STRUCTURAL BUILDING STRUCT

September/October 2007

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"It's not enough in today's world to know that what you are doing works... It is critical to know why it works."

Kendall Hoyd, SBCRI President

SBCRI: A World-Class RESEARCH INSTITUTE Facility Revealed

by Emmy Thorson-Hanson

"In God we trust... all others bring data." -W. Edwards Deming

hursday, June 28 was an ideal summer day in Wisconsin. The sun was shining, the sky was a brilliant blue, and an historic event was taking place on Enterprise Lane in Madison.

Over 100 members of the structural building components industry gathered that day for the grand opening of the Structural Building Components Research Institute

> (SBCRI). Members of the industry traveled from as far as California to attend the highly-anticipated open house and to seize the opportunity for a sneak peek. Construction began on the facility in November 2006, which will house critical testing projects that examine the integrity and cost efficiency of structural building components.

> Rick Parrino (Plum Building Systems) shared why he was eager to witness this long-awaited event. "I had to come see [the facility] to try to grasp what our capabilities are here." Ben Hershev (Alliance TruTrus, LLC) explained why the nearly 1800 mile trip was well worth it. "I was excited about the opportunity to see the fruit of WTCA's labor in building a state-of-the-art facility that will allow us to work with TPI, other associations, insurance companies, and industry groups to further the use of structural building products."



at a glance

- ☐ The grand opening of SBCRI took place on June 28 in Madison, WI.
- ☐ Attendees were amazed at the capabilities and potential of the new facility.
- □ Component manufacturers and suppliers agree that SBCRI is long overdue and will play a huge role in the future of the structural building components industry.

Industry suppliers also had a presence at the ceremony. "MiTek considered it a privilege and honor to be there for the grand opening. As a charter member of TPI, we wanted to share in the festivities that launched what will substantially be a joint effort to advance our industry," said Tom Manenti (MiTek).

WTCA President Barry Dixon (True House, Inc.), TPI President Tom Whatley (Eagle Metal Products), SBCRI President Kendall Hoyd (Idaho Truss & Component Company), and WTCA Executive Director Kirk Grundahl, each took a few moments during the ribbon cutting ceremony to talk about the impact the facility will have on the industry. "It's not enough in today's world to know that what you are doing works...It is critical to know why it works," proclaimed Hoyd during his invigorating speech.

Need for Change

There is no doubt that SBCRI is going to guide us through uncharted territory.

Art Hernandez (Eagle Metal Products) said the 5,730 sq.ft. facility will greatly improve the industry's credibility. "Right now there are too many questions and not enough answers. This is a step in the right direction toward the future."

Ed Robbins (Robbins Design Service) looks forward to what design professionals have to gain from the ground-breaking research to be done at SBCRI. "This will give us (as engineers) more confidence. Until now things have been based on experience rather than physical analytical data. Now we will have data to back up our engineering."

Richard Brown (Truss Systems Inc.) explained that in his company's market, hard data and a fresh body of knowledge will lead to the next generation of growth - the overarching goal of SBCRI. "In our marketplace it is still more common to use stick framing than trusses. This will go a long way to verify that trusses are the way to go and it will prove our capabilities."

For others, proving what we think we know about our products in a very scientific manner is a thrilling prospect. "I'm excited about testing things like 'chunk-out.' [Testing and analyzing lumber stresses will further prove and clarify our theories. It's pretty awesome," said Clyde Bartlett (Bluegrass

Casey Carey (Carter Components) points out how the facility will help with code interpretation. "You have one person's opinion and another person's opinion," he said. "There's an old saying that I heard a long time ago: There's your way, there's my way, then there's the right way. Now we have a means to test the right way."

The flexibility of SBCRI to accommodate testing many different materials - trusses, wall panels, engineered lumber, fiber reinforced products, field repair methods and cold formed steel - is revolutionary. People like Mike Noonan (Cascade Mfg Co) anticipate that the ability to test cold-formed steel

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trusses in the facility will facilitate greater acceptance of the product. "Tests can show, yes, this product works and is cost effective." he said.

Dixon noted the potential environmental impact of the facility. "Right now this industry is starting to look at renewable resources and green building. But to make those things work vou have to be able to reduce costs on the structural side." That requires inventing new processes and understanding the entire structure and how it all works together. And now that we have that ability, "that's huge."

Back to the Future

With a ceiling height of 38', SBCRI allows for full-scale testing and analysis in a real-world environment. The standard widths range from 4' to 18', standard heights range from a 10-inch floor system to a 20-foot high series of floors, walls and a roof. The standard length can range from 4' to 90' long and the maximum area available for testing is 30 feet wide x 32 feet high x 90 feet long. The facility has custom designed software that will allow loads to be applied on the input side. or the load coming in from the actuators, in pounds or the length of the actuator (which causes displacement). It can also record the output loads with a series of digital scales throughout the infrastructure that measure deflection or strains up to 100 times per second. This computer technology allows detailed information to be available for analysis.

The scope of the technologies contained within SBCRI - and its sheer size - impressed the industry pioneers in attendance. The elaborate facility left a lasting effect on the Finnforest team. Jim Gilleran declared that "The technology in the facility is just marvelous," and Jack Palacio commented that "It's mind boggling to see them perform these tests with a little handheld device. Testing has come a long way."

Both Gilleran and Palacio have worked in the industry since its early days, a time when this type of testing seemed impossible. "I never expected to see testing evolve this much When we first tested trusses we piled cinder blocks on the trusses to see how much load weight they could carry before failure," said Palacio.

Stark Truss Company patriarch Abner Yoder was amazed "It's such an innovative idea to test a whole system, not just one truss. Over time I've learned a lot, but I never thought I'd see this."

A League of Its Own

After the ribbon cutting, attendees went on tours through the brand-new state-of-the-art facility. Inside the facility, attendees saw a single truss testing assembly as well as a full system assembly (30-feet long x 12-feet wide x 16-feet tall). They also got to look at the control software which shows

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The Dawn of a New Age for the Structural Building Components Industry

WTCA's SBC Research Institute officially opened its doors in June, marking the dawn of a new age for the structural building components industry. The 5,730 square-foot facility advances the industry's goal of developing a fresh body of knowledge that will add new value to the industry and lead the next generation of industry growth.

The SBC Research Institute offers the industry the ability to test:

- · Standard design loads on a single component
- Drag and shear loads on a single component
- Standard design loads on a system of components
- Drag and shear loads on a system of components, both parallel and perpendicular to the components
- Unbalanced and bidirectional wind loads
- Simulated wind uplift loads
- Cyclic loading at application points from the foundation to the peak of the roof
- · Any point loading condition that a building could possibly have applied to it
- Loading applied in 3 axes simultaneously, to simulate both construction and environmental loads



Thank you to our SBC Research Institute sponsors for helping foster this new age for the industry.

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For more details or to speak to someone in person about the magazine, contact Libby at 608/310-6724 or email Imaurer@ sbcmag.info.

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load development and allows users to view test data in real time to directly track test performance.

"I was impressed by the hand-held controls and how everything is done digitally," said Hernandez. "I was impressed by the overall size and capability of the facility. Being able to test a cyclical load on each axis is unique. Nothing like this has been done before," commented Robbins.

For attendees who had been to other testing facilities, the consensus was that all others paled in comparison. According to Noonan, "This [facility] has much more scope and breadth. It will allow a lot more diversity, [as far as] what we can do and how. It takes it to a different level of sophistication."

Testing of a Different Color

SBCRI will take testing to another level because its purpose is purely to advance the industry. "This size is impressive, but the best part goes beyond just its size. The people that put it together made it unique. I knew there was a move to get it done. The concept to reality – the vision has come true," said Bruce Bain (Richco Structures).

Brown agrees that the efforts of the SBCRI are unparalleled. "Up until now testing has only been done on a proprietary basis, to prove an individual company's product." With knowledge as the driving force/incentive behind testing, rather than money, the facility is truly unbiased and pure in its initiatives.

According to WTCA President Barry Dixon, the facility is in good hands: "What will really separate SBCRI from any other testing facility in the world is that the staff is so educated

"I had been here two to three months ago and had an appreciation for the facility's size. I didn't have an appreciation for the mass of the steel testing framework, especially the vertical columns and the flexibility of the system, until I saw the holes in the ground, and the variety of set-ups possible. There aren't any limitations. We have to show people this facility. The investment is incredible."

—Steve Cabler, P.E., MiTek Industries, Inc., Chesterfield, MO





Attendees were asked to fill out an evaluation form immediately after they toured the facility. Here are a few of the responses we received to a pair of questions about their before-and-after thoughts.

Evaluation: What did you think you would see prior to the tour?

R.E. Franklin: Much less.

Warren Bracken: A typical testing facility.

Wayne Jewell: A test facility without the flexibility I did see.

What was your first impression of what you saw after the testing portion of the tour was completed?

R.E. Franklin: How far the truss industry has come. I started 8/61.

Warren Bracken: An extraordinary testing facility with limitless possibilities.

Wayne Jewell: Great versatility! I'm excited at what this facility will provide.

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What Did Your Peers Have to Say After the Tour?

"I've never seen anything quite like this." Warren Bracken

"It's an impressive facility. I was surprised by the magnitude of what can be tested. It just blows you away." Tom Whatley (TPI President, Eagle Metal Products)

"I liked what I saw. It's something we have been in need of for a long time." Richard Brown (Truss Systems Inc.)

"It's massive, but flexible. Very amazing." Linda Bouford (Finnforest USA)

"I think the size of it, first, is overwhelming. You picture it being big, but it's even bigger. Even seeing all the pictures and everything, it's a much bigger facility than I expected." Rick Parrino (Plum Building Systems)

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"The SBCRI will definitely take on a leadership role."

-Richard Brown, Truss Systems, Inc.



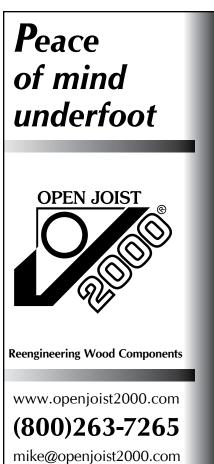




"I think the greatest thing about the facility is the flexibility it offers."

—Jack Palacio, Finnforest USA

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and so dedicated to having successful results. They're very results-driven, and their focus is clear.'

The Future Just Got Brighter

As the day wound down attendees gathered outside for more snacks and desserts while discussing the impact of the event they just witnessed. Joe Hikel commented on how he thinks the industry will grow compared to its progress in the past. "I predict a lot more will happen than in the last 50 years. We'll be able to do our jobs better, faster, cheaper, and completely revolutionize the industry. We'll save costs. We'll eliminate the rules of thumb with real data."

Mike Cassidy (TPI) also anticipates great things down the road. "I think that our testing capabilities will allow us to better understand how entire systems work differently than individual components."

"It's just amazing. This industry has provided everybody here with a means and a livelihood to do the things we want to do. WTCA came in to help us to promote the industry and to bring leadership," shared Carey. "And now, we are going to be able to give back to the people by giving them facts. We're discovering truth here."

Gilleran made an interesting analogy comparing the uncharted territory of the industry to the uncharted maps and seas in the days of Christopher Columbus. "Today the world is flat. SBCRI could have a global effect." Koss Kinser sums it up. "This is just the beginning." And what a great beginning it is **SBC**

Visit the SBCRI website at www.sbcri.info to stay up-to-date with everything going on at the facility. And remember, the door is always open for a personal tour — just let us know when you would like to drop by!



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MESSAGE FROM THE BCMC CHAIR

Here we are at BCMC 2007 where we find ourselves returning to the great city of Columbus, Ohio. Columbus was founded in 1812 and has served as the state capital since 1816. Today, the city has gradually grown into the most populous city in the state of Ohio.

When we hear bits of information such as that, often times it doesn't take into consideration the impact we have had in becoming part of the largest city in a state. How many prefabricated trusses or wall panels have been delivered to the countless jobsites over the years? If it weren't for automated machinery, would we have been able to manufacture as many pieces as efficiently?

The list of questions we could ask ourselves continues to grow, but where does it begin? You guessed it, at the Building Component Manufacturers Conference (BCMC). It is here that we are able to research the products out there that will enable us to build our communities. Whether it's a small town or one of the largest cities in America, BCMC plays an important part.

While here, you will find yourself on the show floor or in the sessions discussing new topics that are relevant to your roles in the industry. Ongoing communication and the latest technology are apparent on the show floor and in sessions and roundtable discussions. It is here where common ground is discovered and solutions are established.

Whether the economy has had an impact on your company, you will find ideas and tools you need to help overcome these obstacles. I look forward to seeing you on the show floor in Columbus where we continue to Discover New Possibilities.

Thank you and welcome to BCMC 2007!

Mr. Ben Hershey BCMC 2007 Chair Alliance TruTrus, LLC

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Owner? **Designer?** Accountant? Discover what BCMC can offer



Look for these symbols throughout the booklet to see all the events targeted toward you!



Owner/CEO/Senior Management

- Expand your market and find out where the market is heading at the Economic Forecast.
- Comparison shop for equipment.
- Motivate your employees at Joe Hikel's incentive compensation session.

OCCUPATION DISCOVER BCMC

- Get industry survival tips and solve critical business issues by attending roundtable discussions.
- Improve your leadership skills at a session by success expert Bryan Dodge.



Design Managers/Designers/Technical Staff

- Cruise the show floor for the latest in industry products and services.
- Meet face-to-face with your vendors for tips and tricks related to the products and software you use everyday!
- Attend sessions (and even a roundtable) dedicated entirely to design issues.



Risk and Safety Managers

- Learn from your industry peers and exhibitors about the best safety and risk materials.
- Develop your company's policies after you attend Kirk Grundahl's session on post-accident best practices.
- Get all your questions answered at the roundtables devoted to safety and risk.



Production Managers/Floor Supervisors

- Find equipment that can help you do your job better and faster!
- Get suggestions from your industry peers on maximizing efficiency.
- Consider expanding your product offerings with information gathered from the sessions: wall panels, steel and EWP.



CFO/Accounting Managers

- Learn about the latest and greatest accounting software.
- Comparison shop for the product that's right for your company.
- Attend the benchmarking session to find out how to improve your bottom line.



Sales Department

- Plan for the future with information from the Economic Forecast.
- Learn how to tackle old problems in the "Building a Better You" session by Bryan Dodge.
- Discover innovative sales ideas in roundtable sessions dedicated to sales.



Human Resources

- Learn more about your industry to better serve your company's employees.
- Stop by Bryan Arzani's sessions to solve the mystery on why performance reviews do not work and learn how to hire producers.

Discover BCMC — The Best Show For **The Structural Building Components Industry!**

CONFERENCE AT A GLANCE

EXHIBIT HALL OPEN:

Wednesday, 10/3 12:15p-6p Thursday, 10/4 10:30a-5p Friday, 10/5 8:30a-12:30p

SEMINARS:

Tuesday, 10/2 6p Component Manufacturer Roundtables

Wednesday, 10/3 8a-9a Kick-off Presentation

9:15a-12p Educational Sessions

Thursday, 10/4 8a-9a WTCA Annual Meeting

9:15a-10:30a Educational Sessions

4:15p-5:30p Component Manufacturer Roundtables

Friday, 10/5 8a-9:30a Economic Forecast

12:30p Component Manufacturer Roundtables

FULL SCHEDULE

TUESDAY, OCTOBER 2

8a-6p Registration • D130

Golf Outing • Bus pick-up: Meet at 6:15 a.m. outside of the Hyatt 8a-4p

Regency near the skywalk to the convention center or at the

Crowne Plaza in the main lobby

WTCA Truss Technician Training Course: Truss Basics • D132 1p-7p

Component Manufacturer Roundtables: Focus Groups on 6p

Industry Issues • Hyatt Regency Franklin B/C/D

Exhibitor Meeting • E160 7p

WEDNESDAY, OCTOBER 3

Registration • D130 7a-6p

7a-8a Continental Breakfast · Ballroom 4-5

Welcome from the BCMC Chair • Ballroom 4-5 7:50a-8a 8a-9a Kick-off Presentation: Lou Holtz • Ballroom 4-5

9a-6p Spouse/Guest Hospitality Room • D131

9:15a-10:30a **Educational Sessions:**

Measurements in Design & Productivity • E170

Power Tools for Hiring Producers Not Pretenders • E160

How to Build a Better You • D233

Mysteries & Myths of the Cold-Formed Steel Industry • D230

Spouse/Guest Orientation by Experience Columbus • D131 10a

Coffee Break • Lobby by E160 & D230 10:30a-10:45a

Educational Sessions: 10:45a-12p Economics of Design • E170

Why Performance Reviews Don't Work • E160

Taking Ownership of Leadership of Your Life • D233 Measures to Take in Measuring Accidents • D230 Ribbon Cutting Ceremony • Exhibit Hall D/E/F 12:15p

Exhibit Hall Open · Exhibit Hall D/E/F 12:15p-6p Welcome Reception • Exhibit Hall D/E/F BCMC Bowl Drawing • Exhibit Hall D/E/F 5p

THURSDAY, OCTOBER 4

Registration • D130 7a-5p

7a-8a Sit-down Breakfast • Ballroom 4-5 8a-9a WTCA Annual Meeting • Ballroom 4-5

All are welcome!

Spouse/Guest Hospitality Room • D131 8a-5p Coffee Break • Lobby by E160 & D230 9a-9:15a

Educational Sessions: 9:15a-10:30a

9:30a

Creative Truss Repairs • E170 Changing Your Panel Perspective • D233 Benchmarking: Find the Methods that

Work for You • D230

Incentive Compensation: If & How • E160

Spouse/Guest Tour • Bus pick-up: Meet at 9:15 a.m. in the skywalk between the

convention center and the Hyatt Regency.

10:30a-5p Exhibit Hall Open · Exhibit Hall D/E/F 1p & 3:30p BCMC Bowl Drawing • Exhibit Hall D/E/F

3:45p Lakeside Trailer Giveaway

Exhibit Hall D/E/F

4:15p-5:30p **Component Manufacturer Roundtables:**

Building Codes & Code Changes • E160 Changing Your Panel Perspective • E150

Design • E162

Engineered Wood Products • E151

FRIDAY, OCTOBER 5

7:30a-11a	Registration • D130
7:30a-8a	Continental Breakfast • E170
8a-9:30a	Economic Forecast • E170
8:30a-12:30p	Exhibit Hall Open • Exhibit Hall D/E/F
8a-12:30p	Spouse/Guest Hospitality Room • D131
11:30a	BCMC Bowl Drawing • Exhibit Hall D/E/F
12:30p	Official Adjournment • Exhibit Hall D/E/F
12:30p	Plant Tour • Bus pick-up: Meet in the skywalk between the convention center and the Hyatt Regency.
12:30p	Component Manufacturer Roundtables: Focus Groups on Industry Issues • E160

Morton's Steakhouse

All are welcome!



5:00p

Photograph Policy:

WTCA Open Quarterly Meeting

Photographs may be taken at BCMC. No images may be published without prior written approval by BCMC.

•••••• TUESDAY'S EVENTS ••••••

GOLF OUTING CEO Tech Risk Prod CFO Sales HR

Tuesday Oct. 2

8 a.m.

BUS PICK UP:

Meet at 6:15 a.m. outside of

the Hyatt Regency near the

center or at the Crowne Plaza

skywalk to the convention

YES - GOLF IS FUN! Join us at the Annual Golf Outing

Scioto Reserve's 18-hole golf course winds through rolling meadows, lakes and wooded areas. Its bent grass fairways, tees and greens are the creation of architect, Barry Serafin, who has designed such courses as the Players Club at Foxfire, Chapel Hill Golf Club and the Links at Echo Springs. The course benefits from large

gently rolling greens, 12 lakes and country club conditions. To check out the course, visit their website at www.sciotoreserve.com.

Scioto Reserve Golf & Athletic Club has a "non-metal spike" golf shoe policy in order to preserve the playability of the greens. Golf club staff will change metal spike shoes to soft spikes for a nominal fee.

See golf registration form between pgs 82 & 83

in the main lobby

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TRUSS BASICS RISK Prod CFO Sales HR

Tuesday Oct. 2

1-7 p.m Room: D132

WTCA TRUSS TECHNICIAN TRAINING (TTT) COURSE



WTCA's Truss Basics course is designed to provide participants with fundamentals and improve the technical knowledge of non-design personnel in truss plants.

Sales people, estimators, administrative staff and others who interact with suppliers, customers and industry professionals will not want to miss this course. Designed with their needs in mind, it provides a practical overview of the structural building components industry. Truss Basics is also ideal for managers or executives who want to get a feel for the content of WTCA's Truss Technician Training (TTT) certification courses.



REGISTER ONLINE at www.bcmcshow.com

or contact Trish Kutz at 608/310-6768 or tkutz@gualtim.com

ATTENDEE COST PER COURSE: MEMBER \$175 • NON-MEMBER \$440 Registration deadline is 9/14/07.



Oct. 2 6 p.m.

Hyatt Regency Franklin B/C/D

> Repeats **Friday** Oct. 5

Tuesday

12:30 p.m. Room: E160

COMPONENT MANUFACTURER ROUNDTABLES

If you would like the rare opportunity to discuss key industry issues with a small group of your peers, then be sure to attend this year's CM roundtables. Each roundtable will be moderated by an individual with in-depth knowledge on the specific topic addressed.

Bring your questions and ideas to get feedback from your peers and engage in real-time problem solving. Roundtables are open to structural building component manufacturers only.

The topics that will be discussed are:

- Ideas and challenges for risk and safety
- Sales ideas
- Small/family-owned business challenges
- Educating building & fire officials
- Ask an industry veteran
- Steel manufacturing issues
- Legislative/immigration issues
- Turnkey framing

••••• WEDNESDAY'S EVENTS •••••





KICK OFF YOUR WEEK WITH LOU HOLTZ!

What is one thing that all BCMC attendees have in common? They are all part of a team - their company's team, which is why this year's kick-off speaker is sure to inspire. Lou Holtz is a sports icon that has become a legend known for his success in coaching football as well as his words of wisdom. When it comes to a winning attitude and knowledge of teamwork, his expertise is unparalleled.

His accomplishments both on and off the field include:

- Took six different teams to a bowl game (winning five of them) within two years of joining each program
- Guided four different college teams to final Top 20 rankings
- Coach of the Year in 1977 and 1988
- Has been a college football analyst on ESPN since 2005
- Has written five books and three motivational videos

Take advantage of this chance to become inspired by a man who knows what it takes to build a successful team. Lou Holtz will leave you feeling ready to seize all the opportunities that come your way at BCMC!

EXHIBITOR INFORMATION CEO Tech Risk Prod CFO Sales HR



YOU DON'T HAVE TO WAIT UNTIL OCTOBER... Find out today who's exhibiting at BCMC 2007!



Show Floor Hours (Exhibit Hall D/E/F):

Wednesday, Oct. 3 12:15 p.m. - 6 p.m.

Thursday, Oct. 4 10:30 a.m. - 5 p.m.

Friday, Oct. 5 8:30 a.m. - 12:30 p.m.

Visit the show's website at www.bcmcshow.com to:

- Find the number of exhibitors & total square footage sold
- Read the exhibitor listing & descriptions of their products and/or services
- Request additional information from each exhibitor
- View the floor plan & booth numbers

WELCOME RECEPTION AND COMMENT OF THE WEIGHT OF T



Wednesday Oct. 3 4-6 p.m. **Exhibit Hall** D/E/F

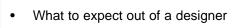
COME-ON OVER...

YOU'RE INVITED! For BCMC newcomers and regulars alike, this is a great opportunity to network with industry peers and build your contacts. Meet new friends and catch up with old ones while enjoying hors d'oeuvres and drinks.

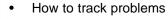








How to measure design productivity



Speaker - Roger Turpen Technician Carter-Lee Building Components (A Pro-Build Company) Industry experience: 14 yrs.

••••• WEDNESDAY, OCT. 3, 9:15 A.M. ••••

Room: E170

Power Tools for Hiring Producers Not Pretenders





- Why interviews alone are an unsuccessful tool 80-88 percent of the time
- What causes job failures in new hires and how to prevent it
- What your turnover really costs your bottom line and what you can do about it
- Power tools you can put in place that will increase the odds of recruiting top producers

Speaker - Bryan Arzani Owner & Vice President Results Group, LLC

Room: E160







Room: D233

Presentation of self-improvement and personal growth that focuses on three key areas:

- Having your best year ever
- · Creating consistent upward growth in your life
- Focusing on the key aspects of a successful and happy life

Brief segment on goal-setting in an innovative way

Speaker - Bryan Dodge

Radio personality, author & speaker Dodge Development, Inc.

Mysteries & Myths of the Cold-Formed Steel Industry





Room: D230

- Cold-formed steel market
- Identifying the competition
- Where is the market heading?

Speaker - Joe Odgers Vice President of Sales Bama Truss & Components, Inc. Industry experience: 15 yrs.

BCMC sessions may count toward required credits for your professional certification. Check with your state or local certification board and contact BCMC for more information.



••••• WEDNESDAY, OCT. 3, 10:45 A.M.

Economics of Design CEO Tech LEO Tec



- · Mindset for developing efficient design
- Tricks of the trade: How to break the rules you thought you knew
- Obstacles to efficient design

Speaker - Joe Heinsman, P.E. **Engineering Manager** Stock Building Supply, Inc. Industry experience: 22 yrs.

Room: E170

Why Performance Reviews Don't Work CEO Tech Risk Prod CFO Sale





- The top three reasons performance reviews are not effective
- Key principles for improving performance
- Strategies for defining expectations and determining your measuring stick
- Make performance reviews objective, not subjective, by design rather than by accident

Speaker - Bryan Arzani Owner & Vice President Results Group, LLC

Taking Ownership of Leadership of Your Life CEO Tech Risk Prod C





Room: E160

Room: D233

- The three main laws of leadership
- Central issues faced by all business owners and managers
- Time management strategies

Speaker - Bryan Dodge Radio personality, author & speaker Dodge Development, Inc.

Measures to Take in Measuring Accidents CEO Tech Risk Prod



- Management tools to minimize risk before an accident occurs
- Actions to take when an accident occurs
- Coming out on top in an accident situation

Speaker - Kirk Grundahl **Executive Director** WTCA - Representing the SBC Industry Industry experience: 29 yrs.

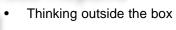




••••• THURSDAY, OCT. 4, 9:15 A.M.

