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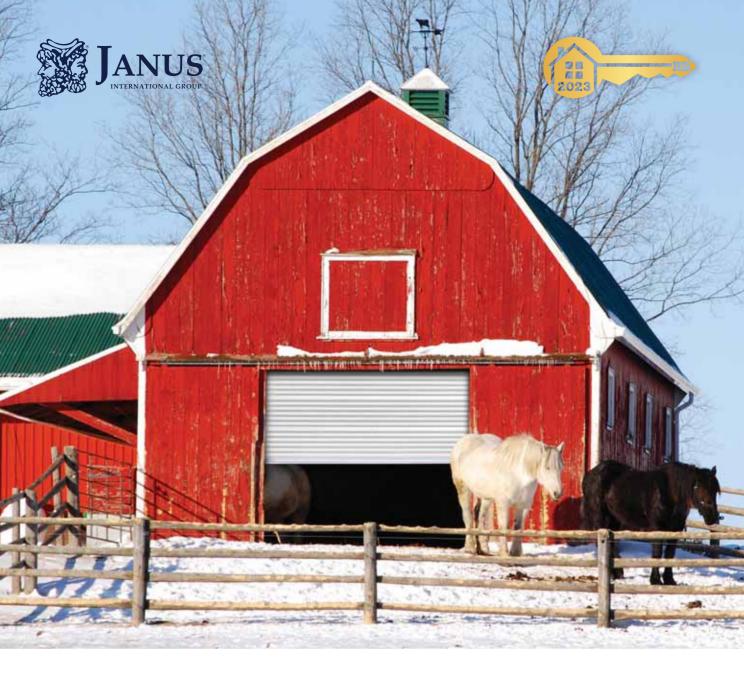




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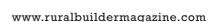
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GOLD KEY WINNER

Observations From Knoxville

What We Learned at Our Garage, Shed & Carport Builder Show

rade shows are learning experiences, and that is the case even when you're one of the people running the show. Here are two things that I learned at our third annual Garage, Shed & Carport Builder Show, held in late January in Knoxville.

STEEL TRUSSES

Some of the possibilities with steel trusses have been underrated and builders/ contractors should stop and take a look at them. Two companies erected post-frame structures that centered around small steel trusses and they really make somebody think. You can add walls and insulate the ceilings or you can use them as really nice outbuildings for a home or barn that deserves a garage or shed or home office that looks alike. We'll follow up on this topic in future issues.

OFFLINE DOESN'T MEAN WHAT IT USED TO

There were several manufacturers on the show floor who are actively trying to reach Amish/Mennonite builders who do not have websites by offering marketing services that involve getting leads and selling packages to buyers, for the purpose of then having those fulfilled by a company that simply receives the plans and an address for delivery. Basically, the website service is acting as a dealer for an offline builder, who in this case is like a manufacturer. Not every plain community builder is interested in such an arrangement but it's there if you want it. Again, we'll discuss this trend in future articles.

Our next opportunity for you to be on either side of that aisle can be found at shieldwallmedia.com/shows. RB

Rocky Landsverk, managing editor rocky@shieldwallmedia.com

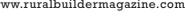


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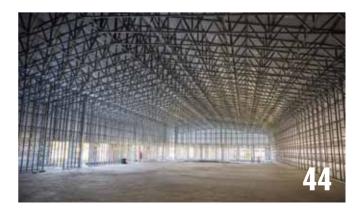
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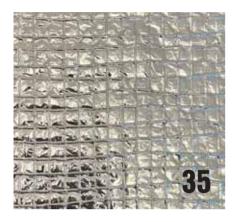
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ON THE COVER: The SDWS Timber screw from Simpson Strong-Tie. See page 8 for more structural fasteners.

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Publisher, Shield Wall Media



e-mail the editor at rocky@shieldwallmedia.com



"I Love the Integrity of the Trades"

Scholarship Winner Finds Pathway to Helping Others

BY LINDA SCHMID

evi Lilley was born into a helping family. His parents are missionaries and he lived in Venezuela from ages 3 to 10, then the family moved to Pennsylvania. They assisted a mission there including hosting a camp and his dad, a carpenter, proffered his maintenance skills. Levi had no interest

in construction; he did, however, pick up on his parents' examples of helping others.

Levi loved school; he always loved learning something new. "The curriculum in Venezuela seemed much tougher than back in Pennsylvania," he said. "I think I learned a strong work ethic because of it."

He met his wife Julia young, and the two of them dreamed that someday they would follow in Levi's parents footsteps and become missionaries. The first step, they figured, was to attend Bible School. They went to school in Michigan, where Levi was born, and upon graduation they married.

Awarded an internship at the Bible School in Mobilization, Levi quickly realized it wasn't for him. When the

people in the maintenance department said they had some work to be done and offered him some hours, he took it. The guys he was working with were very encouraging, and it wasn't long before he left the internship to work full time on the maintenance team. They were doing renovation work, so he got some good experience and a new interest in the trades..

The couple decided to move back to Pennsylvania to be near family. "We were unsure of what was next for us," Levi said, "we were looking for direction."

Back in Pennsylvania, Levi talked to some contractors at



church, and he ended up working for them. He liked the work and he and his wife decided it made sense for him to get a degree in construction. By the time they came to this conclusion and Levi began looking for scholarships, they were gone.

His dad had a great idea; apply for a mikeroweWORKS Foundation scholarship, he said. Levi was familiar with Mike Rowe from "Dirty Jobs," and he decided to try. He applied and eventually, when he heard nothing, he figured he didn't get it. When the bill came from the trade school, it was even more than he had expected it to be. About the time he figured he would have to wait a year to try and scrape together some funds for school, he received an email saying he got the scholarship ... he could start classes!

Trade school was interesting; once again Levi found that he enjoyed learning. He was grateful to be there and serious about his education. The students were a good group, and the teachers were very good too, Levi said.

"One instructor in particular, Mr. Gresko, was so helpful and



As a result of a collaboration with mikeroweWORKS Foundation (www.mikeroweworks.org), *Rural Builder* is featuring profiles of Work Ethic Scholarship recipients in each of its issues. Over 1,700 scholarships have been awarded to trade-school students who value hard work and taking personal responsibility. *Rural Builder* applauds these students and wants to acknowledge their choice to apply their talents to skilled trades. Thank you, mikeroweWORKS Foundation, for your continuing efforts to close the skills gap and "reconnect the average American with the value of a skilled workforce." so encouraging," Levi stated. "He would say things like 'you guys are going to have to work on this bit so you can own your own businesses."

He was something of a mentor to Levi; he sponsored Levi for the scholarship as did some of his other construction contacts.

Levi was so excited about this new direction. He graduated in 2020 and a friend from church asked him to come to his office and have a talk with him, which turned into a job. He said he has been blessed to have a boss, Todd Kepner at Lewis Lumber Products, who is encouraging and patient, pushing him to

do better. Kepner taught him more about what it means to have a good work ethic, continually improving and becoming more productive.

"That kind of patience speaks to me," Levi said. "It makes me want to be that guy."

Lewis lumber supplies rough lumber to the cabinet industry as well as custom millwork. Prior to getting this position, Levi really hadn't considered manufacturing as an option, but he likes it. There is a lot of skill involved in this work, and Levi enjoys that and he enjoys the people he works with.



Levi with Todd Kepner, the mill manager at Lewis Lumber Products

There are many different skills to be learned, creating crown moulding, small trim, using the CNC knife grinder, and CAD work to name a few. Levi wanted to learn the work involved at every station. He loves the variety, and when he got the opportunity to open a station and learn the equipment the company purchased for priming, he got that going and then improved on it.

Levi loves his work, but he has recently left LLP to do what he has always known he wants to do: mission work. He is going to Papua, New Guinea, and one of the wonderful things about it is that he will be taking the skills he has learned with him, because he will be on a team that is building houses in indigenous areas



The Lilley Family: Julia, Brooke, Levi and Clark.

where he will be learning a new skill: building houses on stilts!

Currently he is working, fund-raising for this mission and training, for he needs to learn about solar systems and off-the-grid technology, since most of the areas he will be serving function on solar power.

On a final note, Levi advises that you will always have a job if you learn to do something in the trades. If you can, take wood shop or automotive, or something like that in high school. He bypassed that and still feels like it was an opportunity lost.

"When people give you negative learning don't take it personally" Levi

feedback while you are learning, don't take it personally," Levi said. "Don't worry about it. Try harder. Do better. Get it done." **RB**

For more information about the mission, visit: *linktr.ee/thelilleys*



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PRODUCT FEATURE

BY ROCKY LANDSVERK

Structural fasteners from SPAX

Structural Fasteners What They Are and Why You Need to Know

n the context of construction, the term "structural" generally refers to components of a building or structure that are responsible for supporting loads and maintaining the overall stability of the structure.

When it comes to structural fasteners, then, it makes sense that they are an upgraded type of fastener that holds together those structural components. If you were explaining it to a sixth grader, you might say the word structural means "this piece or part needs to be super-strong and long-lasting because it really matters a lot, because it's carrying weight."

So for the purpose of this article, a structural fastener is a fastener designed to securely join or connect structural elements within a construction or engineering context. These fasteners play a crucial role in maintaining the integrity and stability of structures by providing a strong and reliable connection between components.

"Basically, this is an engineered product that has undergone

testing and has well-defined structural properties," said Sean Shields of the Structural Building Components Association. "For instance, how well do they hold if the members are being pulled apart, or rubbing perpendicular to each other?"

