, 2007, in Indianapolis, IN.

If the Building Designer will be designing a purlin and metal clad roof system, they should be prepared to provide the Truss Manufacturer with specific information on the purlin spacing and coordinate the final truss design with the Truss Manufacturer to ensure the maximum unbraced lengths for top chords are not being exceeded by the purlin design. SBC

To pose a question for this column, call the WTCA technical department at 608/274-4849 or email technicalga@sbcmag.info.

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# Safety Scene

#### Chainsaws Are Powerful, Dangerous

Take these safety precautions to avoid being one of the thousands to report chainsaw injuries every year.

by Molly E. Butz

pring and summer bring with them the familiar roar of chainsaws. From storm damage cleanup to sawing up wood for a backyard bonfire, chainsaws have found a useful place for many people in many places. Chainsaws also serve their purpose in our industry, and many component manufacturers utilize chainsaws year round for various workplace activities including cutting up discarded trusses and trimming engineered joists to the correct size.

Chainsaws are powerful, efficient and effective. According to Lowe's Online How-To Library, "you won't find a tool with more power per inch." But all of that power brings with it an entirely new level of danger; and with thousands of chainsaw injuries reported every year, extra attention to safety is the key to protecting yourself and your employees when using a chainsaw.

For starters, chainsaws were meant to cut one thing: wood. Using a chainsaw for

any other purpose is asking for trouble. Even brief contact with a rock or the

One of the most important things you can do to protect yourself from a possible injury

is wear the appropriate and necessary personal protective equipment, or PPE. The following list includes all of the PPE required by OSHA for anyone using a chainsaw.

• Leg protection made with cut-resistant material such as chaps or leggings. The leg protection should cover the full length of the thigh all the way to the top of

• Foot protection made with cut-resistant material. The boots should cover and

#### Using any tool can pose a safety risk, and chainsaws are no exception.

ground will dull the cutting chain and pose a safety risk.

| ()-   | Head injurtes     | 3,418  |
|-------|-------------------|--------|
| A     | Upper Body Area   | 2,141  |
| 11 11 | Arm and Hand Area | 17,094 |
| 41.14 | Leg Area          | 16,348 |
|       | Foot Area         | 2,885  |
| NO    |                   |        |
| 60    |                   |        |

Figure 1. Accident location and frequency as related to chain saw use (1994). (Source: U.S. Product Safety Commission)

at a glance

□ Chainsaws are powerful; according to

□ Chainsaws were designed to cut only

□ Always use the proper personal protec-

tive equipment (PPE) when operating a

wood, so make sure that all other

objects are cleared from the area before

Lowe's, "you won't find a tool with more

#### Gloves.

- · Ear plugs or earmuff-style hearing protection.
- Head protection if there is potential for falling or flying objects.

support the ankle and include steel toes and nonskid soles.

• Eye protection with side shields.

the boot on both legs.

The accident location and frequency diagram from the U.S. Product Safety Commission (Figure 1) shows how important PPE can be; most injuries occur on the lower left leg and the left arm. Those are the areas you should be sure to protect the most.

Beyond PPE, there are a few other things that should be noted about general chainsaw operation that can help you prevent injuries. Here's a helpful list of things to keep in mind:

- Never remove any kickback device.
- Always read the manufacturer's owners manual for operating instructions and safety information.
- Start the chainsaw on the ground or other place where it is firmly supported.
- Make sure the chain brake is engaged when you start the chainsaw.
- Hold the chainsaw with both hands while cutting.
- Never overreach, cut above shoulder height or cut directly over your head.

Keep your work area clear of people and clutter.

• Never operate a malfunctioning chainsaw.

Refueling a chainsaw can also be dangerous. Here are some safety tips on refueling to prevent an accident or injury from occurring:

- Check the fuel line, tank cap and all connections for leaks.
- · Allow the chainsaw to cool for two or three minutes before attempting to refuel.
- Use the correct fuel/oil mixture recommended by the manufacturer of your chainsaw.
- Do not smoke during refueling.
- · Clean up any spilled fuel from the motor.
- Always refuel at least ten feet from any open flame and start the chainsaw at least ten feet from the refueling area.

Using any tool can pose a safety risk, and chainsaws are no exception. Before you begin any project involving a chainsaw, whether it's work or play, be sure your saw is in good working condition, you have a plan for your project, and you've followed all of the necessary safety precautions. Remember, when it comes to chainsaw operation, Safety First! SBC

To pose a question for this column or to learn more about WTCA's Operation Safety Program, contact WTCA Staff at 608/274-4849, email wtca@sbcindustry.com, or view the Operation Safety demonstration online at <u>www.wtcatko.com</u>.



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# Bcmc 2006

#### Attendee Networking Offers Hidden Value

Don't overlook the take-home value of networking with your peers at BCMC!

by Stephanie Watrud

hether you are expanding your business, developing an existing one, or reaffirming current practices, BCMC has all of the equipment and information you will need to succeed in one location. But while exhibitors offer ideas to improve production flow in your plant, there is hidden value in communicating with fellow component manufacturers. In fact, networking with your peers may just be the single most under-rated perk of attending the BCMC show. According to a recent survey of component manufacturers, 38 percent of respondents indicated the primary reason they attend BCMC is to exchange ideas with other manufacturers. That's proof that there's a lot to be gained from communicating with other component manufacturers and trading perspectives.

At the show, you'll be able to spend uninterrupted time in sessions presented by fellow manufacturers. Each session is tailored to a specific issue, with the intention of giving you ideas to bring home. "Ideas are taken back to our team, and then we work through some of the better ones to determine how they could be implemented. Obviously, as with everyone, we change each idea a bit to better suit what we are doing," said Steven Johnson of Nelson Truss, Inc. Some ideas are taken back and implemented immediately while others are slated as long-term goals for which to strive.

While attendees find take-home value on the show floor and at sessions, learning from other component manufacturers is just as valuable. "Everyone does something a little better," said David Baird of Homestead Building Systems, Inc. "I try to take away one idea [from a discussion at the show] that we can implement into our process."

Some manufacturers attend the show in search of specific advice from their peers. Donnie Hostetler of Kropf Lumber Inc. said, "We are just starting to expand our business, so which piece of equipment is the most appropriate for us is a question that we bounce off many other manufacturers. This has really helped narrow down our options to making a good choice." This example shows the true value of networking.

Exchanging information about design and software issues is another area that attracts manufacturers to BCMC. "We have changed our cutting and layout process in our wall panel division and modified how we present sealed drawings to customers," said Jim Humbert of Advantage Framing Systems Inc, noting the inspiration he received from fellow manufacturers at the show.

It is evident that BCMC provides great take home value in virtually all areas of component manufacturing. "I have gotten ideas for software programming tools

#### at a glance

- □ 38 percent of survey respondents indicated they attend BCMC to exchange ideas with other manufacturers.
- □ Many manufacturers take ideas from BCMC home and determine how they can be implemented.

from discussions with other manufacturers at BCMC and have also brought back material handling ideas," said John Piercefield of Piercefield Corporation, Inc. With discussions, seminars, tours and hundreds of other manufacturers to

exchange ideas with, BCMC is the best place to network. Be sure to attend

October 4-6, in Houston, where the show will be *Bigger and Better in Texas!* SBC

For more details and registration information, visit www.bcmcshow.com.

BIGGER BETTER

BCMC 2006 \* OCTOBER 4-6 \* HOUSTON, TX

Dear BCMC Attendees & Exhibitors:

As you may have heard, due to unforeseen circumstances, the 2006 Building Component Manufacturers Conference (BCMC) will be moving from Fort Worth, Texas to Houston, Texas. The show dates will remain the same: October 4 - 6, 2006. We want to assure you that this decision was not made lightly. It was made with much deliberation between WTCA's Executive Committee, the BCMC Committee and BCMC staff.

Since November of 2005, two of our contracted hotels in Fort Worth closed for renovations and another hotel closed one of its two towers. This represented a loss of important room nights that we needed near the convention center. In order to meet the needs of our attendees, BCMC staff investigated all possible alternative rooms that we could in the downtown area but found that under the best case scenario it would still be necessary to use hotels in locations 5 to 10 miles from the convention center. The distance between these hotels and the convention center would require the use of a shuttle process, with an expected commute of 20 minutes during non-rush hour times.

This made us ask the question, "Where do we go from here and will moving to another location be more likely to maintain the excellent reputation BCMC has established for networking with peers, strengthening current client relationships and establishing new ones?" After researching all possible venues that could accommodate our show on such short notice, and wanting to be able to keep our theme of Bigger and Better in Texas if at all possible, we found that Houston was an option and it has turned into an excellent alternative to Fort Worth.

We appreciate everything the Fort Worth Convention and Visitors Bureau and the City of Fort Worth have done for us to try to accommodate our show, but ultimately we have decided that it is in the best interest of our attendees, exhibitors and industry that we relocate this year's show to the George R. Brown Convention Center in Houston.

With over 257,000 square feet of exhibit space at the convention center, nine show offices that overlook the show floor, and sufficient contracted rooms at the Hyatt and Hilton hotels in downtown Houston and many alternatives for plant tours, we are confident this year's show will be Bigger and Better in Texas!

If you have further questions, please contact Jill Zimmerman, jzimmerman@qualtim.com (608/213-3314), Stephanie Watrud, swatrud@qualtim.com (608/310-6721) or Peg Pichette, ppichette@qualtim.com (608/239-2608).

Best regards,

Don Groom 2006 WTCA President

Doug Folker 2006 BCMC Chair

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Big changes are in store for the industry's handling, installing and bracing guide, BCSI, especially in the sections pertaining to temporary and permanent bracing.

#### by WTCA Staff

ore than 53,600 copies of the BCSI 1-03 booklet have sold since its first printing in fall 2003. The BCSI booklet and the B-Series summary sheets have become a mainstay for the jobsite packages of most component manufacturers. In addition, many construction industry professionals rely on this publication as the premiere source for handling, installing and bracing information for building components on the jobsite. Most building codes, standards and guidelines of this nature are revised and improved on a continual basis and the BCSI booklet is no exception. Last year the WTCA Engineering & Technology Committee (E&T) made the decision to update the BCSI booklet for 2006.

The plan is to complete the booklet revisions first and then develop new editions of the individual B-Series summary sheets. The revised booklet is slated to be available in summer 2006 and the summary sheets by fall 2006.

The most noticeable change to the booklet will be its size. Customer feedback has prompted it to be reformatted into an 8.5x11-inch size with a three-hole punch, while retaining the spiral bound pages.

From a content perspective, the changes are much more striking. The most extensive changes will occur in B2 and B3, on temporary and permanent bracing respectively. The B2 section will incorporate new information for handling truss bundles and delivering them to the plate line, hoisting and crane equipment, assembling field spliced and multi-piece trusses, and bracing of hip systems.

The B3 section is being expanded to become a comprehensive permanent bracing guide for the proper bracing of a series of side-by-side trusses with either similar or highly different web configurations. (The current version focuses on bracing for compression web members.) The plan is to provide standard industry permanent bracing details for lateral/diagonal bracing systems for webs, chords, gable end frames and piggy backs, to name a few. This may seem a drastic departure from the traditional industry position that truss manufacturers supply individual components, not systems of trusses for a roof or floor, and therefore are not responsible for permanent bracing systems design. In fact, that position still holds true, but it does not preclude the truss industry from providing building designers a starting point from which to base their permanent truss system bracing design. To that end, members of E&T have been collecting and reviewing CAD format bracing details from a wide variety of sources—engineers at truss manufacturing plants, at plate manufacturing companies and from independent building designers. The key details will be included in B3 and all the details we receive will be available for download on the Structural Details for CAD web page on the WTCA site (see Support Docs at www.sbcmag.info for a quick link).

This new perspective was developed when WTCA worked with the National Council of Structural Engineers Association (NCSEA) on a code change proposal for the IBC 2006. The topic of permanent bracing design has long been an area of concern between the two groups, and both parties wanted a smoother approach to design and responsibility. The resulting code change, S-165, was approved by the ICC in September 2005. (View this code change and others in **Support Docs** 





at www.sbcmag.info.) This change draws attention to the necessity of proper permanent bracing design of trusses and permits the use of "standard industry bracing details that conform with generally accepted engineering practice" for permanent bracing design. The agreement is that WTCA will provide the standard industry bracing details in the next revision of BCSI and also on its web site for download. The building designer remains responsible for determining the suitability of the details to any particular project, but B3 will give them a head start on specifying wood truss bracing details with the assurance that the truss industry has approved them in concept.

Stay tuned for the next version of BCSI! For more information on the availability of this document, visit www.sbcindustry.com. SBC

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For more information about WTCA membership, contact Anna (608/310-6719 or astamm@qualtim.com) or visit www.sbcindustry.com. Listing as of April 7, 2006.

#### at a glance

- □ BCSI 1-03 booklet will soon be revised. Individual B-Series summary sheets will then undergo updates based on booklet changes.
- □ The new version will be reformatted into an 8.5x11-inch spiral-bound three holepunched booklet.
- □ The most significant changes will occur in BCSI's two bracing sections, B2 on temporary bracing and B3 on permanent bracing.
- □ A change in permanent bracing perspective was developed when WTCA worked with the National Council of Structural Engineers Association on a code change proposal for the IBC 2006.



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# **Code Connection**

Roof Truss-to-Wall Connection Requirements in the 2003 IRC

Sometimes good intentions to solve a problem result in onerous requirements in the code. We'll take a look at one example and how to deal with it.

# 1/3 Nail Length

Figure 1

#### at a glance

- □ Toe-nailing has long been recognized in building codes as an acceptable means of attaching wood members to wood bearing walls.
- □ WTCA has submitted a code change proposal to the IRC regarding the trussto-wall connection requirements.

by WTCA Staff

www.sbcmag.info

provision has been added to the 2003 edition of the International Residential Code<sup>®</sup> (IRC) requiring roof trusses to be attached to the top plate(s) of load bearing walls with connectors capable of resisting an uplift of at least 175 lbs. More specifically, Section R802.10.5 states (in part):

Trusses shall be connected to wall plates by the use of approved connectors having a resistance to uplift of not less than 175 pounds (79.45 kg) and shall be installed in accordance with the manufacturer's specifications.

Here are the arguments used to justify the need for this provision:

- The "standard practice" of toe-nailing the truss to the top plate of the wall results in an inferior connection when compared to a "conventionally" framed roof.
- Toe-nailing can potentially cause splits in the bottom chord of the truss, thereby weakening the connection and compromising the stability of the truss.

Based on these arguments, Section R802.10.5 was adopted with the intention of ensuring "that the proper framing anchor is used for the truss-to-wall connection in order to maintain the same structural integrity as expected in a conventionally framed roof."

While Section R802.10.5 may be a well-intentioned effort to address a perceived problem, we believe it is an onerous requirement that causes unnecessary cost and confusion, and does not deal with all the design considerations required for truss to wall connections.

Truss Design Drawings are required in Section R802.10.1 of the IRC to include the applicable wind loads to which the truss has been designed as well as the magnitude and direction of the reaction force, if any, resulting from these loads. This information should be used to determine the connection requirements for attaching the truss at the bearing locations. The origin of the 175-lb requirement was not included with the supporting information when the language in Section R802.10.5 was proposed. It appears to be an arbitrary value with no apparent relation to actual design parameters. It may also be misinterpreted as limiting uplift resistance requirements to 175 lbs when a greater resistance is required.

Toe-nailing has long been recognized in building codes as an acceptable means of attaching wood members such as rafters and trusses to wood bearing walls to provide resistance to uplift and lateral forces. In order to maximize the strength of this type of connection, it is recommended that the nails be driven at an angle of approximately 30° with the member and held back from the end of the member by a distance of approximately one-third (1/3) the length of the nail (see Figure 1).