Creative Truss Repairs CEO Tech Prod





- There is no such thing as too much information
- Actual solutions to repair problems
- Working with your engineering partner

Moderator - Bob Dayhoff **Director of Technical Operations Room: E170**

WTCA Engineering & Technical Committee Chairman

Shelter Systems Limited Industry experience: 27 yrs.





- Plant layout and equipment needed
- Comparison of stick vs. wall panel framing in the field
- Cost analysis: stick framing and wall panels
- Errors and omissions
- Costs and liability

Speakers - Jason Blenker President

Blenker Building Systems, Inc. Industry experience: 11 yrs.

Casey Carey

Vice President of Manufacturing **Carter Components**

Industry experience: 24 yrs.

Benchmarking: Find the Methods that Work For You 👪 🔀 🍪



Room:

D233

Room: D230



- Various methods of capturing costs
- Benchmarks: What and how to measure
- Costs associated with benchmarking to your company
- How do you relate it back to your business?

Speakers - Scott Arquilla Vice President Best Homes, Inc.

Industry experience: 19 yrs.

Keith Hershey

Director of R&D and Industry Projects WTCA - Representing the SBC Industry

Industry experience: 19 yrs.

Incentive Compensation: If & How CEO Tech Risk Prod CFO Sales H



Room: E160

- Teams vs. individual
- Design vs. production
- Open book vs. closed book management
- When do incentives become entitlement?

Speaker - Joe Hikel Chief Operating Officer

Shelter Systems Limited Industry experience: 31 yrs. "This was the best seminar I have ever been to."

David Saunders, Reliable Truss and Components, Inc. Referring to the BCMC 2006 session - Incentive Compensation: If & How?





•••••• THURSDAY'S EVENTS

WTCA ANNUAL MEETING ROW ROW RESTAURANT REPORT OF THE ROY OF THE RO



Thursday Oct. 4 8 a.m. **Ballroom** 4-5

IT'S POSSIBLE — WITH A SHOW OF HANDS...

Open to everyone, the WTCA annual meeting highlights the organization's accomplishments throughout the year. Featured at this event will be the passing of the gavel from our outgoing President Barry Dixon to our 2008 President Bob Becht. The winners of the 2007 Hall of Fame, Dick Bowman Industry Enthusiast and SBC Industry Leadership awards will also be announced, along with updates on the latest WTCA products and programs designed to improve your business.





Thursday Oct. 4 4:15 p.m.

COMPONENT MANUFACTURER ROUNDTABLES

These roundtables are open to structural building component manufacturers only. There is no better way to tackle important industry issues than to discuss them with your peers, and there is no better forum for this than at the CM roundtables. Each roundtable will be moderated by an individual with in-depth knowledge specific to the topics listed below.

- Building codes and code changes Room: E160
- Changing your panel perspective Room: E150
- Design Room: E162
- Engineered wood products Room: E151



INSPIRATION: Get the inside scoop and leads on the latest trends

EDUCATION: Find out and apply what's new in the industry - real take-home value

DEA EXCHANGE: Make connections and discuss important industry issues. Participate in roundtables & plant tours

EXHIBIT FLOOR: View over 140 suppliers, make informed purchasing decisions & comparison shop

PRIZES & FUN: Win prizes & cash up to \$500! Win the use of a roll-off trailer! Participate in the golf outing. Join the spouse tours and much more!





YOU'LL DISCOVER NEW POSSIBILITIES IN COLUMBUS, OHIO!

•••••• THURSDAY'S EVENTS ••••••

SPOUSE PROGRAM

Thursday

9:30 a.m.

Room: D131

Oct. 4

4 p.m.

to

BUS PICK UP:

Meet at 9:15 a.m. in

the skywalk between

the convention center and the

Hyatt Regency.

RELAX AND ENJOY

Each year spouses and guests make up a special portion of BCMC attendees. In addition to the educational sessions, show floor and tours, we have the following activities planned just for you!

- The Spouse Lounge (Room D131) - when you need a break or want to visit with friends.

NOODHAVEN FARM

Enter

to win!

- Wednesday, October 3, at 10:00 a.m. in Room D131 get the inside scoop on the things to do and see in Columbus.
- Thursday, October 4, 9:30 a.m. 4:00 p.m. spouse tour, meet in the skywalk between the convention center and the Hyatt Regency.

On the spouse tour, you will experience working with a professional chef to prepare various courses of a gourmet meal!

- Guests will be split up into "teams" and will be responsible for preparing one of the delicious courses for the rest of the group.
- All the recipes, fresh ingredients and equipment will be supplied.
- The "icing on the cake" is that you will be able to take your great new recipes home to enjoy!
- · Next on the agenda is an afternoon of shopping at Polaris Fashion Place, the largest mall in the Greater Columbus Area.

To reserve a spot on the bus, you must sign up for the spouse tour by circling "Yes" on the registration form or by registering online at www.bcmcshow.com.



Thursday Oct. 4 3:45 p.m. **Exhibit** Hall D/E/F

ENTER TO WIN — Drawing from all entries received! WIN THE LIMITED* USE OF: 2008 - J.D.H. Trussmaster 48' x 8'6" Heavy Duty Roll-Off



Sliding Tandems Hydraulic Front-End Controllable Rollers with Remote and Flooring Options



"Visit the Lakeside Trailer booth at BCMC 2007 and ENTER TO WIN the use of this trailer for one year. To be eligible to win this valuable prize, you must be a component manufacturer member of WTCA and be present at the time of the official drawing. Tickets are included within your badge. Good luck!

••••••• FRIDAY'S EVENTS



Friday Oct. 5 8 a.m. E170

A Look Back at 2007 and a Look Ahead to 2008

Stanley F. Duobinis, Ph.D., President, Crystal Ball Economics

One of the largest concerns of BCMC attendees is the future of the economy and its effects on the industry. You will not want to miss this year's Economic Forecast where we welcome back BCMC's ever-popular quest speaker, Dr. Stanley F. Duobinis. Few can predict the economic future as accurately or explain better what the economy will bring for the structural building components industry.



Dr. Duobinis is the president of Crystal Ball Economics. His company specializes in analyzing and forecasting the economy and how it relates to firms involved with the construction industry. These forecasts cover the national picture as well as details at the state and metropolitan levels.

You will absolutely want to be a part of this valuable, in-depth economic discussion on how the structural building components industry will fare in 2008.

"I feel that the media has gone haywire with housing starts and they are taking short term trends and saying the market is collapsing. Stan was able to put it in perspective. He does a good job of not getting too excited — positively or negatively — and gives a truly unbiased analysis. I try to never miss the economic forecast because I think it is that valuable."

David Mitchell, Engineered Building Design, L.C.



Friday Oct. 5 12:30 p.m. E160

COMPONENT MANUFACTURER ROUNDTABLES

If you would like the rare opportunity to discuss key industry issues with a small group of your peers, then be sure to attend this year's CM roundtables. Each roundtable will be moderated by an individual with in-depth knowledge on the specific topic addressed.

Bring your questions and ideas to get feedback from your peers and engage in real-time problem solving. These roundtables are open to structural building component manufacturers only.

The topics that will be discussed are:

- · Ideas and challenges for risk and safety
- Sales ideas
- Small/family-owned business challenges
- Educating building & fire officials
- Ask an industry veteran
- Steel manufacturing issues
- Legislative/immigration issues
- Turnkey framing

If you are unable to attend the roundtables on Tuesday, the same topics will be repeated on Friday afternoon.

"The roundtable was very informative. It was very valuable to get an idea that other people are facing the same issues and then be able to brainstorm solutions together."

Scott Ward Southern Components, Inc.

••••••• FRIDAY'S EVENTS ••••••

Friday Oct. 5 12:30 p.m.

BUS PICK UP: Meet in the skywalk between the convention center and the Hyatt Regency.

The plant tour will begin Friday, October 5, at 12:30 p.m. The tour is available only if you are registered for BCMC as a component manufacturer and are 18 years of age or older. Registration is available via the online system (fastest) or the fax/mail registration form. Space is limited and reservations are taken on a first-come, first-served basis.

Please Note: The Plant Tour is sold out, standby options are still available. Register for the tour to reserve your standby ticket.

Additional information will be emailed/faxed to you in September regarding your reserved time and where to catch the tour bus. At the show, you will also find your ticket and tour time inside your name badge.

THINGS YOU'LL SEE:

- Roof and floor truss tables
- Auto saws with live deck feed
- Radial arm saws
- Auto stacker
- Exterior and interior panel lines
- Multi-head stock press
- 8,000 and 12,000 lb. forklifts
- Rail spur for box and A-Frame cars

Acreage: 15 acres total, including 12,000 sq. ft. panel building, 17,000 sq. ft. roof truss building and 7,000 sq. ft. saw building.

Number Tour Allows: 110 people (2 tours of 55

Departure Times: 12:30 p.m. & 1:30 p.m. Please allow 2 hours for this tour (this includes transportation time). The tour lasts 1 hour.

Safety Requirements: Eye and hearing protection will be required in some areas of the plant. Proper footwear should be worn at all times (no open-toed shoes).



COMPONENTS

All are invited to attend the 2007 Open Quarterly Meeting and Top Chord Club Dinner Friday, October 5. Meeting, dinner and awards presentations will be held at Morton's Steakhouse located at 280 North High Street (in the Crowne Plaza Hotel - Nationwide Plaza).

- 5 pm: Meeting and awards
- 6 pm: Cocktails and appetizers
- 7 pm: Dinner

Everyone is welcome to attend! Register online at www.sbcindustry.com or contact Stephanie at swatrud@qualtim.com.

Oct. 5 5 p.m. Morton's Steakhouse (in the Crowne Plaza Hotel)

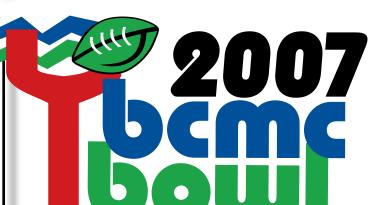
Friday

61 60

UNDERGROUND

••••••• SPECIAL EVENTS ••••••









DRAWING TIMES: Wednesday

> Oct. 3 5 p.m.

Oct. 4 1 p.m. 3:30 p.m.

Thursday

Friday Oct. 5 11:30 a.m.

Exhibit Hall D/E/F



In addition to the many benefits and incentives in attending BCMC, we'd like to give you one more! The BCMC Bowl makes winning cash or other great prizes, as easy as 1-2-3.

- 1) Pick up your entry form at the registration desk.
- 2) Find all the listed items on the show floor.
- 3) Turn in your entry form at the BCMC Booth.

You must be present to win. Random drawings are selected from all entries received.

Thanks to Our 2007 **BCMC Bowl Sponsors:**

Simpson Strong-Tie LED Maglight Flashlight and Leatherman

ITW Building Components Group - Truswal Garmin StreetPilot C340 GPS

MiTek Industries Binoculars in Wooden Case

> **BCMC** \$500

> > **Enter**

MEET LOU HOLTZ! CEO Tech Risk Prod CFO Sales



62

Do you want to have breakfast with Lou Holtz?

to win! BCMC is offering 25 lucky people the chance to have a private breakfast with Lou on Wednesday, October 3 at 7:00 a.m. You will receive an autographed photo of Lou and be given the opportunity to have your photo taken with him. Visit the BCMC website at www.bcmcshow.com to see more information and how you can enter for the drawing.

Deadline to enter is September 15, 2007.

ONLINE REGISTRATION IS FASTER

If you like to get things done promptly and appreciate immediate results, register online! Not only is it faster and provides you with an instant confirmation, it also lets you know if you are registered early enough to guarantee your spot on the popular plant tours that fill up early every year.

Visit www.bcmcshow.com and register to attend.

BCMC LOYALTY REWARDS PROGRAM



BCMC wants to reward our most loyal attendees and companies. If you meet the criteria below, you are already a winner!

••••••BCMC REWARDS••••••

Company Program

To qualify:

- Your company has sent at least one person to BCMC for the past 5 years (2003 2007).
- Your company is a component manufacturer member of WTCA.

One pin will be given to the owner, president or other representative from your company. This person will qualify for the perks below.



Individual Program

To qualify:

- You have attended BCMC 5 out of the last 7 years (2001 2007).
- You attend BCMC 2007.
- Your company is a component manufacturer member of WTCA.



Perks!

If you or your company meet the criteria above, you will receive the following perks:

- 2 extra tickets for the Lakeside Trailer Giveaway.
- 2 extra tickets for the BCMC Bowl drawing.
- The lowest price for any publications/services/products ordered at the BCMC booth. For example: 1 TTT online registration will cost \$99 rather than \$249.
- A special commemorative pin to wear proudly at the show.

Remember to wear your pins from BCMC 2005 and 2006!



THANK YOU to all of our Loyalty Rewards members!



And the Winners Are

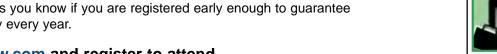


Another exciting BCMC attendee program provided many the opportunity to win a free registration to the show. To qualify for the program, participants had to be component manufacturer members of WTCA and their company could not have attended BCMC in the past five years (2002-2006). The deadline to enter was August 10, 2007.

Congratulations to the following winners:

- Steven Elkins, Modern Homes & Equipment Co.
- Lynn McCarthy, Truss Systems LLC

We look forward to having you at BCMC and hope to see you next year in Denver, CO!



To the: **GREATER COLUMBUS CONVENTION CENTER:** 400 N. High St. • Columbus, OH 43215

From the North (I-71)

Take the I-670 West exit. Quickly move to the left lane and take the Third St. exit. At the stoplight at the bottom of the off-ramp, turn left onto Chestnut. Go one block to the light and turn left onto 4th St. Go one block through the stop light and turn left onto Nationwide Blvd. The Convention Center East Parking Lot is immediately on your right. Continue forward on Nationwide for the Convention Center underground parking.

From the Airport (I-670)

From the Parking Garage, follow the signs to I-670 West (Downtown). Drive for approximately 8 miles and take the Third St. exit. At the stoplight, turn left onto Chestnut. Go one block to the light and turn left onto 4th St. Go one block through the stop light and turn left onto Nationwide Blvd. The Convention Center East Parking Lot is immediately on your right. Continue forward on Nationwide for the Convention Center underground parking.

From the South (I-71)

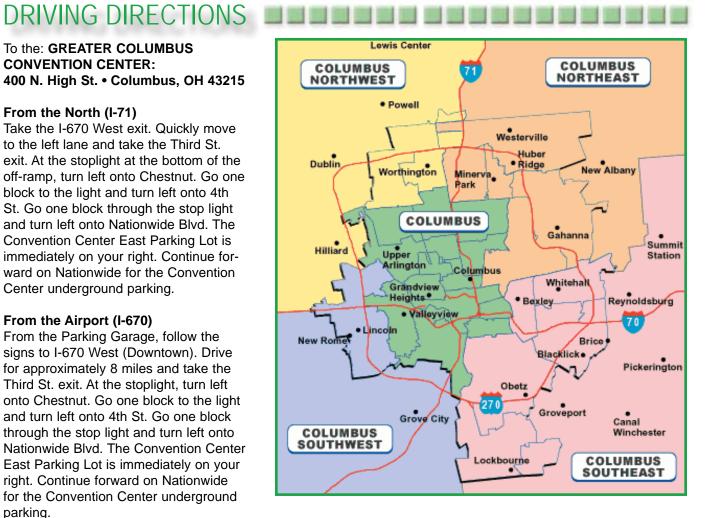
I-71 will merge with I-70 just south of downtown. After they merge, take the Fourth St. exit (#100B). At the top of the off-ramp, stay in the lane you are in and go forward two blocks, turning left onto Fourth St. (it's a one-way). Follow Fourth St. for approximately 15 blocks to Nationwide Blvd. Turn left onto Nationwide and the Convention Center East Parking Lot is immediately on your right. Continue forward on Nationwide for the Convention Center underground parking.

From the West (I-70)

Take the Fourth St. exit (#100B) and follow the directions above from the South (I-71).

From the East (I-70)

Take the Fourth St. exit (#100B) and follow the directions above from the South (I-71).



BY GROUND

AIRPORT SHUTTLES:

The approximate shuttle fare from the airport to downtown Columbus is \$15.*

Arch Express Transportation:

614/252-2277 or 800/325-1882, www.archexpress.com

Please make a reservation prior to traveling.

Urban Express Transportation, Inc.:

614/856-1000 or 877/840-0411, www.urbanexpress.biz

Shuttles run every 20 minutes 24 hours a day and you don't need a reservation.

TAXI

To or from the Port Columbus International Airport to downtown, Columbus taxi service is provided by many vendors. The taxi fare from the airport to downtown Columbus is approximately \$22.*

*Prices subject to change.



"I would definitely advise people to go to the show. BCMC is a wealth of knowledge to be tapped. There is so much to do between talking to vendors, attending the breakout sessions, roundtables and talking with other manufacturers. Looking forward to next year in Columbus!"

Dan Hinkle, Blue Ridge Building Components, Inc.

DRIVING TIME/MILEAGE

Hours

Miles

From

Atlanta	9.5	567
Baltimore	6.75	412
Boston	12.75	747
Charlotte	7.75	475
Chicago	6	354
Dallas	16	1,041
Detroit	4	204
Indianapolis	3	176
Jacksonville	14	856
Kansas City	10	658
Louisville	3.5	206
Memphis	9	593
Minneapolis	12.75	762
Montreal	11.75	715
Nashville	6.5	379
New Orleans	14	910
New York	9	532
Philadelphia	7.5	469
Pittsburgh	3.25	185
St. Louis	6.5	418
Toronto	7.5	428
Washington D.C.	7	411

harder.

AVIS DISCOUNT

TRANSPORTATION

Avis is the place to rent your car! The discounted Avis rates are good from one week before to one week after BCMC, so you can take in all that Columbus has to offer.

To reserve your Avis car, call 800/331-1600 and mention this special meeting Avis Worldwide Discount (AWD) number: T766099, or visit Avis online at www.avis.com and enter T766099 in the AWD prompt under Rates and Discounts.



AIRLINE INFORMATION

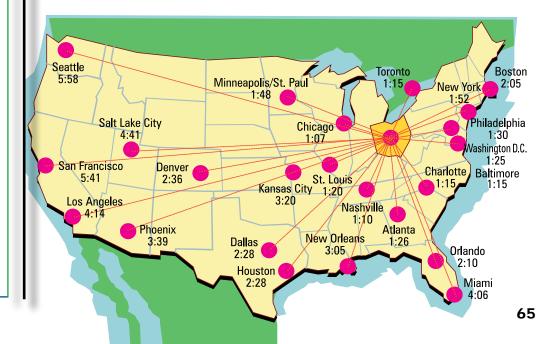
DISCOUNT FARES



BCMC has worked with American Airlines to bring you discounted fares for flights into their hub in Columbus. Call your professional travel agency or American Airlines Meeting Services Desk at 800/433-1790 and provide the Discount Code A7497AG. There will be a \$10 service fee collected, per ticket, for all tickets issued through the Meeting Services Desk reservations, or any American Ticketing facility. The service fee is non-refundable and applies to all itineraries, one-way or roundtrip.

To avoid a service fee and to receive an additional 5% discount, book your reservations online at www.aa.com and enter your Discount Code A7497AG.

FLYING TIMES TO COLUMBUS



Revealed:

How you can take advantage of current market conditions to grow your business.

It's no secret that the market is tough. But by partnering with Alpine Equipment, you'll ride out the tough times and be ready for the recovery.

It's true.

Smart managers know that increasing efficiency and productivity means a huge head start when things heat up again.

Manage your overhead.

With five- and six-year financing arrangements — and low payments for the first 12-18 months — there's minimal impact to your cash flow.

Crazy? Like a fox!

Companies that grew after the last downturn were the ones that seized the advantage!

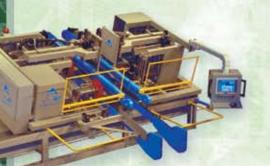
How about you?

Get a great deal on state-of-the-art products from Alpine Equipment and fantastic terms from Alpine Equipment Finance.

We'll customize a program to fit your needs!

For example

Finance \$230,000 for the low amount of \$1,500 a month for 12 or 18 months with the balance over 48 or 60 months.







**TW Building Components Group Inc.

Finance program subject to credit approval.



X4 Saw from Alpine is engineered to save more of what costs you the most - labor and material. Imagine a saw that has virtually no setup time, calibrates on the fly and cuts one, two, three or four boards at a time. The X4 makes cuts in less than a second and feeds lumber at eight linear feet per second which adds up to an effective rate of 32 feet per second for stacks of four! Yes, it optimizes, clamps crooked lumber, handles any length scarf and cuts parts as small as two inches, using 2x3 up to 2x14 lumber. That's just the start, with built-in diagnostics, machine service via the Internet, and the legendary support from Alpine Equipment staff, you will always be sure that cutting is under control. It just doesn't matter how cut-up your jobs are. The X4 Linear Saw from Alpine keeps cutting well ahead of truss plant production. Call us or go online for a free DVD that shows the X4 in action.

The revolutionary



CROWNE PLAZA HOTEL HYATT REGENCY

00000000000

Crowne Plaza Hotel Columbus - Downtown

33 East Nationwide Blvd.

Columbus, OH 43215

614/461-4100 or 800/338-4462

614/461-5828 (fax)

www.crowneplaza.com/cmhcrowneplaza

Group rate: \$142.00 single/double; \$152.00 triple;

\$162.00 quad

Check-in time: 3:00 p.m. Check-out time: 12:00 p.m.

High speed internet: complimentary (wireless)

Hotel Facilities: Restaurant/Room Service from Max and Ermas 6:30 a.m. - 11:00 p.m.; indoor pool 6:00 a.m. - 10:00 p.m.; business center open 24 hours/day;

fitness center open 24 hours/day

Parking Fees: \$12.00/daytime valet; \$21.00/overnight

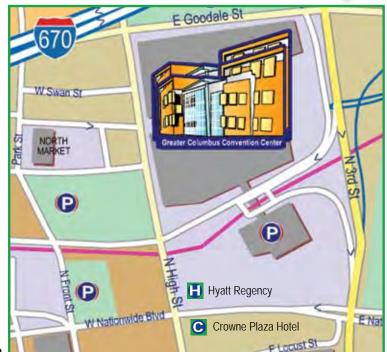
valet with in/out privileges

Distance to Greater Columbus Convention Center: Connected via skywalk to the convention center

Distance from airport: 7 miles

Driving Time from airport: 10 minutes

Directions: Exit airport on International Gateway. Follow this to I-670 West. Take this downtown and exit onto Third St. (this exit is on the left lane of I-670). Third St. is one way southbound. Turn right at the first stoplight onto Chestnut St. Proceed to High St. and turn right. Turn right on Nationwide Blvd. Crowne Plaza/The Lofts are on the right side.



Hyatt Regency Columbus - Downtown

350 N High St.

Columbus, OH 43215

614/463-1234

614/280-3038 (fax)

www.columbusregency.hyatt.com

Group rate:\$141.00 single/double; \$151.00 triple/

00000000000

Check-in time: 3:00 p.m. Check-out time: 12:00 p.m.

High speed internet: \$9.99/24 hours (wireless) Hotel Facilities: Market Stand Cafe 6:30 a.m. - 10:00 p.m.; pool/fitness center 6:00 a.m. - 10:00 p.m.; business center 24 hours/day

Parking Fees: \$18.00/daytime valet; \$21.00/over-

night valet with in/out privileges

Distance to Greater Columbus Convention Center: Connected to the convention center

Distance from airport: 7 miles

Driving Time from airport: 10 minutes

Directions: Follow the main road out of the terminal to I-670 West. Follow I-670 West to downtown. Exit at Third St. (then move to far right lane). Turn right at Chestnut St. (first traffic light). Turn right at High St. Turn right at Nationwide Blvd. Hyatt Regency is located on the left.



Act fast for choice lodging! Make reservations online at www.bcmcshow.com or complete the 2007 BCMC Housing form between pages 82 and 83. The deadline for guaranteed rates is September 4. All rates are subject to change after this date. All rates subject to applicable taxes and availability. Hotels will not accept telephone reservations prior to September 18.



















Benefits of Membership!

Why does WTCA's membership continue to grow every year? Because our members have realized the value that our association provides.



Members receive discounts on ALL WTCA products and services, including: Publications: JOBSITE PACKAGES, BCSI, and more!

Education: Truss Technician Training (TTT), Truss Technology Workshops (TTW)

Programs: In-Plant WTCA QC, Operation Safety, ORisk



WTCA brings members together to learn and network through: Meetings: WTCA Open Quarterly Meetings, Local Chapter meetings Communication Tools: Weekly Board Report, Chapter Focus, SBC Magazine





WTCA offers additional tools and resources FREE for members: Technical & Codes: WTCA Technical Notes, The Load Guide (TLG) Legislative: SBC Legislative Conference, assistance with Legislator Plant Tours Business Management: Lumber Trading Data (LTD), WorkForce Development (WFD)





WTCA provides a comprehensive support system for members – why not join today?



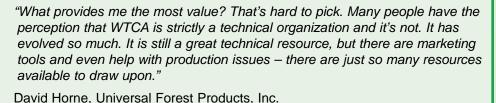




















Need details? www.sbcindustry.com • www.sbcmaq.info • www.sbcri.info www.bcmcshow.com

COLUMBUS, OHIO

THINGS TO DO IN COLUMBUS, OH!

Columbus is jam-packed with exciting things to do and see! Below are just a few of the many experiences Columbus has to offer. For a more complete list, go to www.ExperienceColumbus.com.

Sports:

Columbus Crew - Soccer: www.thecrew.com

Columbus Blue Jackets -Hockey:

www.bluejackets.com

The Ohio State University: www.ohiostatebuckeyes.com

Tours:

Ohio Statehouse: www.ohiostatehouse.org

German Village Historic Neighborhood:

www.germanvillage.org

Anthony-Thomas Candy Company:

www.anthony-thomas.com

October 3-5, in our great city.

Columbus has to offer.

Columbus neighborhood.

and more people to make Columbus their home.

Best wishes for a successful event.

Office of the Mayor

Museums::

Columbus Museum of Art: www.columbusmuseum.org

COSI Columbus - Science Center: www.cosi.org

Jack Nicklaus Museum: www.nicklausmuseum.org

Motorcycle Hall of Fame Museum:

www.motorcyclemuseum.org

Attractions:

Columbus Zoo and Aquarium: www.columbuszoo.org

Short North Arts District: www.shortnorth.org

Gardens:

Franklin Park Conservatory: www.fpconservatory.org

Topiary Garden: www.topiarygarden.org





Important Phone Numbers:

Greater Columbus Convention Center: 614/827-2500

Port Columbus International Airport: 614/239-4083

Columbus Fire & Police Dept.: 911

National Weather Service: 937/383-0031

Crowne Plaza - 614/461-4100

Hyatt Regency - 614/463-1234

www.bcmcshow.com info@bcmcshow.com 608/268-1161 ext. 9 608/274-3329 fax

MARK YOUR CALENDAR!

