FLIP THIS ISSUE

METAL BUILDER SPECIAL SECTION

Rural Builder

Serving The Construction Trade Since 1967

www.ruralbuildermagazine.com

DECEMBER 2025
Vol. 59, Issue 10

SHIELD WALL MEDIA LLC

STRONGER BY DESIGN

THE RISE OF ENGINEERED WOOD

CLOSER LOOK:

ROBOTIC MILKING BARNS

BUSINESS STRATEGY

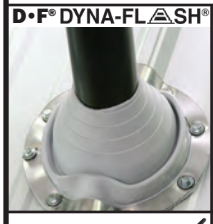
SELLING BENEFITS ALONG WITH FEATURES

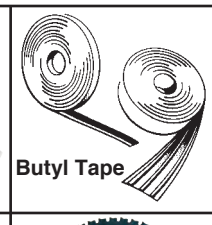
RENT, LEASE, OR BUY?

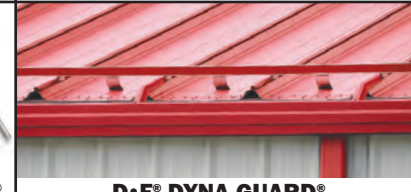
CHOOSING THE RIGHT EQUIPMENT STRATEGY

DYNAMIC FASTENER

Everything for the Metal Builder & Roofer®







You supply the crew.
We'll supply the rest.®

Metal Roofing Magazine
METAL OF HONOR
2025

2025 RB
Gold Key
of Excellence
Award Winner

CALL 800-821-5448 or Order Online @ DYNAMICFASTENER.COM

Call for your Free Full Color 140 Pg. Hand Guide. Better yet, call us for your next tool or fastener requirement. Discover for yourself why your peers enjoy doing business with our company!

EDITOR'S NOTE

BY KAREN KNAPSTEIN

When Technology Meets Tradition

If you've been around farms or rural construction long enough, you know that new technology can stir up equal parts excitement and skepticism. Whether it's a laser level on a framing crew or a milking robot in a dairy barn, the question always comes down to the same thing: Does it really make life easier, or just more complicated?

In Jacob Prater's article on robotic dairies (beginning on page 28), we see a clear example of how technology can reshape a legacy industry without losing its human element. The story out of Wisconsin shows what happens when necessity (in this case, labor shortages) meets innovation. In this case, automation isn't about replacing people—it's about helping a smaller crew do more, better, and smarter.

What left an impression on me is how similar the learning curve sounds to what builders experience when adapting to new tools or prefabricated systems. There's always that adjustment period: new skills to learn, new ways to think about layout, workflow, and maintenance. But once the dust settles, efficiency tends to win out.

The robotic dairies Jacob describes aren't just high-tech curiosities—they're practical, working systems built to solve real-world challenges. And while the initial investment is steep, the long-term benefits in productivity, consistency, and labor savings make a solid case for their growth.

For builders, it's a reminder that innovation is a tool—one that's only as good as the hands guiding it. Whether you're putting up a post-frame barn or designing a robotic milking facility, the principles remain the same: build smart, plan ahead, and never stop learning. RB

EVENT DIRECTOR'S NOTE

BY MISSY BEYER

Post-Frame Builder Show Unites Construction Communities in York, PA

The Post-Frame Builder Show returns June 10-11, 2026, at the York Expo Center in York, Pennsylvania. The 2026 show promises to be the premier business-to-business event for the post-frame, rural, and plain construction communities. This year's show marks a significant evolution, as it merges the previously scheduled **Rural Builder Show** and the **Plain Builder** segment into one unified event. The consolidation of the Rural Builder Show, previously slated for Tennessee in February, creates a powerful platform for networking, education, and commerce across these closely connected industries.

Hosted by Frame Building News, the oldest and largest publication dedicated to post-frame construction, the show is designed for decision-makers seeking reliable suppliers and innovative solutions. Attendees will benefit from the Wednesday and Thursday family friendly full day format with seminars each morning, allowing professionals to conduct business efficiently and still enjoy their weekend, either at home or enjoying the sites in the York area with their families.