Who does the testing? Accredited, third-party agencies will produce the Technical Evaluation documentation. All of the brands featured in this article provided documentation. For instance, SPAX PowerLags have been independently tested by Dr J Engineering and ICC-ES, while GRK gave us documentation from ICC-ES.

WHAT MAKES THEM DIFFERENT

Here are some key characteristics that differentiate structural fasteners from other types of fasteners:

1. Load-Bearing Capacity: Structural fasteners are specifically designed to bear heavy loads and resist forces such as tension, compression, and shear. These fasteners are engineered to provide a robust connection that can withstand the stresses associ-

8

ated with the structural situation.

2. Precision Engineering: Structural fasteners undergo precise engineering and manufacturing processes to meet strict industry standards. This ensures that they have the necessary strength and durability for use in critical structural applications.

3. Material Selection: Structural fasteners are typically made from high-strength materials, such as alloy steel or stainless steel, to enhance their load-bearing capabilities. The choice of material is crucial to ensure resistance to corrosion, fatigue, and other environmental factors.

4. Tight Tolerances: The manufacturing of structural fasteners involves tight tolerances to ensure accurate and consistent dimensions. This precision is essential for proper fitting and alignment of structural components.

5. Testing and Certification: Structural fasteners undergo testing to verify their performance under various conditions.

Common types of fasteners that can be upgraded to be called "structural fasteners" include bolts, nuts, screws, washers, and rivets (and as we'll learn later, nails). These upgraded fasteners may have specific features such as high-strength threads, larger diameters, or unique head designs to accommodate the demands of structural applications.

WHEN ARE STRUCTURAL FASTENERS NEEDED

Big steel buildings and bridges, and similar big projects, will always use structural fasteners. But other areas of construction utilizing wood or cold-formed steel will use them, too. For instance, structural fasteners are commonly used in post-frame construction and other types of construction that heavily involve wood.

While the primary structural connections in wood construction often rely on nails and screws, there are instances where more heavy-duty fasteners, such as bolts and specialty connectors, are used for critical connections. Structural fasteners play a role in connecting horizontal beams, trusses, purlins, and other framing elements. The use of appropriate fasteners is crucial to ensure the stability and integrity of the structure, and many of those scenarios are heavy duty in nature.

And structural fasteners are commonly used in rural buildings, including barns and sheds. These fasteners play a crucial role in connecting various structural components to ensure stability, du-



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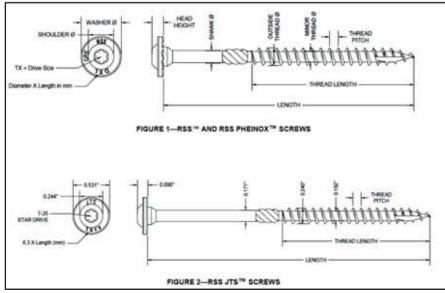
Here's a pergola build using Strong-Drive® SDWS TIMBER Screws (Exterior Grade). The SDWS Timber screw is a structural fastener that is engineered for wood-to-wood. As you'd expect, Simpson Strong-Tie can produce the proof: "Code listed in IAPMO UES ER-192 and meets 2018 and 2021 IRC and IBC code requirements for most common wood framing applications." Simpson's website has an entire section devoted to its products' code documentation.

rability, and overall structural integrity.

WORTH THE EXPENSE

Brett Katsma is Product Manager for SPAX[®] Engineered Fasteners, a brand of Altenloh, Brinck & Co US, Inc. He said that yes, structural fasteners cost more, but by the time you add up the labor costs and also the quantities of fasteners needed, they wind up costing less. "Structural fasteners are generally sold at a slight premium to traditional lag screws, but when you factor in the cost of labor and avoided complications, structural fasteners cost less," he said.

The growth of SPAX PowerLags, which are code-recognized structural wood-towood screws for framing, is proof. "The growth of the structural screw category is a good indication that customers believe the slight price difference is more than offset by the convenience and ease of use compared to traditional lag screws or having to hand-drive large spikes," Katsma said.



Structural fasteners get tested, resulting in documentation like this diagram from an Evaluation Report conducted by ICC-ES for GRK Fasteners.

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"They require no pre-drilling, and drive faster than conventional lags and other structural lag screws."

Basically, it's a simple "time is money" situation, and Katsma said most projects call for more than a handful of lags, so the time savings can really add up. "Reducing the time needed to secure heavy framing members in place is a simple but welcomed relief, especially when setting from a ladder or higher elevations," Katsma said.

Scott Park, Director, Fastening Systems Simpson Strong-Tie, agreed that the growth in the category proves that builders understand how time is money.

"Structural fastening continues to grow each year. Today contractors want a strong, secure connection but they are also looking for fast and easy installation," he said.

Simpson cited the Strong-Drive SDWS Timber screw (see picture) as an example. It provides an alternative to through-bolting and traditional lag screws. "When you have a product that helps the contractor, they keep coming back for that," Park said. "Considering that the industry is still feeling the pinch of the labor shortage, supplying new and innovative systems that allow them to work faster and safer is a goal of ours."

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BECK SCRAIL® SubLoc® Pro nails are among the structural fastener options in the nail category.

"Structural fasteners do cost more than standard fasteners because of their enhanced strength and durability," said Robert Cominos, President/CEO of Albany County Fasteners, a distributor for several manufacturers. "The extra cost is justified for critical structural connections. Structural fasteners prevent joint slippage or failure. They should be used whenever structural integrity is a priority per code requirements or engineering specifications."

Chad Giese, National Product and Sales Manager for BECK

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Structural Screws vs. Lag Bolts

By Levi's Building Components

Structural screws are relatively new products on the market intended to be able to replace most applications where lag bolts would traditionally be used. Lag bolts serve a variety of purposes, with a main purpose being to handle structural applications that are going to be under considerable stress as these bolts are capable of handling heavy loads. It is important to follow code regulations to ensure that the bolts used are capable of meeting required load bearing capacity.

Lag bolts require a few steps for use that include pre-drilling holes with multiple diameters. For example, when fastening a deck ledger, a lag bolt requires a clearance hole through the ledger board and a pilot hole through the rim joist. In addition, it is important to include a washer when using lag bolts as these add additional weight bearing strength. It is not possible to counter sink lag bolts, which means that using certain drivers like an impact driver can

result in over-driving the bolt by driving the washer into the wood.

Structural screws serve as many functions as lag bolts, but are considerably easier and more efficient to use. Since structural screws are made from hardened heat-treated steel, they can be significantly thinner than lag bolts while being capable of holding as much or more weight than traditional lag bolts. Most structural screws do not require any pre-drilling. They also meet high standards for use in structural applications and compatibility with treated lumber.

Structural screws have a number of features that make them unique. Most structural screws have a flat head that is tapered off to the shaft. This allows the screw the ability to countersink into wood so that the head is flush with the surface. The head also utilizes a T30 or T40 star drive making it virtually impossible to strip.



Structural screws, like lag bolts, have an un-threaded portion that allows for the screw head and thread to pull the substrates together for a tight fit. After the un-threaded portion is what is generically called the minor thread (can also be called U thread). The minor thread bores out additional space to make the clearance hole that would need to be pre-drilled if using a lag bolt. Some structural screws have "teeth" on the lower threads that act as a saw blade, making it much easier to drive. The Type 17 drill point allows for an easy start.

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America, said costs are hard to determine because in the long run you should consider things like warranty claims, besides the more-obvious benefits of decreased install times.

INSTALLATION REQUIREMENTS

There isn't a huge different in installation methods with a structural fastener. Albany County Fasteners told us that "proper installation is essential. Structural fasteners require tighter tolerances, specific torque or tension values and use with appropriately rated materials."

Typical head styles include hex, square, flange, and carriage bolts. Each serves specific structural fastening needs. Testing involves axial tension and/or shear force analysis to validate strength and performance claims.

"Speed and convenience for the builder is at the heart of structural screws," Kats-



800-239-8665 WWW.BECK-FASTENING.COM ma said. "Generally, it installs like a 'normal' screw, but be aware that structural screw manufacturers may have specific requirements to be followed. SPAX PowerLags do not require pre-drilling for 1/4" and 5/16", and require 40% less torque than traditional lags due to our patented thread serrations which can mean longer battery life for the power tools being used to install the structural fasteners."

Katsma said that broadly speaking, there are three main head types: hex, flush, and cylindric. "Hex heads are the traditional style and offer a great accented look," he said. "The flush heads, such as flat/pancake, countersunk, or washer heads, are favored for their flexibility, and torx/star drive, which reduces stripping."

Giese said BECK structural fasteners are meant to be shot through a pneumatic nailer or stapler. Giese said the testing allows for a builder to use real math when determining how much of the product to use, giving "assurance of quality and performance perspective" because you can "properly calculate loads, number of fasteners per connection, etc."

WHEN ARE THEY NECESSARY?

How does a builder know when a structural fastener needs to be used? Some kind of paperwork – a plan, or a design, or a drawing, or a manual – needs to tell you that. "If a design calls out a specific structural fastener, it is based upon the strength and performance of the structural fastener from testing and a generic lag screw should not be used," Katsma said. "When there isn't a design being followed, it is up to the contractor to know those limitations and if a structural fastener can overcome the issue."

It's not a difficult decision to make, even when it's a forced one. There's a reason they're required.

"They are also usually stronger, tougher, and more durable because of proprietary treatments and coatings," Katsma said. "Contractors can use less screws, install them faster, and have less headaches from complications." **RB**



Can a Nail be a Structural Fastener?

Many people picture a huge bolt or screw when thinking about a "structural fastener," but Maze Nails says that yes, a nail can be a structural fastener and can come equipped with testing.