IMPORTANT DEADLINES

September 4

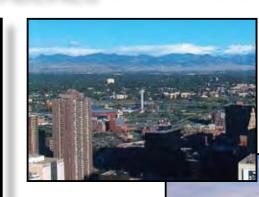
Hotel reservation quaranteed rate deadline

September 14

Registration for WTCA TTT: **Truss Basics**

September 24

Registration for golf and/or substitutions



FUTURE BCMC LOCATIONS

2008 - Oct. 1 - 3, Denver, CO

2009 - Sept. 30 - Oct. 2, Phoenix, AZ

2010 - Sept. 29 - Oct. 1, Charlotte, NC





"I'm excited to see the structural building component industry's most important show come to Denver, CO in 2008. As a 'mile high' native it will be like going home. This is a new city for BCMC and a new level of 'Mile High Performance!' Join the industry's highest performing leaders and suppliers at BCMC 2008 in Denver, CO."

Steve Shrader, Hundegger USA LC, BCMC 2008 Chair

Michael B. Coleman Mayor

Greetings! On behalf of our citizens, we are very proud that participants from across the country and other nations will attend the Building Component Manufacturers Conference,

I am delighted to welcome you to our state capital and Ohio's largest city. Columbus is a

growing, vibrant city known for its dynamic business climate, friendly neighborhoods, and modern, efficient government. Each year, an increasing number of visitors from around

the country and around the world come to our city to meet, compete, trade and enjoy what

While visiting Columbus, Ohio, please take a moment to explore our diverse communities and venues of entertainment such as the Center of Science and Industry (COSI),

Franklin Park Conservatory, The Ohio State University, view the artwork of the internationally acclaimed artist, Brenda "Aminah" Lynn Robinson, at the exquisite King Center

for the Performing Arts, the fantastic shopping, and the vibrant nightlife in places like the

Short North, German Village, the Brewery District, and dozens of friendly spots in every

There's so much to discover in Columbus. But what we hope you'll find most of all is our

generous hospitality and special quality of life that brings visitors back, and leads more

EXHIBITORS AT A GLANCE

VIEW THE FLOOR PLAN AT WWW.BCMCSHOW.COM

Listing as of 7/25/07

- · A-NU-PROSPECT
- Allstrap Steel & Poly Strapping Systems LLC
- · Arch Wood Protection
- BeA Fasteners USA
- Biomass Combustion Systems
- Bloch Lumber Company
- · Boscus Canada Inc.
- BOSS Tiedowns & Strapping
- Buchanan Lumber Sales Inc.
- · Builders Automation Machinery Co.
- BuildersCAD
- Canadian Engineered Wood Products Ltd.
- Canfor
- · Carbeck Structural Components Institute
- Caristrap International Inc.
- Carolina Strapping & Buckles Company
- Clark Industries, Inc.
- CMF Inc., Commercial Machinery Fabricators
- · COMBILIFT USA
- · Cordstrap USA, Inc.
- DANSCO ENGINEERING, LLC
- Deacom, Inc.
- Dietrich's North America
- Digital Canal Corporation
- Eagle Metal Products
- Easy-Arch
- Eide
- · Elliott Equipment Company
- FastenMaster
- FinnForest USA,
- ENGINEERED WOOD DIVISION
- · Full House Company
- Georgia-Pacific Corporation
- Gilman Building Products
- Hiab, Inc. A Cargotec Company
- HOLTEC USA Corporation
- hsbCAD
- Hundegger USA, LC
- iLevel by Weyerhaeuser
- ITW Building Components Group Alpine
- ITW Building Components Group -
- Intelligent Building Systems
- ITW Building Components Group -SpaceJoist TE, LLC
- ITW Building Components Group Truswal
- ITW Industrial Fastening
- (manufacturers of Paslode & Duo-Fast)
- · ITW Panel Fastening Systems
- J M Boyle & Associates, LLC

- Jager Metal Products
- Jordan Lumber
- · Keymark Enterprises, LLC
- · Klaisler Mfg. Corp.
- · Koorsen Manufacturing Inc.
- L.I. Industries
- · L-M Equipment Co. Ltd.
- · L-M Equipment Co., Inc.
- · Lakeside Trailer Mfg., Inc.
- · Langdale Industries
- Lignum Forest Products
- Lumber Technology Corporation
- Lumbermens Merchandising Corp. LMC
- M & O Products, Inc.
- Machinery Boutique
- Makron Engineering
- Mango Tech
- MAXIMIZER TECHNOLOGIES, LLC
- a Component of The Fitzgerald Group, LLC
- McGinnis Saw Service
- Metriguard Inc.
- · Metropolitan Lumber Company
- · MiTek Industries, Inc.
- · Monet DeSauw Inc.
- · MSR Lumber Producers Council
- National Crane, A Division of Manitowoc Crane Group
- No-Burn®, Inc.
- Nordic Engineered Wood
- NUCONSTEEL
- Open Joist 2000 Inc. (Distribution)
- OptiFrame Software
- · Osmose, Inc.
- · Pacific Automation Ltd.
- · Pacific Trail Mfg., Inc.
- Palfinger North America
- Panels Plus
- Pennsylvania Lumbermens Mutual Insurance Co.
- · Perma-Straight I
- PFP Technologies
- Plymouth Foam
- Pratt Industries
- Precision Equipment Manufacturing
- Princeton Delivery Systems Inc.
- · Progressive Solutions Inc.
- · Qualtim, Inc.
- RAND Manufacturing
- Randek BauTech AB

- Rayonier Wood Products
- · Rex Lumber & North Florida Lumber
- · Robbins Engineering, Inc.
- Robbins Lumber
- · Roseburg Forest Products
- Safety Speed Cut Manufacturing
- SBC Research Institute
- Seaboard International Forest Products, LLC
- Sellick Equipment Limited
- · Senco Products, Inc.
- · Simpson Strong-Tie
- SL Laser Systems LP
- · Southern Pine Council
- · SPIDA Machinery 2000 Ltd.
- Spotnails
- · Stanley Bostitch, Inc.
- Stiles Machinery Inc.
- STRAP & WRAP
- Structural Building Components Magazine
- Summit Forest Products
- SUNBELT
- TADANO
- TCT Manufacturing, Inc.
- Temple-Inland
- The Hain Company
- The Koskovich Company
- · Todd Drummond Consulting
- Tolleson Lumber Company
- · Triad/Merrick Machine Co
- Trim Fit LLCTruss Plate Institute
- Truss-Tran by Stoll
- USP Structural Connectors
- Vecoplan, LLC
- Viance
- Viking Forest Products
- Viking WPS
- Virtek Vision International Inc.
- Vision Financial Group, Inc.
- · Wasserman & Associates
- Weima America, Inc.
- Weinig Group
- Westervelt LumberWood Truss Systems, Inc.
- WoodPro Insurance
 A Division of Bowermaster & Associates
- \bullet WoodSmart Solutions, Inc. BLUWOOD®
- WTCA Representing the SBC Industry

A-NU-PROSPECT

See ad on page 89.

KEY: Gold SBC Advertiser • Silver SBC Advertiser • Asterisk (*) indicates a new exhibitor

A-NU-PROSPECT provides the wood component industry with effective delivery systems. These trailers are of the highest quality in the industry featuring innovative improvements on an old concept. These trailers reduce delivery and maintenance costs while being more driver friendly than other trailers.

Contact: Mr. Joe Wilhelm • 519/349-2202 • 519/349-2342 fax joewilhelm@quadro.net • www.trusstrailer.com

Allstrap Steel & Poly Strapping Systems LLC*

Since 1978 we have provided our customers with the best and most innovative strapping solutions. We carry STEEL, CORD, POLYESTER, POLYPROPYLENE, and NYLON strapping for the building industry. Being a master distributor for most strapping and tool companies allows you to buy the best suited products at competitive prices. With in-house tool repair service and most wear parts in stock you can keep your plant running. NEED IT NOW? We maintain a large inventory available for immediate delivery. Talk to our strapping experts and ask about our many packaging products and strapping accessories.

Arch Wood Protection

Protect your customers and your reputation against mold by using and producing -- FrameGuard® mold-resistant wood. Arch Wood Protection has introduced a mold-inhibiting coating that protects wood products against mold, termites, and fungal decay. Suitable for factory-application on lumber, OSB, engineered wood products, trusses, and SIPs, the end products are being promoted as FrameGuard® mold-resistant wood, winner of a 2007 NAHB Green Building Award and listed in the GreenSpec® directory. Arch Wood Protection is also developer of Wolmanized® pressure-treated wood and Dricon® fire retardant treated wood.

BeA Fasteners USA*

Automated high capacity staplers and nailers for wall panel, truss and component assembly. Increased productivity, reduced manufacturing costs, improved quality and reduction in staff workload are just a few benefits of the BeA custom designed modular products. Customized systems can be adapted to your machinery and software for precision stapling and nailing.

Biomass Combustion Systems

See ad on page 89.

Biomass Combustion Systems, Inc. Eliminate escalating fuel bills by using wood waste to heat your facility. The Biomass Combustion Systems' 450, 000 BTU per hour and 800,000 BTU per hour Hot Air Shop Heaters heat industrial facilities safely and reliably. The 25 year field-tested all-steel design is ruggedly built to withstand long-term industrial use. BCS fireboxes are engineered with extra thick end-walls, which unlike refractory fireboxes, will not crack and break with repeated hand firing. With proper operation, the systems are virtually smoke-free with minimal impact on the working environment. With BCS Shop Heaters, you can make your wood waste work for you!

Contact: Mr. Charles R. Cary • 508/798-5970 • 508/798-5971 fax info@biomasscombustion.com • www.biomasscombustion.com

Bloch Lumber Company

Bloch Lumber - Specializes in Guaranteed Forward Pricing, a risk management tool for the lumber and building materials industry. Bloch's industry role also includes the distribution of commodity lumber and panel products.

Boscus Canada Inc.

Boscus Group consist of lumber industry related companies: producers (Berscifor Forest Products), remanufacturing (Rembos), wholesale, distribution and transportation. Member of the MSR Lumber Producers Council, we have been supplying truss and others building components manufacturers for over 15 years. We distribute Canadian SPF, all grades and dimensions, all over North America and overseas. MSR and #1&2 represents 60% of our volume. We rapidly adapt to changing markets to offer a variety of solutions for all our partner's unique needs. Visit our boot for more information on our products and services."

BOSS Tiedowns & Strapping

BOSS Strapping is a lightweight, flexible, heavy duty woven polyester that is rapidly replacing rigid and dangerous steel banding. Our polyester is made in the USA and manufactured into durable strapping in Texas. Because BOSS strapping is made of strong, durable polyester, it holds loads despite nicks, frays and even small cuts. And weighing one-fourth of steel banding, BOSS Strapping is easier on the back and strap choppers are not needed. Quality and consistency of strapping are the primary concerns of BOSS. This is achieved with in-house quality monitoring throughout the entire manufacturing process. Positively 100% DOMESTIC material.

Buchanan Lumber Sales Inc.

With more and more products available every year, Buchanan Lumber Sales is here to service you with all of your SPF lumber needs. We have SPF Studs, #2&Better, Premium, #3, and MSR dimension lumber to suit many applications. We look forward to seeing you.

Builders Automation Machinery Co.

Builders Automation will be exhibiting their CNC Multi Function Stair Router along with other stair equipment. The machine is capable of producing stairs at an amazing rate, demonstrates ultimate flexibility, stair criteria can be entered by the operator or is down-loadable through DXF files using AutoCAD. Programs can be sent over the internet. The only machine on the market that will do the top and bottom landing cut and automatically moves the stringer through the machining bed. The machine is equipped with two (5) horse power Variable Frequency Drive Spindles.

BuildersCAD

Accurate. Detailed. Fast. Customizable. Affordable. With BuildersCAD, produce complete construction documentation or panel drawings and board reports. Make every framing rule decision. Automatically frame an entire structure to your exacting standards or work at an individual wall or board level. Utilize the Header Matrix to size and configure openings to your Specifications. Instantly generate opening schedules and batch cut any or all components. Run detailed framing and cutting reports, generate Bottom Plate or Panel Elevation Drawings. Quickly create stacks for proper build order and shipping. Create detailed roof and floor framing plans and takeoffs. Why lease? Own the BuildersCAD Intelli-Framer.

Canadian Engineered Wood Products Ltd.

CEWP is a national distributor of truss-related material, such as MSR lumber, Quality 1&2 and web stock. Our team of twelve traders in Alberta, British Columbia, Quebec and Ontario allows us to provide the best options for our customers in both the eastern and western markets. In January of 2002, we were pleased to announce our agreement with Millar Western Forest Products, becoming Millar's sole distributor of MSR lumber.

Canfor

See ad on pages 116-117.

Canfor is North America's largest MSR producer, servicing the truss manufacturing, I-joist manufacturing and building components industries. Canfor is your most reliable supplier of MSR, producing consistent quality kiln-dried SPF MSR at 7 mills in prime grades of 1650, 1950, 2100, 2400 in lengths up to 20ft. Canfor also manufactures long length finger-joined MSR up to 36ft. Canfor offers reliable supply options; rail directly from our mills or trucks from one of our 8 North American reloads.

Contact: Mr. Steve Hardy • 604/264-6204 • 604/264-6217 fax steve.hardy@canfor.com • www.canfor.com

KEY: Gold SBC Advertiser • Silver SBC Advertiser • Bronze SBC Advertiser • Asterisk (*) indicates a new exhibitor

Carbeck Structural Components Institute

Carbeck Structural Components Institute (CSCI), a 501(c)3 non-profit organization, undertakes research and education projects focused on the structural framing of residential housing and commercial buildings. One of CSCI's key objectives is to provide the fire service with education and information concerning how to effectively and safely put out fires in structures that include structural building components. Your support last year allowed CSCI to produce a new online educational program entitled "Ad Hoc Demonstration Fire – Sheathed Unprotected Floor System" based off of a live burn demonstration that happened in Colonie, NY, as well as new updates to the www.carbeck.org website.

Caristrap International Inc.*

Why deal with a vendor who carries a few straps when you could be working with a manufacturing company that offers standard and custom designed strapping systems for all your needs! For over 50 years Caristrap International has been providing you with a wide variety of strap systems proven to be Safe, Strong and the best Solutions for your banding requirements. We are a registered ISO 9001-2000 company. We manufacture according to the highest quality standards in this industry; ASTM. We have approval for many AAR and NATO specifications. We also are C-TPAT certify (Customs-Trade Partnership Against Terrorism).

Carolina Strapping & Buckles Company

Carolina Strapping and Buckles Company is the proud manufacturer of GatorSTRAP, the widely accepted heavy duty woven polyester strapping that is used extensively in the North American lumber and building component industries. GatorSTRAP has been engineered by our weaving experts to maximize the inherent advantages of high tenacity polyester yarn and is a superior alternative to steel strapping. As part of an expanding strapping product line, Carolina Strapping and Buckles Company also manufactures phosphate coated, extra grip wire buckles. Our product line also includes tensioners, dispensers, serrated seals, edge protectors and strap cutters.

Clark Industries, Inc.

See ad on pages 90, 122.

Clark Industries, Inc. strives to produce equipment to maximize your labor dollars. Our roof & floor truss pressing systems only require 2-3 man crews without the typical "stand-around" time. Our pressing tables allow raw materials to remain on the working surface not only during layout but also the pressing cycle. In addition, our equipment achieves 100% nail embedment on the assembly table. CII's machinery includes an assortment of roof & floor truss presses, stand-alone jack machines, column laminators, horizontal & peak-up stackers, and conveyor systems. Please come by our booth to discuss any of your equipment needs.

Contact: Mr. Jack Schulz • 417/235-7182 • 417/235-8262 fax sales@clark-ind.com • www.clark-ind.com

CMF Inc., Commercial Machinery Fabricators

ry Fabricators
See ad on pages 92-93.

Commercial Machinery Fabricators, Inc. offers a number of products, and will exhibit some of these at BCMC '07. Products include: New Trackless Gantry with a 24-inch Roller VF Drive with power pack, a Roller Press with 24-inch rollers, Steel Slotted truss tables with 24-inch steel plate and plastic/wood top tables, Trackless Floor Truss and Trackless Jack Table.

Contact: Mr. Edward G. Joseph • 517/323-1996 • 517/323-8939 fax ed@cmfstealth.com • www.cmfstealth.com

COMBILIFT USA

The Combilift multi-directional forklift is designed for handling long and awkward loads in confined spaces within a wide variety of sectors including the aluminium industry. Its robust design and super elastic tyres enable it to work inside and out, on semi-rough terrain and in all weather conditions. Double handling of goods and downtime due to battery charging are a thing of the past with Combilift, as trucks are powered by LPG or diesel. Capacities range from 2.5 to 10 tonnes with a variety of attachments to cater for individual customers requirements. Call for Free Video & Warehouse Design.

Cordstrap USA, Inc.

Cordstrap® is the world leading manufacturer of corded polyester strapping and one-way load securing systems. We provide customers with a safe and cost-efficient alternative to steel banding and other conventional transport packaging materials. Since 1965 it has been Cordstrap's mission to solve strapping, transport, load securing complexities and safety challenges for a diverse base of customers. Cordstrap CC105 is now AAR certified, offering the highest standards available. Cordstrap® Composite Strapping (CC) is a latest development in non-metallic strapping technology. Made from high tenacity polyester filament yarns embedded in a polymer coating, composite strapping is often referred to as synthetic steel.

DANSCO ENGINEERING, LLC*

Dansco Engineering, LLC offers our clients an alternative source for truss and EWP engineering and repairs. We work with many of the industry leaders and are consultants to truss plants as well as plate manufacturers. Dansco can provide you with seals, sealed repairs and layouts in many states often faster and at lower cost than our competitors. We can provide whole house engineering and design services. Registered in many states, we have over 150 years of combined experience. Let us show you how Dansco can save you money and become part of your team.

Deacom, Inc.

Deacom, Inc. produces the DEACOM Integrated Accounting & Enterprise Resource Planning (ERP) Software System for building component and prefabricated housing manufacturers. The DEACOM ERP System is engineered specifically to manage your complex job costing and business process issues, and handles an endless variety of unique requirements without costly customization. DEACOM ERP Software seamlessly integrates all areas of your company—from inventory control and engineering links, to order entry and invoicing—giving you a comprehensive view of your entire operation. Visit the Deacom booth for a demonstration, and learn how Deacom can maximize your productivity and profitability today.

Dietrich's North America*

Dietrich's 3D CAD/CAM software offers a fully integrated modular system for the prefabrication and modular building component industry. The Dietrich's System is not only a CAD/CAM program. Together with specialized CAD functions for construction, it produces all files for the manufacturing process, detailed costing and quoting preparation, and marketing documents. Our system of program modules is flexible and meets most standard needs, however, tailor-made solutions are also possible. Meet with us to discuss your software solutions.

Digital Canal Corporation

Every year component manufacturers spend thousands of dollars on software and equipment leasing. Why lease when you can buy at a fraction of the cost? Digital Canal provides design software to component manufacturers to provide them with a complete design as well as cutlist, framing, sheathing & material take off for all of their component needs. Stop by our booth to see why owning your software that links to your equipment will save you time and money versus costly software and equipment leases. Visit us on line at www.digitalcanal.com.

Eagle Metal Products

See ad on page 29.

For more than 20 years Eagle Metal has served the needs of component plants across the country with connector plates, design software and truss equipment. Visit our booth to experience the TrueBuild™ component design software, browse our complete line of truss equipment, meet our knowledgeable staff and see why Eagle Metal is quickly becoming the supplier of choice for component plants today.

Contact: Mr. Baird Quisenberry • 903/275-7888 • 972/888-9966 fax baird@eaglemetal.com • www.eaglemetal.com

KEY: Gold SBC Advertiser • Silver SBC Advertiser • Asterisk (*) indicates a new exhibitor

Easy-Arch*

One of the simplest and least expensive features you can add to a home to increase its value and appeal, is an arch. Easy-Arch, pre-formed metal framing arches, take the time and labor out of fabricating arches and ensure perfect, consistent arches, time after time. With five distinct styles to choose from and over 150 stock sizes, adding arches to your designs becomes a quick and affordable option to offer your customers. Install during production or deliver with panels for on-site installation.

Eide

See ad on page 17.

Eide debuts more new products and demonstrates the fastest growing jig system in the industry. The WizardPDS™ - Perimeter Definition System is an automated jig system that reduces set up time by 99%. The WizardPDS™ requires NO additional jig hardware or images to accomplish a complete truss set up in 30 seconds or less. The WizardPDS™ converts what is now set up time to build time. Visit our Booth and see the WizardPDS™ build (7) individual and completely different trusses start to finish in just 23 minutes.

Contact: Mr. G. Mitchell Eide • 612/521-9193 x206 • 612/521-9307 fax mitch@eidemachinery.com • www.eidemachinery.com

Elliott Equipment Company

Elliott is the leader in innovative material handling solutions for the building component industry. Elliott's 1881 tractor mount BoomTruck features ultra-smooth controls, fast operating speed and our patented SuperLink outriggers that let you work in the most confined environments. Elliott offers a full line of BoomTrucks with capacities from 10 - 40 tons. Increase your productivity, improve your worker's morale and work safer than ever before.

FastenMaster

FastenMaster, a division of OMG founded in 1981, is a brand of task specific, contractor quality fasteners that are engineered to enable a professional to complete a project faster, easier and stronger. For additional information please call us at 800.518.3569 or visit our website www.FastenMaster.com.

Finnforest USA, ENGINEERED WOOD DIVISION

See ad on pages 38, 95.

Finnforest USA, Engineered Wood Division distributes Master Plank® LVL throughout North America. Master Plank® has all building code acceptances, including NER. Multiple span capabilities make this engineered wood product a logical choice for beams, headers, scaffold planks, mobile home, stair stringers and other industrial applications.

Contact: Ms. Linda Bouford • 586/296-8770 x104 • 586/296-8773 fax linda.bouford@finnforest.com • www.finnforestus.com

Full House Company*

Full House is a family owned company located in Melbourne, Florida. We have been designing, manufacturing, rebuilding and servicing pre-hanging door machinery since 1981. Full House Company currently manufactures over 30 different custom machines for the door industry. Visit our booth to see the latest technology in prehung machinery and various material handling products.

Georgia-Pacific Corporation

Georgia-Pacific is one of the world's leading manufacturers of building products for the single and multi-family builder and commercial construction marketplace. As a brand leader, our high quality building materials are specified in many innovative building envelopes. Visit our web site at www.gp.com/build or call (800) BUILD GP

Gilman Building Products

Gilman Building Products Company is a quality southern yellow pine manufacturer servicing the truss industry since 1972. Gilman's annual production of SYP lumber exceeds 600 million board feet per year with 75% of production going directly to the truss and component manufacturing industry. We invite our current customers and friends to stop by and visit, as well as prospective customers in the truss industry that are not currently doing business with us.

Hiab, Inc. A Cargotec Company

Hiab, Inc. offers Hiab articulated cranes for off loading components and setting both bundles of trusses or single trusses. We also offer the Moffett truck mounted forklift for off loading and placing components on the jobsite including a 4-way version for handling extra long lengths of components. We are proud to offer Total Care—the complete service program, giving total confidence before, during, and after the sale. Please contact our Corporate Headquarters in Ohio at 1-800-852-2331 to locate a branch near you.

HOLTEC USA Corporation

See ad on page 4.

HOLTEC-The worldwide leader in package crosscut systems. Our Transcut® II Portable Crosscut Saw is affordably priced at \$6900 for cutting whole bunks of lumber of length and our HOLTEC Precision Crosscut Systems are in use by over 6,000 customers worldwide to cut whole packages of lumber to length in less than one minute with a precision of +/- 1mm (.040").

Contact: Ms. Kim O'Brien • 813/754-1665 • 813/752-8042 fax kim@holtecusa.com • www.holtecusa.com

hsbCAD

Object oriented technology based on Autocad and Architectural Desktop. From the drawings created in Architectural Desktop you are only a mouse click away to create all the fabrication drawings and details required for automated or non-automated manufacturing including bill of materials and much more. The Design tool of Choice for: Prefabricated Home Manufacturing (Timber and Light Gauge Steel), Timber Framers (Post and Beam), Modular Home Design, Residential Designers, Residential Design, Log home Design, SIP Designers, Builders.

Hundegger USA, LC

See ad on page 31.

Hundegger USA: As a true Whole House Saw Hundegger is the most flexible machine on the market with the largest cross section cut area and the most advanced servo control. That is what separates a Hundegger machine from other component saws on the market. In just under 4 years Hundegger USA has sold over 350 SC-1 machines world wide and 1/3 of those in North America, making the SC-1 the most admired "complete" linear saw on the market. Hundegger continues to define what a linear saw can do for the truss component industry and the EWP component industry as well.

Contact: Mr. Steve Shrader • 435/654-3028 • 435/654-3047 fax steve@hundeggerusa.com • www.hundeggerusa.com

iLevel by Weyerhaeuser

iLevel is an exciting new brand and business within Weyerhaeuser, bringing the most innovative and trusted products for building component manufacturers together under one roof. At the 2007 BCMC Show, we will feature Performance Tested Lumber and iLevel Trus Joist® TimberStrand LSL, along with our proprietary Javelin software and NextPhase Site Solutions. Javelin is next-generation software, powered by OptiFrame®, for iLevel customers providing structural framing to builders. Javelin software is fully parametric and allows seamless integration with MiTek®'s suite of design tools. NextPhase Site Solutions offer building material dealers and fabricators proprietary design and fabrication software tools compatible with industry-leading specialized saws, material handling and component fabrication equipment.

KEY: Gold SBC Advertiser • Silver SBC Advertiser • Bronze SBC Advertiser • Asterisk (*) indicates a new exhibitor

ITW Building Components Group - Alpine

See ad on pages 66-67, 131.