Educational sessions are included with general admission and will cover topics ranging from barndominium business strategies to post-frame foundations and moisture mitigation. Once again, the Post-Frame Builder Show will host the very popular post-frame industry panel. The event also features a complimentary social with a full meal and entertainment on Wednesday, and unlimited guest passes available through exhibitors, making it accessible to contractors, manufacturers, and suppliers alike.

By bringing together the Post-Frame, Rural Builder, and Plain Builder communities, the show fosters collaboration and growth across sectors. Whether you're sourcing materials in bulk or exploring new technologies, the Post-Frame Builder Show is the place to connect, learn, and grow your business.

For more information or to exhibit, contact Director of Events Missy Beyer at missy@shieldwallmedia.com. RB

34

CONTENTS

features


38

DEPARTMENTS

FIND US ONLINE AT:
ruralbuildermagazine.com

CONTACT THE EDITOR AT:
karen@shieldwallmedia.com

INDEX OF ADVERTISERS

GO TO PAGE 15 TO SUBSCRIBE TO MORE FREE MAGAZINES

ON THE COVER:
A recently-completed calf barn that saves the owner time.
Courtesy of Wick Buildings.

Rural Builder®

Managing Editor
Karen Knapstein
karen@shieldwallmedia.com
715-952-1633

Staff Writer
Linda Schmid

Circulation/Subscriptions
Barb Prill
barb@shieldwallmedia.com
715-952-1682

Publisher/CEO
Gary Reichert
gary@shieldwallmedia.com
715-952-1657

Director of Events
Missy Beyer
missy@shieldwallmedia.com
715-350-6658
Fax: 1-715-227-8680

Executive/Advertising Assistant
Kathy Budsberg
kathy@shieldwallmedia.com

Advertising/Show Assistant
Cari Ullom
cari@shieldwallmedia.com

Graphic Designers
Tom Nelsen
Kevin Ulrich

Fax: 1-715-304-3604

Rural Builder (ISSN: 0888-3025) (Volume 59, Issue 10) is published ten times per year (February, March, May, June, July, August, September, Annual, October and December) by Shield Wall Media LLC, 150 Depot St., Iola, WI 54945. Periodical postage paid at Iola, WI, and at additional mailing offices. Canadian Agreement Number: 40665675. POSTMASTER: Send address changes to Rural Builder, Barb Prill, PO BOX 255, Iola, WI 54945.

Mailed free to rural contractors and their suppliers throughout North America. Others may subscribe: $29.98 for 1 year, $55.98 for 2 years, and $79.98 for 3 years in the U.S.; $39.98 for 1 year, $74.98 for 2 years in Canada.

SHIELD WALL MEDIA LLC

YOUR PRIVACY IS IMPORTANT TO US

Unrelated third parties often attempt to sell mailing lists for what they say are our publications. You can be assured that WE DO NOT, HAVE NOT, AND WILL NOT EVER SELL OUR SUBSCRIBER LISTS. We will also NOT sell the attendee or exhibitor lists from our shows. We do provide attendee lists to the exhibitors free of charge and as a courtesy for their support, but we NEVER provide this or any other information to independent vendors.

Gary Reichert,
Publisher, Shield Wall Media

MIKE ROWE WORKS FOUNDATION

WORK ETHIC SCHOLARSHIP

Scholarship Helps Young Entrepreneur

22-Year Old Co-Owns Successful Construction Business

BY LINDA SCHMID

Many people underestimate just how much intelligence, creativity, and problem-solving go into building something with your own hands. Those who work in the trades often combine technical know-how with business sense and determination. Noah Dunkley is a great example of that balance—skilled, driven, and proud to build a career doing what he loves.

WORKING HARD

Noah was born and raised in Cincinnati, Ohio, by hard-working parents; he followed their example. In his junior year of high school he found that he loved working with his hands, so he left his college-prep high school to enroll in a trades high school. He worked at his new vocation through his junior year, summer, and his senior year.

After high school, Noah was doing an apprenticeship at a home repair company, working at Dunkley Brothers Construction on the weekends, while pulling a 4.0 GPA at college.