There are many applications and design conditions where a toe-nailed connection between the truss and top plate of the wall is sufficient to resist the required uplift forces. Section B8 of Building Component Safety Information (BCSI 1), which is referenced in Section R802.10.3 of the IRC, provides a summary table of the nominal uplift design capacities (i.e., load duration factor = 1.0) for 12 commonly used nail types in combination with the five most common species of wood used in Continued on page 24

Clarify code issues and help educate your marketplace with WTCA Technical *Notes*. Developed in partnership with WTCA Chapters, Tech Notes address pertinent issues and offer position statements on some of the most frequently asked questions that component manufacturers face on a daily basis.

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|              | Maximum Uplift<br>Resistance Capacity (lbs.) |                 |                 |  |  |  |
|--------------|--|-----------------|-----------------|--|--|--|
| Nail Type    | 2 toe-<br>nails                              | 3 toe-<br>nails | 4 toe-<br>nails |  |  |  |
| 16d Common   | 118  | 178             | 237             |  |  |  |
| 16d Box      | 99   | 149             | 198             |  |  |  |
| 12d Common   | 99   | 149             | 198             |  |  |  |
| 16d Gun Nail | 96   | 144             | 192             |  |  |  |
| 12d Sinker   | 96   | 144             | 192             |  |  |  |
| 16d Sinker   | 93   | 139             | 186             |  |  |  |
| 10d Common   | 93   | 139             | 186             |  |  |  |
| 12d Box      | 86   | 130             | 173             |  |  |  |
| 12d Gun Nail | 80   | 120             | 160             |  |  |  |
| 10d Box      | 80   | 120             | 160             |  |  |  |
| 10d Gun Nail | 74   | 110             | 147             |  |  |  |
| 10d Sinker   | 70   | 106             | 141             |  |  |  |

#### Notes:

1. Toe-nail design values derived from NDS 1997and NER-272.

2. For normal load duration multiply the values in the table by 0.63 and for snow load duration multiply the value in the table by 0.72.

3. Assumes a top plate of Spruce Pine Fir (SPF). Per NDS 1997 12.4.1 edge distances, end distances and spacing shall be sufficient to prevent the splitting of the wood.

#### Code Connection Continued from page 22

construction in North America. The information provided in BCSI-B8 can be used to easily and quickly determine if a toe-nailed connection can provide sufficient uplift resistance. If the net uplift reaction exceeds the resistance that can be provided by a toe-nailed connection, a mechanical connector such as a framing anchor, hurricane tie or strap will be required.

WTCA has submitted the following code change proposal to the IRC regarding the truss-to-wall connection requirements:

R802.10.5 Truss to wall connection. Trusses shall be connected to wall plates by the use of approved connectors having a resistance to uplift of not less than 175 pounds (79.45 kg.) and shall be installed in accordance with the manufacturer's specifications. For roof assemblies subject to wind uplift pressures of 20 pounds per square foot (0.958 kN/m2) or greater, as established in Table R301.2(2), adjusted for height and exposure per Table R301.2(3), see section R802.11.

#### R802.11 Roof tie-down.

R802.11.1 Uplift resistance. Roof assemblies which are subject to wind uplift pressures of 20 pounds per square foot (0.958 kN/m2) or greater shall have roof rafters or trusses attached to their supporting wall assemblies by connections capable of providing the resistance required in Table R802.11. Wind uplift pressures shall be determined using an effective wind area of 100 square feet (9.3m2) and Zone 1 in Table R301.2(2), as adjusted for height and exposure per Table R301.2(3).

Exception: For trusses designed per Section R802.10.1, the connections shall resist the uplift force, if any, specified on the Truss Design Drawing. In areas where the basic wind speeds to not exceed 90 mph, truss to wall connections shall be permitted to be in accordance with rafter connections per Table R602.3(1).

#### A continuous load path shall be provided to transmit the uplift forces from the rafter or truss ties to the foundation.

If this proposed change is accepted, it will not be incorporated into the IRC until the 2009 edition. In the meantime, WTCA will continue to advocate that trussto-wall connections be determined based on the uplift reactions provided on the Truss Design Drawings, to ensure that these connections are adequate for the appropriate design conditions. SBC

For more information about how to get involved in the code process, contact WTCA staff at 608/274-4849 or codes@sbcindustry.com.

#### Next Edition of BCSI-B8: **Toe-Nailing for Uplift Reactions**

In an effort to make BCSI-B8 more "field friendly," WTCA has considered adding a simplified toe-nailed connection table that provides the maximum uplift resistance capacity for various multi-nail, toe-nailed connections assuming a duration of load for wind (i.e., LDF = 1.6) and a Spruce-Pine-Fir (SPF) top plate. This table could be used to quickly determine the adequacy of toe-nailed connections to resist uplift reactions due to wind loads. Assuming SPF for the top plate is conservative, since the nail withdrawal resistance in SPF is less than the nail withdrawal resistance in other commonly used species groups such as Douglas Fir-Larch, Southern Pine or Hem-Fir. If the uplift resistance capacity is desired for a different duration of load, it can easily be determined by multiplying the table value by the new LDF and dividing this product by 1.6.

The table at left is an example of how this information may be presented. For more information, please contact WTCA's Technical Department at 608/274-4849.





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# Working for Your Workers

Connecting the Dots: Truss Manufacturer to Family Home

Making the connection between manufacturing trusses and identifying what holds the roof above our heads may be the best solution to the industry's work force shortage.

n a recent survey of youth conducted by the respected Gallup organization, "teachers," "law enforcement" and "computer technology" were the three most popular responses when asked what field they wanted to work in when they grew up. Shockingly, "truss manufacturer" did not make the top ten. In fact, none of the children surveyed gave this as an answer.

It is easy to look on the surface and explain this by pointing out that almost all youth are surrounded by teachers who act as instructors and mentors, so this is a logical top choice for kids. Youth also see law enforcement in their local community, see them portrayed on television and in movies as protectors, and this also follows as something they would aspire to be. Finally, given the amount of technology that surround the youth of today, it isn't at all surprising that this profession is foremost on their minds.

However, following this logic, "truss fabricator" should also be near the top of their list because almost all of them live in a house or an apartment that relies on the components made by these manufacturers to provide protection and warmth from the elements. The biggest problem is that relatively few of them know about it.

The best long-term solution to begin addressing the work force shortage facing the industry is to draw the connection between the components you manufacture and the homes they live in. The best place to start is by raising awareness of your company and products within your local community. This approach also has intrinsic benefits, such as creating additional opportunities for you to increase local market share, and obtaining assistance for employee training-a key to retaining your work force—which may be available through your local work force and economic development boards.

"We believe firmly that if you give to your community and invest in education, it comes back to you," says Barry Dixon, True House. "We find that by being involved in the community, they become aware of who we are and they come to us both for our products and for employment."

True House has participated in builder trade shows and career expos for four years and with local community organizations for even longer. Through these shows they've raised their exposure not only to a wider group of builders, but also to students who are prospective employees that might otherwise never have heard of them. For their booth, they've built a small model home out of roof truss and wall panels, and they run a short three-minute video in the booth highlighting the products they manufacture.

Currently, True House is creating a dream home to raise money for a local charity, and they're shooting a commercial to highlight the employment opportunities available at their plant.

Builder trade shows and career expos are an extremely effective way to highlight the connection between, as well as the benefits of, structural building components in residential and commercial construction. Rick Parrino, Plum Building Systems, has been exhibiting at shows for six years. He's also been closely involved in the Continued on page 28

#### by Sean D. Shields

# The Reality of Working Smarter, **Not Harder is Here**

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#### at a glance

- □ Most youth are unaware of careers in the truss manufacturing industry.
- □ Raising awareness about your company locally can bolster market share and promote employment opportunities.
- Consider becoming involved in builder trade shows and career expos to showcase products and employment opportunities.











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#### Working for Your Workers Continued from page 26

educational outreach efforts of his chapter, the Iowa Truss Manufacturers Association (ITMA) in presentations to building and fire service officials.

"This outreach makes a difference. Our company is gaining name recognition, and as our company grows, our employees benefit from both more opportunities for advancement within the plant and additional training opportunities available through local grants," says Parrino.

Within the community, Plum is also active in raising money for local charities and has an ongoing agreement with Habitat for Humanity of Iowa to donate components. That work has earned them recognition locally and helped them get grant money for employee training. Not only does the money go toward production, design and safety education, but it also helps to fund personal growth seminars for Plum's employees.

Another company that has benefited from its relationship with the local community is Shelter Systems Limited. Through the help of their economic development board, they were able to get a Maryland state training grant to provide additional training for their employees. In addition to participating in trade shows to promote their company, they also open their doors and invite members of the community to use their facility for their meetings.

"The Chamber of Commerce holds its meetings in our board room, and other groups do too. We also give a number of plant tours each week, for customers, competitors and students, and let the facility speak for itself. It's a great marketing tool," says Dwight Hikel, Shelter Systems Limited.

By opening their doors to the public and seizing on opportunities to draw them in, Shelter Systems Limited exponentially increases the number of individuals aware of the quality of their products and workplace environment. This, in turn, is leading to additional business opportunities and more individuals seeking out employment with their company.

Shelter has also gone the extra mile in reaching out to its local community college by donating money to set up a scholarship with the company's name on it. It's a significant investment in creating recognition of the industry amongst individuals who will soon be looking for jobs. It also solidifies that connection between "truss manufacturer" and the house they grew up in. The scholarship was established within the last year, so only time will tell how many recipients come to work in the industry. SBC

In the June/July issue, this column will explore how other component manufacturers have successfully built relationships with their local educational institutions and discovered a wealth of potential employees.

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May 2006





# Human Faces

#### SNCMA & SEASoN Work Together to Resolve Truss Design, Specification Issues

by Emmy Thorson-Hanson & Libby Maurer

A WTCA Chapter in one of the most highly regulated building markets forged a relationship that proved invaluable when design responsibilities and code issues surfaced.

hen is membership in a chapter worth its weight in gold? When valuable relationships that benefit everyone involved are formed. And that's just what happened when the Southern Nevada Component Manufacturers Association (SNCMA) became involved with the Structural Engineers Association of Southern Nevada (SEASoN).

#### Finding Common Ground

Smack dab in one of the country's hottest building markets, the manufacturers who make up SNCMA first connected with SEASoN over building code issues. Chapter President Glenn McClendon (Sun State Components, Inc.) says, "Codes brought us together. When everyone was adopting the codes, there were different interpretations. We all came together under the guidance of the Southern Nevada Homebuilders Association to reach an agreement. Out of that, SEASoN formed a truss committee." McClendon adds, "We all have a common goal, which is to build houses, and to do it right and conform to the codes."

#### With greater understanding comes greater acceptance of trusses—something from which we could all stand to benefit.

SNCMA's Bill Bolduc (A.C. Houston Lumber Company) and Rich Menge (Sun State Components, Inc.), both professional engineers who were also members of SEASoN, were immediately involved on this "truss committee" due to their familiarity with truss design and the engineering process. Menge suggested that the committee act as a liaison between the two groups and "bring issues to the table before they became problems," he recalls. Bolduc explains why it has been so important to be involved with SEASoN at the committee level: "Due to the highly regulatory environment in southern Nevada it is always in our best interest to work closely with the building designers."

Close ties to SEASoN have opened the channels of communication, giving the SNCMA and SEASoN a natural platform to discuss broader industry issues, questions and concerns. So when issues surrounding truss design and specification came to light many times over the last several years, the relationship paid off in spades.

#### at a glance

- □ SNCMA joined forced with the Structural Engineers Association of Southern Nevada (SEASoN) by forming a truss committee within the engineers' group.
- Using teamwork, the two groups successfully resolved issues surrounding drag loads and uplift.
- □ Most recently, SNCMA and WTCA staff provided content for SEASoN's design responsibilities document based on language in WTCA/TPI 1 Chapter 2.

#### Understanding Uplift

Bolduc recalls one of the issues that surfaced was how to handle uplift reactions in truss design drawings. "There was a lot of confusion about it, and some building departments were asking the Engineers of Record to provide hold-downs to meet the uplift numbers listed on the truss designs," he says. "Some of the engineers thought that the numbers were excessive, and in some cases they were," says Bolduc. There was real confusion on how to specify drag loads and other lateral loads on trusses.

The committee developed some examples of how to specify drag loads on trusses that work for many common cases. On the uplift issue, they determined that uplift reactions could be reduced in many cases by using a "hybrid" wind analysis, a blend of "components and cladding" and "main wind force-resisting system" wind loading. The committee is publishing a white paper that will provide educational information and recommendations on many of the issues that the committee addressed. WTCA staff also contributed to the review and edit of this white paper.

The challenges facing the two groups didn't end with uplift reactions and drag loads. Because design responsibilities were an ongoing issue, it's no surprise that the topic continued to surface at meetings. Clark County (which covers the Las Vegas area) has its own document that helps define design responsibilities, similar to WTCA/TPI 4-2002 for component manufacturers. Once again, the white paper will discuss this relationship and provide better exposure to WTCA/TPI 1-2002. The SEASoN white paper will help the local building design community better understand the relationship and responsibilities of all the parties involved.

SNCMA wasted no time in asking WTCA staff to assist in the review process. In addition to Bolduc and Menge, several staff members and legal counsel Kent Pagel reviewed the current work, providing feedback and adding language from WTCA/TPI 1 Chapter 2 so it was consistent with the state-of-the-art language. Before the formation of SEASoN's truss committee, "everyone was on a different page," Bolduc says. With the experience of working together over the last year, McClendon says the time and effort put forth was well worth it. "This [resulting document] will make life easier for everyone. When the different areas of responsibilities are clear cut from the start, you won't get to a certain point

and realize they aren't clearly defined, and have to sort it out then," he says. Bolduc adds, "having a good working relationship with the building designers will continue to benefit all of us and result in less confusion and misunderstandings in the preparation of the truss designs for review."

#### Conclusion

The benefits of establishing a relationship like that of SNCMA and SEASoN are many. Because southern Nevada is a highly regulatory environment, Bolduc says, "we are forced to work together. And in most cases we work well together and the result is a better built building." McClendon finds great value in the relationship from a communication perspective. "It's





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important because as new code changes come about, that line of communication is open now; we will be able to tackle issues before they become problems," he explains. "We learned a valuable lesson. By working together, those problems won't become issues again," he says.

And possibly the greatest gain of all, Bolduc says the alliance "will promote a better understanding and working relationship between the truss industry and engineers." With greater understanding comes greater acceptance of trusses-something from which we could all stand to benefit. SBC

Do you have a story of teamwork, cooperation or overcoming challenging situations? Email your story idea to editor@sbcmag.info.

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# Tricky Design Job Showcases Pioneer Truss Company's Creativity

#### by Emily Patterson

#### at a glance

- □ Imagine taking a horizontal slice of a hard-boiled egg and looking at it from the top. Now imagine designing roof trusses to fit on top of that shape and completing the job within budget.
- Pioneer came up with the idea of drawing the trusses first in CAD to represent the roof in true 3D.
- □ Paul Lenauer credited technology with making this project possible, while the project's architect credits structural building components with helping make his vision a reality.

magine taking a horizontal slice of a hard-boiled egg and looking at it from the top. Now imagine designing roof trusses to fit on top of that shape and completing the job within budget. Sound impossible? With most traditional truss design software, it may be. When this question was posed to the staff at Pioneer Truss Company in Owensville, MO, it sounded impossible to them at first. But for a company that "wants to be known as the company that can truss anything," the challenge was too good to pass by, said Chris Lenauer, Co-owner and Vice President of Sales at Pioneer. Or, as he summed it up, "If it's trussable, Pioneer can do it."

The company was tested to live up to those words last year when it received a prospective project from a local lumber yard. The job called for the design and manufacture of roof trusses for Di Zang Hall, a temple for the Mid-America Buddhist Association (MABA). The approximately 800-sq. ft. temple's design called for the roof trusses to form a half-egg shape with a pointed peak on top for electricals. "It wasn't necessarily a large structure, but it's a complicated structure," said Chris Lenauer.