Discover ways to increase productivity and profits with Alpine and the ITW Building Components Group Inc., the leading supplier of technology-driven products and services for the building components industry. Want to cut your labor costs? See Alpine Equipment Division's new, enhanced ALS saw and AutoSet C4 truss assembly system. Gain more information and increase efficiency with Alpine software, including e-Shop, HomeBase and the latest and greatest version of VIEW, the industry's leading whole-house design application. Helpful representatives from Alpine Systems of Canada, Alpine Equipment Finance and Alpine Structural Consultants are also here, as well as Customer Service and Training experts.

Contact: Mr. Gary Muzzarelli • 954/979-9699 • 954/979-9680 fax gary@alpeng.com • www.alpeng.com

ITW Building Components Group - Intelligent Building Systems

See ad on pages 34-35.

Intelligent Building Systems, the leading supplier for the wall panel manufacturing industry, now offers component manufacturers new opportunities for growth with a complete wall panel system. Innovative equipment—manual, semi-automated or fully automated systems—include many exclusive features that will give you the edge over your competitors. Powered by IntelliBuild™ software, you'll maximize your company's performance. Stop by and learn how you can increase profits with a complete wall panel system from Intelligent Building Systems.

Contact: Ms. Valerie Cairns • 817/472-1366 • 817/652-3079 fax val@truswal.com • www.truswal.com

ITW Building Components Group - SpaceJoist TE, LLC

SpaceJoist TE offers a unique truss system combining the best features of a wood I-joist and an open-web floor truss to deliver a quality pre-built product for maximum efficiency, productivity and on-the-job flexibility. Please stop by and learn how you can profit from SpaceJoist's unique trimmable ends.

ITW Building Components Group - Truswal

See ad on pages 110-111.

Discover how you can put Truswal's genuine innovation in whole-house design (IntelliBuildTM), engineering (TrusPlusTM), plant efficiency (WinBatchTM), plant management (TrusManager Pro^{TM}) and state-of-the-art equipment to work for you. The great dependable features along with the newest features and enhancements in Truswal products can bring a new level of speed, accuracy and reliability to your operation. See a demo and experience the innovation!

Contact: Ms. Valerie Cairns • 817/472-1366 • 817/652-3079 fax val@truswal.com • www.truswal.com

ITW Industrial Fastening (manufacturers of Paslode & Duo-Fast)

ITW Industrial Fastening are manufacturers of both the Paslode and Duo-Fast brand of tools and fasteners. Our Industrial focus allows us to concentrate on in-plant applications, especially truss, cabinet, and furniture. We specialize in analyzing plant challenges and providing solutions that increase productivity, quality, and efficiency.

ITW Panel Fastening Systems

ITW Panel Fastening Systems is a supplier of pneumatic and Cordless nailing, stapling tools and fasteners for the wood panel industry. We offer Paslode, Duo-Fast and ToolMatic brand tools and fasteners. Our tools are compatible with all U.S. and European automated panel equipment and tools are available with high capacity magazines. ITW Panel Fastening Systems offers an extensive service network to maximize production efficiency, as well as Engineering support when necessary.

J M Boyle & Associates, LLC*

J.M. Boyle analyzes methods for reducing manufacturing costs, increasing revenue and reducing risk for start-up and existing wall panel and component manufacturing facilities. Operational deliverables include: feasibility studies, lender ready business plans, operational reviews and audits, training and quality control manuals, bidding and estimating models, and company processes, procedures and checklists. Sales and marketing deliverables include: training sales team's "methods of marketing and selling wall panels", sales presentations which create value, responses to customer objections, power point presentations of manufacturing services; and marketing activities designed to educate prospects on how component assemblies can decrease expenses, increase income and manage consequences.

Jager Metal Products

Jager Metal Products strives to continually exceed our position as industry leaders in providing clients with professional in-depth training, exceptional service, industry knowledge, experience and market intelligence. Our goal is to be experts in all aspects of the truss industry and to share this knowledge with our clients, while forming lasting partnerships. Unique to our industry we truly offer the total solution through comprehensive internal and external strategic relationships. From connector plates, hangers, software, metal webs, fabrication equipment, engineering, quote and design support to production and management software and sales support, we "Deliver the Advantage."

Jordan Lumber

JFP & JLS are Southern Yellow Pine Manufacturers currently producing in excess of 370 MMBF at our Barnesville, Georgia and Mount Gilead, North Carolina facilities. Our main focus is the production of 2"x4" thru 2"x10"-6' to 16' with 2"x4" being the largest percentage of our production. Grades by mill are: Georgia-MSR (as of August 2006), #1, #2Pr, #2, #3, & #4. North Carolina- DSS, #1 (4" & 6"), #1pr (4" & 6"), #1Dns (10"), #2Pr, #2, #3, & #4. Our goal is to provide our customers quality products and superior service.

Keymark Enterprises, LLC

Keymark is proud to announce completely rewritten, state-of-the-art truss design software. KeyTruss is brand new, and the only truss design software integrated into KeyBuild, the industry's most advanced Whole House Design Software. Visit Keymark at this year's BCMC and get a demonstration of what whole house design is all about!

Klaisler Mfg. Corp.

See ad on pages 100, 126.

SEE KLAISLER FIRST Klaisler Mfg. Corp. will feature the M Series Finish Roller and Floor Truss System. Why buy used when you can purchase new comparably priced equipment with a warranty! Our Rolsplicer, chord splicing system will display a new kick off automatic conveyor system. Along with the M Series, we will have our patented WEG-IT jigging series, designed to increase jig holding power, speed your production and provide a more durable, longer lasting table. We will also have our AGS "AGRI STACK" line of peak up stackers.

Contact: Mr. Brent Davis • 877/357-3898 • 317/357-3921 fax brent@klaisler.com • www.klaisler.com

Koorsen Manufacturing Inc.

Quality doesn't cost, it pays!...with the Connector Detector. Only every few years does a piece of equipment revolutionize the industry. The Connector Detector detects missing plates, improves production quality, works with all existing truss equipment, and reduces your liability. No more trips to the job site to replace missing plates.

KEY: Gold SBC Advertiser • Silver SBC Advertiser • Asterisk (*) indicates a new exhibitor

L.I. Industries

Supplier of all your promotional needs: supplier of lumber covers, rolls, custom bags, carpenter pencils, printed aprons, architectural rulers, steel tapes, contractor planner & more!

L-M Equipment Co. Ltd.

See ad on page 42.

Since 1957 we have been continually upgrading our equipment to offer our customers the most advance technology on the market today. In 2007 we still offer the most advanced technology available! Our Verticut P4 Package Cross Cut System incorporates new Scan and Cut Technology to eliminate operator error and achieve an incredible finish and cutting tolerance of +- 1/32. We also manufacture a Portable Yard Saw (over 600 machines sold world wide) in both gas or electric power, achieving a cutting tolerance of +- ¼. Visit our web site to view videos of our Package Cross Cut Systems and Automatic Strapping Systems in operation.

Contact: Mr. Rick Weihs • 604/431-8800 • 604/431-7711 fax sales@lmsaws.com • www.l MSaws.com

L-M Equipment Co., Inc.

L-M, Leading the package saw manufacturing market for more than 60 years, has always been ahead of the crowd. We offer high end systems with less complexity and more durability, with options from portable yard saws to full automation PET systems with industry standard tolerance (+ - 0.040).

Lakeside Trailer Mfg., Inc.

See ad on pages 48-49.

Lakeside will be exhibiting two of their most popular and versatile roll-off models with hydraulic front-ends, sliding tandems, and other options.

Contact: Mr. Lee J. Kinsman • 573/736-2966 • 573/736-5515 fax lee@rollerbed.com • www.rollerbed.com

Langdale Industries

Langdale Forest Products, located in south Georgia, has been providing quality Southern Yellow Pine lumber to the building supply and component manufacturing sectors for over 120 years. We are an independent, family-owned business that takes immense pride in its tree farming and forest stewardship programs, which furnish a stable supply of raw materials for our manufacturing facilities. Products available from LFP include 2x4 thru 2x12 in 8 feet to 20 feet lengths, in the following grades: #1 Dense, #2 Dense, #2 & Better, #2N, and #3 GM.

Lignum Forest Products

Lignum Forest Products LLP is a distributor of lumber products focused on servicing Truss manufacturers. Lignum is a partner with Pope & Talbot and Tembec, both leading manufacturer of MSR. With strategically located reloads, we can service your needs in a timely manner.

Lumber Technology Corporation

Live wire lumber merchants with over 100 years experience servicing the component industry. One telephone call to us puts you in touch with both Southern Pine and Canadian SPF markets. One telephone call to us provides you the most efficient and competitive means to make that difficult job more profitable. One telephone call to us does not put you in touch with a recorded message, but an in-depth experienced trader that can immediately react to your needs. Contact: Darren Satsky, Darren@lumbertechnology.com, www.lumbertechnology.com, 800/526-4926 (phone) and 973/467-2104 (fax)

Lumbermens Merchandising Corp. - LMC

LMC - BUILDING ON SERVICE ® LMC is a not-for-profit purchasing cooperative owned by over 350 independent stockholders. Over 75 of our stockholders have truss/wall panel operations representing 115 manufacturing locations. These stockholders make up the LMC - Truss Manufacturers Alliance, a networking and education group working to enhance purchasing programs for forest products, building materials and related services by harnessing combined purchasing volume. With over \$3.5 Billion Dollars in purchasing power, it is LMC's mission to be

the preferred source to which stockholders can entrust their purchases of forest products, building materials and other related products and services.

M & O Products, Inc.

M & O Products, Inc. has launched the Grip H Clip, a roofing H clip that makes sheathing installation faster and easier. The revolutionary design of the Grip H Clip uses living hinge lead-ins that make the clip slide in easily and stay in place. Contractors that use this labor-saving clip estimate that they save 1-1/2 man hours on a typical two-story, 2000 square foot house. The Grip H Clip is made from nylon 66, a non-corrosive material so strong and durable that it is used in many automobile applications. The Grip H Clip is a versatile product that accommodates both 7/16" and ½" sheathing. We invite you to visit the booth to learn more about this innovative clip and to see an installation

Machinery Boutique

For more than 25 years **Machinery Boutique** has been *the* industry source for buying and selling used and hard to find truss machinery equipment. Buyers love us because our informative and low pressure website instantly lets them zone in and figure out the piece of machinery that is right for them. Sellers love us because they know that by listing their equipment on our website they will be instantly linked to buyers conducting internet searches for used truss machinery. Type "used truss machinery" into a Google search and Machinery Boutique is the first website to be located.

Makron Engineering*

Makron is the pioneer of CAD controlled paperless timber framing lines. We offer complete integrated lines for interior and exterior walls. The system is based on the reliable and robust "extruder" system, which offers unique flexibility for panel height, stud dimensions and stud placement. Custom designed lines include self jigging stations, powered conveyor systems with panel flipping, single or double sided sheeting with multitasking CNC controlled bridge. Original Makron quality is again available in North America.

Mango Tech

See ad on page 19.

MangoTech. A young business providing Fresh Automated Solutions. MangoTech is a company with a focus on providing practical automation solutions for timber industry businesses throughout the world. The company's rapid growth is a result of its ability to be fast, flexible and innovative in answering real needs, enabling businesses to substantially increase their efficiency and profitability.

Contact: 1 866 GO MANGO • www.mangotech.com

MAXIMIZER TECHNOLOGIES, LLC

a Component of The Fitzgerald Group, LLC

See ad on page 96.

MaxCustomCutter®. Experience the one that started it ALL, the complete sawing and material handling system (Lean). Addressing current practices with the foresight and flexibility required for the changes coming tomorrow (On-Demand Cutting, Total Material Handling, Certified Safety, Dust Collection and Software Freedom). See how we can Maximize this Technology for your company today! Your Single Source for material handling, cutting, setup and manufacturing equipment / methodology from the premier companies throughout the world. Bring your production numbers, let's talk, we'll become part of your team. Maximizer Technologies. A blending of excellent services and products, with answers that work.®

Contact: Mr. Randall L. Fitzgerald • 719/528-5445 • 719/528-5444 fax answers@maximizertechnologies.com • www.maximizertechnologies.com

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McGinnis Saw Service

McGinnis Saw Service has been specializing in servicing the wood truss industry for 28 years with a complete sharpening and repair service, with sales of high quality saw blades. The foundation of our sharpening service begins with our CNC 5 Walter grinders which provide a precise and consistent grind using the highest quality diamond wheels. Combined with our micro video inspection, experienced hammer-smiths, strict quality controls, and pick-up and delivery vans, we provide a dependable, expedient, high quality sharpening and repair service. This coupled with a complete line of our own proven quality component saw blades to service the industry.

Metriguard Inc.

The World's Leading Provider of precision equipment for: *Machine Lumber Grading (MSR & MEL), *Veneer Testing (LVL), *Bending & Tension Testing (Quality Control).

Metropolitan Lumber Company

Founded in 1907, Metropolitan specializes in the "Pick O' the Pines". We sell Ponderosa Pine, Southern Pine, Idaho White Pine, and Red Pine to name a few. We also ship Green Douglas Fir, Spruce Pine Fir, Hem Fir and White Fir, and other species. We can provide you with the quality and service you need when purchasing your "just in time" inventory. We stock a wide variety of lumber items at two Chicago area reloads. We also ship direct carloads and truckloads from top quality mills and keep our finger on the pulse of the lumber industry every day.

MiTek Industries, Inc.

See ads on pages 2-3, 102-103, 115, 121.

At MiTek we're dedicated to providing a smart approach for enhancing your business performance with a sensible, solid vision for upgrading and automating your component manufacturing processes. Let MiTek show you an easy and profitable way to automate your component manufacturing processes, from component design to final installation.

Contact: Mr. Michael Klein • 314/851-7445 • 314/434-1394 fax mklein@mii.com • www.mii.com

Monet DeSauw Inc.

See ad on back cover.

We manufacture a variety of saws from simple push-button operation to top-of-the-line servo driven automated saws. On display this year will be the DeSawyer ES (servo driven saw), the Desawyer 2000 (automated saw), the FWA500 (floor web saw), our linear saw and live deck. The Desawyer 2000 is the highest production saw on the market and is by far every sawyers choice. It is the only saw in the industry with a complete manual backup system. Our FWA-500 continues to yield the highest productivity of any floor web saw available today. Please stop by our booth and we will show you the difference.

Contact: Mr. Kevin Troesser • 573/642-4900 • 573/642-3736 fax desauw@socket.net • www.desauw.com

MSR Lumber Producers Council

See ad on page 22.

The Machine Stress Rated Lumber Producers Council was formed to promote the benefits of Machine Stress Rated (MSR) lumber for the purpose of increasing the usage and acceptability of the product. It is the intent and mission of the Council to improve, promote, and advance the common interest and general welfare of all phases of the Machine Stress Rated lumber industry.

Contact: Ms. Kathy James • 888/848-5339 • 406/443-6176 fax msrlpc@msrlumber.org • www.msrlumber.org

National Crane.

A Division of Manitowoc Crane Group

Starting as a small family business in 1945, National Crane has come to symbolize the gold standard of telescoping boom trucks and articulating cranes. An estimated 90% of the more than 30,000 National Cranes sold since 1963 are still in operation today. As a member of the Manitowoc Crane Group, we provide our customers

with flexible financing solutions from Manitowoc Crane CREDIT; service and technical support from Manitowoc Crane CARE; and access to a global dealership network providing local support.

No-Burn®, Inc.

See ad on page 99.

No-Burn®, Inc. has committed our efforts towards educating communities, industry professionals and homeowners' about fire and mold's severities. No-Burn® offers a highly advanced suite of fire and mold resistant Products. Our Products are available through a network of No-Burn® Dealers, certified for professional application. Application of No-Burn® Products renders treated materials with the characteristic of fire and mold resistance. Our technology prevents devastating fires from occurring, while saving lives and property from the disturbances of fire and mold.

Contact: Ms. Rachel Gollihue • 330/336-1500 • 330/336-5800 fax rachel@noburn.com • www.noburn.com

Nordic Engineered Wood

Nordic Engineered Wood, a wholly-owned subsidiary of Chantiers Chibougamau, was founded in 2000 to develop high quality wood products for use in residential and light commercial applications. In addition to the largest solid-sawn I-joist manufacturing facility in North America, Nordic manufactures a family of competitively priced laminated products including glulams and columns. In keeping with our parent company's vision, we maintain strict adherence to quality control, environmentally sound harvesting and manufacturing techniques, and reliable service.

NUCONSTEEL

If it can be done in light gauge steel, NUCONSTEEL® can do it! NUCONSTEEL has developed an innovative, fast and, cost-effective method of producing cold-formed steel components for the residential market. With this NU WAY TO BUILD®, the NUFRAME™ and NUTRUSS 2.0® systems can help YOU produce panels and trusses on time every time! Stop by our booth to for live software demos and to see wall panels and trusses being produced in minutes. You DON'T want to miss this!

Open Joist 2000 Inc. (Distribution)

See ad on page 43.

Distribution Open Joist 2000 Inc. has been reengineering wood components since 1990. Open Joist 2000®, the original trimmable open webbed floor truss, was designed to maximize solid sawn lumber to its full structural capacity. While maintaining its competitiveness in the wood industry, new finger-jointed products are being continuously developed. Come and see us at our booth.

Contact: Mr. Michel Beauchamp • 514/952-3945 • 514/990-0078 fax mike@openjoist2000.com • www.openjoist2000.com

OptiFrame Software

See ad on pages 86-87.

OptiFrame Software is creating the industry's most advanced software tools for structural framing, with: Superior Modeling: Roof, wall and floor systems - beams, joists, accessories, trusses, wall panels, dimension lumber and critical connections. Ultimate Flexibility: The products you want, where you want to put them. "Walk thru" our Virtual Jobsite™ before you ship, and generate complete and accurate material lists at any time. Accurate Load Distribution: A traceable and accurate load path from the roof down to the foundation. Enjoy a competitive edge from efficiently designed structures, modeled in one software package: visit our booth or www.OptiFrame.com.

Osmose, Inc.

Osmose is the industry leader in the manufacture and supply of a wide range of wood preservatives and technology for the protection of wood against fungal decay and insect attack. Smart Sense pressure treated wood, with MicroPro technology, is a revolutionary way to pressure treat wood for decks, fences, landscaping and general contraction uses. Other Osmose brands include NatureWood, Advance Guard and FirePro.

Pacific Automation Ltd.

Pacific Trail Mfg., Inc.

Crosscut unit saws have become an extremely valuable tool in quickly cutting lumber back to easily handled lengths. Many times this is done prior to boards being fed into the component saws as just one example. Since 1988 we have been manufacturing a complete line of saws offering cutting tolerances of $\pm 1/4$ ", $\pm 1/16$ " & $\pm 1/32$ " to suit your individual needs.

Palfinger North America

Palfinger North America is a world class manufacturer of truck mounted knuckle boom cranes and forklifts. Used in many applications, we offer several models, which can be operated with radio remote control for fast and economical operation. Palfinger also offers the ideal solution for various loading and unloading problems encountered by transport operators. Different models of the Crayler truck mounted forklift are available depending on your specific needs. Palfinger and their distributors can help custom-manufacture a material handling system to meet your toughest challenges! For more information on the Palfinger product lines, please contact us at 800-567-1554.

Panels Plus

See ad on page 18.

Panels Plus! Your first choice for automated and semi-automated wall panels and component equipment that, builds technology into your craftsmanship. Stop by our booth and see today the answers, for being profitable, in tomorrow's market.

Contact: Mr. John Conti • 507/402-1053 • 507/373-7110 fax sales@panplus.com • www.panplus.com

Pennsylvania Lumbermens Mutual Insurance Co.

PLM specializes in Property and Casualty insurance for the lumber, woodworking and building material industries. Established in 1895, we have over a century of industry knowledge and expertise. The company was formed "by lumbermen for lumbermen", and throughout our entire history, wood and the wood industry has been our sole focus. We offer competitive rates, loss control programs and prompt claims response and handling. We are financially strong and carry an A.M. Best rating of A (Excellent). For more information, contact us at 800-752-1895 or visit our booth to learn more about our services.

Perma-Straight I*

Manufacturer of Engineered Wood: I Joists, Lam Headers, Laminated Posts (Perma-Straight). Certified, Engineered and Stamped by the American Plywood Association.

PFP Technologies

See ad on page 27.

PFP Technologies are the designers and manufacturers of the innovative Razer linear saw. Our new version 5 saw is faster and even more robust and reliable than ever. Come and see the flexibility, versatility, and industry leading features of the Razer. Try the user-friendly but powerful software which includes optimization and real time length calibration. The Razer can be run on its own or fully integrated with optional automated in feed and out feed systems affordable for any size truss plant. We look forward to catching up with old customers and meeting new ones.

Contact: Mr. Joseph A. Tuson • +61/8 9 249 4542 • +61/8 9 249 4596 fax joetuson@pfptech.com.au • www.razerusa.com

Plymouth Foam*

See ad on page 98.

Plymouth Foam is a leading manufacturer of building materials. Their PaceMaker Building Systems Structural Insulated Panels (SIPs) are custom laminated panels for residential and commercial construction. PaceMaker Building Systems SIPs provide High-performance building panels for walls, roofs and floors made with expanded polystyrene (EPS) rigid foam insulation sandwiched between two structural skins of oriented strand board (OSB), or other surface types.

Contact: Mr. Thomas Groth • 920/892-3165 • 920/892-4986 fax tomg@plymouthfoam.com • www.plymouthfoam.com

Pratt Industries

See ad on page 43.

Pratt Industries brings more than 30 years of manufacturing experience to the Wood Industry by providing high quality Truss Trailers, Lumber Dumpers and Roll Down Truck Bodies. Our equipment's quality is unmatched in the industry. All the trailers are made with T1 bar stock for high strength to haul heavy loads and most of the parts are galvanized for longer life span. They never rust and need very little maintenance. Also you have tons of options to choose from. No Wonder, We are the No. 1 in the Industry. Call us for details or check our trailers at our booth.

Contact: Mr. Pratap G. Lingam • 727/584-1414 • 727/584-2323 fax pratap@prattinc.com • www.prattinc.com

Precision Equipment Manufacturing

See ad on page 107.

Precision Equipment Mfg. manufactures quality roll off trailers for easy , roll-off right to the ground delivery, all over the country and Internationally. Our goal is to be your trailer company, you may choose one of our standard series 40', 48' and 53', or our stretch trailers which come in 36'-51', 42'-60', 46'-64', 50'-70', 53'-80'. We also manufacture the HD series goosenecks that come in 28', 32' and 36' lengths. We can custom make any size or axle configuration that best suits your needs. We want to earn your business!

Contact: Mr. Michael J. Syvertson • 701/237-5161 • 701/280-0946 fax sales@precisionequipmfg.com • www.precisionequipmfg.com

Princeton Delivery Systems Inc.

See ad on page 109.

Princeton Delivery Systems located near Columbus is the leading U.S. truck mounted forklift manufacturer. Princeton offers four PiggyBack® Delivery System models designed for building material applications: E2-3RVX "4-Way" is specifically designed to carry long loads, like engineered floor joists, through narrow openings. Controls change wheel direction so that the load can be transported length-wise. PB65 will handle prefabricated wall panels or other heavy loads. It is the industry's only 6,500 pound capacity unit. PB50 5,000 pound capacity unit is unequaled in rough terrain performance. Z2-3 with 4,500 pound capacity is ideal for medium loads on many single axle trucks.

Contact: Ms. Stacey Denney • 614/834-5022 • 614/834-5075 fax stacey.denney@piggy-back.com • www.piggy-back.com

Progressive Solutions Inc.

Progressive Solutions has been delivering premium business software solutions for over 15 years to the wood products and building materials industry in North America, the UK and Australia. Our reputation for product excellence and outstanding customer service has earned us the business of some of the top names in the industry. More wood ships using our Lumber Track™ software than all other competitors combined. Newly introduced bisTrack™—modern software designed specifically for building industry suppliers that manages all buying, selling and inventory tracking for lumber and building materials dealers and distributors—is already winning rave reviews.

Qualtim, Inc.

See ad on page 91.

Have you been considering ideas for improving your business and marketing approach but never seem to find enough time? As the industry leader in personalized service and support to the structural building components industry, Qualtim offers both creative and affordable solutions.

Contact: Ms. Linda Watson • 608/310-6711 • 608/358-5511 fax lwatson@qualtim.com • www.qualtim.com

RAND Manufacturing

KEY: Gold SBC Advertiser • Silver SBC Advertiser • Bronze SBC Advertiser • Asterisk (*) indicates a new exhibitor

Randek BauTech AB

Randek BauTech AB is the world leading manufacturer of automated equipment components for producing prefabricated homes. Our equipment produces finished building components faster and more efficiently than any other manufacturer. Compared to competing technologies, our machines will produce up to four times the linear feet of wall panels per shift. Our leading-edge technology enables manufacturers to produce high quality wall and floor panels in the shortest possible time with a minimum number of operators. Since 2000, we have delivered 13 production lines in the USA and Canada. Randek Automated Equipment, Inc. is exclusive North American agent for Randek BauTech AB.

Rayonier Wood Products

Rayonier manufactures a wide range of Southern Yellow Pine kiln dried lumber products, including the hard to find Dense Select Structural grade. Our seasoned sales staff is ready to help with your truss lumber needs. Visit our booth at the BCMC. When you want only the best, you'll find it at Rayonier Wood Products.

Rex Lumber & North Florida Lumber

Rex Lumber and North Florida Lumber are two of the largest producers of MEL30 and MEL31 yellow pine lumber in the south. We also produce many other truss grades from our two mills located in the panhandle of Florida. Please stop by and see us for more info.

Robbins Engineering, Inc.

See ad on page 105.

As a member of the family of Mitek Industries companies, the industry leader in personalized service and support we continue to provide a complete software solution for the component industry. Robbins Engineering is known as the developer of one of the industry's most intuitive, comprehensive, and integrated software, Online Plus layout and engineering (CAD/Cam) software, InfoStar management information software, and Wallstar wall panel software. Wallstar now supports Shopnet that can revolutionize your manufacturing process. Robbins Engineering offers Web Based Software training 24/7. Robbins invites you to see all of our other products the Mitek family has to offer.

Contact: Mr. Thomas A. Albani, P.E. • 813/972-1135 x259 • 813/978-8626 fax talbani@robbinseng.com • www.robbinseng.com

Robbins Lumber

Robbins Lumber offers distribution centers throughout the Midwest specializing in MSR Pine and MSR spruce lumber. We have office locations in Florida, Michigan and Chicago, IL. Stop by our booth and let us show you our commitment to customer satisfaction.