"Maze is often asked to provide shear values and withdrawal strengths on the very wide variety of nails they manufacture," said Roelif Loveland, President of Maze Nails. "Shear value is based on two primary factors – the gauge of the nail and the type of steel or other metal used in its manufacture (i.e., the tensile strength). In addition, certain steel nails may be heat-treated to enhance their strength."

Maze invented ring shank and spiral shank nails in the 1930s to greatly increase the holding power of nails. "Threaded nails" have been widely used for almost 100 years due to their effectiveness and were built for the post-frame industry. "Depending on the application, Maze manufactures nails from 7 grades of steel, 1 grade of aluminum, 4 grades of stainless steel and a standard copper chemistry," Loveland said. "Those various metals all have significant attributes - each suited to the fastener being produced. Additionally, Maze manufactures nails in 15 different gauges - depending again upon the application. Nails range from 1/2" up to 12" - with particular features including: wire chemistry and diameter, head size and shape, nail point, plain, or deformed shanks (i.e. ring or spiral thread) and coatings depending on the use."

Loveland added that when applications depend on high shear values or withdrawal strengths, their nails can meet those standards. Shear values are calculated using standard engineering tables. Withdrawal strengths are determined using the wood substrates that Maze customers specify, which provides "real world" numbers and not theoreticals. "For example, if a specific minimum withdrawal value is needed for a 1-1/4" ring shank roofing nails driven into ½" OSB or plywood, those are the exact materials used," in testing, he said. "A hydraulic nail remover is paired with a pressure gauge to give accurate readouts. We find it most representative to use an average of the withdrawal results.

"Whether it's critical shear values that they require – or withdrawal strengths to make certain that wood or fiber cement siding doesn't loosen – nails may not be glamorous, but they certainly are economical and effective."

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About FastenMaster's New TrussBRACE System

teven Szymanski had been working in construction for decades, much of it at truss companies, including his own company in Wisconsin, and he knew there had to be a better way to quickly and safely set roof trusses.

He and his team at Truss Systems in Little Chute, Wisconsin, started working on their idea five years ago. They went through all of the required testing, got certified, then partnered with FastenMaster[®], which then launched TrussBRACE nationwide.

Frame Building News went to a jobsite in Southeastern Wisconsin to see the new product in action. We met there with Szymanski and Product Manager Charles Emma. The framing team on site was led by Nate Fischer of Steve Fischer Construction (Steve is his father). Nate Fischer told us he loves the time efficiency "and they're way safer than how we normally do it."

Emma said working with builders like Fischer to truly learn their challenges and pain points is how FastenMaster identifies its new product lines. "At FastenMaster we're dedicated to developing and delivering products that increase productivity and safety on the jobsite," he said. "Our products help PROs get the job done faster *and* safer. TrussBRACE delivers on that mission and we're very excited to be partnered with Steve as we bring the product to builders across the country."

THE TRADITIONAL WAY

The usual way of holding a truss in place until the roof sheathing is added is to cut 2x4 pieces to either 2 feet long or 4 feet long. Industry best practices suggest cutting these wood blocks such that they extend beyond each truss. This way the nail is not installed too close to the end

of the board. Often framers use 25-1/2" wooden blocks nailed to the top chord of the trusses.

"If your trusses are 2 foot on center, the edge of the 2x4 will flush out with the truss," Szymanski said. "The problem is that when the wooden block is cut at 25-1/2" and flush with the edge of the truss, the nail will be installed just three-quarters of an inch from the end of that block. Framers often don't realize how dangerous that is. It doesn't take much for that wood



to split and pull that nail right out. In fact, industry best practices recommend extending the wooden braces well beyond the edge of the truss and using two nails per connection. More often than not, we're finding framers are using just one nail at each end of that wooden block."

There are a number of additional challenges with the traditional method. First, somebody must cut all those 2x4 pieces, plus that is more wood used that eventually gets removed and thrown into a dumpster. Second, continuous diagonal bracing has to be installed on the top chords to prevent racking (the whole truss set tipping over like dominoes).

"They are about time efficiency, and they're way safer than how we normally do it. The cost is the cost. They hold everything way stronger and way more solidly. It's the only way to go."

- Framing professional Nate Fischer

"Without sufficient diagonal support, the trusses may be tied together, but there's nothing to prevent the whole set from tipping," Emma said. "It's a lot like assembling one of those bookshelves you can order online. As you put it together it will stand up on its own, but go ahead and lean on one side of it before installing the panel on the back. The whole thing will rack and tip over. That panel acts like sheathing and prevents the bookshelf from tipping over when you lean on the side of it. The diagonal support in Truss-BRACE does essentially the same thing."

Framers "get it" as soon as they see a picture of the product. It's a metal piece that creates 90-degree angles with almost



See the row of TrussBRACE pieces installed on the four webs. Unlike other braces, these don't need to be removed, they satisfy the requirement for permanent reinforcement.

no chance for error while aligning trusses during a set. TrussBRACE spaces out the trusses at exactly 24" on center and the diagonal support holds each truss secure. By spacing and bracing in one step, Truss-BRACE eliminates almost all of the wood diagonal bracing in the truss set.

Obviously this product doesn't work in truss sets that are farther apart than 2 feet, like you would see in post-frame construction.

HOW DOES A TRUSS WORK?

Szymanski is not an engineer, but he and his team understand enough about trusses to start the process of creating a solution. In short, a truss is a lot of triangles, which as even non-engineers know is the strongest shape. "And that was also my thought behind the TrussBRACE because we are building triangles," Szymanski said.

The next key is the metal plates that hold those triangles together. "There are different-sized plates for different joints, to hold the stress," he said. "We are load-



Steven Szymanski holds a TrussBRACE.

ing a roof truss for vertical loads. In this case, we're in Wisconsin — we have snow loads, we have dead loads (the truss itself, the roof sheathing, shingles, sheetrock, etc.) When you load a truss, that force gets distributed throughout the members and hopefully down to the foundation. That's our load path.

17









Top left: A truss being lifted onto the multi-family project in SE Wisconsin. This truss set took four hours, two hours less than typical. Above: For convenience and ease of shipping, handling and storage, the angled leg of a TrussBRACE can be folded flat.

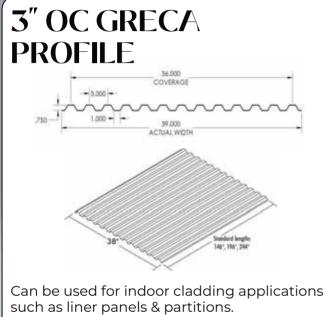
Top right and middle right: Workers setting trusses only from the bottom chord. Bottom right and below: Adding the TrussBRACE before the next truss is placed will save time and gives the framer something to do while they wait.





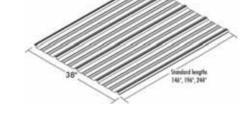
PVC panels are ideal for use as a wall or ceiling liner panel in any type of confinement

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PRODUCT FEATURES





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PRODUCT REVIEW



Workers will periodically hand some upward to be temporarily hung near the incoming trusses.



Nate Fischer (bottom) helps a framer get a truss in position.

"Different parts of the truss are going to be subjected to different stresses. Top chords are almost always going to be in compression force. Bottom chords almost always are going to be in tension, and how that load gets transferred to the bearing, they're going to go through these webs to the bearing and you're going to have compression forces and tension forces. The job of the plate is to keep that amount of force (where it belongs either in tension or compression)."

SAFETY MATTERS

Besides time, safety obviously matters, and it's inherently risky to climb on top of the top chord of a truss.

Safety was actually the genesis of this idea. Szymanski was at the Building Component Manufacturers Conference & Framing Summit in 2017, where the topic of holding the trusses together safely (without having to climb on top) was discussed. "They showed ways of temporarily bracing them safely without having to go on the top chords, but nothing ever became of that," Szymanski said. "So that was kind of my drive."

There were, and still are, truss supports on the market that help framers keep the trusses in place. "I used those products with my truss company, and they're good products, but they don't have a diagonal, so the trusses can still domino," Szymanski said. "I asked the companies to make an angled bracket, and they never did. So I did."

One builder told us that "it definitely cut our time down, like cutting blocks. It helps keep our 24" spacing. And they're really sturdy; it makes me more comfortable climbing the trusses with them up there. It's eliminating the laterals so it's going to save time in the long run, as well."

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MID SOUTH



This project used trusses from Drexel Building Supply. Also visible here are MiTek connectors and Simpson Strong-Tie truss hangers.



Just a couple hours after the photo on page 18.

TIME SAVINGS

Changing the way you've done something for decades isn't going to happen overnight.

The project pictured in this article took about four hours, two hours less than would have been typical. "We did a time study and they cut almost two hours off their crane set because they would set eight trusses and stop the crane, and it would take them 15 to 30 minutes to go back on the roof and put the rest of the temporary bracing on top of there," Szymanski said. And as you know if you've ever rented one, cranes are typically \$300-\$350 an hour.

And it's not just about speed on-site; it's about not needing to revisit the site, sometimes days or weeks later. "They save any-

EXPERT TIPS

truss.

ous truss.

the crew up in the rafters.

Make sure you start straight, with the first truss.

In the "old way," if you were slightly off, you could

they're all going to be straight relative to the first

adjust the second and third trusses. In this method,

Have four workers so one of them can be the gopher

outside of the most-recent truss before the next truss

gets there. It helps set the next truss and it does a

better job of that if it's already mounted to the previ-

and also handle the TrussBRACEs and get them to

Teach the crew to put the TrussBRACE onto the

where from 30 to 45 man-hours, just for setting the trusses, plus the [2x4] material, plus the crane," Szymanski said.