# In Memoriam

Paul D. Lenauer, 42, Operations Manager and Co-owner of Pioneer Industries, LLC, passed away suddenly on October 24, 2005. He played a vital role in growing the company and made significant contributions to the Di Zang Hall project. SBC staff spoke with Paul during an initial phone interview for this article.

An initial look at the structure's design showed that the roof's curved shape would make designing the trusses using conventional design software extremely difficult, if not impossible, because it wouldn't show the project in true 3D. "My first thought was, 'We don't want to be involved,'" joked Roger Campbell, the project's eventual designer. "Everything we fabricate has straight lines. This project has curves and arcs with different radiuses. Because there are so many calculations and the project is so out of the ordinary, I was concerned that errors would show up in the roof or there would be problems for those installing the trusses," he explained.

#### A Shot in the Dark

With so many complexities, how did Pioneer come up with an accurate and competitive bid for the job? "We had no idea," said Chris Lenauer. "Pricing this project was sort of a shot in the dark because we'd never done it before," added Paul Lenauer, Pioneer's late Operations Manager (See "In Memoriam" above). Pioneer decided to use the total component square-footage cost (calculated by software) and add 50 percent to arrive at the bid price. The formula paid off and Pioneer won the bid. In fact, the company's bid came in so much lower than the competition that the customer asked Pioneer



The roof's curved shape made designing the trusses using conventional design software extremely difficult

to double check its bid. "We were literally half the cost of competitors in the area," said Chris Lenauer. Aside from helping Pioneer win the bid, the calculation proved accurate when the company fell within its budget for the project.

Once Pioneer won the bid, staff began tackling the job. The project posed a number of challenges from the beginning, explained Paul Lenauer. "A half moon above an entrance is one thing. That's an easy design because all the trusses are the same size and dimension. This project was much more difficult because the trusses that make up the oval shape are each a different dimension."

Pioneer's design consisted of four different types of trusses. The high peak in the roof was achieved by piggybacking a bottom and top truss (see figures 1 and 2 on page 36). A halfmoon-shaped truss and an end truss then rounded out the roof's egg-like shape at the ends of the building (see figures 3 and 4 on page 37). The edges of the curve (the very top and bottom of the hard-boiled egg) would be completed by builders on the jobsite with dimensional lumber.

Not only did the job call for a complex roof design, the structure's oval shape also required that each truss in the roof Continued on page 36





The trusses that made up the roof's peak were then piggybacked to achieve the full design height. Some trusses were so tall, Pioneer had to cap the caps

#### Tricky Design Job... Continued from page 35

system come together like a puzzle to fit perfectly with the rest of the structure, leaving no room for inaccuracies. "We not only had to hit everything side by side perfectly plum, but also front to back. The project is curved in both directions," explained Campbell. "The pieces really had to fit together."

To meet this level of accuracy, the project also required extra time outside the design office. "It's one of those jobs where you've got to go out multiple times and snap a line on 50 percent of every truss," said Chris Lenauer. He noted that repeat trips to the jobsite to confirm measurements played a key role in assuring that Pioneer's design not only worked in the design phase, but also when the trusses were delivered to the site.

#### CAD to the Rescue

Because the temple's x and y axis changed for each truss, Pioneer's staff knew that designing the project with the company's proprietary software would be extremely difficult as it wouldn't represent the job in true 3D. The project's unique design forced the team at Pioneer to look beyond standard truss design. "We knew this job would be time consuming. Roger [Campbell] figured it would take a week and a half to figure out," said Chris Lenauer. It was Campbell who came up with the idea of drawing the trusses first in CAD to represent the roof in true 3D. Pioneer enlisted the skills of Steve Nolting, a local CAD designer who works for an area company that manufactures display cases for retail stores. "Putting the job in CAD made it a lot guicker," said Chris Lenauer.

Once the structure was designed in CAD, Campbell extracted a set of reference points from each truss and input them into Pioneer's proprietary software. "[The CAD designer] segmented [the architect's] drawings for us. We basically connected the points and created profiles that would fit inside the segments."

With a true 3D representation of the structure, the roof system design began to come together. "We rounded three different sections for trusses with a 24/12 pitch with room inside for heating ducts," said Chris Lenauer. The trusses that made up the roof's peak were then piggybacked to achieve the full design height. "Some trusses were so tall we had to cap the caps," he commented (see photo on page 36).

#### Advancements in the Shop

With the design complete, the project proceeded to the shop, where again the job posed unique challenges. The project's oval shape required the table setup to change for each set of trusses. Pioneer's automated saws helped sawyers quickly cut webs to the appropriate length. The job then proceeded to the table where the overhead laser projection system speeded set-ups and assemblies. "Without that technology, this project would have been almost impossible to set up," said Chris Lenauer. "Most companies would take two days [to complete this stage of the job], but we did it in eight hours." Paul Lenauer also credited technology with making this project a reality, saying, "A few years ago, this project might not have been possible. Thanks to CAD, the proprietary software, automated saws and the overhead laser, we were able to accomplish this incredible feat."

Continued on page 38

The structure's oval shape also required that each truss in the roof system come together like a puzzle to fit perfectly with the rest of the structure, leaving no room for inaccuracies. (Photos have been used to show this project at various stages in the construction process. They are not representative of proper bracing per BCSI 1-03.)



Figures 1-2. The high peak in the roof was achieved by piggybacking a bottom and top truss.

#### Figures 3-4.

A half-moon-shaped truss and an end truss then rounded out the roof's egg-like shape at the ends of the building.



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Figure 4.



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Tricky Design Job... Continued from page 37

#### Architect's Perspective

Pioneer's staff says that communication-both with the architect and the outside CAD designer—played a major role in the project's success. "Roger had multiple conversations with the architect and CAD designer. He talked to these guys many, many times," said Tim Gooch, the main technician on the project. "What Roger designed, they ended up using."

The challenging nature of the project is echoed by the temple's architect, Lei-Hoo Mak of Mak Architects, Inc. "The challenges were both cultural and aesthetic; cultural in that

we're in the United States in the 21st century and aesthetic in what kind of architecture will fit the setting," he said. Nearly ten years ago, Mak designed MABA's meditation center-a project that also used component construction-which sits on the same property as Di Zang Hall.

Noting that the temple is under 1000 sg. ft., Mak said he tried to come up with something modern with an Eastern flavor. "This is a memorial building, what many people might call a mausoleum," he explained. Pointing out that the temple's concrete walls are more than 12 inches thick, Mak stressed that Di Zang Hall had to be designed and constructed to stand the tests of time: "This structure is permanent and durable."

Mak credits structural building components in helping make his vision a reality. "Trusses, cost-wise, make sense," he said. "Trusses' ability to give us flexibility from a design standpoint helped give us more of what we wanted on the project."

Campbell said he couldn't be happier that the architect and the customer were pleased with Pioneer's design and that there were no difficulties with installing the trusses on the jobsite. "I was very happy to learn that the job went well," he said. He commented that the project's many challenges tested his skills and taught him not to underestimate his abilities. "A lot of times you can do things you didn't think you could. You may think, 'I don't want to venture into that realm because it's outside of my experience."

#### A Formula for Success

Pushing oneself to the next level has been a goal, and a major key to success, for

Pioneer. Since the Lenauer brothers, Chris, Paul and Matt, purchased it in 2000, sales have doubled and the company has grown from a 10-acre facility to a 33-acre facility. Noting that truss design has become increasingly more complex, Chris Lenauer says that he and his brothers made a conscious decision to invest in technology.

Part of that investment included linking communication between all of Pioneer's departments. "Everything is wireless, from design to pricing to the shop," says Chris Lenauer. He says that technology has helped transform Pioneer into a well-oiled machine that can dedicate more energy to cus-Continued on page 40

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![](_page_20_Picture_1.jpeg)

that work with other types of projects that could showcase Pioneer's full range of services as a truss manufacturer. Overall, Chris Lenauer says the company developed a formula to move forward and grow its business. "We diversified. I think you have to look at your sales like you look at your financials," he explained. Pioneer's formula aims to focus 80 percent of the company's business on residential jobs while the

Clearly, the Di Zang Hall project falls into the 20 percent "other projects" category, and Chris Lenauer says it's a fun type of job to show Pioneer's abilities. While he admits, "You wouldn't want to do jobs like that every day," because they demand extra time and can become costly, he says they're a good opportunity to step outside the mold. "Everyone sees you're capable of more than the typical cookie-cutter projects," he said.

Chris Lenauer says that the company's serious investment in technology clearly paid off with the Di Zang Hall project:

"This project wouldn't have been possible if we didn't have the technology—the CAD and the lasers—to get the job done right." Indeed, with technology, imagination and determination, it seems Pioneer has found its formula for success. SBC

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#### for the design flexibility he enjoyed in this project-one he is sure will stand the test of time.

#### Tricky Design Job... Continued from page 38

tomers' needs and providing timely service. "At least once a week, we contact customers and do takeoffs," he explained. "I've had customers tell me that we've delivered trusses to them on a job before competitors have even responded to the initial quote."

Chris Lenauer says that, when he and his brothers first bought the company, they took a pragmatic look at the types of jobs the company was doing. In that examination, they determined how different kinds of jobs figured into the company's bottom line, and decided they needed to make some changes. The company made a conscious decision to work with some of the bigger builders in the state because it helps ensure a steady stream of work. "[The larger builders] build year round. They're just as strong in December as they are in April," he said.

While the brothers found job security and stability in their big builder customers, they also recognized the need to balance remaining 20 percent is dedicated to other projects.

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# JOHN MEEKS: BRACING ACTIVIST

"If I have seen farther than others, it is because I was standing on the shoulders of giants."

-Isaac Newton

#### at a glance

- □ John Meeks began his post-military career in the commercial concrete industry.
- □ Meeks met Gang-Nail's Cal Jureit in Florida, and joined Automated Building Components, Inc. as the Engineering Manager in charge of building franchise chains.
- □ He became involved in truss design engineering at ABC, and also took an interest in bracing and installation while inspecting a truss collapse.
- □ Throughout his career and still today, Meeks has made his mark on the wood truss industry as a respected forensic engineer.

by Molly E. Butz

ohn E. Meeks, P.E., has been called every name in the book-teacher, promoter, contributor, crusader, leader-and he's also one of the pioneers of the structural building components industry that has shaped the way we do business today. But don't be misguided because, even if you have read through his extensive résumé, what you'll find out about this classic southern gentleman is that, first and foremost, he's humble. And for John, humility and greatness have defined his career.

John's career path began after he completed his senior year of high school in Savannah, GA, in 1943. Like so many young men during that time, John joined the Navy and spent three quiet years doing radio/radar work. After attending Tulane University in New Orleans on the G.I. Bill, John graduated with a B.S. in Civil Engineering and married Beatrice, his lovely wife and a native of the city. Just a few years later, John and Beatrice started a family, and John left his post-graduate work in structural engineering to land his first job designing concrete, steel and wood framed commercial and industrial buildings for Albert M. Alexander in New Orleans.

Continued involvement in the concrete industry, which included working with prestressed concrete products (a fairly new concept at the time), eventually led John to his first entrepreneurial endeavor, W.R. Jones and John E. Meeks, Inc. in Baton Rouge, LA, a "design and build" company that opened in 1959. A bit ahead of his time, John's new business was responsible for the design and construction of numerous commercial and industrial buildings in the area. (Think "component manufacturer with an internal engineering staff.")

A move in the early 1960s prompted by family medical issues brought John to Florida. Here, once again, he worked in the concrete industry and, after a brief stint doing land surveying and subdivision engineering, John met Cal Jureit of Gang-Nail fame and owner of Automated Building Components, Inc. (See SBC Magazine, Sept/Oct 2005.) Initially, as Engineering Manager of the Multi-Structures Division at ABC, John was in charge of the design and construction of franchise chains that were popping up all around the country. "It was places like Bonanza and McDonald's," John said, "but we didn't do that for very long. We knew we Continued on page 46

## MY BUILDERS WOULDN'T CONSIDER GOING BACK TO SOLID-TOP TABLES.

# AND I COULDN'T AFFORD TO GO BACK.

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#### John Meeks: Bracing Activist Continued from page 44

weren't experts and we wanted to focus on other things."

This change in focus found John working as the Chief Structural Engineer at ABC, which made him responsible for providing wood truss engineering designs for roughly 200 truss fabricators throughout the U.S. Always passionate about engineering, John jumped into the structural building components industry with both feet. Over the next 13 years, John participated in and was Chairman of the Truss Plate Institute's Technical Advisory Committee (TPI TAC) and later served as the organization's president.

John was intimately involved in the evolution of the Metal Plate Connected Wood Truss design standard into what it is today and continues to actively participate in the project committee work as the industry develops its 2007 version of the standard. He was also very involved in working with TPI's former technical director Buddy Showalter, P.E., on two bracing-related documents: Design of Structural Bracing, DSB-89 and its summary sheet, HIB-91.

"I saw [John] in action with the Truss Plate Institute's TAC committee," says Steve Cabler, P.E. and Senior Vice President of Engineering and Technology Services for MiTek, Inc. "He brought to the table the best combination of technical abilities and practical experiences using realistic approaches. John contributed significantly in the area of permanent bracing issues and his work is the basis of much of the work the committee has been doing and will continue to do in the future."

John also wrote WTCA's "Commentary for Permanent Bracing of Metal Plate Connected Wood Trusses" publication. In addition, he was a member of numerous other industry organizations including WTCA, the Forest Products Society and APA – The Engineered Wood Association.

In 1979, Cal Jureit and the other stockholders, which included John, sold ABC. Shortly thereafter, he left ABC and opened his one-man consulting company, John E. Meeks, P.A. Consulting Engineer, in Fort Lauderdale, FL, where he is still doing consulting work today.

"Yes, I'm still working," John will tell you. "But I'm limiting it to forensic work, and only with the wood truss industry." With nearly 60 years of his career behind him, John is keenly aware that there is still a need in the structural building components industry for an ally. "When there is a problem," John says matter-of-factly, "I can help them solve it." And the rest of the industry is in total agreement.

"John is a fabulous expert witness," recalls Bob Becht, President of Chambers Truss Inc., who describes John as the most respected forensic engineer in South Florida. "I've seen cases dissolve because John was involved as an expert witness," Bob continued. "I've known John for at least 20 years, and what I remember most about John is his untiring defense of the truss industry."

Carlos Rionda, a fellow P.E., agrees. "John was the first industry engineer to concentrate on forensic truss analysis in collapses," Carlos recollects. "And he also developed many industry firsts in truss bracing during erection. Always a solid engineer and a good, ethical person, John has been a real contributor to the truss industry."

But having your career, even your life, described as a "truss bracing crusade" is no small feat. Even John (mostly seriously) refers to himself as the "grandfather of bracing." So what does it take to turn a Louisiana concrete buff into a truss bracing activist? Just one truss failure.

Continued on page 48

![](_page_23_Picture_24.jpeg)

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#### John Meeks: Bracing Activist Continued from page 46

"We were in the process of constructing a new building for ABC," John told *SBC* staff. "We designed the trusses for the building, but we had an independent contractor working on the project. It was actually being erected right near the main offices for ABC headquarters. The trusses went up, and just as quickly it seemed, they came right back down."

As V.P. of Engineering at ABC, John was sent out to examine the jobsite and analyze the truss collapse. "I could see that I didn't know enough at the time to know why the trusses fell down," John says. And that was the beginning of the end. "It just hit me, and I thought 'Hey, this is awful. All they were trying to do is put trusses up. This is a major problem." Calls started trickling in from all over the country. "I realized this was happening all over. We were getting more and more sophisticated with the engineering and analysis of the trusses, but then we just turned them over to the builders and framers with no instructions!"