Roseburg Forest Products

Roseburg is a major national supplier of quality wood products for customers throughout North America. Based in Dillard, Oregon, the privately-owned company owns Western timberlands and manufacturing facilities stretching across the nation. Made in state-of-the-art, vertically integrated facilities; Roseburg softwood plywood, EWP and lumber meet or exceed the industry's high structural standards.

Safety Speed Cut Manufacturing

See ad on page 96.

Safety Speed Cut offers vertical panel saws, vertical panel routers and wide belt sanders to component manufacturers worldwide. Our products allow you to efficiently and effectively handle panels of all sizes. Our U.S. made products are highly accurate and heavy duty for those tough jobs. Stop by our booth to see our saws in action and get your questions answered.

Contact: Mr. Brian Donahue • 763/755-1600 x203 • 763/755-6080 fax b.donahue@safetyspeedcut.com • www.panelsaw.com

SBC Research Institute

The SBC Research Institute (SBCRI) provides thorough, affordable testing of construction products with the goal of developing a better knowledge of actual performance, both alone and within the integrated structure. Offering complete confidentially to independently evaluate any type of innovative product or product system, SBCRI has an extensive list of testing options under a variety of application, attachment and loading conditions. Dedicated to the fact-based analysis of component performance and properties, SBCRI testing will lead to more accurate and efficient design and improved installation—advancing a new generation of growth for the structural building components industry.

Seaboard International Forest Products, LLC

Seaboard International Forest Products LLC is a wholesale broker of commodity forest products. Founded in 1983, it has become one of the Top 20 forest products wholesale distributors in the country according to the Annual Home Channel News Survey. Seaboard has an active and experienced trading floor consisting of thirty-five traders. Their combined market and products knowledge is as solid and extensive as the products traded. Building component manufacturers all over the country rely on Seaboard to put together the most valuable transaction in terms of price, volume, and delivery.

Sellick Equipment Limited

Visit the Sellick Equipment Limited display to discuss your rough terrain materials handlings needs. Whether you need to handle the raw material or deliver the finished goods to the job site, Sellick has machines for the job. Learn more about the S Series rough terrain forklifts with capacities to 12,000 pounds and extra wide carriages for wide loads, and also the TMF Series of truck mounted forklifts that quickly and easily mount/dismount to a truck or trailer to efficiently deliver the goods.

Senco Products, Inc.

Air, battery and electric-operated stapling, nailing, and screw fastening equipment and fasteners for all areas of industry.

Simpson Strong-Tie

See ad on page 23.

World's largest manufacturer of wood-to-wood, wood-to-concrete, and steel stud framing connectors. Simpson's connectors for solid timber, composite wood products and plated trusses are the most specified of any brand. Strong-Tie plated truss products on display include: TSB Truss Spacer Bracer for faster truss installation; THASR/L218 Truss Hanger for 2x trusses available factory-skewed 45° left or right or field skewable from 46° to 84°; SDS Strong-Drive® Screws for joining or repairing trusses; and HGUQ Multi-Ply Girder Truss Hanger, a face-mount hanger that installs with SDS screws for improved distribution of load between all plys of the supporting girder truss.

Contact: Ms. Frankie Emerson • 925/560-9081 • 925/833-1496 fax femerson@stronqtie.com • www.stronqtie.com

SL Laser Systems LP

See ad on page 106.

Founded in 1988, SL Laser has been a pioneering force in the development of precision single and multiple head laser projection systems for truss, floor deck and wall panel systems. Our patented hardware and state-of-the-art software feature many user-friendly features designed to enhance functionality, while prompting the easy-to-use fundamentals that make our systems the industry benchmark. Seamless integration between TrussPilot™ software and hardware results in reduction of production costs and an increase in accuracy and profitability. Our Laser Systems can be found projecting increased productivity in some of thefinest building components manufacturing companies in the world.

Contact: Mr. Jason Galek • 704/561-9990 x 103 • 704/561-9994 fax qalek@sl-laser.com • www.sl-laser.com

KEY: Gold SBC Advertiser • Silver SBC Advertiser • Asterisk (*) indicates a new exhibitor

Southern Pine Council

See ad on page 13.

Southern Pine is the #1 species used by component manufacturers. A big reason is Southern Pine saves money due to its high strength, stiffness, and density. Southern Pine is available in strong visual grades, plus MSR and MEL, making it ideal for roof and floor trusses. Finger-jointed studs also provide a strong, straight product for wall panels. Come check out our new Structural Components brochure.

Contact: Ms. Catherine M. Kaake, P.E. • 504/443-4464 x213 • 504/443-6612 fax info@southernpine.com • www.southernpine.com

SPIDA Machinery 2000 Ltd.

SPIDA designs and manufactures a range of industrial saws and tables specifically for the TRUSS and FRAME industry. Our AUTOMATED sawing systems can help your plant reduce errors and increase quality and production of components—saving you valuable time and money. SPIDA's range of machinery will provide years of accuracy, reliability and low maintenance. SPIDA saws are known for their exceptional quality and reliability. We look Forward to seeing our old friends and meeting new ones this year.

Spotnails

Spotnails has been one of the leading manufacturers of pneumatically driven fasteners for nearly 70 years. The Company manufactures a wide range of industrial fastening products including nails, staples, pins, brads and tools for use in packaging, furniture/woodworking, construction, factory-built housing and many other industries. With manufacturing facilities in the United States, Mexico and Korea, Spotnails is keeping pace with the demand for quality tools and fasteners.

Stanley Bostitch, Inc.

Manufacturer of collated nails, staples, and specialty fasteners as well as the pneumatic nailers and staplers to apply them. Full on-site and off site service programs, loan tool program and custom application systems and support available.

Stiles Machinery Inc.

See ad on page 9.

Weinmann offers a complete range of machinery for the efficient and economical production of frame wall, SIP wall, floor, and roof components including assembly and tilt tables, automatic framing stations, and automatic fastening with nailing, stapling, and screw driving equipment. Weinmann features fully-automated CNC processing with their unique multi-function bridge machines, and WBZ lumber saws and machining centers. Stiles Machinery, Inc. is pleased to sell and service Weinmann component manufacturing systems in the USA. Weinmann is represented in Canada by Homag Canada.

Contact: Mr. Tom VanSlooten • 616/698-7500 x 1353 tvanslooten@stilesmachinery.com • www.stilesmachinery.com

STRAP & WRAP

Strap & Wrap is a tightly woven, polyester strapping system that replaces steel banding. Our tested system will effectively contain your Components, Trusses, OSB, Lumber, and other products and is gentle on the load and the user. Elasticity and memory allow it to absorb shock and maintain tension when loads are dropped. Buckles are designed and manufactured to work with our strap providing the best joint efficiency. Safety and Strength at Great Prices. AMERICAN PRODUCTS KEEP AMERICANS WORKING!

Structural Building Components Magazine

Your Industry...Your Ideas...Your Magazine! Structural Building Components (SBC) Magazine is the component industry's primary resource for leading-edge information about current issues, trends and products that affect the future of framing. The mission of SBC is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing structural building components. SBC strives to ensure growth and continuity and to be the industry's information conduit by taking a leadership role in the dissemination of technical and marketplace information. SBC staff welcomes your feedback and article ideas at editor@sbcmag.info.

Summit Forest Products

Summit Forest Products Inc. is a North American distributor specializing in the supply of lumber to component manufacturers. Through our strategically placed distribution centers we have the ability to service truss manufacturers throughout the United States & Canada, with high quality lumber at a level of service that is second to none. Whether it is quick delivery, highly specified tallies or forward pricing, at Summit we adapt to the individual customers' requirements. We continually strive to understand and anticipate our customers' needs to ensure that we are supplying them with well priced, high quality products.

SUNBELT

Sunbelt has provided quality steel storage systems to lumber yards and building materials dealers nationwide since 1987. We specialize in designing, engineering and installing warehouse racking, rack supported buildings, T-sheds and bulk sheds. Sunbelt offers complete yard and warehouse planning services tailored to each customer's specific needs, along with multiple ship points. Visit our booth to discover the many ways Sunbelt can be beneficial to your business.

TADANO

Tadano will be exhibiting two cranes. The TM-1882 tractor mounted crane and TM-20110 rear mounted crane. Both can be equipped with 2 person basket. The Tadano TM-1882 tractor mounted crane, a proven performer, has the shortest overall retracted length in the industry (18.3 ft.) but can be at a tip height of 92 feet in less than one minute (58 seconds) without a jib. The rear mounted Tadano TM-20110 has an extended tip height of 120 feet in 73 seconds. Please visit our booth.

TCT Manufacturing, Inc.

See ad on page 119.

TCT Manufacturing was the first to bring Linear-Feed Saws and automated Material Transporter Systems to the Truss Industry. We are now introducing our new "Robotic Truss Assembly System (TAS)". Come talk to us about this revolutionary new product and about the automation needs in your plant.

Contact: Mr. Doug Johnson • 352/735-5070 • 352/735-5071 fax dougi@tctwebsaw.com • www.tctwebsaw.com

Temple-Inland

See ad on page 123.

Temple-Inland is a major manufacturer of forest products including lumber and studs, fiberboard structural sheathing, engineered wood siding and trim, gypsum wallboard, particleboard and medium density fiberboard.

Ms. Susan Childers • 936/829-7317 • 936/829-1731 fax susanchilders@templeinland.com • www.temple.com

The Hain Company

The Hain Company specializes in developing machinery and solutions for the lumber and truss yards, onsite framing, wall panel and shed manufacturing, as well as TJI processing and any other random length cutting or precut packaging. We have over 30 years of experience helping this industry provide for production needs and our products reflect machinery that works for you...this gives you the consumer an advantage to not only produce an efficient product but will reflect money well spent because we at The Hain Company build machinery that is built to last. The Hain Company also broker's Klaisler—Monet DeSauw—Mango—Maximizer Technologies and Koskovich.

Contact: Mr. Leonard Hain • 530/295-8068 • 530/295-0468 fax sales@haincompany.com • www.haincompany.com

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The Koskovich Company

See ad on page 45.

The Koskovich Company manufactures automated equipment for cutting, marking, handling, and assembling wood components used in roof trusses and wall frames. The Servo-Omni is the fastest lateral-feed component saw available with cutting head set-up speeds averaging 6-8 seconds. The Omni-Miser is the fastest linear-feed saw available. It can perform most any angle cut, including compound angles, rip and bevel cuts, as well as infinite-length scarf cuts. Planx is an automated roof truss jigging system contained in a steel plank which simply bolts on a steel table top and can be combined with a laser imaging system

Contact: Ms. Karin Anding • 507/286-9209 x 104 • 507/285-1730 fax karina@omnisaw.com • www.KoskovichCompany.com

Todd Drummond Consulting

Professional Lean Manufacturing Consulting Services for the Component Industry. Including time standards for truss fabrication labor estimation. (Man-minutes, R.E. & S.U.) Normal Payback is 3 to 4 months! Truss Shop Labor Tracking Software Systems for truss fabrication. Track every man and order in your shop down to the minute. Consulting services tailored to your needs. Proven and practical solutions using Lean Manufacturing and Theory of Constraints principles for your component manufacturing. Clear and practical ideas that you can implement into your organization that can make a difference.

Tolleson Lumber Company

See ad on page 25.

Tolleson Lumber Company is a family owned business that has produced quality southern pine lumber since 1919. Our state of the art sawmills are located in Perry, Georgia and Preston, Georgia with a combined capacity in excess of 370 million board feet annually. Production includes #1, #2, and MSR grade marked lumber. In addition to truck shipments our mills have rail service on CSXT and NS. We also maintain on the ground inventory of MSR lumber in Aurora, IL & Reading, PA. Visit our booth and meet some of our people. We believe in long term relationships.

Contact: Ms. Dori Melendez • 478/988-1293 • 478/987-0160 fax sales@tollesonlumber.com • www.tollesonlumber.com

Triad/Merrick Machine Co.

See ad on page 97.

As one looks back through the history of component homes and reviews the advancement in technologies, one name remains synonymous—TRIAD. During FIVE decades Triad panel and component machines have lead the industry in meeting the demands and needs of builders in the United States, Canada, and around the world. Having built more panel equipment than all of the competition, COMBINED, Triad continues to meet the ever growing needs of today's builders by providing machinery and production systems that: lower labor costs, give higher production and productivity, controlled material costs, high quality finished products, the latest state-of-the-art engineering and programming.

Contact: Mr. Lanny Morris • 308/384-1780 x 126 • 308/384-1780 fax lannym@merrickmachine.com • www.triadruvo.com

Trim Fit LLC

See ad on page 26.

Trim Fit LLC manufactures the I-Block, an insertable, plate-able end panel component for your open web floor truss program. The Trim Fit I-Block is made of solid sawn, southern yellow pine. I-Block inserts are trimmed to 16" in length and are manufactured in truss depths from 11-1/4" to 24" in both 4x2 and 3x2 chord widths. On the job, the I-Block allows for maximum trim of 12". Save time in design and production, meet job deadlines and increase customer satisfaction.

Truss Plate Institute

The Truss Plate Institute (TPI) and its members are connecting the truss industry. Come visit the TPI booth to see how and to learn more about the products and services provided by TPI. Speak to our professional staff about our nationally recognized quality assurance inspection program. Learn about the soon to be released updated ANSI/TPI 1 standard. Review and ask questions about other guidelines and technical publications such as BCSI. See you at the show!

Truss-Tran by Stoll

See ad on page 30.

Stoll Trailers is a manufacturer of roll off truss trailers, designed to meet the needs of smaller companies, and also to maneuver in difficult locations. Our trailers are built in lengths of 28', 32', 36' and 40' with gooseneck hookup and generally pulled with a one ton truck.

Contact: Mr. Bradley W. Stoll • 864/446-2121 • 864/446-2116 fax stolltrailer@wctel.net • www.stolltrailers.com

USP Structural Connectors

See ad on page 15.

USP Structural Connectors is redefining the industry standards with an extensive line of products for general framing, engineered wood products and plated truss. The company has numerous exclusive products to solve any framing application. USP has several locations strategically located to supply truss manufacturers in all areas of the United States. All this is supported by unsurpassed customer and product support, an in-house engineering staff and a national sales force to assist in all areas of the construction process.

Contact: Ms. Mary Fritz • 507/364-8345 • 507/364-5042 fax mfritz@gibraltar1.com • www.uspconnectors.com

Vecoplan, LLC

For over 30 years, Vecoplan has provided innovative size reduction equipment and systems to the wood industry. Vecoplan's product offerings include a whole spectrum of wood waste handling equipment such as ReTech Single Shaft Rotary Grinders, Vecoplan Horizontal Grinders, Drum Chippers, and an expanded line of material handling equipment. All products are backed up with aggressive guarantees and parts and service support from experienced professionals at our North Carolina facility.

Viance*

Viance, the new source for Preservation Innovation.On January 1, 2007, Viance, a new leader in wood treatment technology, commenced operation. Based in Charlotte, N.C., the new business brings together the wood biocides business of Rohm and Haas and the wood protection chemicals business of Chemical Specialties Inc., a wholly owned subsidiary of Rockwood Holdings, to provide an extensive range of advanced wood treatment technologies and services to the global wood treatment industry. Visit www.treatedwood.com for more info.

Viking Forest Products

Viking Forest Products, one of North America's leading wholesale distributors of lumber products sells by the truck and railcar to truss manufacturers, lumber yards, distribution centers, and home centers. With reloads located throughout the country Viking can offer quick shipping trucks to fill just in time needs as well as offering mill direct shipments. Stock items include SPF and SYP MSR and #2 lumber as well as web stock. Viking Forest Products Truss Sales Specialists desire to build long lasting partnerships with their customers by keeping them abreast to market activity and provide solutions to their needs.

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Viking WPS

See ad on page 127.

Viking has provided creative fastening and material handling solutions to world-wide markets for over 30 yrs. Our history and experience has allowed us to create a line of new wall panel assembly products that clearly differentiate us from anything on the market today. All Viking equipment runs independent of design software and allows you to choose or change to any design software that fits your business needs. Our modular approach allows you to start small and increase production later by upgrading and adding equipment that moves your line from manual to a fully automated solution.

Contact: Ms. Linda Resch • 763/586-1202 • 763/571-7379 fax lindar@vikingeng.com • www.vikingincorporated.com

Virtek Vision International Inc.

See ad on page 115.

Virtek is the leading developer of precision laser-based solutions enabling component manufacturers to produce their products faster, better and at a lower cost. See the Virtek TrussLine Laser Projection System, with new green lasers that provide improved visibility along with new software that features improved usability, real-time production status, planning/scheduling and reporting functionality. The LaserMC, the superior laser marking system that has no ink mess or consumables. It streamlines the production of component materials used in wall panel assembly by measuring, laser marking and cutting in a single step. The Virtek I-Joist Processing precision cuts I-joists with optimization of material and automatically routes service openings.

Contact: Mr. Ed Bianchin, P.Eng. • 519/746-7190 x271 • 519/746-3383 fax ed.bianchin@virtek.ca • www.virtek.ca

Vision Financial Group, Inc.

VFG, on a national basis, provides equipment leasing and financing services through vendors and directly for end users of equipment. Capable of providing a variety of repayment structures to meet tax and book guidelines, as well as providing progress payments to vendors. Can do US and Canada for all types of equipment including titled vehicles and software.

Wasserman & Associates

See ad on page 43.

Wasserman & Associates is a representative for new truss, wall panel, stair, door and material handling equipment. We also offer the option of used or reconditioned equipment. As a partner in your equipment selection process, we promote the equipment that best suits your individual requirements, not the equipment that optimizes our commission. Buying or selling, large or small budget, please contact us.

Contact: Mr. Rod Wasserman • 402/438-2161 • 402/438-2524 fax

Weima America, Inc.

WEIMA America, Inc. provides customized scrap volume reduction services. Size reduction can be used to sell chips, provide boiler fuel or simply save on hauling & labor costs. We offer grinding, shredding and granulating solutions. Low prices, low energy, low maintenance, high safety machines have been sold worldwide for more than 20 years.

Weinig Group

Weinig Group—Your source for solid wood processing machines. WEINIG—Moulders, knife grinders; GRECON—Finger jointers, rough mills, flooring lines; DIMTER—Optimizing cross-cut saws, vision scanning, edge gluing presses; RAIMANN—Ripping solutions, gang ripsaws, moving blade ripsaws; WACO—High speed moulders, planers; CONTROL LOGIC—Vision Scanning Equipment, Optimizing Software; OPTIMIZING CROSSCUT SAWS—New features and software. RIP SAWS—Entrylevel fixed arbor saw, up to the 268 fpm, four moving blades and new optimizing infeed systems. RIP SCANNING SYSTEMS—including the latest Valu-Vision. FINGER JOINTERS—Profi-Joint, and high-speed 180 lugs/min. EDGE GLUING PRESS.

Westervelt Lumber*

Westervelt Lumber is a SYP Sawmill located in Moundville, AL producing 1" boards, dimension lumber, 5/4 x6 RED, and timbers. Annual production capacity is 285 mmbf. We also run 1" and 2" patterns on our Weinig moulder. Additional services include paper wrap, half packs in selected #2 items, freight by truck or rail (NS line), and extended shipping hours.

Wood Truss Systems, Inc.

See ad on page 25.

USED AND NEW EQUIPMENT—Respected by our customers and competitors alike for delivery of innovative and objective solutions and service that consistently places us among the top sales representatives in North America. Fully independent, we search from a variety of industry suppliers for equipment and services that best meet your needs. We've built a reputation and our whole business on it. Count on effective, economical and timely solutions featuring new and used: truss equipment; wall panel equipment; automated saws: component, radial arm, measuring systems; material handling systems; automated jigging systems; waste reduction equipment; replacement production surfaces; and plant layouts/production consultants.

Contact: Ms. Cathy Halteman • 765/751-9990 • 765/288-9991 fax cathy@woodtrusssystems.com • www.woodtrusssystems.com

WoodPro Insurance

A Division of Bowermaster & Associates

Bowermaster & Associates is an expert partner with the WTCA. We are the leader in providing the Building Component Industry with the best coverage at the lowest cost. Over 40 truss manufacturers choose Bowermaster's Woodpro specialists to protect their insurance needs. Bowermaster & Associates is a full service insurance agency offering Property and Casualty insurance, Workers' Compensation, Health and Employee Benefits, Retirement and Financial Planning, and Human Resource Consultation. Stop by and see what we can do for you.

WoodSmart Solutions, Inc. BLUWOOD®

BLUWOOD by WoodSmart Solutions, Inc., located in Boca Raton Florida is the product of a proprietary two-part, pre-construction, factory applied coating system that provides life-time warranted protection from moisture, mold fungus growth, rot decay and termites to dimensional, panel and engineered wood products. BLUWOOD is a GreenSpec listed product. www.bluwood.com PH: (561) 416-1972.

WTCA - Representing the SBC Industry

See ads on pages 11, 33, 39, 95, 114, 120.

WTCA is a leading force in strengthening the structural building components industry. Representing component manufacturers, builders, material suppliers and industry professionals, WTCA provides the tools and resources needed to grow component manufacturing businesses. Whether it's educational resources, risk management strategies, building code watch, financial and wage surveys, legislative alerts, in-plant safety and quality control, transportation issues, technical training or marketing plans, WTCA provides tangible benefits to component manufacturing members. This year, stop by our booth to learn about SBCRI - the new research and testing facility, and also get a first-hand look at new and updated programs, products and services, and see how it pays to be a member of WTCA.

Contact: Ms. Anna L. Stamm • 608/310-6719 • 608/274-3329 fax astamm@qualtim.com • www.sbcindustry.com

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Mr. Mark S. Hope, P.E.	16.5	Mr. Richard Marriott	6	Mr. David C. Dunbar, PE	3	Mr. Jeffrey W. Robertson	3		
Mr. Jack Littfin	16	Mr. Jim Mavrakes	6	Mr. Richard E. Dyson	3	Mr. Timothy Rouch	3		
Mr. John Hogan	15	Mr. Mike McCloud	6	Mr. George Eberle	3	Mr. Patrick Sammet	3		
Mr. Thomas J. Manenti	15	Mr. Donald McDavid	6	Mr. Simon Evans	3	Mr. Don Samora	3		

AWARD WINNERS **WTCA Hall of Fame**

Each year at BCMC, WTCA inducts a new member(s) into the Hall of Fame. Each recipient is selected for this honor by the vote of industry peers and is recognized as contributing significantly to the advancement of WTCA and the component industry. Members of the Hall of Fame include:

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<u>1986</u>	Staton Douthit	<u>1996</u>	Lee Vulgaris
	Dr. Stanley K. Suddarth	<u> 1997</u>	Kirk Grundahl
<u>1987</u>	Dave Chambers	<u> 1998</u>	Bob Ward
	Don Percival	1999	John R. Herring
<u>1988</u>	Don O. Carlson	2000	Thomas J. Manenti
<u>1989</u>	Leonard Sylk	2001	Bernie Boilen
	George Eberle	<u>2002</u>	Koss Kinser
<u>1991</u>	John Mannix Bill Alcorn	<u>2003</u>	Merle Nett
1992	Rip Rogers	<u>2004</u>	Richard Brown
1993	Tom Carbeck		Andy Schwitter
		<u>2005</u>	Suzanne Grundahl
<u>1994</u>	Michael Conforti	2006	John Meeks, P.E.
<u>1995</u>	Don Hershey		Kent J. Pagel
	Bill McAlpine		None 3. 1 agor

Bowman Industry Enthusiast Award

Awarded each year at BCMC to an individual supplier member of WTCA who has enthusiastically supported the structural building components industry. Award winners include:

2005 Mike Bugbee Simpson Strong-Tie Company

> 2006 Tom Manenti MiTek Industries, Inc.

SBC Leadership Award

New in 2006, This award honors an individual who, since the industry was founded 50 years ago, has helped nurture, support and grow the structural building components industry as a whole with their vision, innovation and/or creativity. The individual may be a component manufacturer, supplier, associate or any other person whose efforts has helped create our industry into what it is today. The first recipient was: Abner Yoder of Stark Truss Company.

> Abner Yoder Stark Truss Company

Attend the WTCA Annual Meeting on Thursday, October 4, to see who this year's award winners will be!



WTCA Member Capitalizes on Extreme Experience to Convert Builder to Wall Panels

by Emmy Thorson-Hanson

n March, one component manufacturer was given a chance to educate one builder in its region on the benefits of wall panels. WTCA member Northeast Panel & Truss, LLC of Kingston, NY took this golden opportunity and ran with it.

By supplying components for this special project, not only was NE Panel & Truss doing something good for the community, but for the wall panel industry as well. The build helped skeptics in the area dispel misconceptions about wall panels and embrace the product. What's more, the builder had such a great experience that they plan to start using wall panels! **SBC** caught up with NE Panel & Truss and the builder to get the inside scoop on what

contributed to the unique outcome of this project.

The use of wall panels in this project served more than one purpose.

at a glance

- ☐ The Extreme build helped Northeast Panel & Truss dispel misconceptions about wall panels and led their builder customer to embrace the product.
- □ The experience convinced Amedore Homes that wall panels are quality products that are also efficient and economical.
- □ The project couldn't have been completed in the given timeframe without the use of wall panels, roof truss and floor trusses.

The Project

For the two-hour season finale of ABC's hit TV series *Extreme Makeover: Home Edition* the show went to New York to help a family in need of a new home. The build took place in Colonie, NY with NE Panel & Truss supplying roof and floor trusses and wall panels for the project. Amedore Homes, a long-time customer of NE Panel & Truss (NEPT), was the builder for the project.

Supplying the components for an *Extreme* build is demanding enough, but NEPT had even more pressure to have a flawless performance thanks to a unique circumstance. Roof and floor truss designer John Workstus explained, "We've been working with Amedore Homes for about three years. We've done roof and floor trusses for them before, but they had never used wall panels, so this was their first time they got to see wall panels in use."

Jacob Masker designed the wall panels and knew the heat was on. "There was more pressure in getting things done perfectly because I knew there would be dozens of framers on site looking at the product and assessing it," he said. NEPT realized how much weight Amedore's first wall panel experience would hold and understood that it had to be an exceptional one.

George Amedore Jr., Executive Vice President of Amedore Homes, explained why his company had never used wall panels. "Prior to the *Extreme* build we had tossed around the idea of using wall panels, but the feasibility in changing our whole product line to wall panels didn't seem realistic," he explained. "At that time we couldn't find the savings or the financial benefit in it." George said his decision not to use wall panels in the past was simply a by-product of tradition: "Since framers in our area are quite accustomed to stick-framed walls, it would take them longer to do, which in turn would cost us more."