What percentage of time does it save? Szymanski estimates 25-35%. Fasten-Master's Emma says their estimates are that the method lowers overall costs by 20%.

Szymanski said that with the early customers, TrussBRACE has typically been included with the truss package; the GC will typically pay for it, and it will come to the framer as part of the truss package.

Truss companies will also want to be aware of this product, because if crews

are using it, it might lead to slight changes in the production process for the truss itself. The companies Szymanski has worked with so far have made slight tweaks to their trusses if this is going to be used. "You need think about how you're designing your trusses," Szymanski said. "You want to think big picture. How does it help the GC and the framing contractor, to make it as efficient as possible in the field?"

TESTING THE RESULTS

Is the TrussBRACE a permanent and structural brace? Trusses require two types of bracing. Temporary bracing is used to prevent the truss from tipping over during construction. Permanent bracing is called out by the truss designer as required to prevent individual webs from buckling when subject to high loads. "Truss-BRACE is a temporary roof truss brace that is strong enough to be used as a permanent brace as well," Emma said. "Depending on the permanent bracing requirements, it may make sense to use TrussBRACE in those locations during construction so workers get a 2-for-1 benefit. "

TrussBRACE was tested and certified to meet that lateral requirement. "With the TrussBRACE, they're saving that entire step

> and all of that material," Szymanski said. "They are applying the brace on the webs, as they're setting, so it's acting as temporary bracing, but it's also satisfying that requirement of the permanent reinforcement."

THE BOTTOM LINE

If there was something wrong with the traditional framing methods, wouldn't we collectively have noticed before? FastenMaster and Szymanski have been working to increase attention on the time that can be saved and how that can impact the bottom line for contractors.

"Why did you get a nail gun even though it was more expensive than a hammer?" Szymanski said. "Because you became that much more efficient. You spent more money to be more efficient. Even if you break even on a job site, spending more dollars on materials and less on labor, you now have that next hour to move onto the next task." **RB**

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HDR-1-34" x 9-1/2" VERSA-LAMO LVL 2 1E 31M 59-8

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Penthouse interior

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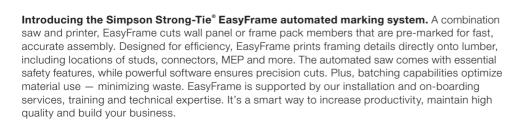
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The aisles were full at the start of the show.

GSCB SHOW SETS RECORDS IN KNOXVILLE

Records were set for exhibitors and attendance as the industry gathered in Knoxville, Tennessee, on January 24-25 for the third annual Garage, Shed & Carport Builder Show.

Almost 70 manufacturers, suppliers, and companies dedicated to all things regarding the construction of small residential buildings were exhibiting. There were more than 10 educational sessions, a happy hour with a great mid-Southern meal, and a positive vibe all around.

The show set a new bar for attendance, beating the previous best by 30%, and as always at a Shield Wall Media show, almost all of those attendees were decision-makers and budget-managers.

"This event was impressive and it was well attended by both contractors and companies. An audience that was interested in what we had to share," said Jason Heifnar, Director Operations, Best Buy Metals. "It was also good to meet mem-



Neil Miller from Neil's Roofing in Indiana exhibited with a PVC exhaust kit of his own creation, and at the back is a roof ladder from a business partner.

bers of the event team from Shield Wall as well. Best Buy Metals and American Pole Barns by Best Buy Metals, greatly appreciated the opportunities this show provided."

Both shed lot salespeople and shed builders said they benefited from the educational programming from several speakers including sessions with Making Sales Simple, along with noted industry marketing expert Randy Chaffee and several others.

Among the highlights on the show floor were post-frame structures erected by Best Buy Metals and True Metal Supply that

centered around metal trusses. Other products that would interest builders and contractors included the Wall-Lift system for more easily lifting walls during construction, and a couple roofing products from Neil's Roofing (a roof ladder, and a PVC vent).

In addition to the show's almost exhibitor booths, Shed University presented its programming to more than 50 shed salespeople on January 23-24.

The next Shield Wall Media show is the Post-Frame Builder Show in Branson, Missouri, in June. Learn more about all of the company's shows at shieldwallmedia.com/shows. **RB**



Best Buy Metals (pictured above) and True Metal Supply built postframe structures on the show floor.



Wall-Lift had a working model of its powered wall-lifting system on display. We'll talk more about this product in a future issue.





In July, *Rural Builder* magazine will present its **Gold Key of Excellence Awards** for the 41st time. Help us determine the names of suppliers of building materials and/or construction equipment who do the best job of providing you with all of the services and products you need to run your business successfully. You can select up to three suppliers from the following list or nominate someone new in the spaces provided below. **TAKE A MINUTE TO SUBMIT YOUR VOTE TODAY!**

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AceClamp	HD Quality Builders	GreenPost
AkzoNobel Coatings	Hixwood	Plyco Corporation
Amerilux International	I Beam Sliding Doors	Post Protector
AMS Controls	Janus International Group	Progressive Metals
ASC Machine Tools Inc.	JTS Sales	RetroFitClip
Atlas Building Products	Kevmar Manufacturing	rFoil Reflective Insulation
Aztec Washer Company	Klauer Manufacturing Co.	Richland Laminated Columns
Becker Specialty Corporation	Lakeside Fasteners	Rigidply Rafters
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South!



March/April 1976 Farm Building News

Many people are intimidated by public speaking; it is often said that many people fear public speaking more than death. There are many different theories regarding how to deal with it. These basic ideas are one way to start.

FOR 50+ YEARS RURAL BUILDER has been

providing the news, trends and resources builders need. Prior to the January 1974 edition, "Farm Building News," as it was called, was in newspaper form. However, those old papers are not to be found in our Shield Wall library. We would love to see some of them... it's our lost heritage! If you have one/some of them please drop a line to me: rockv@shieldwallmedia. com. I'll publish a brief news story about you, your organization, and your projects in return!

Squaring Your Business When Asked to Speak...

By Alan Farrant

As a professional businessman, you, as a farm builder, need to be effective with words, whether in speaking or in writing.

hen you are asked to make a public talk, most likely you find many reasons for not doing it. Suppose the Farmer's Club wants you to speak at lunch next week — about your own work, or something you do every day and know intimately. Will you say "yes!" right off? Nope!

If you're like most people — including other farm builders — you'll say you are busy, or that somebody else would be better. The truth of the matter is: You're afraid to talk to a group audience!

And this fear applies in like situations. You will delay in writing an article, a written report, or a direct mail advertising letter. You may have all the facts, but you'll postpone the chore. Perhaps not because you are afraid, but because you don't know where to begin.

This business of communicating ideas — in writing or by voice — is one of the large problems facing many farm builders. But we must communicate, and to many people and places: stockholders, employees, customers, prospects, and sometimes even to our competition. Unfortunately, many find it difficult and even embarrassing sometimes.

LEARN HOW TO EXPRESS YOURSELF

Now, unless you know *how* to express yourself, much of what you write or say is wasted. Your message just doesn't get across. It has been often said that in this busy world of today, people listen but do not hear. They read but do not understand.

TELL 'EM MANY WAYS

You can do much to overcome this attitude by repeating what you have to say. If you have a new rule for your employees, tell it to them in a meeting and repeat it in a memo. Then put a notice on the bulletin board as insurance that all will see and know it.

Some people are afraid of words. This is often because they are not sure of the exact meaning of the words they want to use. The answer — if you want to be a good speaker or writer — is to fall in love with words. Read good writings, look up words in the dictionary, solve crossword puzzles to add to your vocabulary.

WRITE IT OUT

Whether you are going to present a written report or a verbal speech, you will probably make a draft first. You should! Take your time ... think as you write.

Abraham Lincoln said he needed two days for a 10-minute speech. "But I can make a 2-hour one right now," said Abe.

If your speech takes 1 hour to give, take 4 to 6 hours for its preparation. But don't get carried away with 1-hour speeches. Make them on rare occasions! Have pity on your listeners. "The mind cannot absorb more than the seat can endure," has often been quoted. So? Twenty to 30 minutes is enough for most any speech.

Now back to the first draft. Getting started is a real problem, for the inexperienced. Here's a way that is popular. The "filing card method" is widely used. Get some 3 x 5-inch white cards. On each one write down — without plan — any idea which seems pertinent: figures to be cited, quotes to be used, arguments to be included.

Then? Then spread all the cards out on the table, and put them in place. The "place" for most of them is easy to find. Don't worry about fancy writing; just organize your work in a simple way:

1. The beginning. This gives your subject and states what you hope to prove.

2. The middle. This is all the arguments you can muster, the figures and quota-

tions, the jokes to lighten your subject.

3. The end. Here is where you stop. Sum up what you have said, then stop. Period.

Should the speech be a difficult one, then more than the cards is needed. You'll have to write up a rough draft of the entire speech. Leave it alone for a couple of days, while your subconscious stews about it. Then pick up the draft and read it coldly and at a distance, as though for the first time.

FOLLOW THE RULES

These rules for writing are the same for speaking. So if you get to the point where you make a speech without first writing it — follow the same instructions. This applies regardless of where you are speaking! Board of directors, garden club, an irate customer or a subdued employee.

The best way to speak in public is to pretend you are speaking in private. Usually people who have no trouble speaking privately in their office, often freeze up at just the thought of speaking in public.