"How would you like to go to work every day and risk your life?" John asks. "Every time those guys moved around on the jobsite they were potentially risking their lives. That's not how it should be."

Since that day back at ABC, John has spent a lot of his time and energy improving safety and solving problems associated with truss installation. "I helped write the first bracing article in 1976," John recalls. "It was so important because it was the first time anyone tried to give any kind of guidance." That same document evolved into the "Green Sheet," which eventually became what we know as the BCSI B1 Summary Sheet.

Once bracing and installation issues were on the front burn-

er, John's career took off. On the jobsite, he always had a knack for which measurements, photos and information needed to be analyzed after an incident occurred. He's also known for building small scale models of the structure and trusses in question to use as an example. This was often his method for making the rather sophisticated topic of truss bracing and collapse a little easier to understand. "John is able to relate to the lay person," Steve Cabler adds. "He is proficient at making complex engineering theories understandable to anyone."

Dave Brakeman, P.E., S.E., and Vice President of Engineering at Alpine Engineered Products, Inc., recalls the impact that John's truss models often had on the jury. "John did a lot of forensic work," Dave says. "I remember a time that he needed to make the jury really understand how

important it was to use proper bracing. He built a model that looked a little like a hangman's gallows and he used rubber bands to squeeze the end of the model, which was in essence like applying a load. Then he took what appeared to be a paperclip he'd straightened out and he would use it to 'release' the bracing and the entire structure would collapse. It really made it clear how necessary it was to properly brace and how strong a structure could be, even under heavy loads, if the bracing was in place and installed correctly."

John is often asked to write a report or make his files available for review. And when push comes to shove, he gives expert testimony in court. "The plaintiff's attorney wants to talk to me," John explains, "and then the component manufacturer's attorney wants to talk to me and sometimes I even have meetings right here in my office. And then I have to explain what I do, and how I analyzed the situation."

Bob Becht notes that one of the best things about John is that he is "definitely not for sale." No matter which side of the case John is representing, "he always tells the truth." John has never been afraid to tell the builder, framer or component manufacturer that they are at fault. "Occasionally, I do have to tell the component manufacturer that he's wrong," John laments. "But it doesn't happen very often and it's getting rarer and rarer. And I won't help an architect or engineer that's only in it for the lawsuit; I only want to help people that are honestly having problems."

#### Hurricane Season

Over the years, John's work has branched out beyond working with specific component manufacturers. He has participated in a multitude of seminars and written countless articles, reports and papers concerning issues that affect almost everyone in the structural building components industry.

"Immediately after Hurricane Andrew came through the southeast in 1992, I called TPI," John remembers. "I could see that we were looking at a tremendous amount of damage and we needed written documentation. Every day, Mike Triche, a professor of wood engineering at the University of Alabama, and Ramon Riba, a professional engineer from TPI, would meet me at the grocery store and fill my truck with everything we could think of and head down to South Florida to our 'hurricane headquarters' located at the University of Miami." Each day was spent reviewing the hurricane damage and handing out supplies to the families in the area. "When we got to the university the next morning we compared notes and talked about what we saw," John continued.

"On one of our trips, we took big garbage bags loaded with toys that my neighborhood had collected," John relates. "That day I stopped at a multi-story complex for damage assessment. There were a lot of small children around and no power. Everyone was just hanging around and the mothers were keeping a small fire going so that they could cook to feed the children. I gave them a bag of toys and one woman was completely overcome with emotion. She said, 'They are bringing us all kinds of stuff down here, everything under the sun, but no one ever thought to bring us toys! Thank you so much!' That made my day," John recollects.

John, Mike and Ramon eventually pooled all of their information and co-authored a paper for TPI called "Performance of Metal Plate

Connected Wood Truss Structures During Hurricane Andrew." This became just one in a library of articles and reports John has authored throughout the years.

Today, John continues to write about hurricanes and any other topic he deems necessary, and he's still protecting the men and women in our industry. Hesitant to rehash old forensic work and unlikely to bring up topics he hasn't thoroughly researched, John has set an example that anyone should be pleased to follow. "His roots go right back to the beginning of the industry," Steve Cabler says. As a matter of fact, even though he'll be celebrating his 80th birthday this month, there isn't anything holding John back and, oddly

design tool!

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enough, he's not the only one. "I've made a lot of friends over the years," John concludes, "and I know a lot of people that could have gotten out of the industry years ago; they could have retired...but they didn't. I don't know what it is, there's just something about this industry."

John E. Meeks, P.E., has been called every name in the book, but we've got just a little more name-calling to do. Even though we're guessing the name John likes the best is Grandpa, today we add to his list innovator, guardian and friend. Yes, there is just something about this industry and, John, we're glad you've been a part of it. Happy Birthday! SBC

Jerry Koskovich, P.E.

# Where to Start

Jerry recalls the 1984 conversation that spurred his interest in automation.

n March of 1973, I began a career path shift that led me into the wood roof truss industry. For ten years prior to that, my career had been in government working with building code enforcement as a plan check engineer with Los Angeles County and later as Director of Building and Safety with the City of Rochester, MN.

During those earlier times, the wood roof truss industry was just beginning to get a toehold in the western markets. I remember checking the designs of some of the first nail plate connected trusses that came into the LA area. Calculations were done long-hand with slide rules. I still have mine.

A lot of truss plant managers are so involved with the challenges of running the company and seeing to a million details, that they don't have the time to actually study and evaluate what is going on in the back room. That back room (aka, the production floor) is where the success or failure of the business is most likely to manifest itself.

#### at a glance

- □ Studies conducted on manual component saws, once the standard of the industry, found that operators were spending more time doing the manual set-ups than they were cutting wood.
- Almost anything you can automate will likely be an improvement over the manual production method you are currently using.
- □ The average saw operator will do three to four hundred set-ups per shift with an automated saw.
- Lt doesn't do any good to have a saw that sets up in seven seconds if it takes much longer than that to get the wood moving through the saw.

All through the seventies I worked with numerous truss companies as a third party inspector and forensic engineer dealing with roof collapses and other misfortunes that can befall a building.

Ultimately, in 1979, we delivered our first manual component saw. A few years later, in 1984, after having installed another manual saw in Florida, the plant manager, Bill Sauder, stunned me with the question, "When are you going to do something with automation?"

Forgive me for sharing what sounds like a résumé. I'm really not looking for work. I'm trying to make a point. Sometimes you can be standing so close to the trees you can't see the forest! Bill helped me see what was going on in the industry, and the world, more clearly. The computer was having an impact!

Studies he had done during the previous year indicated that his manual component saws, which were the standard of the industry, were spending more time doing the manual set-ups than they were cutting wood. A year earlier they had averaged about 25 set-ups per shift, and by 1984, they were struggling with fifty or more. The next week I returned home, and we began the design of the first automated component saw.

In the years that have followed, the demand for chopped up roofs has become the

norm. So called "common trusses" are now uncommon!

While I haven't guizzed any manual saw owners about it lately, I believe I'm probably still safe in saying that doing 80 to 100 set-ups a shift on a manual saw is akin to running the four-minute mile. While there are some who can do it, it isn't the norm.

The point of all of the above (bet you thought I'd never get there), is that like my early experience, a lot of truss plant managers are so involved with the challenges of running the company and seeing to a million details, that they don't have the time to actually study and evaluate what is going on in the back room. That back room (aka, the production floor) is where the success or failure of the business is most likely to manifest itself.

If, for the moment, we assume that every truss plant is using a software package developed by one of the truss plate vendors, and we further assume that the design staff of the factory is competent, it may be reasonable to say that the efficiency of the average factory is no worse or better than its competition. Add to that, if the raw materials and labor costs for fabricating trusses is likewise on a pretty level playing field, it follows that the fabrication of trusses (or walls), is where the game is won or lost.

While I can say with certainty that I have been in factories that had outstanding crews, I can say with equal certainty, such workers are not the norm—the norm is the norm. I don't say this to disparage the average work force, but rather to emphasize that most work forces are truly average. Having said that, the challenge is how do you make an average work force exceptional? Or above average. There are at least two methods and I recommend them both.

Certainly, incentive programs are one of the most effective ways of boosting performance. I personally like this approach. It rewards employees for putting forth an extra effort. If you haven't worked on the production floor, give it a try. You'll have a greater appreciation for incentive programs and the people who can benefit from them.

Continued on page 52

![](_page_25_Picture_29.jpeg)

Steve Baker\* Plum Building Systems, Osceola, IA Jean Blackwood TJ Truss Corp., Fort Pierce, FL Jerry Denny Carter-Lee Lumber Co., Mooresville, IN Johnny Fuller\* Sun State Components, Inc., North Las Vegas, NV Leo Gandera\* Sun State Components of Northern Arizona. Inc., Kingman, AZ Fred Gilbert Jack Walters & Sons, Corp., Fairfield, IL **David Hernikl** Walters Buildings, Allenton, WI Zak Lindell\* Manion Truss and Components, Superior, WI **Gerald Macon\*** Spenard Builders Supply, Anchorage, AK Tim Matteson Sun State Components, Inc., Surprize, AZ Herbie McIntosh\* Eckman Lumber Company, Inc., Lehighton, PA David L. Meadows Automated Structures, Inc., Ogden, UT Randall Nakaya HPM Building Supply, Keaau, HI Jeff Olson Walters Buildings, Allenton, WI **David Swaney\*** Spenard Builders Supply, Anchorage, AK **Chad Sweitzer** Plum Building Systems, New Hampton, IA Michael Valentine\* Spenard Building Supply, Anchorage, AK Shane Weitzenkamp Structural Component Systems, Inc., Boone, IA As of May 1, 2006

\*Also Operation Safety Plant Certified.

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

#### Automation Straight Talk Continued from page 51

If your factory doesn't already have such a program, I strongly recommend you consider it. It'll improve production and you'll have a happier, more stable work force.

Of course the method most often mentioned when industries strive for more efficient production is automation. Fortunately in our industry, automated methods of doing the various functions of truss and wall production are becoming more available, and their use and acceptance more prevalent.

How and when does a component factory decide to automate? There are again at least two methods available to management. The first is the simplest for the plant without automated equipment. Just ask yourself if you want your company to grow and increase market share while improving your bottom line. If the answer is yes, then the next question is "what should I automate first?"

The point being, in this industry, most anything you can automate will likely be an improvement over the manual production method you are currently using-sometimes dramatically better! You'll be better off no matter what you do.

The other method leading to a decision to automate is to know and understand what you are currently doing in the various production processes. You'll want to look for the process that is causing the biggest bottleneck. In the average truss plant, cutting will usually take center stage.

As I noted above, the chopped up roof designs of today dictate that the number of set-ups on the component saw will nearly equal the piece count. Years of studying production reports generated by our machines shows that the piece

If you haven't worked on the production floor give it a try. You'll have a greater appreciation for incentive programs and the people who can benefit from them.

count per saw set-up will typically vary from one to five. Most of our newest machines are showing an average of four. However, recognize that an average is just that-an average-it's not a "mean" number.

You'll have to determine how many setups and pieces your current saws are producing on a per shift basis. In addition to that, you'll need to know how much and what is being processed on radial arm type saws. Once you have

these numbers at your disposal, you'll be able to determine how much benefit can be achieved by installing an automated saw.

A rule of thumb I've used in the past is about a three-to-one ratio (or more), or an automated component saw will typically produce about three times as much as its manual counterpart. This, of course, assumes that the chopped up roof designs predominate, as opposed to doing nothing but five hundred-foot long chicken houses.

Over the past decade, well maintained automated saws will do set-ups in times ranging from as few as ten seconds to as many as 30 seconds depending on what they're doing. For example, most automated saws will take more time when doing extremely short components and when doing bottom chords, since they must relocate the material conveyors (and in some instances the overhead hold down conveyors) in order to sequence the movement of the saw blades. In the past and even today a good average set-up time for most saws would be about twenty seconds for comparison purposes.

With that in mind, the average factory will do three to four hundred set-ups with an automated saw. The above-average user will often do five to six hundred set-ups. They achieve these elevated numbers through efficient material handling and sequencing the cutting list so as to minimize the required movements of the transport frame (moveable end of the saw) when going from one setup to the next. This later function is a technique that should generally be applied with any component saw regardless of its level of automation.

I mentioned earlier that 80 set-ups per shift for a manual saw would be considered quite good. Today we have automated saws that average seventy to eighty set-ups per hour! Since piece counts are so low, the speed of setup is critical in order to maintain total production at acceptable levels. In order to achieve the incredible number of set-ups per hour mentioned above, these saws must do the set-up, the operator must load the wood, then typically run an average of about four pieces, and finally go to the next set-up-all within about forty to fifty seconds total.

If the piece count per set-up goes up slightly, the total number of set-ups may fade slightly. The opposite is true if the piece count goes down. The thing to remember is that the automated saws don't necessarily process the wood any faster than the manual saws. Again, depending on what they are processing, the rate of thru-put will vary. You don't do 2x4s at the same rate as 2x12s.

Set-up speed, accuracy and reliability is what it's all about when it comes to automation. However, as I've said so often in the past, automated machines will likely make you change the way you do business. The key to getting the most production out of your automated saw is getting the wood to and from the saw. It doesn't do any good to have a saw that sets up in seven seconds if it takes much longer than that to get the wood moving through the saw. Make sure you make provisions for more pickers and most likely a live deck in front of your new saw.

With the above information, you should be able to begin evaluating your cutting system and seeing where an automated saw could improve your operation. Check with your favorite saw manufacturer as well, since if you can provide them with

your factory's production data, the automated saw manufacturer may have a program that will spit out your projected payback.

With that in mind, beware of misleading statistics or production numbers presented by a machinery rep or numbers you might have seen in advertising or a show demo. I don't mean to imply that the rep or demo is dishonest, but rather that "all that glitters is not gold."

Remember, the salesperson always wants to show his machine in the best circumstances doing what it does best. What you have to decide is, "Does this information or demo truly represent what I need done," or is it a glitzy display

![](_page_26_Picture_25.jpeg)

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Ask for production reports from users that demonstrate a history of efficient production over an extended period of time, rather than something that might be the result of a staged event. Get a list of users you can contact for an unvarnished assessment of all of the virtues and pitfalls of the machine. Don't assume!

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with little or no practical application in your factory?

By this time you should be able to get a sense of what automation can do for you. If you're still interested, we'll talk more about payback in a future article. SBC

Jerry Koskovich is President of The Koskovich Company in Rochester, MN.

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# WCMA, BMC WEST HOST TOUR FOR fire service leadership A photo recap by Libby Maurer

![](_page_28_Picture_1.jpeg)

## **Representing the Structural Building Components Industry**

![](_page_28_Picture_3.jpeg)

"Another fine example of the efforts WTCA continues to put forth in educating the manufacturer, building designer, general contractor, building official, and the fire service of the advantages of the component industry." -Jeff Reynolds, BMC West

t's been said that a picture is worth a thousand words. On February 28, a plant tour for the some of the fire service's most instrumental and involved education/training curriculum developers helped tell the story of an industry that has historically been looked upon unfavorably by the firefight-

#### at a glance

- □ This event is one example of WTCA's work to provide solid technical education on the fire performance of trusses.
- □ The goal of the tour was to listen to the concerns of the fire service about structural building components in modern building construction.
- □ The fire service was very impressed with the level of sophistication programmed into the truss design software, asking questions about how it could be integrated into the pre-fire planning process.

Together with WTCA staff, the Western Component Manufacturers Association (WCMA) met an American Forest and Paper Association (AF&PA) request to provide a truss plant tour for their Fire Service Awareness Tour. From there we planned the event and put together a package of materials to educate attendees about truss manufacturing. The goal of the tour was twofold:

- Bring to the fire service's attention the work WTCA has done to provide solid technical education on the fire performance of wood trusses.
- Hear their concerns about structural building components in modern building construction.