As a production homebuilder putting up between 100 and 140 homes per year, George said he knew from experience that trusses are very beneficial for every project in terms of cost. "As for wall panels," he said, "I figured that they were a good method of speeding up construction, but as far as the cost savings of the home, I wasn't convinced."

This illustrates an important fact for component manufacturers to keep in mind when discussing the use of wall panels with their builders. Just because a customer doesn't see how they can realize bottom line savings from implementing wall panels doesn't mean they aren't interested in the product. This can affect how you approach the discussion with your builder; an understanding and appreciation of the product is half the battle.

As was the case with NEPT, an actual demonstration of the benefits of using wall panels is often the best way to convert a customer. The three major benefits that Amedore Homes witnessed during the *Extreme* project were the time-saving element of wall panels, the environmental advantage of less waste, and the ease and the ability to do more on the front end.

Wall Panels Save Time

Luckily Amedore didn't need a whole lot of convincing that this unique project would require wall panels. "They realized right from the get-go that they would need panels. Originally they planned to use panels just for the exterior walls," said John. "But then they went to the site of an *Extreme* build in Philadelphia to get a feel for scheduling and such. They realized that the only way they would get it done was to do the whole house using panels."

Framing the house as quickly as possible was the best solution to getting the project completed on time, George said. Jacob agreed that was the right decision: "[Framing] would have taken at least twice the time, not to mention all the setup. It wouldn't have been possible to finish the framing in the time allotted without the use of wall panels."

Months after the home was built, George continues to marvel at the speed of the build. "[Extreme] was a unique project; we had 80 framing contractors on the job. It took us 12 hours to frame the house, and it couldn't have been done without using wall panels, roof trusses and floor trusses. The quickest Continued on page 90

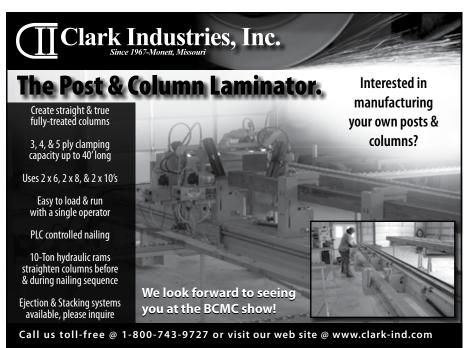


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Going the Distance

I have ever completed a home using conventional methods to stick-frame a house was 54 days."

Less Waste Is an Advantage

Extreme Experience...

Continued from page 89

Another advantage to using wall panels that George had previously been unaware of was the benefit to the environment. "The waste and scraps from stick framing is a huge issue, and I had never considered the cost savings of waste from using wall panels," he said. "When I conventionally stick frame a home the dumpster is full of waste material, but when you use wall panels you have none."

Prior to this project, George had only taken the obvious financial "pros and cons" of wall panels into consideration, as many builders tend to do. But now things have changed because he witnessed firsthand the minimal waste produced when using components: "Now I have to factor that in. Being environmentally friendly is just another benefit to using wall panels."

Easy as 1-2-3

The last major benefit that stands out in George's mind is how other processes were improved thanks to the use of components. "It afforded us to do some pre-roughing of mechanicals when building the home," he said. "It was the first time I've ever used a pre-cast wall foundation and wall panel framing."

Because Amedore was still a little hesitant to use wall panels, extra communication was necessary during the design process. "It was a trade off," said Jacob. "We had a continuous communication line with the contractor; there was a lot of back and forth in order to get everything done ahead of time."

"This experience really opened up a lot of peoples' eyes as to what the product is.... The project opened up this market-place for the product."

Fortunately Amedore was open to learning and embraced the experience. "We preeducated [the framers] ahead of time. We took all of our managing directors of each crew and went through the plans over and over," noted George. "We worked hand in hand with NEPT to come up with a whole timeline, what needed to be done on site and how it should be done." This level of organization and the use of wall panels allowed the NEPT team to pre-frame labor intensive elements ahead of time.

Thanks to all of the work done ahead of time, when the day of the build came, everything came together seamlessly. "I walked away amazed with how smoothly the whole project went together," said John. "It was due to all the up-front preparation." In the two weeks prior to the build, NEPT had numerous face-to-face meetings with all of the trades (plumbing, heating, etc.) to get even the tiniest details on paper. Because every aspect of framing the home was componentized, it allowed them to save precious minutes for everyone else down the line. They added extra duct chases, brought extra floor trusses and put extra blocking in the roof trusses. This allowed the HVAC volunteers to lay the ducts on top of the bottom chords. NEPT was even able to help expedite the electricians' work by drilling the studs in the panels for

Not leaving anything to chance, NEPT even came to the jobsite prepared for any product damage that may have occurred during shipping or on the build site. This included



a laptop with all of the standard repair details, a portable press and a stock of extra connector plates. They also brought extra hangers (one or more of each style used). "Everything was coordinated so there were no structural interferences when it came time to build," John said. NEPT went the extra mile to ensure that Amedore's first experience with wall panels was memorable and positive.

Leaving a Good Impression

The impact of this build will last long past the date the episode airs. Thanks to NEPT, the framers who were on site witnessed the benefits of using wall panels. John got positive feedback from the folks at Amedore. "They were really impressed by the ease, speed and quality of the wall panels. The volunteer framers on this project hadn't used wall panels either, and were quite skeptical going into it. If

something didn't fit during the framing their back-up plan was to stick frame that panel," he said. They never had to resort to the back-up plan.

According to George, "It was a great experience." He continued, "It was amazing to see the quality control that went into each panel. I had my very best framing contractors on the job, and they were all so impressed with the quality and with the way it came together. [Wall panels] are great products."

Hopes are high that this positive learning experience with wall panels will reach beyond Amedore Homes. "Years ago you wouldn't associate wall panels with good quality. But quality control is much greater now than it ever has been, and as technology progresses and as people continue to use pre-manufactured products (floor trusses, roof trusses, wall panels, even pre-hung doors) the acceptability of each product will rise," said George. "As builders venture out to use wall panels, one after the other will have a good experi-





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ence. When others see their successes, more will jump on the bandwagon."

Happily Ever After

Not only was a good deed accomplished through this *Extreme Makeover*, but something much larger took place thanks to the use of wall panels in this project. One company able to overcome its pre-conceived notions and open a new door for their business, and a whole region was able to learn about and gain an appreciation for wall panels, which was a huge step for the industry.

"I know this experience really opened up a lot of peoples' eyes as to what the product is. It was a great learning curve for them as well as for this region. The project opened up this marketplace for the product," commented George. "As a matter of fact we are in discussion with NEPT right now to reevaluate all of our product line and see how we can start bringing wall panels into our production." **SBC**



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by Emmy Thorson-Hanson

Read about how one component manufacturer is taking coldformed steel to the next "round."

at a glance

- □ Cold-formed steel is gaining respect and popularity in the industry thanks to challenging design projects and diverse construction applications.
- M-Truss worked on a luxury condominium project in Las Vegas that called for steel radius trusses and radius wall panels.
- □ Companies like M-Truss have been successful by demonstrating the bottom line savings of cold-formed steel in the ease of installation and reduced labor costs.

old-formed steel is gaining respect and popularity in the industry thanks to companies like M-Truss that welcome challenging projects. Cathy and Tom McBride of M-Truss & Components, LLC in Las Vegas, NV gave us a glimpse into their business of cold-formed steel component manufacturing and shared how they got involved in a very cutting-edge application of cold-formed steel.

Their first commercial cold-formed steel job in Las Vegas presented itself in 1997 on the Las Vegas Strip, far away from their previous jobs as general contractors in Kansas. Before it became a popular Vegas hotel and casino, the Venetian Hotel & Resort was a drawing on paper that Tom was asked to work on as a framing contractor. The position required the couple to move to Nevada for a short period of time. They've never left.

Their "temporary" move to the West presented a unique business option that suited their interests. Around 2001, with the Vegas construction market heating up and the demand for cold-formed steel framing in all construction applications growing, they saw an opportunity to create a start-up cold-formed steel operation. The McBrides had always been drawn to steel components in particular. "We contemplated the idea of getting into the steel structural building components industry for many years, and when the opportunity came along we went for it," said Tom. Cathy says that their previous work with wood stick framing led the couple to the conclusion that manufactured components offer a far more economical framing method. With the Venetian project behind them, the McBrides permanently relocated in Vegas and formed M-Truss.

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"Figuring out how to radius the steel so we could consistently create the truss, putting together the wall panels, building the jig, and maintaining consistency and quality were the biggest challenges."

"Those who were leery of the concept of bringing a completed steel component of this size on site were amazed at the ease of installation."



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The Art of Radius Steel

Continued from page 104

After five years in business, they found themselves in the midst of one of the most complex cold-formed steel design applications ever; and thus took on their first project utilizing radius components. KHS&S Contractors Inc. approached M-Truss about One Queensridge, a luxury condominium building situated ten miles west of The Strip. The project called for steel radius trusses for the lobby and the penthouse roof, as well as radius wall panels.

Kevin Nanney, who has held the position of senior project manager at KHS&S for ten years, explained that the condo's very intricate roof design was a major reason that his com-

pany chose to work with M-Truss: "Due to the design we determined that radius steel was the only option. It made the most sense to hire a specialty truss company that specializes in these designs."

What Is a Radius Component?

There are different kinds of radius trusses. Radius shapes include domes (circular), ovals and elliptical (which are curved then flatten out). Although they achieve the same aesthetic effect, radius steel trusses are built using a very different process than wood radius trusses. "Wood radius trusses are created in one of two ways. You have a beam and cut the wood in a radius, or create the curved shape using smaller lengths attached with connector plates." explained Cathy.

In contrast, steel radius trusses are not segmented. "They are put through a process that forms the steel to an arch or curved shape (which is the radius). This process keeps the steel's proprietary shape and maintains its strength," she said.

Which is easier said than done. "Figuring out how to radius the steel so we could consistently create the truss, putting together the wall panels, building the jig, and maintaining consistency and quality were the biggest challenges," according to Cathy. It took three months to complete the design work for the job, and it was a virtual race to keep up with the timeframe KHS&S had set.

Despite the time crunch, they were able to stay on schedule. It helped that they had extra motivation—to prove that premanufactured steel components are worthy of respect. "Those who were leery of the concept of bringing a completed steel component of this size on site were amazed at the ease of installation," comments Cathy. For this project they sheathed the wall panels on the ground and then flew (rafted) them up to the top—up 21 stories—to place.

Challenges

Tom feels that the biggest challenge steel component manufacturers face is getting their product accepted by the construction community. Cathy agrees that getting builders and contractors to think in terms of pre-fab steel has been a long hard struggle. "But the ones that have made the conversionhave been faithful," she added.

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The Art of Radius Steel

Continued from page 107

The company recently became members of WTCA's Cold-Formed Steel Council (CFSC), an organization that Tom thinks will play a big role in the advancement of steel components. "I think CFSC will help standardize the industry on the component side, as well as educate the marketplace and the building officials. It has a lot to offer the industry as a whole."

In addition to becoming involved with CFSC, M-Truss feels it is worth it to spread the word about steel and help it gain acceptance in the industry. "Steel component construction is a quality product, once a customer uses it, they can tell the difference," says Cathy.

Despite the challenges of selling the marketplace on coldformed steel, Cathy is quick to point out the undeniable benefits of using steel components. "The main selling point is the ease of installation," she said, noting that this is where the cost savings of using steel components are generally realized. "The cost savings are in installation, you don't have as much crew out there, and it's easy to install. It's like putting together a puzzle when you are using prefab components like this."

As for the slow housing market, the McBrides feel they aren't really suffering the effects. "We are not really affected because we do so little residential, although we have recently completed a high-end all steel home using our wall panels and trusses. We do a lot of condos, but they are kind of grayline—they are built like commercial and sold like residential," said Tom, noting that roughly 90 percent of the company's business is in commercial framing. This unique feature has kept them from being directly hit by the downturn in the housing market.

So far, their venture into the steel components industry has proven to be profitable, and the McBrides have high hopes for the future. Cathy says M-Truss is ready to take it head-on. If their recent foray into supplying steel radius trusses is any indication of what they can do, M-Truss's future looks bright. "We like to think outside the box, we want to get creative and see what we can do with steel," she ended. "We want to add to what's out there." **SBC**



"CFSC will help standardize the industry on the component side, as well as educate the marketplace and the building officials. It has a lot to offer the industry as a whole."



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A Remembrance

Jim Pruitt: The Patient Cowboy



The industry remembers a BCMC fixture whose boots will not be easily filled.

by WTCA Staff

he industry—BCMC tradeshow leadership, exhibitors and staff especially—will miss the presence of James Kent Pruitt at this year's show. The longtime account executive of national exposition service contractor George Fern Co. died suddenly on Wednesday, July 18, at his home in Olathe, KS, of a massive heart attack. Pruitt was 52.

Lovingly known as "JP," Pruitt was born on July 15, 1955, in Springfield, IL. He was a graduate of Shawnee Mission South High School and was employed by Louisvillebased George Fern Co.

The BCMC Committee was shocked and saddened by the news. Since starting at George Fern in January 1992, JP worked tirelessly with members of the committee and exhibitors to accommodate their needs year-round. JP facilitated every aspect of exhibitor move in and move-out, which involved a great deal of planning.

Although it required him to spend many weeks away from his family, JP loved his work and it showed. He worked relentlessly, keeping an even temper and a quiet smile during high intensity situations. BCMC exhibitors came to appreciate his composed demeanor. "JP was the GO TO GUY. Always calm, cool and collected even when we were not. Whether finding our trucks, getting equipment in and out, or just where the best place was to get good coffee. He made the BCMC run smoothly. I know my staff will miss him greatly," wrote Brent Davis, Sales Manager of Klaisler Mfg Corp.

Many spoke of his genuine nature and friendship. "He was a guy who NEVER backed down from a challenge and was a true believer in the phrase 'everything works if you let it.' His calm, easy-going manner helped make every year's BCMC trip significantly easier for me. We became friends over the years and I will miss those annual late night chats over an adult beverage when we solved the world's problems. There are not enough good guys in the world, and we lost one in JP. He will be missed," remembered Ray Kunze of ITW Building Components Group Inc.

Steve Shrader of Hundegger USA said, "I was always impressed with JP as a professional and as a friend. He was that calm figure in the heat of setting up for a show that assured you everything would work out...which it always did. A few weeks ago he reminded me he was also a friend; JP invited me and my wife to dinner knowing I lived close to where he would be vacationing. We could all learn from JP."

JP was known for his trademark cowboy boots and meaningful swagger on the show floor. "You always knew things were under control when you saw him walk across the show floor in his cowboy boots, mustache and blue shirt. You knew this because he was the type of man who would do whatever needed to be done and do it himself if necessary. He was dedicated to his job but you also got the sense that he was dedicated to the exhibitors. Dedicated to making this the best and easiest show they had ever been involved in. I will miss his smile and good nature, but most of all I will miss the way he treated me like we were the best of friends even though we only saw each other once a year," Michael Klein of MiTek Industries wrote.

JP also had a profound effect on the BCMC Committee and staff over the years. According to records, his work with BCMC began with the 1992 show in Louisville,

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A Remembrance: Jim Pruitt

Continued from page 112

KY (at the time, Fern was known as Hubbell/Tyner). BCMC became one of his accounts in 1995, and he was Fern's floor manager ever since. To say he had a hand in the BCMC's success during that period is an understatement.

Ben Hershey worked with JP on the Committee for seven years. "It has been a pleasure to have worked with JP since 2000. Over the past few years, I had the opportunity to work with him directly on getting the floor set up and exhibits coordinated. He taught all of us a lot about how to improve the show each year. I will miss him a great deal and the contribution he made to the show," he wrote.

WTCA President and BCMC committee member Barry Dixon appreciated his steady disposition. "JP was the consummate professional while adding a flavor of fun during his tenure with BCMC. I remember him always being calm under fire and very committed to finding solutions while carrying a smile on his face. I will dearly miss our conversations and his invaluable input within the Committee," he said.

Peg Pichette and Jill Zimmerman are two staff members who relied on JP's experience and patience while organizing BCMC each year. "I had the privilege of working with JP for almost eight years. For the last couple of years we often joked that we could read each others' minds. We worked very well together; in fact, I couldn't have asked for a better person to guide me through my first show. He was a special guy. I still find myself wanting and needing to pick up the phone to ask him a question; he always had an answer. I will definitely miss working with him, but more importantly, I will miss a great friend," said Pichette.

Zimmerman won't soon forget his mark on BCMC. "The success of BCMC and our exhibitors was in large part due to JP. He often solved our problems before we knew they existed. He shared our passion for the success of BCMC and wasn't afraid to share ideas on how to help improve it. He was the best multi-tasker known to mankind, and he even baked homemade cookies for our staff every year at Christmas. JP was a wonderful guy and he will be greatly missed. I will miss the cowboy boots at the show," she said.

JP was preceded in death by his father Lynn. Survivors include his wife Elizabeth; daughters, Brittney and Brooke and son, Justin; mother, Marianne; son, Bryan and wife Lisa and their children, Lauren and Lindsay; daughter, Lisa and husband Paul and their children, Alexis and Anna. A memorial service was held on July 22, at D.W. Newcomer's Sons Johnson County Chapel in Overland Park, KS. At the family's request, memorial contributions may be made to the Children of Jim Pruitt Education Fund c/o Credit Union of Johnson County, 14280 W. 135th St., Olathe, KS 66062.

Bio information taken from an obituary published in the Kansas City Star newspaper on July 20, 2007. Thanks to James Knudtson of George Fern Company for providing additional information.





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September/October 2007 Structural Building Components Magazine www.sbcmag.info

System Stability in Wood Truss Assemblies during Construction

by Steven M. Cramer, P.E., PhD & Dan Hawk

Learn about emerging research on bracing strategies for system stability.

Authors' Note: This paper is a modification of a paper presented at the World Conference on Timber Engineering in August 2006 in Portland, OR. We appreciate the contributions of Professor Dan Wheat from the University of Texas-Austin.

$$P_{cr} = \frac{\pi^2 EI}{\left(K_e L\right)^2}$$

Equation 1. Euler's Buckling Formula

at a glance

- □ Euler's buckling formula dates back to 1757; we still use it today to determine bracing.
- ☐ With the creation of an analysis program that more accurately predicts the behavior of a truss system, bracing designs can be examined.
- ☐ Given that relatively few material properties were measured, the SAWFT predictions are surprisingly close to the instability loads obtained from the tests.
- ☐ This work shows promise as a first step toward development of robust structural analysis algorithms for developing new design procedures for wood structural system stability.

Most framers and non-engineering construction people have a practical understanding of gravity loads and the basic resistance of these loads exhibited primarily as tension and compression in the building components that support them. Compression, however, can lead to crushing in some instances and buckling in others. By definition and theory, buckling is a sudden event which can occur at loads far below those necessary to cause crushing. As a result, it is a failure mode that can be unexpected for those unfamiliar with the concept.

Trusses must be braced during construction and in service to prevent buckling. The current approach for determining bracing requirements is to evaluate individual truss members independently of other members and trusses they may be attached to. Since metal plate connected wood trusses are primarily used as part of a structural system of repetitive members, a more realistic approach would be to evaluate bracing requirements by considering the behavior of the entire roof or floor system. Computational techniques currently exist to extend the structural analysis of a wood truss system to consider stability. This article reviews several computational approaches and demonstrates the application of one method to the prediction of system stability with different bracing strategies. Once prediction of system stability is shown to be accurate, the method can also be used to examine the forces that occur within the braces.

Introduction

If trusses were restrained and braced according to the recommendations provided in the Building Component Safety Information booklet, BCSI, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses, there would not be much to write about here. As truss installers look for the most efficient ways to install trusses, industry recommendations are often modified or ignored, sometimes resulting in performance problems and/or truss collapse. This article discusses the results of some preliminary research involving stability calculations for truss systems. The computations suggested here are not guite ready for everyday design, but perhaps they will be in the near future.

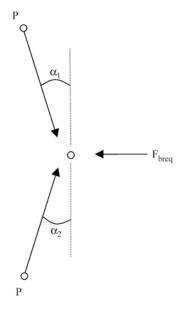
The rules upon which current temporary and permanent bracing recommendations are based are fairly simple and rely on basic engineering concepts of triangulation of members, Euler's buckling formula, and the "2% Rule." Euler's buckling formula (see Equation 1) dates back to 1757 and yes, 250 years later, we still use it to determine bracing! This formula is used to calculate the theoretical elastic buckling load of a compression member based on the modulus of elasticity, E, unbraced length of the subject member, L, moment of inertia, I, and effective length factor, Ke, for the member (see sidebar for the derivation of the 2% Rule).

If the buckling load is exceeded, either the size and/or grade of the member must be increased, or restraint and bracing must be added to reduce the unbraced length. The force required to prevent buckling is typically assumed to equal two percent (thus the 2% Rule) of the compression force in the member. Using this information the size and connection requirements for the lateral restraint and diagonal bracing can be determined Continued on page 96

The 2% Rule¹

The 2% Rule is a strength model used to determine the amount of load required to stabilize a column against buckling. Designers primarily use strength models during design due to the simplicity of the calculations. In the derivation of the 2% Rule, the column is assumed to be pinned at each end and at the center restraint location. Throop (1947) explained where the 2% Rule originated and Nair (1992) and Waltz (1998) illustrated the use of a force balance in the development of the 2% Rule. The column is assumed to be one-inch out of plumb for an assumed story height of 100 inches (Throop, 1947). A compression chord restrained at the center of its span will have a force of 1/100 above and below the restraint as depicted in Figure A below. A force balance for the free body diagram at the restraint is the basis for the 2% Rule (Nair, 1992).

¹ Underwood, Catherine R. 2000. Bracing Design for a MPC Wood Truss Member with Numerous Brace Locations. MS Thesis, Virginia Polytechnic Institute and State University, Blacksburg, VA.



P = column load (pounds)

 F_{hr} = restraint force

 α_1 = angle between brace and vertical plane

 α_2 = angle between brace and vertical plane

Assuming pins at column ends and at point of restraint attachment:

$$F_{hr} = P \sin(\alpha_1) + P \sin(\alpha_2)$$

When α_1 and α_2 are small and equal, \sin_{α} approximately equals tan_{α} . From Throop (1947), tan_{α} was assumed to be 1/100,

$$F_{br} \approx (1/100 + 1/100) P$$

 $F_{hr} \approx 0.02P$, or 2% or P

Figure A. A free body diagram and a force balance depicting the origin of the 2% Rule as presented by Waltz (1998), Throop (1947) and Nair (1992)





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There is probably an inherent conservatism using this approach since the compression members in trusses are embedded within a system and the stability of the system cannot be readily reduced to the performance of a single member. This article presents a way to consider truss system stability and the design of bracing, by considering the system as a whole. Such approaches are computationally more complex, but the technical foundation already exists in the structural analysis methods currently used by the industry to analyze and design trusses.

Different Computational Approaches to Buckling

The standard linear stiffness analyses currently used by all the major software providers to design trusses assume in the calculations that the displacements and rotations are very small compared to the length of the truss members. As part of this approach, member forces are computed based on the undeformed geometry of the truss. Displacements that are one percent or less of the length of the wood members are considered small or infinitesimal and those that are larger are called finite displacements. By lifting the "small displacement" restriction in the computer software, buckling and system instability can also be determined but the analysis becomes more complex. The numerical prediction of buckling and structure instability

falls under the branch of structural mechanics called geometric nonlinearity. When displacements (and rotations) are small (infinitesimal), structural analysis is a linear problem that is easily solved. When displacements (and rotations) are larger (finite), structural analysis becomes nonlinear and solutions are obtained by iteration.

There are a variety of structural analysis approaches that consider geometric nonlinearity. Given the importance of structural stability to the building component industry it is timely to see how these methods can be used to improve building component stability and bracing design. Recently we examined three methods that can be classified according to the assumptions concerning the magnitude of displacement as follows:

- 1. methods that address finite displacements but infinitesimal rotations,
- 2. methods that address finite displacements and finite rotations, and
- 3. methods that address the effect of finite displacements through the inclusion of a geometric stiffness matrix.

The first method has the advantage of being essentially the same as the current methods used in truss design software except analysis of a given truss configuration must be done iteratively. It simplifies the software and solution computations if the rotations are small even if the displacements are

large. The main advantage of this method is simplicity, in that it involves doing more of the analysis that is currently employed for design. The primary disadvantage is that as the single truss or assembly becomes more complex, the number of iterations required to find the maximum load before buckling occurs can be impractically large. Thus while this method would require little change to current software, analyses would be too time-consuming even with high speed computers and in some cases may not even provide a solution.

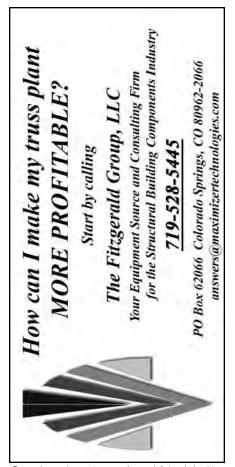
The introduction of finite rotations in the second method requires a new set of stiffness coefficients that are significantly more complex than currently used in truss design. We have not implemented this method because it only presents an advantage over the first where the members undergo large rotations prior to reaching instability. Again iterations to update the deformed shape are necessary and, in many situations with complex systems, the number of iterations to identify the maximum load before instability is large.

The third method also offers simplicity and can take two forms. One form is referred to as a two-part linear analysis which, in its most common form, uses 1) elastic and 2) geometric stiffness matrices to represent the stiffness of the structure. The geometric stiffness matrix introduces nonlinear effects into the analysis more directly than in the two methods above. The nonlinear effect considers interrelationships such as those between bending and axial forces. For

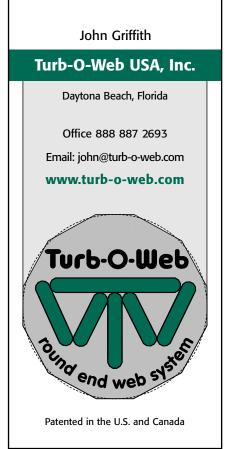
example, a column experiencing a lateral load will fail much sooner with a compressive load applied than if no lateral load is applied. The first form of the method is advantageous, as no iterations are necessary, but the disadvantages are incomplete structural information and for some problems inaccurate predictions of the load causing buckling. Therefore we have examined a second form of this method.