Nobody learns all the rules in one session We all must practice. The thing to do is to begin writing, begin speaking, and keep it up until you have mastered the techniques of transmitting ideas with the only weapon we have — words. Good luck to you! **RB**





BUSINESS ADVICE

Back to the Start

Faux Finishes on Metal

Why Print Advertising Still Works in the Construction Industry

or many companies, Spring includes building a marketing budget and getting proposals for advertising. While I am not an expert on all advertising, I do have a reasonable handle on print and digital advertising for Business to Business. I will mostly limit myself to the B2B side, but most of the general information and concepts included here will apply to consumer advertising as well.

There is one HUGE difference between most B2B and B2C: B2B is predominantly branding and education. Using our publications as an example, a \$250,000 roll former or finding a new supplier is not usually an impulse buy. Capital equipment and building supplies have longer buying cycles.

If a contractor needs a fastener supplier, their existing supplier either fell through on an order or raised prices. There is no way to know when you can capitalize on a competitor's mistake. To be prepared is all about branding and frequency; when the customer needs you, they need to be able to find you. They will either find you in

Always ask yourself these questions

- 1. What do I want to achieve with my advertising?
- 2. Do I think this product will reach my potential customers?
- 3. Will my message appeal to my prospective customers?
- 4. Will my audience be able to see and/or read my message in the ad?
- 5. Will my budget allow me the frequency required
- for consumers to remember my message? 6. Is the ad rate appropriate to the audience reached?

Always ask the company supplying the media these questions

- 1. Is your product opt in (if digital) or qualified / requested (if print)?
- 2. How many readers or subscribers do you have and how can I verify them?
 - a. Are you a registered periodical with the USPS?
 - b. What issue contains your Statement of Ownership?

that publication, or they need to remember your name to find you online. SEO is good and necessary, but branding means they search for you by name.

BUYER EDUCATION

MACHINETOOLS

Education is about distinguishing your product so it is not seen as a commodity. Customers purchase commodities primarily on price. Sophisticated customers purchase on features and benefits. Educating consumers combines editorial and advertising functions. Editorial presents the message in a credible and accurate form. Advertising repeats the message so consumers remember. The two together create sophisticated and knowledgeable customers.

This corresponds with big-ticket B2C items. Houses, cars, or major renovations are not usually impulse purchases. Much of the common information on advertising applies more to selling T-shirts than selling a custom home.

PRINT AND DIGITAL

At Shield Wall Media, we are obviously firm believers in print media - especially in our niche. There are multiple reasons why:

1. A large portion of our audience is plain community.

2. Our audience is primarily decision makers or C-Suite level. This group is older and often prefers printed media.

3. Print is consumed in a different manner than digital. More time is spent viewing and more attention is paid to a specific item. Print readers have less tendency to bounce around.

4. Research shows that information from printed media is retained longer than information from digital media.

5. Printed magazines are physical, can easily be passed between readers and are seen multiple times.

Digital works best as a direct-response medium. In many ways, that is more suited to consumer products and an impulse buy. [I have many T-shirts that made me laugh for inappropriate reasons. I may not be able to wear them in polite company, but they have my money.]

Branding in digital is largely companies with million-dollar budgets. Because the impression is not recalled as easily, more impressions are required. To achieve that frequency level on a large platform requires an investment beyond the reach of most companies.

SUCCESSFUL PLANNING

All successful advertising focuses on message, audience, and repetition.

Audience refers to the type of person,

and how many of them receive the magazine or digital product. For B2B publications, demographics like age and sex are nearly irrelevant. You will want to know if the subscribers are applicable for your product and their role in the buying decision. Most advertising targets decision makers and influencers for obvious reasons.

Most B2B trade publications are "qualified" and "free requested" publications. For someone to be a subscriber, they must answer a few questions to say they are "qualified" and ask to receive the publication. For digital products this is an "optin" list. Opt in indicates someone asked to receive it but there are usually no criteria showing they are legitimate prospects.

determining the magazine After reached your audience, verifying the



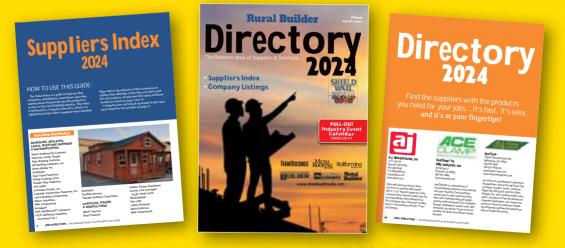
Note that offering a black and white rate is usually a sales trick or a forgotten leftover from years ago. Years ago, some pages in a magazine were printed in black and white some pages in color. It cost more to print the color pages, so the rate was higher. Virtually all magazines today print every page in 4-color so there is no cost Gambral Farran B difference for black and white. This doesn't apply to newsprint or some small event programs.

number of copies printed and mailed is the most important step. The circulation determines the advertising rates.

For print media, the U.S. Postal Service has a several requirements to be a "publication" and qualify for discounted postal rates. The Post Office verifies subscribers when they audit a magazine or grant it publication status. They pick subscribers randomly from the list and confirm the address is valid and that they requested the publication.

The USPS requires that over half of the subscribers have been subscribers for less than three years. They also require an annual Statement of Ownership (SOO). These have to be submitted every year and published in the magazine. They state the ownership and the number of copies printed. The SOO is a simple way to verify

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the circulation of any magazine. An SOO is required for a magazine that is registered as a periodical and receives a lower postage rate. If a magazine does not publish an SOO, you should ask why.

Advertising is based on Cost Per Thousand, abbreviated as CPM. CPM is how rates are determined for both print and digital media.

For printed B2B/trade publications, CPM for a full page 4-color ad varies between \$150 and \$300 depending on the focus of the publication. The narrower the focus, the more requestors will be in your specific target audience. Rural Builder incorporates different types of construction, all parts of the building and everything from residential to agricultural. Rollforming targets metal forming for construction. Since Rollforming is more targeted, the CPM will be higher.

As an example of CPM pricing, Frame Building News has 20,000+ requested subscribers. With a CPM of \$150 to \$300, the rate for a full page would range between \$3,000 and \$6,000 depending on the focus of the magazine. Frame Building News is exclusively about post-frame, so it's fairly targeted and falls in the middle of that range.

By contrast Garage, Shed & Carport Builder has 8,000+ subscribers. The range for a full page would be \$1,200 to \$2,400 ... A smaller circulation results in a smaller rate.

By contrast, CPM for digital advertising varies between \$25 and \$60. An email of 15,000 then would be between \$375 and \$900. The question to ask regarding any email campaign is: "Is it opt in?" That is the equivalent of being "requested" for a print publication.

Be wary of digital pretending to be print. Print ads often do not work as digital ads. This number increases every day, but currently about 49% of digital media is consumed on phones. Even a full-page ad scaled down to 2.75" sideways and 5.5" high will be virtually unreadable. The magazines should also be reformatted to be read on a device. A PDF or flip book does not work on a phone.

Advertising is a product like any other. To be satisfied with the product, understand what you are buying and how you plan to use it. **RB**

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OSHA ISSUES SAFETY **HELMETS BULLETIN**

From the Occupational Safety and Health Administration

Workplace safety equipment, including head protection, has evolved over the years. As industries strive to enhance worker safety and reduce the risks of head injuries, more advanced and protective modern head protection, safety helmets, are replacing traditional hard hats.

This Safety and Health Information Bulletin (SHIB) presents the key differences between safety helmets and traditional hard hats, describing the advancements in design, materials, and protective features that help to protect the worker's entire head. This SHIB also provides instructions for properly inspecting and storing head protection, whether it be a

safety helmet or a traditional hard hat. With a thorough understanding of the benefits and capabilities of head protection options, employers and workers can make informed decisions on which to use.

One of the differences between traditional hard hats and safety helmets lies in their construction materials. While hard hats are made of hard plastics, safety helmets incorporate a combination of materials, including lightweight composites, fiberglass, and advanced thermoplastics. These materials not only enhance impact resistance but also reduce the overall weight of the helmet, reducing neck strain and improving comfort during extended use. In addition, all safety helmets include a chin strap that, when worn properly, maintains the position of the safety helmet in the event of a slip, trip, or fall.

Moreover, safety helmets can incorporate an array of additional features designed to address specific workplace risks. Many models include add-on face shields or goggles to protect against projectiles, dust, and chemical splashes. They may also have built-in hearing protection and communication systems to facilitate clear communication in noisy environments, enabling workers to stay connected and safe. However, head protection with integrated technology may not be suitable for some workplaces. Employers should evaluate workplace hazards to determine the most appropriate head protection for each situation.

To read the entire bulletin, search Google for "Head Protection: Safety Helmets in the Workplace." You'll find a link to a PDF from OSHA.



■ THE BRADBURY COMPANY HITS 65TH ANNIVERSARY

The Bradbury Company, a global family of companies dedicated to the manufacturing of industry-leading metal processing equipment, is celebrating its 65th anniversary this year.

Founded in 1959, the Bradbury Company has expanded its global presence and diversified its product portfolio through several acquisitions and ventures to create The Bradbury Group. With a focus on innovation and customer satisfaction, The Bradbury Group caters to a wide range of industries worldwide.

"At the Bradbury Group, we are dedicated to upholding our values, leveraging our core competencies and continuously enhancing our range of solutions,"



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Call us today at 215-997-2511 www.rollformerllc.com says David Cox, CEO at The Bradbury Group. "We strive to live by these principles, allowing us to consistently meet the evolving needs of our customers and drive innovation in the industries we serve. We are open to new ideas that help our companies, employees, equipment and customers grow and evolve."