A WHITE COLLAR FAMILY

The Dunkley brothers' mother is a principal at a grade school and his father runs an architectural firm. However, when two of their sons decided they wanted careers in construction, definitely a Blue Collar choice, they were supportive.

"We were super fortunate to have such great parents," Noah said. "They let us choose."

Construction is in line with their father's vocation, so he was able to give tips and advice on the work, too.

Noah and Brennan, co-owners of Dunkley Brothers Construction.
PHOTOS COURTESY OF DUNKLEY BROTHERS CONSTRUCTION.

TRAVELING THE PATH

Noah attended the local trade school, Cincinnati State. He loved the classes and expanded his knowledge as his instructor gave him increasingly challenging projects to work on. The program also taught him about running a construction business, which was especially helpful because Noah and Brennan wanted to start their own company right away—they didn't want to wait. Still, Noah wondered how it would work. He was in college and needed to earn tuition money—would their new company bring in enough for that?

Then Noah remembered that his uncle had told him about a scholarship he should apply for.

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 2,000 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."

MAZE NAILS
Building America one NAIL at a time

NAIL IT RIGHT EVERY TIME

MADE IN USA • MADE IN USA • MADE IN USA

Maze Premium Post Frame Nails

2025 RB
Gold Key of Excellence Award Winner

Metal Roofing Magazine
METAL OF HONOR 2025

RUBBER WASHER NAILS

HARDENED POST & FRAMING NAILS

STORMGUARD® POST & FRAMING NAILS

STORMGUARD® JOIST HANGER NAILS

1.800.435.5949 | mazenails.com

A SCHOLARSHIP FROM THE MIKEROWEWORKS FOUNDATION

Noah liked the application process; he felt like it was challenging him, asking: Who are you? Who do you want to be?

He put in his application and when he received the scholarship it was a weight off his shoulders. He could take the risk and not have to forestall his and Brennan's dream because college was paid for. So he happily went on pursuing his dream. He was learning more and more in college and at 18 he and his 20-year-old partner started their own construction business.

BUILDING THE BUSINESS

At first, the brothers took on any job they could get, mostly small jobs. However, when a builder backed out of a job, their dad passed the work on to Noah and Brennan. It was a remodel of a friend's home, and for their dad, it was a small job. For Noah and Brennan it was a big job and they put their all into it. It turned out well and got their name out there. After that they added a couple of employees.

The company has grown faster than the brothers expected. They have been working in the residential market, doing everything from small remodels to building the whole house.

They have great relationships with various trades people, and now they are taking the next step and offering general contracting so customers can rest assured that the planning, coordination, and oversight are all in good hands.

A NEW GENERATION OF BUILDERS

While building up their business is fun, it's also a lot of hard work. However, that's not a challenge for this crew. Noah said the real challenge has been getting people to take them seriously. They started the business when they were just barely adults, and even now, Brennan is the oldest person in the company at 25.

"We take this work very seriously; it is important and we treat it as such. Everyone in our company is courteous, professional and in uniform. The goal is perfection," Noah said.

"The best parts of this work are the relationships we get to make with the customers," Noah explained. "We want to know who they are and what they love so we can incorporate it into the project."

Noah pointed to their current 2,000-square-foot renovation project as an example. The crew selected walnut wood for the customers' laundry room, which the homeowners loved. Now, Noah and his team are using the leftover scraps to make matching walnut cutting boards for the kitchen.

"We like this kind of detail," he said. "It's something we can present as a gift for them allowing us into their homes and lives."

GOALS

These ambitious brothers have a big goal. They want to keep learning, growing as a team, developing more relationships, and taking on larger and larger projects as they grow. Within five to ten years, they want to be one of the top general contractors in Cincinnati. **RB**


JANUS
INTERNATIONAL GROUP
THE DOOR THAT WORKS
AS HARD AS YOU DO.
Our sheet doors are built for the long haul—easy to install, smooth to roll, and tough enough for whatever the season brings. With heavy-gauge steel construction, weather-tight seals, and hardware made to handle daily use, these doors work as hard as you do. From barns and sheds to workshops and warehouses, Janus Commercial Doors deliver dependable performance year after year.
JanusIntl.com
Learn more about Janus Commercial doors.
Scan here or call 770-629-9313.