This second form is similar to the one just mentioned but involves tracking the load-displacement behavior of the structure. With this second approach, the loads are applied in steps as opposed to the full load all at once. The changing geometry of the truss is constantly updated according to the new displacements in each step. Instability occurs once the displacements become very large during a small load increment. This approach was chosen as it is the most robust, efficient and accurate candidate among the options listed above.

The geometric stiffness matrix used here was added to the elastic stiffness matrix for each member and incorporated in a truss analysis software called SAWFT (Structural Analysis of Wood Frames and Trusses) by Samiappan (2005) and the authors. These two matrices allow for changes in axial stiffness due to axial load, the interaction between bending stiffness and axial force, and the interaction between torsional stiffness and axial force. Instabilities associated with axial forces in compression members and torsion in bending members are included.



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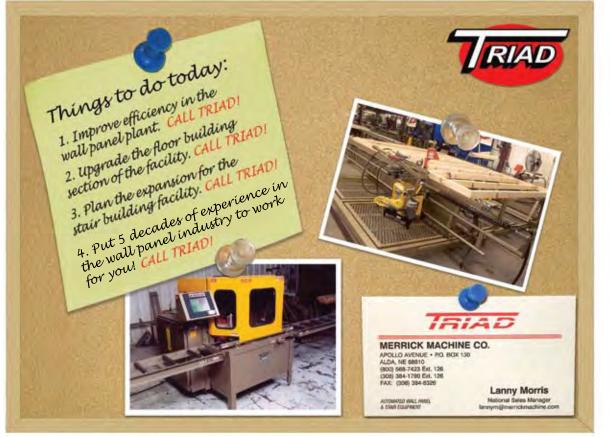


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System Stability...

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Example Problems & Results

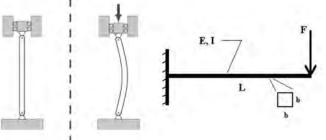
Single member examples: With the creation of an analysis program that more accurately predicts the behavior of a truss system, bracing designs can be examined. However, before attempting to analyze truss systems, it was first necessary to ensure the mathematical algorithms in the program were accurate. Two simple models were tested to check the programs accuracy. The two examples tested included an axially loaded column and a cantilever beam loaded transversely (see Figure 1). The theoretical critical buckling loads for these problems are derived from classical buckling theory, Equation 1 for the column (see page 94) and Equation 2 below for the

$$P_{cr} = \frac{4.013}{L^2} \cdot \sqrt{E \cdot I_y \cdot G \cdot J}$$

Where I_{v} is the minor axis moment of inertia, J as the section torsional constant, G is the shear modulus and the other quantities are as previously defined.

EPS

Insulation

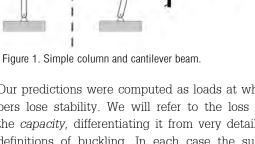


Our predictions were computed as loads at which the members lose stability. We will refer to the loss of stability as

Wood column assembly: With a theoretically verified algorithm, we proceeded to analyze a simple wood assembly

> consisting of seven parallel 2x4 members each 12' in length, spaced 2' apart (see Figure 2). Using the flatwise E and initial curvature data from Waltz et al. for Douglas-fir 2x4s, Monte Carlo simulation (a process where different values of E and curvatures are randomly selected from a preformed list of possibilities) of 50 of these assemblies was conducted for the following cases:

- 3. Randomly selected E and randomly selected initial curvature with 2x4 mid-height lateral restraint connecting the members but unattached to a boundary.
- 4. Same as 3 but the lateral restraint is attached to a flexible support representative of the stiffness of a nailed con-



the capacity, differentiating it from very detailed theoretical definitions of buckling. In each case the subject member consisted of a nominal 2x4 member with a 10-ft length. The modulus of elasticity (E) was 1.80 million psi with a shear modulus (G) equal to 1/16th of E, or 112,500 psi. The results are shown in Table 1 (see facing page) and reveal that while accuracy increases as expected with more elements, even a relatively few elements provide a satisfactory solution compared to the theoretical value.

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- 1.) Straight members with randomly selected E and no midheight restraint.
- 2. Randomly selected E and randomly selected initial curvature with no mid-height restraint.
- nection.

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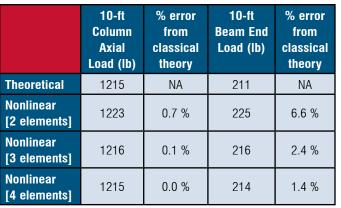


Table 1. Instability loads for single member theoretical verification examples.

	Case 1	Case 2	Case 3	Case 4
Average Capacity (lbs)	3800	3330	4950	14200
% Difference Relative to Case 1	0	-12	30	274

Table 2. Average system capacities for Cases 1, 2, 3 and 4, and percent differences relative to Case 1.

Applied load 2 by 4 columns Rigid beam Spring and Load cell 0.61 m -1.83 m 2 by 4 Variable E and member curvatures

Figure 2. Simple seven member wood column assembly for stability.

The results, as expected, show that systems with no restraint or bracing (i.e., Case 1 and Case 2), reach their capacity (i.e., lose stability) when the member with the lowest E reaches its Euler buckling load.

Table 2 provides a summary of the average system capacities for Cases 1-4 and the percent differences in capacities relative to Case 1. Review of these data indicates that by including random curvature or lack of straightness and no restraint or bracing (i.e., Case 2), the average capacity of the system is reduced by approximately 12 percent. The average capacity for Case 3 showed a 30 percent increase over Case 1 (straight member) since random member curvatures will bias individual members to displace in different directions and, in connecting them together, they act as a system. By attaching the lateral restraint to a support corresponding to a nailed con-Continued on page 100



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		Capacity (in lbs)	% Error		
Truss Testing	Laboratory Test Load	Euler Buckling Load	SAWFT Load	Euler Buckling Equation	SAWFT
Test I: Single truss	1820	1248	1730	-31	-5
Test II: Three truss assembly connected with 2x4 short member lateral restraint	3200	5256	3210	64	0
Test III: Three truss assembly connected with 2x4 short member lateral restraint and diagonal bracing	4110	5256	3680	28	-11

Table 3. Buckling capacity of single and three truss systems.

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Continued from page 99

nection (Case 4), the average capacity was over 274 percent greater than the average capacity of Case 1.

The assembly considered here is relatively simple, but it emphasizes that wood assemblies are structural systems that behave differently than single members. System behavior cannot always be predicted with Euler's formula and in some cases Euler's formula (Eq. 1) may be conservative, and in other cases unconservative.

MPC wood truss assembly: As part of a separate truss testing program conducted at the truss testing facilities of Trussway, Ltd. in Houston the buckling behavior of the following three truss assemblies was examined:

- **Test I** Measured the capacity for a single 24' Fink roof truss subject to a concentrated load near the peak.
- **Test II** Measured the capacity of the truss evaluated in Test 1 subject to a concentrated load near the peak and connected by 2x4 short member lateral restraints to two adjacent trusses.
- **Test III** Measured the capacity of the truss evaluated in Test 1 subject to a concentrated load near the peak and connected by 2x4 short member lateral restraints and diagonal bracing to two adjacent trusses.

The trusses evaluated in these tests were constructed by Trussway, Ltd. and had a 24-ft span with a 5-in-12 top chord slope. All the members in the trusses were nominal 2x4 Southern Pine 2400f-2.0E machine stress rated lumber con-



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nected at the joints with MiTek MII20, 20-gauge plates. The actual plate sizes used in these trusses were modeled explicitly in SAWFT. The capacity recorded for each test, together with the predicted capacities using the Euler equation and the SAWFT program are provided in Table 3.

Figure 3 shows the *Test II* configuration with the three trusses connected by 2x4 short member lateral restraint commonly referred to as spacer blocks. The spacer

blocks were placed at the peak, heel and top chord panel point of each truss (see Figure 3) and attached with two 16d nails driven through the top chord and into the end grain of the spacer block. Figure 4 shows the *Test III* configuration with three trusses connected by spacer blocks and diagonal bracing. The diagonal bracing was attached to the top chords of each truss with two 16d nails.

The truss in *Test I* failed due to lateral buckling of the top chord. There was little or no damage to the member and plate connections so load was simply removed and the adjacent trusses and short member lateral restraints added for *Test II*.

Test ${\it II}$ also resulted in lateral buckling of the top chord of the loaded truss after the nailed connection between the spacer block and the top chord failed due to end-grain withdrawal of the nails. Note that the capacity of this three truss assembly was nearly 76 percent greater than the capacity of the single truss.

Test III consisted of the same three trusses used in Test II with the addition of 2x4 diagonal bracing attached to the top chords (see Figure 4). Load was reapplied to the first truss in the assembly. Once again failure occurred when the top chord of the loaded truss buckled after end-grain nail withdrawal between the 2x4 lateral restraint and the truss heel.

The modulus of elasticity of each truss member was measured after the completion of *Test III* along with member and plate geometry and used to predict the peak load at the onset of instability using SAWFT. The predicted load values obtained using SAWFT are included in Table 3. For *Tests II* and *III*, the finite stiffnesses of the nailed supports were included in the analyses.

An attempt was also made to compute the Euler buckling load of the top chord of the loaded truss. Due to the amount of guess work involved in selecting the $K_{\rm e}$ value (Eq. 1) for Euler buckling, it is not surprising that the predicted load values derived using the Euler bucking equation vary considerably from the tested values. It is unrealistic to expect a single-member equation to accurately predict a system response.

Given that relatively few material properties were measured, the SAWFT predictions are surprisingly close to the insta-



Fig 3. Test II configuration of three 24-foot span Fink trusses interconnected with 2x4 short member lateral restraint.



Fig 4. Test III configuration of three 24-foot Fink trusses with 2x4 short member lateral restraint and diagonal bracing.

bility loads obtained from the tests. For *Test I*, the SAWFT prediction was slightly conservative; for *Test II*, the SAWFT prediction was right on target; and finally, for *Test III*, SAWFT proved to be about 11 percent conservative. The Euler formula over predicted the capacity of the three truss assembly in *Test II and III* because of its inability to accurately model the impact of the lateral restraint and diagonal bracing members framing into the subject truss.

Discussion & Conclusions

The design of bracing for light frame wood structural systems continues to rely on Euler's formula and simple rules of thumb. Euler's formula is inherently limited because of its focus on single members. A variety of methods exist that incorporate the same matrix stiffness structural analysis methods already used in truss design to compute the instability of structural systems. This paper has briefly reviewed three methods and applied one of them to predict the instability of a simple truss system.

The method highlighted here employs a geometric stiffness matrix first developed by Yang and McGuire (1986). The method has been shown to be accurate as indicated by a series of single column and beam theoretical examples, and shows promise for predicting truss system instability loads. Examples of simple wood structural systems illustrated the impact that material variability can have on the instability of wood structural systems. These variabilities, such as the amount of initial member curvature and distribution of modulus of elasticity values can only be accounted for through the analysis of structural systems or large mechanical test programs. Although the verifications of the instability computation embodied in SAWFT are limited and preliminary, this work shows promise as a first step toward development of robust structural analysis algorithms for developing new design procedures for wood structural system stability.

For Acknowledgements and References, visit **Support Docs** at www.sbcmag.info. **SBC**

Steve Cramer is a Professor of Civil and Environmental Engineering at the University of Wisconsin. Dan Hawk is a Graduate Student Research Assistant under Cramer.

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Publisher's Message

It's Show Time!

by Libby Maurer

Read on to find out what's in store for you at BCMC 2007—plus much more!

CMC 2007 is upon us, and if you haven't already registered, you have under a month to sign up. Don't let the current market conditions deter you from making the journey to Columbus. Now is a better time than ever to bring your team and learn how to improve your business! Turn to page 50 to check out what this year's show has to offer.

On a related note, we were saddened to hear that in late July, Jim "JP" Pruitt, long-time exhibit floor manager of George Fern Company, passed away suddenly. In his fifteen years working with the BCMC show, JP had a big hand in advancing our industry in his own quiet way. Although neither exhibitor nor attendee, JP was committed to doing what he could to make each show a success for everyone involved. Turn to page 112 to read about JP's life, what he taught us, and what we won't soon forget about him.



In July 2002, Congress passed legislation called the Sarbanes-Oxley Act to address many corporate accounting scandals associated with companies like Enron and WorldCom. Certain sections of the act had an impact our industry's recommended accounting practices, including the length of time manufacturers must keep certain documents. The last time **SBC** printed anything on the topic was prior to Sarbanes-Oxley, so we asked Kent Pagel to provide us with an update. As with the preceding article, "Record Retention—Reason and Risk" on page 28 is a keeper.

Don't let the current market conditions deter you from making the journey to Columbus. Now is a better time than ever to bring your team and learn how to improve your business!

at a glance

- ☐ This issue of SBC contains the BCMC 2007 Show Guide starting on page 50.
- ☐ Learn about how to increase cold-formed steel truss market share with some tips from Cascade Mfg Co on page 24.
- □ Read "Record Retention—Reason & Risk" on page 28 for an update on how long you should keep important documents.
- New methods for determining bracing requirements for wood trusses are examined on page 94.

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For steel truss manufacturers, finding new ways to market the product is critical. So in this issue's **How To...** column on page 24, Mike and Tim Noonan of Cascade Mfg Co share their success in converting steel bar joist projects to cold-formed steel trusses. Pick up some tips about how to make it happen and what to look out for.

On page 94, engineering professor Steve Cramer examines systems of determining bracing requirements for wood trusses as part of an entire structural system. This article reviews computational techniques and demonstrates the application of one method for the prediction of system stability with different bracing strategies.

When Northeast Panel & Truss of Kingston, NY signed on to donate components for an *Extreme Makeover: Home Edition* project filmed in March, the company didn't necessarily set out to convince the builder to embrace walls panels. But Amedore Homes' first experience with the product was all it needed to be sold. Read how Northeast Panel & Truss impressed Amedore on page 88.

Finally, we want to know how we're doing! Go to **www.sbcmag.info/2007survey. php** to take the 2007 Reader Survey. Complete it and you'll be in the running for a free registration to BCMC 2008 in Denver! **SBC**

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Guide to Good Practice for Handling, Installing, Restraining

& Bracing of Cold-Formed Steel Trusses

2007 EDITION PUBLISHED SEPTEMBER 2007
Derival train 909—created by WTCA & the Trass Plate feature.

Cold-Formed Steel Council Gels

by WTCA Staff

This new group has accomplished a lot in one year!

at a glance

☐ CFSC is nearing the completion of a cold-

☐ The Council has established addition

priorities that include the development

of a standard design responsibilities

formed steel version of BCSI.

document

fter just one year since its inception, WTCA's Cold-Formed Steel Council (CFSC) has banded together and is making steady progress on behalf of cold-formed steel component manufacturers. The group met on July 25-26 in Madison, WI. Twenty-four individuals attended the event, which included a tour of the new SBC Research Institute.

Chris Lambert of Southeastern Materials, Inc. attended the meeting as a newcomer to the cold-formed steel industry and was impressed with the group. "I've been in the components industry for a long time, but we are a brand new steel truss fabri-

> cator, so it was good to be around experience," he stated. "By the second day of the meeting, a group of individuals that had gathered with a common interest became a unified body."

> Dan Cordova of Gem State Truss Co, Inc. said, "The meeting was a ground-breaking event - because of it, there will soon be documentation on cold-formed steel from a unified group of manufacturers. It was a very useful meeting in terms of the direction of where the industry is headed "



One of the top agenda items was a thorough review of the new Guide to Good Practice for Handling, Installing, Restraining & Bracing of Cold-Formed Steel Trusses, or CFSBCSI booklet. The Council's goal is to have the booklet completed and available for purchase by the BCMC show in early October. Once the booklet has been completed, the next priority will be to put together the corresponding CFSBCSI Summary Sheets and jobsite package.

CFSBCSI includes information on:



• CFSBCSI-B3 - Permanent Restraint/Bracing of Chords & Web Members

• CFSBCSI-B4 - Construction Loading

• CFSBCSI-B5 - Truss Damage, Jobsite Modifications & Installation Errors



• CFSBCSI-B2 - Setting Trusses & Installation Restraint/Bracing

• CFSBCSI-B11 - Fall Protection & Trusses

Cordova, who does both sales and design in his company's steel division, says he can't wait to get this new information into the hands of their customers. "Information like bracing and jobsite safety has been lacking in the marketplace for a long, long time," he said.







This booklet is the truss industry's guide for jobsite safety and truss performance. This 8.5" x 11" guide (3-hole punched and spiral bound) includes the most current information regarding the handling, installation, restraining and bracing of cold-formed steel trusses.

Lambert said that CFSC's work on the booklet will be critical to the group's success. "Getting the CFSBCSI reviewed and marked up was also a big step toward making the cold-formed steel industry more unified."

Beyond CFSBCSI

After the work on CFSBCSI has been completed, the Council has outlined a set of additional priorities, including the development of a tool to assist general contractors in properly reading a cold-formed steel bid, as well as a standard responsibilities document for the cold-formed steel industry. CFSC has already developed five truss tags for the industry, which will be available for purchase soon. The tags include: Bearing Location, Do Not Use Damaged Components, Jobsite Warning, Permanent Lateral Restraint and Installation Restraint & Bracing.

The meeting also included a valuable open forum discussion on cold-formed steel market issues and a tour and truss testing at the SBC Research Institute. A testing demonstration of the performance of a 360-sq.ft. roof assembly with 30-foot roof trusses was compared to a single 30-foot cold-formed steel truss. The testing measures applied load capacity, monitors deflection performance and measures lateral buckling forces.

About the future of CFSC, Cordova says he'll do whatever he can to maintain the momentum and energy of the group. "It's good for us to have an organization that brings [cold-formed steel manufacturers] together," he said.

To order a copy of CFSBCSI or truss tags, visit CFSC online or call 608/274-4849 ext. 8.

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Increase Market Share By Converting Structural Steel to Cold-Formed Steel

by Libby Maurer

Increase market share and spread product awareness in the process.

old-formed steel components have many commercial construction applications. Particularly suitable for high-pitched structures or complex roof lines, cold-formed steel typically achieves a more interesting end aesthetic. Convincing specifiers and builders to embrace the versatile qualities of cold-formed steel is a good way to increase market share. The Noonans of Cascade Mfg Co in Cascade, IA explain how converting a building that originally calls for structural steel to its cold-formed steel equivalent demonstrates this flexibility, accommodates fast track projects and adds green to builders' bottom lines. Here, they share how they sell it and why they're sharing their idea with all of us. (Hint: there's an ulterior motive.)

Think Right-Brained/Become Entrepreneurially Minded

Mike and Tim Noonan call themselves the "Buns of Steel Road Show," which refers not only to the product they're peddling, but the anatomical impact of their long hours on the road. The uncle/nephew team work side by side in the company's cold-formed steel division, an enterprise that has grown tremendously in the last four years (the shop first opened in 1998). This growth didn't happen by accident; the pioneering Mike is always looking for the opportunity to apply cold-formed steel components in a new way. This entrepreneurial mindset allowed him to suggest substituting their product for the originally specified bar joist when talking to a builder he'd met at a local HBA event. "It's up to the imagination of the fabricator to substitute structural steel with cold-formed steel. That's how we were able to convince builders to switch to our product," he says.

Being on the road often creates plenty of opportunities to talk about upcoming commercial projects and hone in on whether cold-formed steel could be offered as an option. In fact, at one lunch-and-learn Mike gave, he met an architect working on a church fellowship hall that required the addition of office and fellowship space. "He was curious about the possibility of using steel trusses on a small portion of the project and sent me the drawings. It gave me the opportunity to ask if he had considered doing the entire project in cold-formed steel," he recalls. Thanks to Mike's initial foot in the door and outside the box mindset, Cascade got the job.

Understand When (& Why!) Cold-Formed Steel Makes Sense

Steel bar joists generally perform well in applications with shallow depths and wider on-center spacing and spans. As a general rule of thumb, cold-formed steel has a difficult time competing with a flat bar joist product at wide on-center spacing. Pitched bar joists, however, require a complicated fabrication process with typically a longer lead time than cold-formed steel. So given its flexibility in terms of lead time, cost and visual appeal, cold-formed steel is a natural substitute. This is why, Tim explains, cold-formed steel trusses lend themselves better to structures that aim for more architectural freedom and an aesthetically pleasing effect.

Mike says buildings like schools and assisted living facilities are good candidates for conversion. "These structures are mixing into residential neighborhoods now, and they often look like warehouses. They tend to really stick out—and not in a good way," he explains. But providing a sloped roof with cold-formed steel trusses gives these types of buildings a less institutional look, Mike says.



For this casino expansion project, converting cold-formed steel trusses was a "no-brainer."

With this in mind, it was a "no-brainer" for Mike to ask whether the prospective customer had considered trussing a casino expansion project. The 77-foot span with 6/12 pitched drive-under canopy was originally specified with pitched bar joists, and since both lead time and cost were critical in this job, cold-formed steel was an ideal substitute. (See photo above.)

Tim and Mike also had success converting a new college dining facility. At the College of St. Benedict in St. Joseph, MN, pitched bar joists specified for the dining hall were drawn as 65-ft spans with a 7/12 pitch. "They would have been behemoth," says Tim. But since the drawings also had a small area of cold-formed steel trusses, it made sense to convert the other pitched areas as well. The customer agreed, and the original \$5,000 job turned quickly into a sizable \$140,000. (See layout below.)

In the process, Tim had to redesign the trusses to work instead at 3-ft on center instead of 4-ft. Although this conversion required additional trusses, Cascade's customer saved significantly compared to what they would have paid if they had stayed with structural steel.

The moral of the story, Mike says, is to use common sense. "If you bid out a project, and you see a portion of the project that is steel bar joist, use common sense—offer the builder cold-formed steel in a more cost efficient manner."

Define Your Selling Points

In order to sell the conversion, the application has to offer something better or different that the structural steel option. For instance, substituting cold-formed steel could shave days or weeks off lead time. The Noonans estimate that the lead time on a bar joist project (after approval of the shop drawings) can run up to about 12 weeks. But for the same job, the lead time on cold-formed steel would likely be considerably less: in the four-week range.

Other selling points include reduced cost and design diversity. For instance, Tim says if you can pull it off without compromising the design values or deviate from the general span range of the original plans, cold-formed steel will cost less than structural steel in 99 percent of cases. And as stated above, if the goal is an architecturally complex look, cold-formed steel is "hands down" the best option.

In the case of the casino project, lead time was Cascade's magic bullet. "If we could cut lead time, the casino could open its doors earlier, which meant extra days to increase gambling revenues," Tim says, adding that the builder was under Continued on page 26



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at a glance

- □ Converting structural steel to its coldformed steel equivalent showcases the flexibility, efficiency and cost saving benefits of the product.
- □ Steel truss component manufacturers will generally have a difficult time competing with a non-pitched bar joist product at wide on-center spacings.
- ☐ Schools and assisted living facilities are good candidates for conversion.

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How to...

Continued from page 25

big pressure from the owner to expedite the job. Plus, they estimated that switching to cold-formed steel could be done for two-thirds of the cost of the bar joists. Once they defined the conversion in terms of additional revenues and fewer days waiting for product, it was an easy sell. "We were saving them money, so they were pretty enthusiastic about going with cold-formed steel." Mike says.

Execute the Conversion

Tim lays out two ways for converting projects like these. Both of these approaches have drawbacks, so be mindful of a few pitfalls and some possible concessions you'll need to make.

1. Attack the job at the time the project is being designed; sell the building designer on the idea.

Potential pitfalls: This approach requires a big marketing effort on the front end; the architect or engineer is often the hardest nut to crack. However, if you can convince them that the project cost and lead times can be reduced, this may entice them to consider converting.

2. You come across a project that is already out to bid, and it specifies structural steel, so you go after it.

Potential pitfalls: Keep in mind that you may encounter some resistance from the structural engineer if you go this route. Because of this, warns Tim, you had better be prepared to completely engineer the roof if you are successful in converting the project. This means designing all

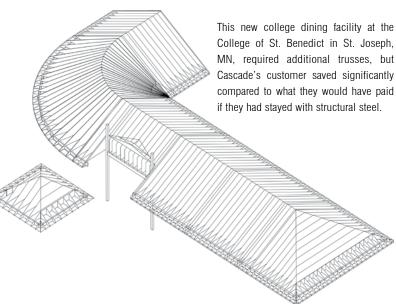
the permanent bracing, the shear transfer blocking and truss to bearing connections. "You can't expect the EOR to do it. You can bet it's a relatively new product to them, and they don't know much about it," he says, adding that if the EOR had known anything about cold-formed steel design, he would have designed the job this way from the beginning. And as always, remember to cover your costs for this work.

Whether or not you attempt to convert a job at this point may also depend on whether the general contractor has been pre-selected. "I would hesitate to go after it at the time of the bid (attacking it after it's designed) unless the GC has been preselected." This is because if there are multiple GCs in the running, it's difficult and time consuming convincing all of them to embrace cold-formed steel trusses. It may be too much to bite off, according to Tim.

However, if the GC is pre-selected, you are bringing them the idea of how to save money and time, and they can expect better success.

Why Share?

And remember that ulterior motive I mentioned? Well, turns out Mike and Tim are glad to spread the word for a quite selfish reason: they hope that by sharing, steel component products will become more well known. "What's important to us is that we see more adaptation of the product on the front end, in the design community. The only way we can do that is to spread the word and open a dialog about the benefits, savings and efficiencies of cold-formed steel applications," Mike says. And ultimately, because they want the industry to grow, Cascade is happy to be a resource. **SBC**



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Legal EdgeRecord Retention—Reason & Risk

by Kent J. Pagel

An update on how long you are required to keep accounting and employment documentation.

hat to keep in terms of records and how long to keep them are two questions commonly asked of me by component manufacturers. This is the case even if the manufacturer keeps many of its records digitally as they still retain a great deal of hard copy records and generally have no plan or system in place for discarding such records.

You may think the answer to these questions could be easily found under particular state law. That is not the case however. No matter the state you conduct business in, there is no single statute of limitations for the many categories of records component manufacturers hang on to. And where states do impose rules or suggestions, they may not correspond with the federal requirements and seem to change from year to year.