The companies that make up the group include Alliance Machine and Engraving, American Machine and Rollform Tech, Athader Slitting Lines, Attica Precision Machining, Beck Automation, The Bradbury Co., Inc., Bradbury Group Australia, Bradbury Group PU.MA., Bradbury Metal Tile Roofing Solutions, Bradbury UK, Custom Rollforming Corporation, Hayes International, Marion Die & Fixture, Metform International and Press Room Equipment Company. In other Bradbury news, and fittingly related to the above, it announced it has acquired the assets of Press Room Equipment Co., (PRE) a leading provider of press feed and coil handling equipment based in Springfield, Missouri.

Press Room Equipment Co. has more than four decades of experience designing and manufacturing high-quality equipment for the metal stamping and fabrication industries. PRE has supplied equipment for Bradbury's roll forming lines for several decades.

Meanwhile, Cox was honored as one of the Executives of the Year honorees through the Wichita Business Journal. Cox took over as CEO in 2016. Cox's journey with the Bradbury team began in 1997 when he joined as the Operations Manager. **RB**



NWFA'S 72ND HOME WITH GARY SINISE FOUNDATION

The National Wood Flooring Association (NWFA) has provided flooring for its 72nd home in support of the Gary Sinise Foundation R.I.S.E. program (Restoring Independence Supporting Empowerment). The R.I.S.E. program builds mortgage-free, custom, specially adapted smart homes for severely wounded veterans and first responders.

The home dedication for United States Army Sergeant First Class (Ret.) Ryan Davis took place on October 12, in Savannah, Georgia. Flooring for the project was donated by NWFA member Allegheny Mountain Hardwood Flooring. Sanding and finishing products were donated

by NWFA member companies Norton Abrasives and Uzin-Utz/ Pallmann. Installation services were donated by NWFA members MSC Inc./Roswell Floor Refinishing, Southern Woods Flooring, and Davidson Wood Flooring.

Throughout his five deployments to Afghanistan and Syria, SFC Davis was invested in leading servicemen and women on missions

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United States Army Sergeant First Class (Ret.) Ryan Davis & family. PHOTO COURTESY OF NWFA

and enjoyed finding ways to inspire younger soldiers. In 2019, while on deployment in Afghanistan, he and his team were conducting a raid when an explosion was triggered. The blast caused severe injury, resulting in the loss of his right arm above the elbow, his right leg above the knee, and his left leg below the knee.

In addition to the 72 homes already completed, NWFA currently is working with its members to source wood flooring for 14 additional R.I.S.E. homes in various stages of planning and construction. A list of all NWFA R.I.S.E. participating companies can be found at www. nwfa.org/giving-back.aspx.

S-5! GETS INDUSTRY ADVOCATE AWARD

S-5!, the original inventor of engineered metal roof attachments, was awarded the 2023 Gold Level Industry Advocate Award for outstanding service, participation and support of the Metal Building Manufacturers Association at the MBMA annual meeting and awards presentation in December in San Antonio, Texas.

Accepting on behalf of the S-5! team was CEO and founder, Rob Haddock together with his sons, Shawn Haddock, vice president of operations and Dustin Haddock, vice president of research and development. S-5! earned gold recognition and was recognized for exceptional commitment to promoting and enhancing MBMA initiatives, including participation in MBMA committees, advocacy efforts to enhance the metal building systems industry, attendance at MBMA educational and promotional events, and participation in its safety program.

"MBMA provides much-needed resources to those who work with metal building systems," said Rob Haddock. "It provides exceptional programming, networking, support and mentorship opportunities for industry professionals who want to up their game. We are honored to receive this award and to be part of such a remarkable community of industry specialists." **RB**



COVERTECH UNVEILS BUBBLE INSULATION THAT WON'T TEAR: RFOIL MAX-NT

Responding to growing market demand for a for a bubble insulation product designed with improved strength to stay securely in place when stapled to wood purlins or framing, Covertech, a division of Balcan Innovations Inc., has launched the first reflective bubble insulation made with a reinforcing scrim mesh. rFOIL™ MAX-NT (No-Tear) Reflective Metal Building Insulation combines the thermal performance of metalized film, the condensation-controlling properties of bubble, and a strong layer of woven scrim. It is a great alternative to lightweight foam / scrim products. The reinforcing woven layer helps prevent wind-uplift when the material is stapled in place.

"One of our goals at Covertech is to provide our customers with high-quality insulation solutions that are innovative and functional" said Kelly Myers, National Sales Manager at Covertech. "The launch of rFOIL[™] MAX-NT is another example of our commitment to meeting the needs of the construction industry, enabling builders to achieve superior performance with our products, and supporting our distribution partners." rFOIL[™] MAX-NT delivers the thermal value by using a highly reflective metalized film which dramatically reduces heat gain / loss by blocking radiating heat from entering or escaping through the building system. This saves energy, reduces utility bills, and enhances the life of heating and cooling equipment.

Additionally, rFOIL[™] MAX-NT helps prevents condensation by providing an airtight thermal break of high-strength bubble between the exterior metal and interior airspace. The reinforcing woven scrim layer adds tear-resistance and tensile strength. rFOIL[™] MAX-NT is not affected by moisture and humidity, will not harbor mold and fungi, will not degrade over time, and is safe and clean to handle which makes it easy to install. It is available in 48" and 72" widths, with various tab options including QuickSeam (tape / tab), and is available with either a white interior facing, or metalized film on both sides.

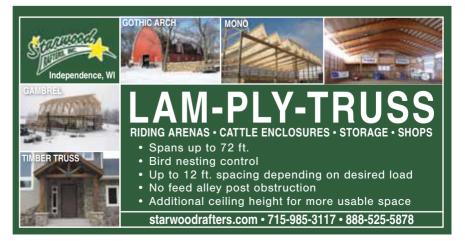
BARRICADE UNVEILS THERMAPRO EXTERIOR WALL INSULATION SYSTEM

Barricade Building Products, a leading name in innovative construction solutions, is excited to unveil its latest offering, the ThermoPro Rigid Insulation System, now available in two variations: the metallic reflective facer and the poly facer with a clear facer on the back. The ThermoPro Rigid Insulation System represents a advancement in insulation technology, designed to provide exceptional thermal performance without the need for transitioning to 2x6 studs, thus enabling builders to meet the new 2021 IECC code requirements seamlessly.

With the metallic reflective facer, the ThermoPro Rigid Insulation System actively addresses moisture management concerns while ensuring optimal energy efficiency. Similarly, the poly facer with a clear back facilitates a balanced approach, offering durability and enhanced structural support, along with an increased focus on environmental sustainability.

"Our goal at Barricade Building Products has always been to provide our customers with top-of-the-line solutions that combine innovation and practicality," said Darcy Overby, Director of National Sales at Barricade Building Products. "The launch of the ThermoPro Rigid Insulation System in multiple facer options signifies our commitment to meeting the evolving needs of the construction industry and enabling builders to achieve superior performance while staying compliant with the latest code requirements."

The ThermoPro Rigid Insulation System reinforces Barricade Building Products' dedication to delivering products that meet and exceed industry standards, empowering builders to create sustainable and energy-efficient structures.





■ MALCO TOOLS UNVEILS ADDITIONS TO ITS C-RHEX LINE OF HEX DRIVERS

Malco Tools, manufacturers of a variety of high-quality tools for the HVAC and building construction trades, announced additions to its popular C-RHEX* line including C-RHEX drivers and C-RHEX SAWTOOTH in 3/8-inch and 7/16-inch hex sizes. The new models offer trade professionals more options to quickly and easily install and remove fasteners commonly used on commercial sites.

With the addition of 3/8" and 7/16" hex sizes to Malco's C-RHEX lines, trade professionals now have access to more driver options that feature a heavy-duty, deep-set magnet that does not contact the screw, so the fasteners spin true, and the magnet retains its strength for years to come.

Built with S2 hardened steel for long life and superior durability, the removable and reversible hex driver allows users to easily clean the socket and magnet. You can get back to work quickly by removing the driver from the impact to push the drive side of the shaft through the socket.

With the new SAWTOOTH 3/8" and 7/16" hex drivers, pros can rapidly remove sealant and adhesive-coated fasteners when doing retrofits or removals of existing HVAC equipment and ducting with the sawtooth action. The new hex reversible sockets in the 3/8" and 7/16" sizes ensure trade pros have the right size. "Malco is proud of the positive response we've received for our C-RHEX products and we look forward to providing future innovations that trade professionals need to make their jobs easier and safer," said Rebecca Talbot, Malco's vice president of marketing.



STRONG-ARM RELEASES NEW VERSION OF PORTABLE DRILL PRESS

Strong Arm 5 has released the MAX MRC, the latest version of its innovative and powerful mobile drill press. With its revolutionary clamping system and superior design, the Strong Arm 5 MAX MRC sets a new standard for portable drill presses, offering unmatched power, versatility, and durability for a wide range of drilling applications.

The Strong Arm 5 MAX is designed to provide multi-application leverage and perfect for handheld drills. With its exceptional power and versatility, it enhances performance and productivity, making it the go-to choice for drilling steel and other tough materials. What sets it apart is its ability not only to pull but also push into drilling material, eliminating the need to get underneath the job. It introduces the groundbreaking MRC (Maximum Range Clamp) — an industrial leader in clamping technology. This innovative clamping mechanism securely holds the drill motor in place, significantly expanding the range of clamps that can be used with the drill motor. The Strong Arm 5 MAX MRC can now accommodate drill bands ranging of 1.68" (4.2672 cm) and a maximum range of 2.68" (6.8072 cm) wide.