Gathering at BMC West's Sherwood, OR location, ten fire service representatives and ten members of the lumber industry toured the truss plant, EWP distribution center and the millwork shop to learn about how building components are designed, manufactured and shipped before being installed into a structure on the jobsite.

![](_page_28_Picture_14.jpeg)

BMC West Truss Plant General Manager Steve Wethern welcomes the attendees.

"The entire team at BMC West was pleased to have been involved with this tour."

![](_page_28_Picture_18.jpeg)

Members of the fire service (Dan Smits, Calumet City Fire Department; Ron Coleman; and Shane Ray, National Fallen Firefighters Foundation) participate in a challenge to pull a metal connector plate from wood members with pliers. Determined to show up his colleagues, Smits spent 20 minutes prying the teeth from the wood before claiming victory.

"The tour was a great way to better understand the truss product and more importantly to see the use of technology to maintain better quality control of their product."

-Dan Smits, Calumet City Fire Department

ing community.

-Steve Wethern, BMC West

Continued on page 58

![](_page_28_Picture_31.jpeg)

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![](_page_29_Picture_8.jpeg)

![](_page_29_Picture_9.jpeg)

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![](_page_29_Picture_11.jpeg)

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DESIGN

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Ron Siarnicki (National Fallen Firefighters Foundation) and Charles Smeby (University of Florida Fire & Emergency Services Distance Learning) look on as Rob Brooks of TrusJoist concentrates on prying off the plate.

Jeff Reynolds, BMC West Assistant Truss Manager, explains the truss design process by showing a sequence of roof layouts. The fire service was very impressed with the level of sophistication programmed into the truss design software, and asked questions about 3D layout capabilities, loading, and electronic submittals and how this work could be integrated into the pre-fire planning process.

![](_page_29_Picture_14.jpeg)

Siarnicki pauses to ask the sawyer about the automated component saw.

"Observing the process of how trusses are actually constructed was very helpful for me. The level of quality control that the plant workers put in was phenomenal. When I saw that pile of lumber that didn't make the grade, it caught my attention and I realized there is a whole lot of QC that goes into the manufacturing process that I never knew before."

-Ron Siarnicki, National Fallen Firefighters Foundation

Continued on page 60

# **Over 20 years of product innovation** for the structural component industry.

![](_page_29_Picture_20.jpeg)

![](_page_29_Picture_21.jpeg)

ince the 1980's, when we introduced our THA double-shear nailed hanger to address truss connection concerns, Simpson has been offering products designed specifically for connecting trusses. Today, we offer more than 100 plated truss products, and continue to develop products for the plated truss and structural component industry.

Each year sees more innovations - like our easy-to-install jack truss connector that is field-skewable to 67.5 degrees; the new 3-ply girder tie-down with over 3500 lbs. of uplift capacity; or the new high capacity girder truss hangers that install with Strong-Drive® screws and eliminate the need for bolts. We also continue to add options - like sloped, skewed, concealed flange, etc. - to keep up with ever-changing needs.

These products are engineered to meet or exceed the IRC/IBC codes and reflect our commitment to serve the building industry. Check our current catalog or website for details.

#### **Better Connections for Component Systems.**

800-999-5099 www.strongtie.com

For reader service, go to www.sbcmaq.info/simpson.htm

![](_page_29_Picture_31.jpeg)

![](_page_29_Picture_32.jpeg)

![](_page_29_Picture_33.jpeg)

THGO/THGOH **High Capacity Girder Truss Hangers** 

![](_page_29_Picture_35.jpeg)

TJC37 Skewable Jack Truss Connector

![](_page_29_Picture_37.jpeg)

LGT3 **3-Ply Girder Truss Tiedown** 

![](_page_29_Picture_39.jpeg)

**GU** Series **High Capacity Girder Hangers** 

![](_page_30_Picture_0.jpeg)

![](_page_30_Picture_1.jpeg)

Attendees watch as production employees stack a finished truss.

"During the tour I learned in the past that the lumber and component industry used the wood from trees as product. However, with today's building demand and innovative construction techniques, the tree is now the resource and the product is engineered wood. It was amazing to see how far the component construction and lumber industry have come with technology and products, and it is clear that the fire service still teaches out-dated construction methods."

—Greg Rogers, South Kitsap (WA) Fire and Rescue

A cold mist falls on the cut members staging area in the BMC West yard.

![](_page_30_Picture_6.jpeg)

"Each member of the fire service expressed a great deal of interest in the truss manufacturing process. The tour was a great opportunity to show them first hand, the entire process from start to finish. They were all impressed with the amount of effort and coordination involved in designing, fabricating, and delivering the finished product." —Jeff Reynolds, BMC West

Ron Coleman and Kuma Sumathipala (AF&PA) immersed in conversation against a backdrop of stacked lumber ready for shipment to the jobsite.

After the plant tour, attendees received a binder full of educational resources available from WTCA. Among the materials were a listing of Truss Technology Workshops (TTWs) and the new Wood Truss Construction and Fire Performance CD from the Carbeck Structural Components Institute (CSCI). The chapter encouraged the fire service to use this information in its ongoing nationwide curriculum development, especially given the need for supplemental and updated construction methods training for firefighters. By the time the group broke for lunch, it had become clear that the tour helped bridge a gap, bringer the fire service and the lumber and component industry closer. A special thanks to BMC West and the Western Component Manufacturers Association for so generously hosting the plant tour and providing educational literature for the fire service. SBC

![](_page_30_Picture_10.jpeg)

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After thirty years, our customers continue to count on our individualized customer service and independent solutions to maximize their return on investment.

![](_page_30_Picture_14.jpeg)

![](_page_30_Picture_15.jpeg)

May 2006

# Performance

![](_page_30_Picture_21.jpeg)

# **ROBBINS DELIVERS** — When and where you need it.

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#### JACK TABLE™

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SUPERIOR PRODUCT DESIGN means our powerful member design process accesses the strength and experience of the MiTek 20/20® truss engineering software as well as the iLevel<sup>™</sup> Trus Joist<sup>®</sup> engineered wood product design engine. Our partners, MiTek and iLevel" Trus Joist," lead their respective industries, so you can be confident that your results are accurate and cost effective.

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See for yourself what sets us apart at www.OptiFrame.com/Loads

**OPTIFRAME** THERE IS WHOLE HOUSE SOFTWARE: NO COMPARISON.

![](_page_31_Picture_6.jpeg)

Industry Partners:

![](_page_31_Picture_8.jpeg)

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Advanced Tools for Structural Framing

![](_page_31_Picture_12.jpeg)

![](_page_32_Picture_0.jpeg)

#### Growing More than Just Corn in Iowa by Sean D. Shields

While this department is regularly devoted to federal issues and the workings of Capitol Hill in Washington, DC, it's important to point out that state lawmaking bodies can have an equal or greater effect on the economic and regulatory environment in which you operate your business. So while you can sometimes get a bigger bang for your buck by establishing relationships with your members of Congress, it's important to not overlook efforts to grow those same lines of communication with your state lawmakers.

The good news is building those relationships can be relatively easy. For one, a lawmaker on the state level represents a significantly fewer number of people. This can translate into less constituents vying for time and attention. Two, the economic development and employment base your company represents in their district takes on a more significant role in establishing your credibility and adds strength to your message. Third, it can be a lot easier to set up a face-to-face meeting with your state lawmaker because he or she doesn't spend a majority of their time working out of state (in Washington, DC).

However, if setting up a personal meeting with your lawmaker still seems daunting or possibly not something you want to do on your own, having your local WTCA chapter invite state lawmakers to one of its meetings is a great alternative.

The Iowa Truss Manufacturers Association (ITMA) has invited state lawmakers to visit its guarterly meeting in March for three years running. In each of those years, members have had at least one representative from both the Iowa Senate and House attend to discuss pending legislation. Not only has ITMA been able to positively advocate change to bills affecting the structural building components industry in Iowa, it has established close relationships with the lawmakers who have attended.

They've also been successful in attracting lawmakers to return multiple years, and have had representation from both Republicans and Democrats. This strengthens their chances for success because they can get support not only in both lawmaking chambers, but from both sides of the aisle. One example of success from ITMA's efforts is a bill introduced last year to create a statewide fire code advisory board to review the code and give recommendations to the legislature.

During ITMA's meeting with lawmakers last year, members asked them to amend that bill to include representation from the structural building components industry. A state Senator in attendance (who happened to be a retired fire service official) agreed to sponsor the amendment and was successful during debate on the bill the following week to "Representing the structural building components industry...will allow us to provide immediate input in the decision-making process." -Ray Noonan, Cascade Mfg Co

add the amendment to the bill, which eventually passed and was signed into law

Finally, in February of this year, the fire code advisory committee had their first meeting, and ITMA members Ray Noonan (Cascade Mfg Co) and Rick Parrino (Plum Building Systems), were invited to attend. Commenting on the experience, Ray said, "Representing the structural building components industry, and having an opportunity to review the baseline codes they are considering for adoption, will allow us to provide immediate input in the decision-making process, particularly if they consider adopting any amendments to the code."

During the ITMA meeting this year, members spoke with lawmakers at length about a number of meaty issues. One, which ITMA was in strong support of, was a pending bill requiring claimants intending to sue builders for damages to give notice and provide a period of time for repairs to be made.

Another piece of legislation ITMA was against was a tort reform bill revising construction contract indemnification laws in such a way that if the component manufacturer had conducted repairs on a roof truss and the roof subsequently collapsed at some time in the future, the CM could be brought in as a party to the lawsuit.

They also discussed legislation pertaining to statewide building codes, safety standards and construction wage standards, as well as a bill on eminent domain. At the conclusion of the meeting, the lawmakers in attendance pledged to report back to the chapter on all the legislation discussed-providing an additional line of communication between the lawmakers and ITMA.

Many WTCA chapters are actively looking for speakers and topics for their guarterly meetings. Many chapters are also looking for ways to boost membership and meeting attendance. Devoting a meeting each year to inviting state lawmakers can be a very effective means to accomplishing both objectives. If this sounds like something you would like to see happen through your state chapter, contact your chapter officers or WTCA staff, and we'll be happy to help set it up. SBC

![](_page_32_Picture_15.jpeg)

Live deck infeed – operator simply loads the lumber and removes the cut components from the outfeed bench.

#### **Uniquely engineered ST8**

achieves both low angulation and long scarf cuts. The ST8 will cut material from 2x4 through 2x10 and angles as low as 5° attaining long scarf cuts to meet most applications.

The ST8 Trussmaster optimizes the cutting list, automatically cutting multiple members from a single piece of lumber.

#### **Quality industrial automation**, touch screen and advanced operating software.

![](_page_32_Picture_21.jpeg)

![](_page_32_Picture_22.jpeg)

![](_page_32_Picture_23.jpeg)

![](_page_32_Picture_24.jpeg)

![](_page_32_Picture_29.jpeg)

# ST8 Trussmaster

Inline Automated Truss Component Cutting System

![](_page_32_Figure_32.jpeg)

Built with the same quality and reliability of all SPIDA machinery... this is the latest inline saw technology for component manufacturers!

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

![](_page_33_Picture_0.jpeg)

Safety and personnel topics took the spotlight in the March issue and you loved it! A perennial favorite due to its tie-in to things like workers' compensation, potentially costly OSHA citings, and the culture of your company, the pages were packed with valuable safety information for the office and the plant. Here is what some of you had to say about the safety articles.

Scott Arguilla of Best Homes, Inc. found it interesting to read about a fellow manufacturer's Experience Modification Rate, or MOD:

"Interesting article about Casmin in March. Our MOD is .72 and still too high. We have been trying to convert all of our workers into realizing the benefits of everyone being very safety-conscience in everything they do. It has been a long process for 18 months now; I think we are finally getting through. Our goal is to further reduce Lost Work days, Injuries and Days on Restricted Duty so they are below SIC code averages for 2006."

Frank Madden of Trussway, Ltd. appreciated that Safety Scene reminded readers not to discount office safety:

"Great job on bring the office into the safety fray. This is an area that is often overlooked and you are doing a service by bringing it to the attention of all concerned. Keep up the good work!

"Another good idea is to have a lock box for the local fire department, complete with building layouts (noting the self contained computer room), keys to buildings and any other communication that is helpful to the firefighters so, in the event of a fire during non-working hours, they can get into buildings and lessen their entry damage."

The office safety article jogged retiree Bill Loeffler's memory of the state of safety in industry decades ago:

"Thanks for your office safety article in the March issue. It reminded me of some places I called upon in the earlier years of our component industry. Often the office was up open stairs with a slightly loose hand-rail. Floors with shop and parking lot dirt usually became slippery on rainy days. Always there was the old rug or mat near the door with corners dog-eared just waiting to trip me. A decade of success has permitted plant owners to provide much improved office arrangements; it's up to the employees to keep it safe and clean now."

We love hearing from you! So let us know if something revs your engine by emailing us at editor@sbcmag.info. We look forward to your comments. SBC

# **Respond** retirements

R. Larry Foley • Trus Joist

After a 35-year career in the engineered wood products industry, R. Larry Foley of Trus Joist retired on April 14, 2006. While he will be missed at Trus Joist, he and wife Mary Anne are looking forward to this exciting transition in their lives. His contributions to Trus Joist have helped shape the company's culture and busi-

![](_page_33_Picture_13.jpeg)

ness. Over the years, his professionalism and caring attitude has gained him the highest respect of his fellow associates.

Foley attended public schools in rural southeast North Dakota through high school. He graduated from North Dakota State University in 1968 with a BS in Civil Engineering. Foley began his Trus Joist career in the early 1970s at the Dubuque Iowa Open Web plant. He left the Dubuque plant in 1974 to work for a short time in Atlanta. His next stop was Oregon. which he has called home ever since. His Oregon career began with the City of Hillsboro where he managed the engineering department. In 1984, Foley left Trus Joist to join Willamette Industries and head up its ELP (StrucJoist) efforts. Finally, he found his way back to the Trus Joist commercial division when TJ acquired Willamette in 2002.

A true team player, Larry served a brief stint on the WTCA Board of Directors as an associate member director in 2002.

Foley noted the industry's continuous growth was what charmed him-and his colleagues-into staying for his entire career. "What I enjoyed the most about my career in the engineered wood industry was that it was a relatively small and in an expanding growth period during my career. Many of the people I met and enjoyed working with changed employment or location, but remained in the industry. I had the opportunity to work in several roles from engineering, sales, manufacturing and marketing during my career. This variety gave me a broad exposure to many people," he said.

Ted Osterberger, P.E., Applications Engineering Manager of Trus Joist said, "Larry's fingerprints are all over Trus Joist and will be felt long after his retirement." He began working with the likes of a Don Sharp and eventually would manage and mentor the last two commercial senior engineers, Bruce Hess and Dave Soderguist. Soderguist said of his mentor: "Larry is the consummate professional. During his career, he blended outstanding technical and engineering knowledge with a passion for our business and our customers."

After a long career, Foley still has plans to work. "It may be difficult spending all my time in leisure, so I may end up pursuing part-time consulting opportunities," he told SBC staff. In his retirement, Foley plans to spend time with Mary Anne, and will enjoy more frequent visits with his children and grandchildren. He also plans to start guitar lessons and is looking forward to providing daily lunches for the homeless in downtown Portland through his church's social service program. SBC

Thanks to Ted Osterberger of Trus Joist for contributing to this piece.

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Canadian Conseil Wood canadier Council du bois

The Collins Companies www.CollinsWood.com

#### **NAHB Research Center**

![](_page_33_Picture_29.jpeg)

![](_page_33_Picture_31.jpeg)

# **9th World Conference on Timber Engineering** August 6-10, 2006 • Portland, OR

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# **Register today!**

WCTE 2006 will be held at the Portland Marriott Downtown, which is located on the banks of the Willamette River in beautiful downtown Portland, Oregon. A full conference program, as well as pre- and post-conference events are being planned. Visit the conference website for more details!