The federal requirements also vary tremendously, do not apply to all types of records, and may even contradict themselves from agency to agency. For example—OSHA requires that records of job-related injuries and illnesses be kept for five years; the Equal Employment Opportunity Commission (EEOC) stipulates that documents about job applicants and personnel records be kept from one to three years; and the Department of Health and Human Services requires that certain records be held for six years. The IRS also imposes record retention requirements of up to seven years for certain financial records and some of the Small Business Administration (SBA) recommendations actually conflict with the IRS requirements.

The uncertainty cannot be resolved either through an online search or by reviewing published treatises. A Google search will quickly lead you to an overwhelming number of suggested policies and far too many misguided suggestions. Treatises can be found, but they are primarily geared to providing guidance to professionals who can in turn advise their clients on record retention for a fee.

When it comes to record retention philosophies, some manufacturers attempt to avoid adverse consequences and hang on to anything and everything forever—just to err on the safe side. This strategy may prove effective, assuming they have kept good records and can easily locate them when needed. On the other hand, such companies should be prepared for their records stockpile to grow and the expense of housing them to increase. Finally, keeping too much information can also increase a company's future litigation risk.

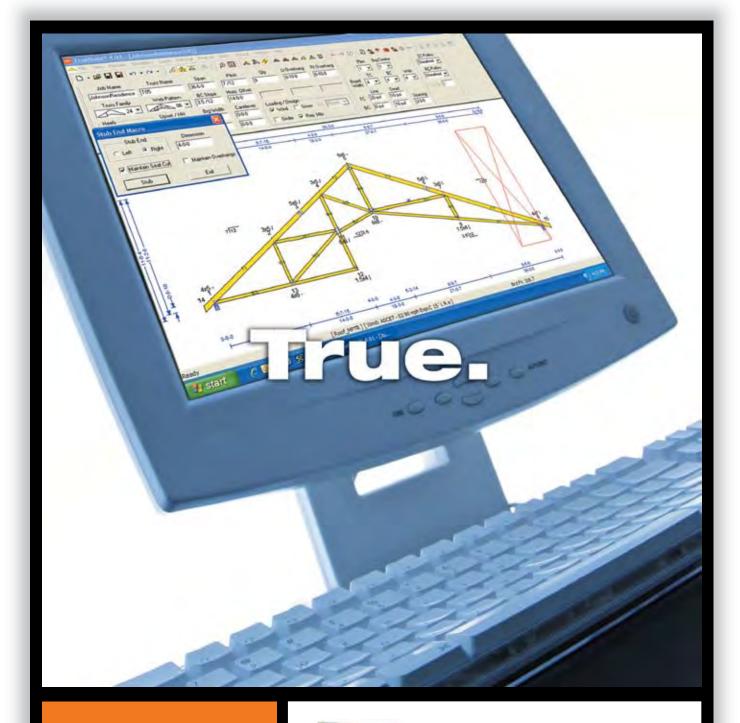
The other side of the extreme are manufacturers that trash everything early and often. This practice can be dangerous if a record should legally be retained and especially in the event such company becomes the subject of a regulatory inquiry or litigation where failing to produce records may be the difference between winning or losing.

However confusing this topic can be, component manufacturers should know that it is possible to strike a balance between saving too much and keeping too little. I believe when it comes to record retention, a manufacturer ought to have a foundation in place that recognizes generally state and federal legal requirements and at the same time analyzes what to keep and for how long from the standpoint of

Continued on page 30



- ☐ There is no single statute of limitations for the many categories of records component manufacturers hang on to.
- ☐ The federal requirements vary tremendously, do not apply to all types of records, and may even contradict themselves from agency to agency.
- ☐ It is possible to strike a balance between saving too much and keeping too little.





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"Lessons or Losses"

The Enron episode of 2001 demonstrates that potential disaster awaits corporations with no or poor record retention policies. In the wake of Enron, many are urging that a mere listing of document types and how long they are to be kept is not a document retention policy! They would suggest at a minimum a record retention policy would also include the following.

- The policy should be written, dated, and disseminated to all employees
- The policy should be written in plain English—simple words are needed because the policy will probably be lengthy.
- Individual creators of records should not be responsible for determining the retention or the destruction of individual records. All documents should be maintained and destroyed in accordance with the retention standards adopted by the company.
- A company should schedule regular audits of the employees' use of the policy to ensure compliance.
- The company should schedule at least annual purging periods—when employees review records in their control and destroy those that are beyond their retention life.
- The policy should include a procedure for notifying all employees with dispatch if certain categories of documents are exempted by events such as pending, threatened, or reasonably foreseeable, litigation.
- A good, preexisting document retention policy will have destroyed all unnecessary records before the litigation starts and will be able to locate, after the litigation starts, the relevant records that the company has retained.
- The company should set procedures for regular review, revision and update of the policy.

Legal Edge

Continued from page 28

reason and risk. Let's take a look at some examples to see what this means.

EXAMPLE: The IRS may choose to audit any income tax return within the federally mandated statute of limitations period. For this reason, companies must maintain tax information for seven years. This timeframe should serve as a benchmark for every company record retention plan.

EXAMPLE: Most who opine on how long a company should retain its insurance policies will support their opinion with a statement that no state or federal law requires a business to retain an insurance policy. In turn they may suggest that a company keep a policy for three years or so. On the other hand those in the know will tell you that if your com-

pany is to ever face a lawsuit years after selling trusses and components, you will be glad if you can easily put your hands on a complete copy of all applicable property and casualty insurance policies. An insurance policy can only help and not hurt a component manufacturer and the costs of storing policies is not that significant. A manufacturer with a well reasoned record retention policy contemplates this reality and will make sure that at least all company property and casualty insurance policies are maintained indefinitely.

EXAMPLE: As with the previous example concerning insurance polices, there is no per se legal requirement on how long a component manufacturer must keep approved truss design and truss placement drawings. On the other hand, retaining approved drawings might be the difference between winning and losing a lawsuit if the issue of approval becomes a fact question. On the other hand, retaining drawings that were submitted to a building designer for approval and never approved might result in a different outcome. How one decides with regard to record retention of approved shop drawings should depend on their knowledge of how good a job their company has done in obtaining approvals.

To guide manufacturers in preparing their own corporate policy, I have developed a sample record retention schedule using my premise of reason and risk (see page 32). Keep in mind this is a guideline only. Go to **Support Docs** at www.sbcmag.info for copy of this guideline listed alphabetically by record type. **SBC**

Kent J. Pagel is the President and Senior Shareholder of Pagel, Davis & Hill, a professional corporation. He also serves as the outside counsel for WTCA.



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Receiving sheets 1 Certificates of insurance furnished by company to others 1 Correspondence (general, including with customers and vendors) 2	year after termina- on of policy
Certificates of insurance furnished by company to others tid Correspondence (general, including with customers and vendors)	year after termina-
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, , , , , , , , , , , , , , , , , , ,	years
	years
Duplicate deposit slips 2	years
Employment applications—if employee not hired 2	years
Safety reports 2	years
	years after note is aid in full
Employee job evaluation ratings (after termination) 3	years
Petty cash vouchers 3	years
	years after termina- on of policy
ye	yrs after hire or 1 ear after termination, hichever is later
Budgets 4	years
Construction issue paperwork / RFIs /Revision and 4 check sets	years
Construction issue plans 4	years
Customer files 4	years
Plant product quality inspections 4	years
Insurance polices—group insurance 4	years after expiration
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	years after the rmination of policy
OSHA logs of job-related injuries and illnesses 5	years
Accounts payable ledgers and schedules 7	years
Accounts receivable ledgers and schedules 7	years
Bank statements 7	years
Checks (canceled, see exceptions below) 7	years
Contracts, mortgages, notes, and leases (expired) 7	years
Delivery tickets 7	years
Electronic fund transfer documents 7	years
	years
Employment applications—if employee hired 7	years
Expense analyses and expense distribution schedules 7	years
Freight records 7	years
Inventories of products, materials, supplies 7	years
Invoices 7	years
Invoices from vendors 7	years
Journals 7	years
Notes receivable ledgers and schedules 7	years
Payroll records and summaries, pensions, payroll taxes 7	years
-	years
Purchasing and related records —inventory and 7 non-inventory items	years
Purchase orders 7	years
Sales records 7	years

Types of Records	Retention Period
Scrap and salvage records (inventories, sales, etc.)	7 years
Social Security forms	7 years
Subsidiary ledgers	7 years
Time books/cards	7 years
Unemployment insurance forms	7 years
Vouchers for payments to vendors, employees, etc. (including allowances and reimbursement of employees officers, etc., for travel and entertainment expenses)	7 years
Employer's copy of W-2 earnings statement; W-4 forms; and Withholding tax statements	7 years
Agreements, contracts, leases, and permits	7 years after expiration or termination
Workers' Compensation—accident and claim reports should be kept seven years after termination of the claim	7 years after termination of claim
Accident reports and claims (settled cases)	7 years from settlement
Accident reports and claim records (pending or unsettled)	Until settled
Customer contract originals	10 years
Truss Design and Truss Placement Plan Approvals	10 years
Contracts, mortgages, notes and leases (still in effect)	While in effect
Annual reports	Permanently
Cash books	Permanently
Capital stock and bond records: ledgers, transfer registers, stubs showing issues, options, etc.	Permanently
Checks (canceled for important payments, i.e., taxes, purchases of property, special contracts, etc.)	Permanently
Correspondence (legal and important matters only)	Permanently
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Union agreements	Permanently

SOURCES

- 1. http://www.sba.gov/gopher/Business-Development/Success-Series/Vol1/Prof/
- 2. Internal Revenue Service Publication 583 (1/2007), Starting a Business and Keeping Records
- 3. Pagel, Davis & Hill, P.C.

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FORGING AHEAD TOGETHER



Editor's Message

Remember Four Things

by Barry Dixon

Farewell to a year of great challenges and rewarding success.

at a glance

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for all of your customers' needs.

s I'm late on my last deadline, I'd like to thank Emily Patterson for helping me get these articles written on time. Until you've done this for a year, you have no idea how long the writing process takes.

Hard to believe a year ago we were just getting used to this arrangement: I was getting my first dose of executive branch responsibility, and you were learning the FSU fight song and loving every minute of it.

All joking aside, those who know me well know that I care deeply about this industry. Like so many of you out there, I (along with my siblings) inherited my father's business; with it came a concern for the success and long-term sustainability of this little niche industry we all work in. I hope this passion has resonated in my columns over the last year.

I don't have space (thank God) to recount every small victory WTCA has had on my watch. My list of top three highlights includes the themes of grassroots, data/testing and marketing. We advanced our grassroots causes this year by teaming up with the National Lumber & Building Material Dealers Association (NLBMDA) and the Florida Building Materials Association (FBMA) for two joint legislative conferences. It is my hope that we continue partnerships like these in the future. Next, our strong relationship with the Truss Plate Institute (TPI) allowed us to complete and unveil the SBC Research Institute (SBCRI), a new component testing lab. TPI has committed to donate a significant portion of funds to the facility each year, which will benefit the industry for years to come. And finally, now more than ever, component manufacturers realize that marketing their commitment to quality and continued improvement is critical to their success. I believe that the inception of the SCORE certification program will truly make a difference in the way the market views our industry.

While I feel proud to have served during such an eventful period, it wouldn't be right for me to sugar-coat the condition of the industry. This has been a challenging year for many of us. Some of us are beginning to see the light, just as analysts predicted. Others are just hitting the bottom or are stuck in the doldrums, thanks to record-high housing inventories. I wish I had a quick fix for us, but I don't and neither do you. Unfortunately, it's out of our hands.

But what we do have is something very powerful. I'll remind our collective industry of something I said at BCMC in October 2006. I challenged every component manufacturer to develop new manufacturing processes and more efficient and economical applications for our products. I believe that if we do this and look to the future, our efforts will do more to advance this industry than anything else.

I'd like to reiterate some ways we can do this.

Learn to Differentiate

During my first years in the industry, manufacturers had to find a way to differentiate their companies in order to make sales. I believe we've become a little lax in finding new ways to market ourselves. The consequence of this is passing responsibility for advancing the industry onto either our suppliers or customers. We can reverse this by developing new manufacturing processes—we can push our own companies, supplicontinued on page 8

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Editor's Message

Continued from page 7

ers, and competitors to new heights by creating better-more efficient and economical—application solutions.

Be THE Solution

Take a comprehensive approach by branding your company as "The Solution" for ALL of your customers' needs. For instance, many of us no longer only make single components. We have added wall panels, engineered wood products, steel trusses, and turnkey labor, as well as engineering design services. Through our technical advancements, we are not simply manufacturers but innovators that have streamlined the ordering, permitting, and construction process. We have become the technical framing solution for our customers. We are their most valuable resource in the construction industry, and it's time we let them know it.

Collaborate

The value we provide as manufacturers needs to be understood by everyone in the building process—not just our customers! Another way we can advance our industry is to work with architects, engineers and building officials to help streamline the front end of the construction process and be able to value-engineer structures. Together, we can create a more cost effective solution for the builder.

Prepare for Added Risk/Liability with Education

If our ultimate goal is to increase profits by becoming total solution providers, profits should rise. But we shouldn't turn a blind eye to the fact that our risks and liabilities also can increase sharply in this process. Learn to identify comprehensive training and education. I recommend the SCORE program developed by WTCA to accomplish this. It's essentially a marketing tool that helps companies define themselves as quality conscious, educate their workforce and market, manage risk and stay current on industry advancements while also defining their unique brand in the market. For more information about SCORE, visit

www.sbcindustry.com/score.php.

Remember these tools as we ride out the next year or so. We can't lose if we focus on them with an eye toward the future.

Last, I have a lot of people to recognize for getting me through the past year. I have a lot of respect for all the WTCA past presidents who went before me—each of them has had a profound impact on the direction of WTCA. I am especially grateful to Don Groom (2006), Kendall Hoyd (2005), Scott Arquilla (2003) and Mike Ruede (2002); these guys are some of my best friends in the industry, and I called on them for guidance many times during my presidency.

My job was made easier thanks to the passion and commitment of the WTCA Board. This includes Chapter reps and Committee chairs; their work in local/regional levels and in small groups keeps this association moving. With that, I'll turn this column over to incoming president and fellow Floridian Bob Becht. I wish him—and the entire membership—the best in the coming year. Go 'Noles! SBC

SBC Magazine encourages the participation of its readers in developing content for future issues. Do vou 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@ sbcmaa.info.



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The mission of Structural Building Components Magazine (SBC) is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing structural building components. Further, SBC strives to ensure growth, continuity and increased professionalism in our industry, and to be the information conduit by staying abreast of leading-edge issues. SBC's editorial focus is geared toward the entire structural building component industry, which includes the membership of 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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ECHNICAL Technical Q & A

Code Reference to BCSI

by Ryan J. Dexter, P.E.

Learn which version of BCSI to use per code.

he 2006 International Residential Code (IRC-06) references the *Building Components Safety Information* booklet *BCSI 1-03* in two locations—R502.11.2 and R802.10.3.

R502.11 Wood trusses.

R502.11.2 Bracing. Trusses shall be braced to prevent rotation and provide lateral stability in accordance with the requirements specified in the construction documents for the building and on the individual truss design drawings. In the absence of specific bracing requirements, trusses shall be braced in accordance with the Building Component Safety Information (BCSI 1-03) Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

R802.10 Wood trusses.

R802.10.3 Bracing. Trusses shall be braced to prevent rotation and provide lateral stability in accordance with the requirements specified in the construction documents for the building and on the individual truss design drawings. In the absence of specific bracing requirements, trusses shall be braced in accordance with the Building Component Safety Information (BCSI 1-03) Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

BCSI 1-03 is a good practice guideline for bracing floor and roof trusses. However, this edition is out of print and is no longer available from either WTCA or TPI. It was replaced in October 2006 with an updated version.

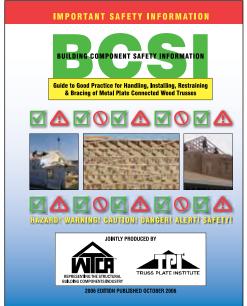
Since many states have recently adopted the IRC-06, many people have asked questions about the *BCSI 1-03* reference. This article has been written to clarify the code reference to *BCSI*.

Question

The IRC-06 references BCSI 1-03 as the standard for bracing trusses, but it's been called to my attention that a version called BCSI also exists. Should I use the code referenced edition?

Answer

BCSI 1-03 was replaced by an updated edition in 2006 entitled, Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses The current edition is available from WTCA, and can be ordered on the website (www.sbcindustry.com/ bcsi.php) or by phone (608/310-6716). BCSI is an installation guideline and as such is not a referenced design standard. The methods and procedures in BCSI are intended to ensure that the overall construction Continued on page 14



at a glance

- ☐ The IRC 2006 references *BCSI 1-03* in two locations—R502.11.2 and R802.10.3.
- □ In 2006, BCSI 1-03 was revised and retitled Building Component Safety Information; Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.
- □ Although BCSI 1-03 is referenced in IRC 2006, you should use the most recent version of the booklet—BCSI.





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Technical Q&A

Continued from page 12

techniques employed will put floor and roof trusses in place safely. These recommendations for handling, installing, restraining and bracing trusses are based on the collective experience of leading personnel involved with truss design, manufacturing, and installation. It is appropriate to use the most current recommendations available.

The BCSI 1-03 document replaced HIB-91 which was referenced in the IRC-00 and IRC-03. The full title of HIB-91 is the Commentary and Recommendations for Handling Installing & Bracing Metal Plate Connected Wood Trusses.

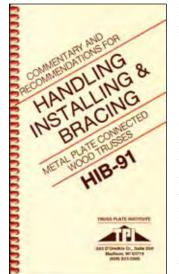
BCSI, and its predecessors $\it HIB-91$ and $\it BCSI$ 1-03, are considered installation instructions,

guides or recommendations as their titles indicate. IRC-06 discusses installation guides in the following section: $\frac{1}{2} \frac{1}{2} \frac{1}{2}$

R106.1.2 Manufacturer's installation instructions. Manufacturer's installation instructions, as required by this code, shall be available on the job site at the time of inspection.

Sections R502.11.2 and R802.10.3 reference *BCSI 1-03* because that was the only edition available at that time—but it is always been the intention for *BCSI* to contain the most current installation instructions. As such, *BCSI* contains the following precautionary note to its users:

This Guide to Good Practice for Handling, Installing, Restraining & Bracing Metal Plate Connected Wood Trusses (BCSI) may be edited, changed, revised or withdrawn at any time. Purchasers and users of this guide are advised to visit the Products section of www.sbcindustry.com to confirm that this edition is the most current information available. Use only the latest edition. Additionally, errata and updates are published periodically and are available at www.sbcindustry.com/bcsi.php.



Courtesy of Truss Plate Institute.

IRC-06 Chapter 2 contains this definition of installation instructions (like *BCSI*):

MANUFACTURER'S INSTALLATION INSTRUCTIONS.

Printed instructions included with equipment as part of the conditions of listing and labeling.

The term "equipment" can be a little misleading; it is intended to include products and a variety of items (in addition to equipment) that typically require special installation instructions. Here are some examples of products for which the IRC recommends consulting an installation guide. Although they are not specifically called out within the IRC, structural building components also fall into this category.

R308.6.8 Curbs for skylights. All unit skylights installed in a roof ...shall be mounted on a curb ...unless otherwise specified in the manufacturer's installation instructions.

R314.5.2 Roofing. The thermal barrier ...is not required when the foam plastic in a roof assembly or under a roof covering is installed in accordance with the code and the manufacturer's installation instructions...

R402.3 Precast concrete. Approved precast concrete foundations shall be designed and installed in accordance with the provisions of this code and the manufacturer's installation instructions.

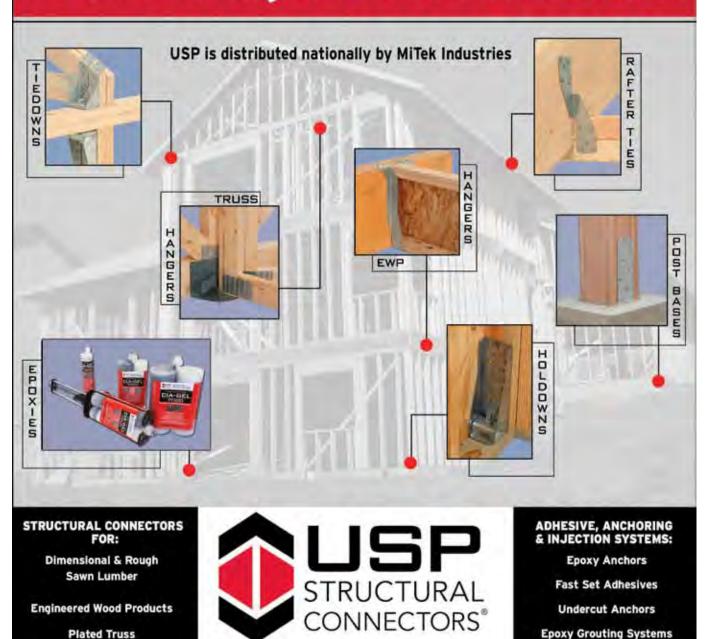
Although the IRC-06 refers to *BCSI 1-03*, for the best and safest approach for truss installation, one should always use the latest edition (which at time of printing is October 2006) when handling, installing, restraining and bracing metal plate connected wood trusses **SBC**

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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This building in West Salem, WI, is a merchandising building located in a new industrial park. The building design and general contract work was done by Brickl Brothers Design/Build General Contractors of West Salem, WI. WTCA member Select Trusses & Lumber, Inc. then engineered and manufactured the roof trusses for the structure. Daniel Pogreba is the General Manager at Select Truss, and he commented on the round shape of the roof. "You don't see a lot of round roof systems anymore, and when you do they catch your eye."

"The unique difference in these trusses is that we not only had an exterior radius on the top chord, but also an interior radius in the bottom chord," added Pogreba. "Also, we trimmed the top and bottom chords, so they were perfectly smooth and only required one layer of plywood sheathing on the top chord and more importantly, one layer of drywall sheathing on the interior radius. As you can see, this roof also had a metal roof on it and it was perfectly smooth after it was installed." SBC



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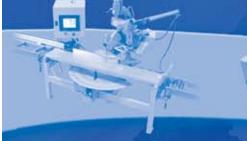




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Safety Scene

Let the Countdown Begin: OSHA's Top 10 Safety Violations

by Molly E. Butz

Do you know what's on OSHA's most wanted list?

ach October, OSHA releases a list of the Top Ten Violations for its previous fiscal year, October through September. The list released for 2006 included many of the same violations that appear every year, many of which could occur in almost any industry, including ours. With that in mind, OSHA's Top Ten list is a great place to start for reviewing safety issues at your facility.

Let's start at the beginning. The following is the 2006 list of the top ten violations by name and standard number:

- 1. Scaffolding (1926.451)
- 2. Hazard Communication (1910.1200)
- 3. Fall Protection (1926.501)
- 4. Respiratory Protection (1910.134)
- 5. Lockout/Tagout (1910.147)
- 6. Powered Industrial Trucks (1910.178)
- 7. Electrical Wiring (1910.305)
- 8. Machine Guarding (1910.212)
- 9. Ladders (1926.1056)
- 10. Electrical General (1910.303)

Three of the 2006 Top Ten (one, three and nine) fall under OSHA's Safety and Health Regulations for Construction (Part 1926). These violations are specific to the building construction industry and don't apply to component manufacturing.

The remaining **seven violations** relate to standards that are important to comply with as a component manufacturer. Because every component manufacturing facility is unique, these standards will apply in various ways. Here are some considerations to keep your facility in tip-top shape.

- 2. Hazard Communication (1910.1200). Hazard communication is important to ensure that the risks associated with all of the potentially unsafe chemicals you use in your facility are passed on to your employees. A thorough hazard communication program should include container labeling/warnings, material safety data sheets (MSDS) and employee training. Chemicals in a component manufacturing facility that may fall into this category include cleaning agents, degreasers, flammables, greases, paints, pesticides, aerosols and compressed gases.
- 4. Respiratory Protection (1910.134). Breathing airborne contaminants, such as harmful dusts, can cause occupational illnesses. When possible, minimize contaminants by using engineering controls such as enclosures or local ventilation. If engineering controls are not feasible or are ineffective, proper personal protective equipment, for example a filtering facepiece (dust mask), can be used as your next line of defense. Respiratory protection may or may not be necessary in your component manufacturing facility. Should testing determine that respiratory protection is needed (the most likely place is your saw area), you will also be required to develop and implement a written respiratory protection program that includes worksite-specific procedures and employee training.
- 5. Lockout/Tagout (1910.147). Lockout/tagout examines the risks associated
- and nine) fall under OSHA's Safety and Health Regulations for Construction (Part 1926) and don't apply to component manufacturing.

at a glance

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facility

Safety Scene

Continued from page 16

with performing maintenance on machinery where the "unexpected" start-up of the equipment, or release of stored energy could create a hazard. Requirements for lockout/tagout include a detailed written program and employee training.

- 6. Powered Industrial Trucks (1910.178). Powered Industrial Trucks, or forklifts, are often critical for transportation of materials in a component manufacturing facility. It is very important to keep the truck in good running condition and the operator(s) trained. Violations for forklifts include issues related to fire protection, maintenance, and use. For more information, visit Support Docs at www.sbcmag.info for links to the past **SBC** articles on this topic.
- **7. Electrical Wiring (1910.305).** Standard 1910.305 deals with wiring methods related to "electrical continuity of metal raceways and enclosures," "wiring in ducts," and "temporary wiring." This standard can affect all areas of a component manufacturing facility from the office building to the manufacturing area.
- 8. Machine Guarding (1910.212). As explored in August 2007 article "On Guard: A Closer Look at Safeguarding Your Manufacturing Equipment," the machine guarding standard can affect component manufacturers. Machine guarding is

both simple and necessary, and most importantly can help prevent accidents and injuries. A walk-through will help you identify any outstanding machine guarding issues in your facility—such as missing, broken or deteriorated guards.

10. Electrical General (1910.303). This final standard covers the "examination, installation, and use of equipment." In this case, the employer's responsibility is to establish general safety requirements for employees designing electrical systems. For instance, an onsite maintenance person or crew would need to be trained for these safety requirements if they install or repair equipment in the shop.

Using OSHA's 2006 Top Ten Violations list as a tool to identify areas of potential safety concern in your facility can help you provide a safer workplace. In addition, it's beneficial to work together with your employees to make safety and health a priority. Involving your employees in making policies on safety and health issues, holding meetings that focus on safety and investing time and effort in a safety and health program are all things that can help build a positive safety culture in your component manufacturing facility. 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 www.wtcatko.com.



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