The Strong Arm 5 MAX MRC provides users with 11" of quick set 1" incremental adjustments, fine tune for your application, improving efficiency and saving valuable time.



ASV ADDS ATTACHMENTS TO LOADERS AND SKID STEERS

ASV, which offers all-purpose and allseason compact track loaders and skid steers, introduces new attachments. The new branded tools include several versatile options for forestry, construction, landscaping and snow clearing.

They include a low-flow mulcher, stump grinders, angle brooms, a teleboom (shown in the photo below), a long floor bucket, a cold planer and a v-blade. The attachments are tested and optimized for ASV machines. Additionally, buyers benefit from the ability to purchase both the attachment and machine from ASV dealers.

Available through ASV's dealer network, the attachments are built to last and improve jobsite productivity. Each was chosen and carefully matched to ASV machines for maximum compatibility. The result is guaranteed performance right off the shelf, with plug-and-play performance ready to go from day one.

The new attachments are also simple to finance. If eligible, commercial buyers who buy an ASV machine through an ASV dealer have the option to finance the attachment with the loader.

ASV backs the attachments with a twoyear warranty. Parts and support are available directly through the company. **RB**



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ick and the Anti-Vibration System: Helps to duce tool vibration due to the lo usshion built into the hammer tu ampeners added in the handle. Lock-On/Lock-Off Button: Ke cool running when locked on (h mode only) and helps prevent a activation of the tool trigger wh





Include a clear, high resolution image of the product (no logos or advertisements), along with a brief description of your product and the problems it solves.

Submission is not a guarantee of publication. We reserve the right to edit all submissions for content, length, and clarity.



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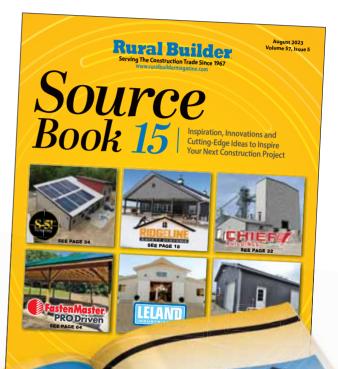


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Saving the Construction Industry From Injury

Deliverance Safety Hammer Delivers More Ergonomically Designed Tools

DRIVEN

Some people are driven to perform. Meet Don Carlson, CEO of Deliverance Safety Hammer. Don began his career working in his parents' business selling office supplies in 1954, helping them build the company. Since then he's developed and grown many affiliate companies in everything from real estate to engineering. When Carlson decided to retire at age 79, he went on to start another company!

Carlson and his buddy Rudy Canlas, an engineer at Everwin, had a discussion about the tools available for driving nails and the lack of an ergonomically designed option.

"There are lots of powered hammers to drive a nail," Carlson said, "but they are injurious to the hand and wrist."

The injuries that are likely to result from pounding with most hammers include repetitive stress injuries such as carpal tunnel, trigger finger, and tennis or golf elbow. Pounding nails can lead to injuries causing pain, missed workdays, and delays. People who start young in construction may be harming their musculoskeletal system over years and years of pounding.

With that in mind, Canlas, developed a couple of adaptations for an ergonomically designed pneumatic nailer that pounds nails 1 1/2" to spike size. They strike the nail 37 times per second making pounding fast, easy, and painless, helping to correctly position arms and wrists to avoid stressing them. Carlson saw great potential for remodeling, refurbishing,



and demolition and Deliverance Safety Hammer was born.

INNOVATION

A friend — a manufacturer and farmer who was driving fence staples manually — suggested developing an ergonomic power stapler. At the time, he was using a manual stapler, and Carlson says that they couldn't find an ergonomically designed option, so they introduced one, The Deliverance Stapler. It works with variously sized staples with quick-change coupler stapling and staple removing for wire fence staples.

The company is getting ready to launch its newest product — a tool dedicated to

driving nails into metal connectors and hangers, and of course, it offers the same protection from injury as the first two tools.

The company's innovative ideas all come from friends and associates who are facing problems that the market has not adequately addressed. Carlson divulged that they have yet another tool to introduce to the market, but it's not ready to be revealed.

POUNDING AWAY

The company is small, consisting of Carlson, his wife Lynne, and son-in-law Wyatt Demasseo, Director of Marketing. They are located in Scottsdale, Arizona, but their products are not limited to any region. Their main market is construction hardware suppliers, and these safety tools can be shipped worldwide.

One of the main challenges the company has faced is getting the word out. To remedy this, they are running more advertising, and they have enhanced their website with videos so people can see how efficiently their tools work. Demasseo still has quite the job before him; there is a huge target market out there still to be tapped.

A marketing enterprise Carlson's team has had much success with is STAFDA (Specialty Tools & Fasteners Distributors Association). This network has a membership of over 2,000 businesses that support each other by buying mainly within the network. Its response to Deliverance Tools has been outstanding.

BUSINESS ADVICE

Every tool has to be repaired sooner or later, Carlson said, so make sure that you have a good setup to repair the tools. This is good customer service, and if the shop is local, the customer is likely to buy other



materials while he is there.

Every new product needs a good marketing plan. Go to trade shows; talk to suppliers. These things are easy to put off, but Carlson says that he wishes now he had started sooner. Don't count on word of mouth alone; get your name out there. **RB**





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Commercial Building From American Building Network Is 250 Feet Long

TE Properties contracted with American Building Network to produce this commercial building for NanoTechLabs, Inc. in Winston-Salem, North Carolina. The building is 80' wide x 250' long with a 20' eave height.

This project required 8 miles of structural steel tubing and nearly 36,000 square feet of sheet metal.

The structure is located in an industrial park, and is slated for use as commercial office and warehousing space. The property owner came to ABN looking for a flexible, open building plan that offered ample room for offices and meeting space, as well as vertical storage capacity for the warehouse section. ABN managed it with its unique clear-span truss design.

There are several challenges that go along with erecting a steel building of this size and magnitude. To meet these challenges, the trusses were shipped to the project site in 40' halves that were bolted together in the field with multiple 5/8"



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WHAT WE NEED:

- Component List
- Brief Description
- Three to five attractive high resolution images (at least one must be the entire building).

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PHOTO COURTESY OF STEVEN BULLOCK

If you have any questions about the Project of the Month, contact the editor:

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high-strength bolts. The trusses were then hoisted with a crane and inserted within ABN's 12" ladder-style column legs. The truss inserts were finally secured with eight #12-14 x $\frac{3}{4}$ " SDFs on each truss end.

A building like this requires serious

fasteners. Levi's Building Components provided #12-14 x 3/4" SDF fasteners.

As of press time, this project was in the final stages of completion and finishing by client-appointed subcontractors. **RB**



THE DETAILS:

Building Manufacturer: American Building Network

Builder: LC Contracting LLC Building Specs: 80' wide x 250' long x 20' high.

Frame: High-strength tube steel clear-span

Roof Pitch: 3/12

Fasteners: Levi's Building Components, #12-14 x 3/4" SDF

Insulation: WMP-UR R-19 6" fiberglass

Posts: American Building Network

Roof & Wall Panels: American Building Network 26g galvanized steel PBR paneling (vertical)

Panel Coating: Sherwin Williams Valspar

Trusses: American Building Network 80' clear-span with 2 1/4" x 2 1/4" x 14g steel tube

For more information: americanbuildingnetwork.com



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BUSINESS BUILDING

BY RICK ZAND, NEW TECH MACHINERY

Solutions to the Labor Shortage

Finding Workers in a Shrinking Labor Market



he labor shortage in the U.S. is a growing problem faced by many industries, including manufacturers and contractors, even as we've seen an increased demand for metal in building construction. According to an industry publication, 42% of top metal builders reported labor as the biggest challenge they faced in 2022, up from 23% reported in 2021. Imagine you have the machines and materials to meet the needs and the jobs are lined up, but you can't find workers to fabricate and install panels.

REASONS FOR THE PERSISTENT LABOR SHORTAGE Reason 1:

Decrease in Birth Rate Starting out as a roofer or in metal panel production is generally a young person's game. Many of these entry-level positions tend to attract those from 18-22 years old.

In a perfect world, this isn't a problem. There's always a high school or a trade school grad searching for a job or career opportunity. However, we've seen a decline in the population growth rate in the U.S. In the 1950s, the growth rate approached 2%. Until the end of the 20th century, it consistently remained above or very close to 1%, a number we haven't seen since 2007. In 2023, it reached only .50%, which was actually an increase over 2021 and 2022, which saw .31% and .38% increases, respectively.

This is not good news for the workforce, coming after a wave of Baby Boomer retirements. In fact, the last time it reached 1.50% was in 1963, and that was a decrease from the previous decade, which saw peaks as high as 1.98%. By 2035, adults 65 and older will outnumber children under the age of 18 for the first time in history.

The labor market in the U.S. is shrinking, a trend that is predicted to continue for years to come.

Reason 2:

The Big Quit

According to the U.S. Chamber of Commerce, by the end of 2023, the U.S. had 9.5 million job openings but only 6.5 million available workers to fill them, leaving a deficit of 3 million jobs. This is partly due to the residual impact of the pandemic. During 2020-2022, employees received aid and relief due to layoffs and hiring freezes. We saw the availability of goods shrink due to disruption in the supply chain. We also saw what's become known as the Great Resignation, also known as the Big Quit, where many workers simply left the workforce.

After, many laborers didn't return to their jobs. They may have used their lockdown time to learn coding or other skills that made them marketable in the tech industry. Even now, more and more companies are dropping degree requirements from job descriptions as technical skills are valued over academic credentials. Additionally, if you're a coder, programmer, or web designer, you can make a decent salary and not have to stand on a roof in the hot sun or in cold winter weather. For some, the pandemic provided an opportunity to regroup and perhaps move in another direction.