#### MANY THANKS TO OUR OUTSTANDING SPONSORS — **THEIR SUPPORT WILL MAKE WCTE 2006 BETTER THAN EVER!**

![](_page_33_Picture_40.jpeg)

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

#### Housing Starts

Despite a 15.7 percent increase in multi-family starts, total starts fell 7.8 percent in March to 1.96 million (SAAR). Single-family starts fell 12 percent to 1.59 million (SAAR). Permits, an indicator of future activity, were down a more modest 5.5 percent.

| U.S. Housing Starts<br>Millions - Seasonally Adjusted Annual Rate (SAAR) |         |            |          |  |  |  |  |
|--|---------|------------|----------|--|--|--|--|
| U.S. Totals  | Mar     | Feb(rev.)  | % Change |  |  |  |  |
| Starts   | 1.960   | 2.126      | -7.8%    |  |  |  |  |
| Permits  | 2.059   | 2.179      | -5.5%    |  |  |  |  |
| Single Family  |         |            |          |  |  |  |  |
| Starts   | 1.591   | 1.807      | -12.0%   |  |  |  |  |
| Permits  | 1.542   | 1.657      | -6.9%    |  |  |  |  |
| Multi Family   |         |            |          |  |  |  |  |
| Starts   | 0.369   | 0.319      | 15.7%    |  |  |  |  |
| Permits  | 0.517   | 0.522      | -1.0%    |  |  |  |  |
| Starts   | and Per | mits By Re | egion:   |  |  |  |  |
| 😐 Starts   | 0.189   | 0.190      | -0.5%    |  |  |  |  |
| Permits  | 0.211   | 0.204      | 3.4%     |  |  |  |  |
| Starts   | 0.291   | 0.317      | -8.2%    |  |  |  |  |
| Permits  | 0.334   | 0.376      | -11.2%   |  |  |  |  |
| Starts   | 0.994   | 1.044      | -4.8%    |  |  |  |  |
| Permits  | 1.028   | 1.028      | 0.0%     |  |  |  |  |
| Starts   | 0.486   | 0.575      | -15.5%   |  |  |  |  |
| Permits  | 0.486   | 0.571      | -14.9%   |  |  |  |  |

Analysis & Outlook: It appears that we are simply returning to a more sustainable level that is supported by basic demographic forces. Depending on your assumptions regarding immigration, demand for second homes and demolition demand, annual demand for shelter is estimated to be 1.85 to 2.05 million units. Assuming that 150,000 units for manufactured (HUD code) housing, that means demand for conventional housing is about 1.7 to 1.9 million. Very attractive interest rates, innovative financing and a surplus of capital (encouraging speculative buying of real estate) pushed demand beyond sustainable levels for the past few years. We are still at the upper end of that range, but we're certainly getting closer to what most analysts would call "sustainable." In that respect, the fixed rate mortgage, although moving up to 6.49 percent, remains attractive by historical standards. The job picture continues to improve with the unemployment rate dropping below five percent and incomes are still increasing faster than inflation. The April 18 PPI report tells us that inflation is "tame" (with the exception of volatility in the oil markets) and should remain so; however, tighter labor markets are becoming a growing concern with the Fed. Residential fixed investment (the dollar amount invested in housing) is slowing, and prices are pulling back in parts of California and southern Florida. Additional signs are: (1) the inventory of new homes on the market is 548.000, a 6.3 month supply at current sale rates: (2) builders are starting to offer "deals"; (3) price increases are moderating (actually falling in some areas); (4) sellers are seeing fewer "multiple offers"; (5) mortgage delinquencies are increasing; and (6) lending standards are tightening. To summarize, in my opinion, it is still a solid housing market that is simply correcting to more sustainable levels. SBC

This housing starts report is provided to SBC on a monthly basis by SBC Economic Environment columnist AI Schuler Visit www.sbcmag.info for more economic news.

![](_page_34_Picture_5.jpeg)

## **Builder Banter**

#### **Rebuilding a Hurricane-Proof New Orleans**

Hurricane Katrina hit land as a category four storm in Louisiana on August 29, 2005. At that moment the world would never be the same. The devastation Katrina wreaked on New Orleans has given new focus to researchers. Experts are searching for ways to ensure that New Orleans will never again suffer this kind of extensive and overwhelming damage from a storm. The following are five innovative solutions that if used together could provide defense against a category five storm.

- 1. Sea Gates: Giant air-filled walls that would hold back storm surges.
- 2. Engineered Wetlands: Restoring wetlands would provide natural barriers against storms.
- 3. Mega Plumbing: A giant subterranean plumbing system that would carry floodwaters out of the city to keep it dry.
- 4. Community Havens: Limits flooding to a smaller area by dividing the city into sections. 5. Amphibious Houses: Foundations would double as life rafts and lift homes to safety if flooding became serious.

For details on these five ideas, visit www.popsci.com. [SOURCE: Michael Behar, Popular Science Magazine, www.popsci.com]

#### Fortified Homes Gaining Recognition from Insurance Industry

Insurance companies are beginning to offer lower insurance premiums for fortified homes. Fortified homes exist in Florida, Louisiana, South Carolina, North Carolina, Missouri and Illinois. In Louisiana, the American National Property and Casualty Company offers a 25 percent discount on the hurricane portion of a homeowner policy premium for fortified homes. Debi Harper, a spokeswoman for the company estimates that the discount would lead to a 12.5 percent savings on the total property cost in many cases in Louisiana.

According to Carlos Martin, a researcher at Partnership for Advancing Technology in Housing (PATH) offices in Washington, DC, the threat of more storms prompt people to invest in better built homes. "I think you are going to see a lot more of that (investment in housing). It takes a crisis for people to realize the physical performance of their house matters to them."

"I think there is a movement in the country to build homes better structurally," said Mike Moran. Vice President of Builder Programs at Simpson Strong-Tie. "The insurance industry (could have) a lot of impact." [Source: John Anderson, The Morning News, www.nwaonline.net]

#### **Builder Confidence Declines in April**

Rising mortgage rates, continued affordability issues and subsiding demand from investors/ speculators are prompting single-family home builders to adjust their perspectives on the new-home market, according to the National Association of Home Builders/Wells Fargo Housing Market Index (HMI) for April, released on April 17. The HMI declined four points from a downwardly revised reading in the previous month to hit 50 for the latest report.

#### Housing Market Index 2005-06 (HMI)

The HMI is a weighted, seasonally adjusted statistic derived from ratings for present single family sales, single family sales in the next 6 months and buyers traffic. The first two components are measured on a scale of "good" "fair," and "poor," and the last one is measured on a scale of "high," "average" and "low." A rating of 50 indicates that the number of positive or good responses received from the builders is about the same as the number of negative or poor responses. Ratings higher than 50 indicate more positive or good responses.

| June | July | Aug | Sept | Oct | Nov | Dec | Jan06 | Feb | Mar | Apr   | Мау |
|------|------|-----|------|-----|-----|-----|-------|-----|-----|-------|-----|
| 72   | 70   | 67  | 65   | 68  | 61  | 57  | 57    | 56  | 54  | 51(r) | 45  |

Source: National Association of Home Builder

"Home builders definitely view this as something of a transition period, where demand from speculators is easing off and the market is heading to a more sustainable level of activity following the record-breaking performance of 2005," said NAHB President David Pressly, a home builder from Statesville, NC. "This process should help restore a healthier balance between supply and demand going forward."

"With mortgage rates back up to the 6.5 percent range and serious affordability issues in the highest-priced markets, today's HMI numbers are neither surprising nor alarming," noted NAHB Chief Economist David Seiders. "Indeed, a reported reduction in home buying by investors/speculators in the market for new single-family homes is a positive development. Furthermore, we expect solid growth in employment and household income to essentially offset the minor increases in the interest-rate structure that we're projecting for the balance of this year."

Derived from a monthly survey that NAHB has been conducting for nearly 20 years, the NAHB/ Wells Fargo HMI gauges builder perceptions of current single-family home sales and sales expectations for the next six months as "good," "fair" or "poor." The survey also asks builders to rate traffic of prospective buyers as either "high to very high," "average" or "low to very low." Scores for each component are then used to calculate a seasonally adjusted index where any number over 50 indicates that more builders view sales conditions as good than poor. [Source: www.nahb.org]

#### Earth-Friendly Materials Go Mainstream

Consumers are continuously becoming more environmentally conscious. Increased interest in green homebuilding retailers is predicted to give these stores a national presence.

() SE

According to Greg Snowden, the chief executive of Green Fusion Design Center in San Anselmo, CA, "The time is ripe, the market is ready, and

the products are mature." You will find plant-based paints, organic bedding, cork flooring and more environmentally friendly materials at Green Fusion. Green retailers are springing up all over the country, not just in California. There is Environmental Home Center in Seattle, WA, Environmental Building Supplies in Portland, OR, Environmental Construction Outfitters in the Bronx, Green in Scottsdale, AZ, and Greenmaker in Chicago.

National retail chains are also joining the ranks of stores offering consumers "green" building products. EcoOptions is part of a marketing effort from Home Depot to promote environmentally friendly products, including natural fertilizer and mold resistant drywall. Home Depot is testing these in all of its Canadian stores. [Source: Ernest Beck, The New York Times, www.nytimes.com]

![](_page_34_Picture_34.jpeg)

# Our future forests are in good hands.

Planting more trees, protecting wildlife and preserving water quality are a way of life for us at Anthony Forest Products Company.

We practice the Sustainable Forestry Initiative" to ensure future generations of superior, environmentally friendly building products as a part of our Powerful Building Solutions<sup>SM</sup>.

![](_page_34_Picture_45.jpeg)

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

#### Construction Web Sites Benchmarked in Study

The Internet Standards Assessment Report (ISAR) recently released by the Web Marketing Association says construction industry web sites are generally inline with the overall ISAR Index. This shows a substantial improvement from their significant underperformance in 2003. The ISAR study provides industry benchmarks for site development and is based on data collected from 9,748 site evaluations in more than 80 industries over the past decade. The Web Marketing Association also conducts an annual WebAward Competition for web site development. To view past WebAwards Best Construction web site winners, or to nominate a site, visit www.webawards2006.org to download a copy of the full ISAR report. [Source: 03/23/06, www.toolbase.org] SBC

Email ideas for this department to builderbanter@sbcmaq.info.

![](_page_35_Picture_0.jpeg)

For more information about WTCA Chapters and how to become more involved, contact Anna L. Stamm (608/310-6719 or astamm@qualtim.com) or Danielle Bothun (608/310-6735 or dbothun@qualtim.com). Contributions to Chapter Corner, including pictures, are encouraged. Submissions may be edited for grammar, length and clarity.

#### Chapter Spotlight

Addressing Chapter Issues with WTCA Tech Notes

by Anna L. Stamm AS

All component manufacturers have days when they wish they had a standard industry policy that they could simply refer to resolve an issue with a building official, architect, engineer, or someone else in the industry-a simple piece of paper that says how our industry has already addressed a particular question and has a recognized response. To fill that need, WTCA has developed Tech Notes.

WTCA Technical Notes address specific component industry situations, pulling together all of the facts we have and applying building code regulations, professional engineering law, truss industry standards, etc. to define a logical approach. Tech Notes use a Background, Issue, Analysis and Conclusion template, and all Tech Notes are reviewed by the WTCA Engineering & Technology Committee. Through this consensus process, all industry members can be sure that we are speaking from a united industry position.

Once finalized, Tech Notes are posted online at www.sbcindustry.com/tech notes.php and freely available for use by anyone online or as printable PDFs at any time. Please bookmark this site and refer anyone with a question to it, email them the PDF, or print one out for a meeting and hand it out. The bottom line is that the information is at your fingertips and theirs!

Importantly, Tech Notes are developed in cooperation with WTCA Chapters and are state-based where applicable. On the web site, there is an interactive map so that anyone browsing may click on a particular state to see what Tech Notes are available.

So, the guestion to ask your chapter now is: what issues do we have that could be resolved with a Tech Note? The most common issues to date are those surrounding requests for sealed truss placement diagrams. Missouri and Kentucky were the first states to act as templates (see also the Chapter Corner item on Missouri). The latest work for the State of Missouri is being edited where this issue arises in other states and the pertinent state laws are incorporated into the text. Also in the works are Tech Notes on design responsibilities, web member bracing, bottom chord live loads and more. Many issues can be addressed through Tech Notes, so be sure to let WTCA staff know what issues you need to resolve in your marketplace-we'll gladly work with you, since it is likely that if you are facing an issue, another component manufacturer will too. SBC

"I just wanted to let you know how much we appreciate the team effort in dealing with the sealed placement plan issue in Kentucky. By submitting the Tech Note Position Statement to the local engineering companies, things have guieted down at least for now. Please pass on to those responsible our gratitude."

-Clyde Bartlett, Bluegrass Truss Company, WTCA-Kentucky Chapter

#### Chapter Highlights

#### California Engineered Structural **Components Association**

The Southern and Northern Regions of the California Chapter held back-to-back meetings on March 14 and 15. Chapter members had two chances to lend their thoughts and feedback on all of the issues the chapter is pursuing. The subcommittee addressing the Safety Zone project is moving forward. Plans are underway to determine the first beta site using a flatbed trailer. Sites with roll off trailers and top plate delivery will be selected next. The Department of State Architect (DSA-SS) has written proposed changes to the requirements for trusses in the 2007 California Building Code. WTCA staff will submit comments per the agreements made at the CalESCA meeting on changes for DSA-supervised projects such as schools and essential public facilities. The current status of the CalTrans Transportation Permits Advisory Council (CTPAC) activities was reviewed. A member happened to have an issue with a wall panel load that was ticketed by the California Highway Patrol as a reducible load violation. This will allow the chapter to use this as a test case for working with CTPAC on issues like this so that there is consistent interpretation and enforcement of the law.

Finally, members discussed ways to encourage more companies to take advantage of the publications cooperative offered by WTCA. Members will also recruit attendees for this summer's WTCA Open Quarterly Meeting in San Diego on August 2-4. The next chapter meeting will be a statewide meeting in Sacramento on May 23 with a golf outing to follow on May 24. All members and nonmembers are welcome to attend.

#### Central Florida Component Manufacturers Association

At its March meeting, the Central Florida Chapter swore in its new officers: Bill Heine of CBS Builders Supply as President, Herb Hildebrand of Casmin as Vice President and Chuck Stillwaggon of Casmin as Secretary. The featured topic of the evening was In-Plant WTCA QC. Tony Piek of WTCA staff was on-hand to discuss the features and benefits of In-Plant WTCA QC as well as the recent work by the WTCA Quality Control Committee and the anticipated 2006 priorities.

For its May meeting, the Central Florida Chapter is jointly sponsoring a statewide Florida Chapters meet-Continued on page 72

# 7th Annual WTCA Membership Drive

# "It ain't over till it's over!"

You know membership in WTCA is a great deal! Spread the word to potential members and you could WIN! The race is on for: #1 WTCA Component Manufacturer Recruiter

## **#1 WTCA Supplier Membership Recruiter #1 WTCA Recruiting Chapter**

#### Visit www.sbcindustry.com/memdrive.php for details and the current standings!

"It seems as though everyone at WTCA is headed for a common goal and is doing more (far more) for the advancement of the industry than any company or group of companies could ever do on their own." -Keith Cresotti, President, NU-Truss, Inc., Westfield, MA

Will is be a 3-peat for Texas, or will someone else take the lead? Don't wait...

# Start recruiting today!

#### For more information, contact Anna at 608/310-6719 or astamm@qualtim.com.

# —Yogi Berra

![](_page_36_Picture_0.jpeg)

Alan Esch presented a Fire Performance of Wood Trusses workshop on behalf of the lowa Chapter at the Regional Fire Service Training Event in Emmetsburg, IA.