Lost income was another deterrent to returning to the workforce. According to Roofing Contractor, 68% of the workforce earned more on unemployment during the pandemic than they did working their regular jobs. Those who have returned to work or joined the workforce post-pandemic may not have the same work ethic as the pre-pandemic crews.

"Their expectations are different," says Dave Susee, Vice President of Taylor Metal Products, a West Coast manufacturer. "They want more flexibility to come in when they want to. They may tell us they won't come in before 9 a.m. Some of them are very good, but some haven't developed a work ethic."

In the end, the changes in financial circumstances, job options, and changing work expectations bite into the availability of roof and gutter installers.

SOLUTIONS TO THE LABOR DILEMMA

Although the demand for metal construction increases and the supply chain is close to the pre-pandemic flow of goods, the labor market remains in a downward spiral. While there probably isn't one solution to the labor shortage, combined approaches may bolster your labor force.

Solution 1:

Use a Workforce Service

Services like Labor Central will match you up with roofing crews online. Crews are available in all states, and their site will provide you with a list to choose from for residential and commercial work, as well as the type of roofs they install (metal, shingle, clay tile, etc.).

You must join as a member. Memberships are priced at \$99 monthly or \$999 annually (there is no fee for roofing crews). Once you join, you can contact the crews listed and receive job bids. It's up to you to negotiate fees, as Labor Central does not serve as a go-between in this capacity.

Labor Central is easy to use either on your computer or through their app. While their service may not be a longterm solution, it can get you through a crunch. In the long run, however, you may want your own employees who you can train and supervise.

Solution 2:

Attract and Develop Workers Skills, skills, skills. If your workforce comprises skilled workers who can operate machines, leverage technology, and are educated in techniques, types of roofing, roofing measurement software, smart roofs, etc., they can establish themselves as industry professionals. Also, if you can create room for growth, say, as crew leaders, advancement in the field can be a motivator.

Developing an educated, skilled workforce takes time and investment. However, providing a hiring plan that includes training and professional development may attract new workers to the industry. Also, if you produce qualified professionals, you're less likely to have turnover, and you'll have a more productive, committed workforce.

Taylor Metal Products often hires entry-level warehouse workers and trains



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them for more advanced operational positions. That way, they can gauge their performance and work ethic and then promote from within.

Solution 3:

Hire Documented Immigrants

Currently, we're dealing with an influx of immigrants, and the government is expediting work permits to those residing here legally. Increasing work permits provides hiring opportunities for businesses desperate for workers. Contact local employment and job agencies to see if you can use them to acquire documented immigrant workers.

Solution 4:

Join a Contractors Association

Joining a contractors association provides many benefits outside of engaging and recruiting workers. Roofing and metal associations also offer access to training programs, strategies for recruitment, and resources through articles, podcasts, networking, and more.

National associations like the National Roofing Contractors Association (NRCA) and the Metal Construction Association (MCA) offer training for roofers, including certifications for crew members, OSHA compliance, etc. Promoting training as a way of recruiting workers may attract those who hadn't previously considered roofing as a profession.

NRCA offers members recruitment resources and expands the idea of career development through skills, safety, and technology training. NCRA also offers an online job bank to its members to locate qualified workers.

MCA membership provides access to their Metal University online training, which includes metal roofs, solar systems, sealants, and more. Roofers can receive training and certification online.

Which Workforce Solution Is Right for You?

Depending on your situation, a combination of solutions may best serve your

ConstructReach Helps Solve Employee Shortages

By Linda Schmid

A major challenge in the construction industry is the lack of employees, a challenge that has been ongoing for years and is exacerbated by the many long timers retiring from the industry. Builders, roofers, manufacturers... everyone in the industry seems to be looking for answers to the employee shortage. Paul Robinson has built his business, ConstructReach, on helping companies with that. He believes that there are great pockets of potential that are largely unmined for talent.

"Currently, the industry workforce is comprised of only 11% women, under 6% African Americans, and under 2% Asian Americans," Robinson said. "Further, while Latino people are well-represented in the industry, they are underrepresented in leadership positions," he added.

Meanwhile, almost half of the construction workforce is expected to retire by 2031, but less than 8% of high school graduates and just 14% of college graduates are pursuing careers in construction.

ConstructReach believes that the way to find those elusive employees is to develop relationships in the community. One of the ways they help clients to do that is to host "I Built This" events. Robinson's team acts as liaison between their client and educators and their students. Working on the idea that the client is a future prospective employer for these kids, the ConstructReach team implements surveys to find out what knowledge the kids have about the business at hand and develops an event where they can have hands-on experiences that give them a taste of construction activities. For example, in one instance kids constructed shelfing for Target store displays.

Volunteers are picked intentionally; they are knowledgeable about the activities the kids are engaged in and they are representative of the kids they are interacting with. Examples are women leading girls. Seeing successful adults they identify with can help kids to imagine themselves being successful in an enterprise.

Robinson says that the students and teachers react enthusiastically to the experience. The kids generally ace the post-survey for increased knowledge of the opportunities available and about 80% of them express interest in some type of construction work. Interestingly, they have seen that more girls sign up for these events than boys, perhaps because construction has traditionally been a pathway that girls have not been encouraged to explore.

The companies who support these events are providing a great service to the community and their youth, inspiring them to think about opportunities they may not have known existed. Meanwhile, the company is getting some brand recognition that can help them in future when people see job openings and they have a positive image of the company based on their experience or what they've heard about the company's involvement in these events.

ConstructReach also creates and formalizes internship programs and company counseling and training to help create inclusive environments in hiring and throughout the culture to help them attain and retain employees.

Learn More: constructreach.com/constructiondei-consultation/

workforce needs. A workforce service is a great quick fix if you must line up a crew for an immediate job. If you're looking toward the long-term, you might include a recruitment tactic, such as hiring immigrants with work visas, recruiting and developing a skilled workforce, joining a roofers association, or a combination of approaches.

As mentioned at the beginning of the article, more people are retiring than are entering the workforce. With the dramatic decrease in birth rates, we'll need more solutions to the tightening labor market on the road ahead. Beyond attracting workers, retention is imperative, especially if you're investing in training. Maintaining a positive work environment and providing bonuses, rewards, and advancement opportunities will go a long way toward curbing turnover and keeping a well-trained, qualified workforce. **RB**

Check out Rural Builder Magazine online: www.ruralbuildermagazine.com



The 2023 Survey Says ...

e have closed out our annual survey and are working on the CSI Annual that will mail in April. Our efforts to improve our data collection seem to be working. We roughly doubled the total number of respondents from 2022 to 2023.

Our strong areas, like post-frame, remained constant, but we gained a significant number of responses in General Roofing, Metal Building and Wood Framed (Stick Built) construction. With the roll out of Metal Builder Magazine, the gain in "Metal Building" makes sense. The gains in General Roofing and Wood Framed construction should help act as a baseline or control group to measure against the specific markets we cover.

One of the interesting aspects comparing year over year are the changes in responses, hot markets, business climates and concerns. Going through the comparison from 2022 to 2023, this is what caught my attention.

MARKET PREDICTIONS

What Market Segments of construction do you build for?

No areas increased significantly. Agricultural, Commercial and Industrial all decreased as a percentage of respondents. Agricultural from 40% to 28%. Commercial from 67% to 30%. Industrial from 44% to 19%.

When combined with results from the question "Overall, across the industry will residential construction increase or decrease in 2024 to 2023?" the obvious assumption is the change in products is in response, preparative or reactive, to the view of residential construction. In 2022,

47% predicted the market would decrease and 32% predicted the market would the same. In 2023, 37% predicted the market would increase and 47% predicted it would stay the same. The percentage predicting an increase grew by 16%, while the percentage predicting a decrease dropped by 31%.

The market predictions for Agricultural, Commercial and Industrial remained unchanged. This seems to indicate a shift in direction to take advantage of an increase in residential construction.

This is consistent with the level of concern regarding interest rates and inflation. In 2022, 58% of respondents listed Inflation as a major concern. In 2023 that percentage dropped to 27%. Inflation followed a similar path. In 2022, 67% listed it as a major concern and in 2023 that number decreased to 34%.

EXPANSION PLANS

In 2022, 18% had immediate expansion plans and 50% had future plans. In 2023, 28% had immediate plans and 29% had plans farther in the future.

The areas for expansion remained the same with adding personnel (both construction and support) and new products or building types leading the way.

The one interesting drop was in trucks. In 2022, 24% of respondents planned on adding trucks. In 2023 that number dropped to 14%.

FINANCIAL OUTLOOK

The predictions of gross sales remained consistent. Units sold remained consistent as well.

Profitability remained consistent. The only significant change was an increase of

approximately 7% predicting their profitability would increase by more than 25% in 2024.

CONCERNS FOR 2024

One bright spot is the level of concern across the industry seems to have generally decreased. The challenges still remain but respondents seem less concerned.

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24% 12%

SUMMARY

Generally concerning issues seem down. Residential construction is expected to remain strong enough builders are shifting toward that market. Projections for gross sales, units sold and profitability remain stable. Which is extremely positive considering the industry is coming off of some record years.

The CSI Annual will mail in April and should provide additional insight into the above topics and much more. We will be able to isolate regions, building types and specific market niches and examine our data and combine that information with input from industry experts and economists. The CSI Annual is free to all subscribers to Shield Wall Media publications. **RB**



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