![](_page_36_Picture_2.jpeg)

The 2006 North Carolina Chapter Board (left to right): Mike McIntosh, David Green, Chris Lambert, Tom Hollinshed, John Presley and Jack Parker (not pictured: Glenn Traylor).

![](_page_36_Picture_4.jpeg)

#### Chapter Corner Continued from page 70

ing. The guest speaker will be WTCA Legal Counsel Kent Pagel. The meeting will be held on May 16 in Orlando. For more information, contact WTCA staff.

#### Colorado Truss Manufacturers Association

At their March chapter meeting, Colorado Chapter members agreed to allow Wyoming component manufacturers to join their association. The chapter is in the process of updating its bylaws, so this is one of the changes they will implement. The chapter is also planning to develop a CTMA web site. The quest speaker for the day was Jerry Weintraub from the Weintraub Organization. With a presentation on truss bracing and wind loads, many pertinent issues were raised. The chapter thanks him for his presentation and an evening well spent.

#### Iowa Truss Manufacturers Association

The winter educational sessions of the lowa Chapter were a hit once again. This year, the focus was on fire and the chapter was able to use the newly revised Carbeck CD on fire performance. See photo (above) of the April 1 workshop for the Regional Fire Service Training Event held in Emmetsburg, IA, at Iowa Lakes Community College, one of many current and ongoing ITMA workshops being given to the Iowa Fire Service.

#### Missouri Truss Fabricators Association

The hot topic at the March meeting of the Missouri Chapter was sealed placement diagrams. The MTFA/WTCA staff team has been working on this issue since November. This includes several meetings with the Kansas City Planning and Development Office. The following WTCA Technical Notes were also created to address the situation: "Position Statement on Sealed Truss Placement Diagrams for Commercial Projects in the State of Missouri," "Position Statement on Sealed Truss Placement Diagrams for Residential Projects in the State of Missouri" and "Recommended Truss Placement Diagram Note for Projects Constructed in Missouri." To view these and other Tech Notes, visit www.sbcindustry.com/technotes.php.

#### North Carolina/South Carolina Joint Chapter Meeting

On March 15, the South Carolina Component Manufacturers Association and the Wood Truss Council of North Carolina held a joint chapter meeting in Matthews, NC, a suburb of Charlotte. Before the meeting, attendees were invited to an informal lunch at a nearby restaurant.

A North Carolina Chapter Board meeting also preceded the joint meeting and the 2006 Board of Directors and Officers were confirmed as: Chris Lambert of Southeastern Materials as Chapter President, Tom Hollinshed of Comtech as Vice President, Corey Misenheimer of Stock Components as Treasurer, John Presley of Universal Forest Products as Secretary, and additional Directors David Green of Stock Components, Jack Parker of Eastern Building Components, Glenn Traylor of Alpine Engineered Products and Mike McIntosh of MiTek Industries (see photo above).

The special guest for the day was WTCA Legal Counsel Kent Pagel. Kent delivered his presentation on "Successfully Negotiating an Acceptable Customer Contract," which focused on general considerations to follow when reviewing a customer's proposed purchase order or subcontract agreement, a review of problematic provisions from a sample agreement and guidelines on how to address problematic provisions. In addition, a preview was shown of his new program for WTCA, ORisk: Online Risk and Liability Management. Everyone enjoyed the presentation and this special joint meeting.

#### WTCA - Illinois

Following its special downstate meeting in December, the chapter welcomed a second Illinois State Police Commercial Vehicle Enforcement Officer as the quest speaker at the March meeting in Rockford, IL. Officer Joe Mata delivered a presentation on the rules of the road and emphasized several pertinent issues including oversize loads, permits, inspections and log books. Many questions were raised, especially regarding load securement, and the component manufacturers in attendance demonstrated that they know their cargo well and have great suggestions on how to make sure their loads are secure (see also photo above).

Additional issues discussed at the chapter meeting included the Governor's Task Force on the Uniform Building Code for the State of Illinois, activity in Belvedere to require sprinklers in residential buildings and an update on the WTCA Open Quarterly Meeting in San Antonio. The next chapter meeting will be held on June 6 in Rockford.

For more information, about WTCA Chapters, contact Anna L. Stamm (608/310-6719 or astamm@qualtim.com) or Danielle Bothun (608/310-6735 or dbothun@qualtim.com). Contributions to Chapter Corner, including pictures, are encouraged. Submissions may be edited for grammar, length and clarity.

![](_page_36_Picture_21.jpeg)

IL State Police Officer Joe Mata of the Commercial Vehicle Enforcement Div. "arrests" James Griffin of Component Systems Inc. during his presentation at the Illinois Chapter meeting.

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![](_page_36_Picture_35.jpeg)

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![](_page_37_Picture_0.jpeg)

#### May

- 11: Wisconsin Truss Manufacturers Association (WTMA) Chapter Meeting. For more information, contact Chapter President Gene Geurts at 920/336-9400 or ggeurts@richcostr.com.
- 16: Florida Chapters Meeting with guest speaker Kent Pagel, The Castle Doubletree Hotel, Orlando, FL. For more information, contact Dani at WTCA-National, 608/310-6735 or dbothun@qualtim.com.
- 18: Minnesota Truss Manufacturers Association (MTMA) Chapter Meeting. For more information, contact Chapter President Tom Nomeland at 507/872-5195 or thomeland@ufpi.com.
- 18: Mid Atlantic Wood Truss Council (MAWTC) Chapter Meeting. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@gualtim.com.
- 18: Western Component Manufacturers Association (WCMA) Chapter Meeting, The Century Hotel, Tualatin, OR. For more information, contact Chapter Vice President David Hughes at 503/581-8787 or davidh@ oregontruss.com.
- 23: California Engineered Structural Components Association (CalESCA) Statewide Chapter Meeting. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@qualtim.com.

#### June

- 1: Inland Empire Truss Fabricators Association (IETFA) Chapter Meeting. For more information, contact Dani at WTCA-National, 608/310-6735 or dbothun@qualtim.com.
- 6: WTCA-Illinois Chapter Meeting. For more information, contact Dani at WTCA-National, 608/310-6735 or dbothun@gualtim.com.
- 7: Iowa Truss Manufacturers Association (ITMA) Chapter Meeting. Date changed from June 14. For more information, contact Chapter President Tom Lambertz at 515/283-7100 or tlambertz@robertsdybdahl.com.
- 7: Southwest Florida Truss Manufacturers Association (SWFTMA) Chapter Meeting. For more information, contact Chapter President Jim Swain at 239/437-1100 or jimsw@carpentercontractors.com.
- 8: Missouri Truss Fabricators Association (MTFA) Chapter Meeting. For more information, contact Dani at WTCA-National, 608/310-6735 or dbothun@qualtim.com.
- 8: West Florida Truss Association (WFTA) Chapter Meeting. For more information, contact Chapter President Rick Cashman at 727/585-2067 or rcashman@ffptruss.com.
- 8: Wood Truss Council of Michigan (WTCM) Chapter Meeting. Date changed from June 15. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@qualtim.com.
- 13: Colorado Truss Manufacturers Association (CTMA) Chapter Meeting. For more information, contact Chapter President Dennis Wilson at 303/307-1441 or DWilson@HomeLumber.com.
- 15: South Florida WTCA Chapter Meeting. For more information, contact Dani at WTCA-National, 608/310-6735 or email dbothun@gualtim.com.
- 15: Truss Manufacturers Association of Texas (TMAT) Chapter Meeting, Cool River Restaurant in Austin. For more information, contact Anna at

WTCA-National, 608/310-6719 or astamm@gualtim.com.

- 20: South Carolina Component Manufacturers Association (SCCMA) Chapter Meeting. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@gualtim.com.
- 21: Wood Truss Council of North Carolina (WTCNC) Chapter Meeting. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@qualtim.com.

#### July

- 11: Georgia Component Manufacturers Association (GCMA) Chapter Meeting. For more information, contact Chapter President Bob Burkett at 770/534-0364 or bob.burkett@gamtn.com.
- 11: Northwest Truss Fabricators Association (NWTFA) Chapter Meeting and Golf Tournament, Harbour Pointe Golf Club, Mukilteo, WA. For more information, contact Laurie Motter at Idmotter@juno.com.
- 12: Southwest Florida Truss Manufacturers Association (SWFTMA) Chapter Meeting. For more information, contact Chapter President Jim Swain at 239/437-1100 or jimsw@carpentercontractors.com.
- 13: Alabama Component Manufacturers Association (ACMA) Chapter Meeting. For more information, contact Dani at WTCA-National, 608/310-6735 or dbothun@qualtim.com.
- 18: Central Florida Component Manufacturers Association (CFCMA) Chapter Meeting. For more information, contact Dani at WTCA-National 608/310-6735 or dbothun@qualtim.com.
- <u>18</u>: Tennessee Truss Manufacturers Association (TTMA) Chapter Meeting. For more information, contact Chapter President Jerry Robertson at 931/645-3324 or orgaintruss@earthlink.net.
- 19: WTCA-Arizona Chapter Meeting. For more information, contact Chapter President Terry Lillard at 623/584-8151 or tsl@sunstateaz.com.
- 19: WTCA-Northeast Chapter Meeting, Holiday Inn Worcester, MA. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@qualtim.com.
- 20: North Florida Component Manufacturers Association (NFCMA) Chapter Meeting. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@qualtim.com
- 20: South Florida WTCA (SFCMA) Chapter Meeting. For more information, contact Dani at WTCA-National, 608/310-6735 or dbothun@ gualtim.com.
- <u>20</u>: Southern Nevada Component Manufacturers Association (SNCMA) Chapter Meeting, Memphis Championship Barbeque at 1401 South Rainbow Blvd, Las Vegas, NV. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@gualtim.com.
- 20: WTCA-New York Chapter Meeting, NRLA Educational Center, Rensselaer, NY. For more information, contact Anna at WTCA-National, 608/310-6719 or astamm@qualtim.com.
- 25: Mid South Component Manufacturers Association (MSCMA) Chapter Meeting. For more information, contact Dani at WTCA-National, 608/310-6735 or dbothun@qualtim.com. SBC

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![](_page_38_Picture_0.jpeg)

## **Industry News & Data**

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| [an index measuring the cl      | <b>Consume</b><br>hange in the cost of      | r <b>Pric</b><br>typical wag | e Index                         | kases of goods and services             | Unemploy       | ment Rate           |
|---------------------------------|---|------------------------------|---------------------------------|---|----------------|---------------------|
| expressed as a p                | ercentage of the cos<br>base period - calle | t of these s<br>d also cost  | same goods a<br>-of-living inde | nd services in some<br>x]               | Dec            | <b>4.9%</b>         |
| Expenditure Category            | Changes fr<br>Dec                           | om Prece<br>Jan              | eding Mo.<br>Feb                | Compound annual rate 3-mo. ended Feb 06 | Jan06          | 4.7%                |
| All Items                       | 1   | .7                           | .1                              | 2.7                                     | Feb            | 4.8%                |
| All Items Less<br>Food & Engery | .1  | .2                           | .1                              | 2.0                                     | Source: Bureau | 4.1%                |
|                                 | Source: Bur                                 | eau of Labor                 | Statistics                      |   | Source. Bureau | of Eubor Statistics |

#### **Producer Price Index - Customized Industry Data**

| An initiationary indicator published by the 0.5. Bureau of Labor Statistics to evaluate wholesale price levels in the economy. |          |          |                             |                     |          |          |          |
|--|----------|----------|-----------------------------|---------------------|----------|----------|----------|
| Engineered Wood<br>Mem. (exc. truss) Mfg   | Jan06    | Feb      | Mar                         | Truss Mfg.          | Jan06    | Feb      | Mar      |
| Eng. Wood Mem.   | 122.4(P) | 122.0(P) | 119.3(P)                    | Truss Mfg.          | 122.4(P) | 121.8(P) | 121.8(P) |
| LVL  | 126.4(P) | 126.4(P) | 126.4(P)                    | Wood Trusses        | 120.2(P) | 119.5(P) | 119.5(P) |
| Other  | 121.9(P) | 121.3(P) | 121.6(P)                    | Primary Products    | 120.2(P) | 119.5(P) | 119.5(P) |
|  |          | (P) =    | preliminary                 | Secondary Products  | 107.8(P) | 109.6(P) | 107.0(P) |
|  |          | S        | ource <sup>,</sup> Bureau o | of Labor Statistics |          |          |          |

#### **Consumer Confidence Index**

The Consumer Confidence Index is a measure of consumer optimism toward current economic conditions. The consumer confidence index was arbitrarily set at 100 in 1985 and is adjusted monthly on the basis of a survey of consumers. The index considers consumer opinion on both current conditions (40%) and future expectations (60%)

| July  | Aug   | Sept | Oct  | Nov  | Dec   | Jan06 | Feb      | Mar   | % +/- |
|-------|-------|------|------|------|-------|-------|----------|-------|-------|
| 103.2 | 105.5 | 87.5 | 85.2 | 98.9 | 103.8 | 106.8 | 102.7(r) | 107.2 | 4.2%  |

Source: www.consumerresearchcenter.org

#### MARCH 2006 ISM BUSINESS SURVEY AT A GLANCE

|   | Series Index | Direction Mar vs Feb | Rate of Change Mar vs Feb |
|---|--------------|----------------------|---------------------------|
| ISM Manufacturing<br>Index (formerly PMI) | 55.2         | Growing              | Slower                    |
| New Orders                                | 58.4         | Growing              | Slower                    |
| Production                                | 57.5         | Growing              | Faster                    |
| Employment                                | 52.5         | Growing              | Slower                    |
| Supplier Deliveries                       | 53.1         | Slowing              | Faster                    |
| Inventories                               | 48.7         | Contracting          | Faster                    |
| Customers' Inventories                    | 48.0         | Too Low              | Faster                    |
| Prices                                    | 66.5         | Increasing           | Faster                    |
| Backlog of Orders                         | 59.5         | Growing              | Faster                    |
| Exports                                   | 57.3         | Growing              | Faster                    |
| Imports                                   | 57.0         | Growing              | Slower                    |

For an in-depth explanation of this summary, go to www.ism.ws/ISMReport/ROB042006.cfm.

| Unemployment Rate |                    |  |  |  |
|-------------------|--------------------|--|--|--|
| Dec               | <b>4.9</b> %       |  |  |  |
| Jan06             | 4.7%               |  |  |  |
| Feb               | <b>4.8</b> %       |  |  |  |
| Mar               | 4.7%               |  |  |  |
| Source: Bureau o  | f Labor Statistics |  |  |  |

**Producer Price Index** General % changes in selected stage-of-processing price indexes Ex. Food Month Total & Energy Dec 0.8(r) 0.2(r) Jan06 0.3 0.4 Feb -1.4 0.3 0.5 0.1 Mar

Source: Bureau of Labor Statistics

| U.S. Prime Rate |       |       |       |  |  |  |  |  |
|-----------------|-------|-------|-------|--|--|--|--|--|
| Month           | 2006  | 2005  | 2004  |  |  |  |  |  |
| Dec 1           | -     | 7.00% | 5.00% |  |  |  |  |  |
| Jan 1           | 7.25% | 5.25% | 4.00% |  |  |  |  |  |
| Feb 1           | 7.50% | 5.25% | 4.00% |  |  |  |  |  |
| Mar 1           | 7.50% | 5.50% | 4.00% |  |  |  |  |  |
| Apr 1           | 7.75% | 5.75% | 4.00% |  |  |  |  |  |

Source: Federal Reserve Board

![](_page_38_Picture_18.jpeg)

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#### Industrial Production Index

The industrial production (IP) index measures the change n output in U.S. manufacturing, mining, and electric and gas utilities. Output refers to the physical quantity of items produced, unlike sales value which combines quantity and price. The index covers the production of goods and power for domestic sales in the United States and for export. It excludes production in the agriculture, construction transportation, communication, trade, finance, and service industries povernment output, and imports. The IP index is developed by weighting each component according to its relative importance in the base period The information for weights is obtained from the value added measure of production in the economic censuses of manufacturer and minerals dustries, and from value added information for the utility industries ir Internal Revenue Service statistics of income data. The weights are updated at five-vear intervals to coincide with the economic censuse The current index base year is 1992. (r=revised)

|   | Dec     | Jan06   | Feb     | Mar  |
|---|---------|---------|---------|------|
| idustrial<br>roduction<br>otal Index<br>% change) | 1.0     | -0.4(r) | 0.5(r)  | 0.6  |
| apacity<br>tilization<br>otal Industry<br>%)      | 81.1(r) | 80.7(r) | 81.0(r) | 81.3 |

Source: Federal Reserve Board

#### CM News STOCK PURCHASES HOME LUMBER

Stock Building Supply, the largest U.S. pro dealer, has purchased Home Lumber Company in San Bernardino, Calif. Terms of the deal were not disclosed.

"Home Lumber is located in one of the most robust economies in the United States," said Fenton Hord, Stock president and CEO. "The company has been a consistently strong performer for many years."

Founded in 1947, Home Lumber's product mix includes lumber, OSB and plywood, engineered wood products and miscellaneous building materials. For the year ending November 2005, Home Lumber reported sales of \$92.2 million.

Home Lumber operates additional locations in Bishop, CA, and Yerington, NV. The acquisition adds 143 associates to the Stock team. All senior management, including company owner and founder's son, Milt Johnson, will remain with the company. [Source: www.homechannel news.com, 4/4/06]

#### MCGUIRE RECEIVES POST-FRAME **INDUSTRY'S HIGHEST HONOR**

During the National Frame Builders Association's (NFBA) Award Luncheon on March 1, Patrick McGuire, P.E., chief engineer for Borkholder Buildings in Napanee, IN, was bestowed with the Bernon Perkins Award.

The Bernon Perkins Award is NFBA's highest honor. It is presented each year to an

individual giving exemplary service to the post-frame industry. Bernon G. Perkins is credited with refining the evolution of the modern post-frame building from a temporary "pole building" to a longlasting structure. Red cedar poles were used before Perkin's time, lending up to a decade or more of longevity to structures. When red cedar poles became scarce in the mid-1930's, Perkins used creosote-treated poles to provide primary structural support. This extended a typical pole building's life by several decades. Perkins pioneered several design enhancements, and postframe has since proven an economical and efficient building concept for many uses.

As a chair of the NFBA technical and Research Committee, in the past decade Pat McGuire spearheaded some very important breakthroughs for the Post-Frame Industry. He united industry factions that were often at odds to push for new technical research projects that safeguard the continued growth of the post-frame industry. His vision led the way for acceptance of postframe design in the International Building Code. He identified the urgent problem created when ring-shank "pole-barn nails" were deleted from the National Design Standard, and coordinated efforts to create a new ASTM Standard, F1667, for ring shank nails under the new title of "Post- Frame Nails."

McGuire also served as WTCA President in 1995. [Source: NFBA Press Release, www. nfba.org, 3/21/06]

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> **Construction Lifters** (Bronze Advertiser)

# Many thanks for your support!

#### News 218,000 ACRES OF U.S. FOREST-LAND PROTECTED VIA HISTORIC LAND ACQUISITION PROJECT

International Paper, The Nature Conservancy and The Conservation Fund have reached an agreement to protect 218,000 acres of forestlands across 10 states in the single largest private land conservation sale in the history of the South, and one of the largest in the nation.

The Nature Conservancy will acquire more than 173,000 acres in North Carolina, Virginia, Georgia, Florida, Alabama, Arkansas, Tennessee, Louisiana and Mississippi. The Conservation Fund will acquire more than 5,000 acres in Florida and 500 in North Carolina. The two groups will jointly purchase an additional 39,000 acres in South Carolina.

International Paper will receive approximately \$300 million for the land at closing, which is expected to occur in the next several months. The tracts included in the sale are some of International Paper's most ecologically important lands. The majority of the land will remain working forests. Under the terms of the agreement, timber will be sustainably harvested from some tracts and a set amount of timber volume will be supplied to International Paper for local production. Sensitive areas will continue to be set aside from harvesting activities. [Source: investor.internationalpaper.com, 3/28/06]

#### Announcements STILES ADDS NEW PERSONNEL

Stiles Machinery Inc. is proud to welcome two new District Sales Managers. David Brooks will Continued on page 78

![](_page_39_Picture_0.jpeg)

# **Classified Ads**

#### WOOD TRUSS & PANEL COMPONENT PROFESSIONALS

Are you looking for a career that rewards and promotes individuals based on performance?

84 Components is currently seeking enthusiastic wood truss and panel professionals. Available positions include General Managers, Sales, Design Managers, Senior or Experienced Designers, and Production Management.

This is an excellent opportunity for motivated individuals to grow with a rapidly expanding, debt-free company. 84 Components currently has 18 manufacturing facilities, with plans for major expansion!

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![](_page_39_Picture_10.jpeg)

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#### EXPERIENCED TRUSS DESIGNERS

Manning Building Supplies in Jacksonville, FL, is seeking Experienced Truss Designers utilizing the Alpine Design Program. Salary based on experience. Managerial experience a plus. Relocation expense negotiable. Benefits include paid

medical and dental, profit sharing, paid vacation and holidays. For confidential consideration, please forward your résumé to: Mark Rose, Fax: 904/260-2981, email: mrose@mbs-corp.com

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#### WALL PANEL DESIGNER

Woodinville Lumber, WA's leading Wall Panel supplier, is looking for a Wall Panel Designer for our Woodinville, WA location. Must have exp w/CAD, AutoDesk exp. preferred, understanding of load calculation/transfer, familiarity w/wall panel and/or pre-engineered wood products, ability to read construction blue prints & execute take-off list, & min. 2 years exp in construction industry. Ideal candidate will display initiative, orderliness, patience, thoroughness & endurance. Excellent benefits inc. medical/dental/vision. 401k w/match & immediate vesting. Pay DOE. EEO/Drug Free Workplace. Email résumé to: lisa.wesolowski@woodinvillelumber.com or fax to 425/951-8206.

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#### Industry News Continued from page 77

serve their dealer partner, Brooks Machinery of Georgia, in its South East Region, which includes Georgia, Alabama and North Florida. Brooks has over seven years of industry experience as a sales representative for panel saws and other CNC machinery.

Steve Williams will serve their dealer partner, John G. Weber Co. of Wisconsin. Williams has been in the woodworking industry for over 10 years, most recently as a sales representative with a large hardware distributor. Williams also worked as a project engineer with Krueger International (now known as KI). KI is a large office furniture company that manufactures a comprehensive and diverse line of office, commercial, institutional and educational furniture. [Source: Press Release, 3/30/06. For reader service, go to www.sbcmag. info/stiles.htm.]

#### CMF INC. EXPANDS OPERATIONS

CMF Inc. is tripling its facility size to accommodate the increase in sales. The new additions are to increase production flow and maintain equipment quality. [Source: Press Release, April 2006. For reader service, go to www.sbcmag.info/cmf.htm.]

#### In Print & on the Web NEW STRUCTURAL COMPONENTS PUBLICATION NOW AVAILABLE

A new publication from the Southern Pine Council is now available: Southern Pine for Structural Components. To order a free copy, call 504/443-4464 (ext. 207) and request publication #215; e-mail info@southernpine.com; or visit www.southernpine.com. Online, in the Publications section, a PDF download is also available. [Source: Southern Forest Products Association Newsletter, 3/27/06. For reader service, go to www.sbc mag.info/spc.htm.

#### LSU WEB SITE TACKLES TERMITES

Louisiana State University has launched a web site designed to raise awareness of Formosan subterranean termites, the threat this pest poses and possible management strategies. To learn more about the termite, go to www.agctr.lsu.edu/termites/. SBC

> Visit www.sbcmag.info for additional industry news!

#### **Rip Rogers Inducted into Trussway Hall of Fame**

Palm Springs, CA – Industry icon Rip Rogers was inducted into the Trussway Hall of Fame during the Trussway National Sales Meeting held at the beautiful LaQuinta Resort and Club in Palm Springs, CA in February. The sales meeting was a celebration of a successful 2005 and a look forward to the future. In addition to meetings and golf, the sales and design staff at Trussway learned about the art of negotiation from renowned speaker John Patrick Dolan. But the highlight of the meeting was the awards dinner.

![](_page_39_Picture_37.jpeg)

Rogers was recognized for a long and distinguished career that dates back over forty-six years. He graduated from the University of Texas at Arlington with a BS in Civil Engineering and began his career with Barnes Lumber and Manufacturing in 1960 in Dallas. He later joined Trussway and moved to Houston. Trussway has since grown to over 1300 employees with manufacturing facilities stretching from Virginia to Arizona. Always an industry advocate, Rip was elected to the WTCA Board in 1984 and was one of the original board members of the Truss Manufacturers Association of Texas. He served as WTCA President in 1989 and was elected to the WTCA Hall of Fame in 1990.

Congratulations and best wishes for a happy and healthy retirement to "After serving on the WTCA Board for 15 years, I decided several Rip and his "first wife" of over forty years, Sally. SBC years ago that it was time to step aside," Rip said recently. "In doing

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![](_page_39_Picture_41.jpeg)

or fast, guality, solutions to your connector challenges, call Simpson  $^{7}$ Strong-Tie in Columbus, Ohio or our new Warehouse and Specials facility in Eagan, Minnesota.

Not only can you pick up orders locally, you also have a full service source for specials. More than 30 different Simpson standard models can be modified with up to 15 different options. Custom connectors can be fabricated from your Engineer's signed drawings. Quick turns and special finishes available on request.

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#### SIMPSON STRONG-TIE COMPANY. INC.

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so, I felt I was leaving it in good hands and my feelings have not changed. WTCA is far beyond anything I ever envisioned it to be 20 years ago. My commitment to the industry has always been to put more into it than you take out and to constantly strive to raise the level of professionalism within the industry."

"I feel the same about Trussway," he continued. "I feel comfortable that Trussway is healthy and strong. The company is in a position to grow with committed ownership and experienced management. The

people in place are among the best in the business and I feel good that I'm leaving the company stronger than it's ever been."

Rip was presented with a Trussway "Green Jacket" and Trussway Hall of Fame ring by President and CEO Bill Adams. "Rip is one of a kind-totally dedicated, having played a major role in the success of Trussway and the industry over the years," said Adams. "He will be missed."

Rogers retired at the end of 2005 and is looking forward to spending more time with his children and grandchildren.

![](_page_39_Picture_60.jpeg)

![](_page_39_Picture_61.jpeg)

![](_page_39_Picture_62.jpeg)

![](_page_39_Picture_63.jpeg)

15 different options for more than 30 different base models

![](_page_39_Picture_65.jpeg)

Quick turn and special finishes upon request

![](_page_40_Picture_0.jpeg)

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#### **Building Component**

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#### Hundegger USA L.C.

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#### Open Joist 2000 Inc. (Distribution) Page: 58

Mike Beauchamp • 800/263-7265 • 514/990-0078 fax Email: mike@openjoist2000.com Web site: www.openjoist2000.com

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#### SL Laser Systems Page: 31

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#### Southern Pine Council

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#### Weima America, Inc. Page: 17

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#### Wood Truss Council of America

#### Pages: 23, 28, 51, 71

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#### World Conference on Timber Engineering

#### Page: 67

Jamie LeGore, Oregon State University • 541/737-6443 Email: jamie.legore@oregonstate.edu Web site: www.wcte2006.com

![](_page_41_Picture_0.jpeg)

![](_page_41_Picture_1.jpeg)

During his career as a forensic consultant and expert witness, John Meeks, P.E., has become known for building small scale models of the structure and trusses in question to use as examples (see photo above). This was often his method for making the rather sophisticated topic of truss bracing and collapse a little easier to understand. "John is able to relate to the lay person," remarked Steve Cabler, P.E., Senior Vice President of Engineering and Technology Services for MiTek, Inc. "He is proficient at making complex engineering theories understandable to anyone." Here Cabler greets Meeks in front of Cal Jureit's first Gang-Nail plate at BCMC 2005 in Milwaukee, WI, where the 50th anniversary of Jureit's invention was celebrated. (For more about Meeks' contributions to the industry, see page 44 of this issue.) SBC

![](_page_41_Picture_3.jpeg)

# PRODUCT SHOWCASE

![](_page_41_Picture_5.jpeg)

#### RAM Easy Rider ™

The RAM Easy Rider is the component industry's leading trackless truss fabrication system. Why? Because you can build more trusses with less labor. Its unique distribution of workload keeps the manufacturing process smooth, efficient and highly productive. Now, with the introduction of the AutoSet C4 automated jigging system, it's even more productive. The C4's innovative offset drive keeps table slots clear and open to the floor for easier maintenance. What's more, it may be the fastest setup system in the industry.

![](_page_41_Picture_8.jpeg)

![](_page_41_Picture_9.jpeg)

#### Speed Cut Express ™

The Speed Cut Express installed on a new or existing Metra-Cut turntable saw can make even a relatively new sawyer cut like a pro. Using information created with truss design software, the Speed Cut Express automatically sets up both length and angle for every piece. On-screen graphics show the orientation for the lumber while the saw sets up for the next cut. Machine

while the saw sets up for the next cut. Machine movement occurs after the blade returns to safe position behind the fence. Setup is fast and pieces are cut to exact design specifications. Tough servo motor technology is the same as in the machine tool industry.

![](_page_41_Picture_13.jpeg)

![](_page_41_Picture_14.jpeg)

![](_page_41_Picture_15.jpeg)

www.alpeng.com – Videos are available of most Alpine equipment – 800-755-6005 For reader service, go to www.sbcmag.info/alpine.htm

82 May 2006

![](_page_41_Picture_20.jpeg)

#### Hi Speed Linear Saw™

![](_page_41_Picture_22.jpeg)

The ALS saw is the most sought after cutting machine in the component industry. No wonder. It is the only automated component cutter that cuts all standard truss parts from any lumber width: single, double, and step webs – off center – regular and scissor bottom chords – scarfs longer than 60 inches – and bevels of 90 to 30 degrees. The ALS will cut parts as short as 3 inches and engineered wood products as large as 40 by 14 by 1 ½ inches with no machine modification. To see it for yourself call for a free video that shows the ALS in action.

![](_page_41_Picture_24.jpeg)

#### AutoMill Component Cutters TM

With 5 cutting heads, setup times of less than 20 seconds, 23 axes of automation, and auto sequencing, AutoMill component cutters are the standard of the industry. The AutoMill RS can cut more than 3,000 pieces in lengths of 13" to 20' in a single 8-hour shift. The AutoMill SC version is the

shift. The AutoMill SC version is the most accurate saw ever produced for the wood truss industry, thanks to servo technology. Get all the facts from the Alpine Equipment Division.

![](_page_41_Picture_28.jpeg)

![](_page_41_Picture_29.jpeg)

A Division of Alpine Engineered Products, Inc.

# Desawyer 2000

The only fully computerized, five-bladed saw on the market with a complete manual backup system. This saw can be operated in one of three modes: Automatic, Semi-Automatic and Manual.

![](_page_42_Picture_2.jpeg)

![](_page_42_Picture_3.jpeg)

HEAVY DUTY CONSTRUCT

![](_page_42_Picture_5.jpeg)

FAST & EASY SETUP

![](_page_42_Picture_7.jpeg)

![](_page_42_Picture_8.jpeg)

Automatic - Jobs are downloaded by Network or removable disks. Semi-Automatic - Sawyer uses the touch screen to enter the values from cut sheet. Manual - Bypasses the computer allowing the sawyer to use

- Bypasses the computer allowing the sawyer to use conventional push buttons

1-877-642-4900

![](_page_42_Picture_12.jpeg)

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