BY RANDY CHAFFEE

Selling Benefits Not Just Features

Features Are the Ingredients, Benefits Are the Meal

Let's do a little straight talk here. We all know the specs. We can rattle off wind ratings, steel gauges, insulation values, truss spacing, and screw types like we're reciting our ABCs. And that's good … we should know our products inside and out. But here's the honest question: When you're talking to a homeowner, are you leaning too hard on the features and forgetting to paint the real picture?

You see, at the end of the day, your customer doesn't want just a building. They want what the building does for them. That's where benefits come in. That's the story they actually care about.

FEATURES ARE THE INGREDIENTS, BENEFITS ARE THE MEAL

Think of it like this. If features are the ingredients, benefits are the meal on the table. You can tell someone you're using free-range eggs and stone-ground flour, but what they want is the smell of fresh bread, the crunch of the crust, and the way it makes them feel like home.

It's the same in our world. You say "24-gauge standing seam roof," but what they want to hear is, "less maintenance, better protection, and peace of mind during storms." You say "engineered clear-span trusses," but what they want to imagine is "open, unobstructed space where the kids can run wild, Thanksgiving dinner can stretch across a 12-foot table, or the RV can park next to the riding mower." As Zig Ziglar used to say, sell the sizzle not the steak.

LET'S USE THE BARNDOMINIUM BOOM AS A CASE STUDY

Post-frame homes, barndos, shouses. Call them what you want, they've exploded in popularity. And rightly so. But if you're just selling them as a cheaper alternative to a stick-frame house, you're missing a golden opportunity.

Let's break it down.

Clear-span construction? That's a feature.

Customizable space for a home gym, workshop, or massive kitchen island? That's a benefit.

Durable metal roofing and siding? Feature!

SERGEY-STOCK.ADOBE.COM

Worry-free weekends instead of climbing a ladder to replace shingles? Benefit.

High-efficiency insulation packages? Feature!

A warm home in winter with lower heating bills? That's a benefit every homeowner can feel in their wallet.

When you shift the conversation from "what it is" to "what it does," your buyer starts picturing themselves in the home. That's the moment when interest turns into action.

WHY THIS SHIFT MATTERS MORE NOW THAN EVER

Today's buyers are more informed than ever. They've watched YouTube videos, followed builders on Instagram, and read blog posts comparing spray foam to batt insulation. What they need from you isn't just specs, they need vision. They need help connecting the dots between what you're offering and how it's going to improve their everyday life.

They're not asking, "What type of screw do you use?" They're really asking, "Is this a smart investment for my family?"

UNITED™ STEEL SUPPLY

United Steel Supply is the premier distributor of USA-made painted Galvalume® flat rolled steel coils for light gauge construction. With a focus on service, we strive to meet our customers' needs with superior quality and just-in-time delivery.

PAINTED COILS

- 100+ colors available
- 22, 24, 26, 28, and 29 gauge
- SMP and PVDF paint systems

RAPID SHIPPING

- Thousands of coils in stock
- Delivery in <24 hrs in most cases
- 6 locations nationwide

FLEXIBLE ORDERING

- **Mix multiple colors in a load**
- **Flexible min coil weights**

ON-SITE PROCESSING

- Advanced slitting capabilities
- Cut-to-length flat sheet

Visit **UnitedSteelSupply.com** or call **512-263-0954** to get started.

PLEASANTON, TEXAS | **EUGENE, OREGON** | **JEFFERSONVILLE , INDIANA** **TERRE HAUTE, INDIANA** | **JACKSON , MISSISSIPPI** | **BLACKFOOT, IDAHO**

They're not asking, "What's the R-value?" They're wondering, "Will my kids be warm upstairs in January?"

You see the difference?

This isn't about dumbing it down. It's about translating builder-speak into homeowner value. They want the peace of mind, the functionality, the comfort, the lifestyle upgrade. Your job is to show how your product delivers it.

TURN YOUR FEATURES INTO BENEFITS AND SPEAK THEIR LANGUAGE

Let's make this simple. Take every feature you normally rattle off and ask yourself: "So what?"

That's the trick.

You say, "This package comes with spray foam insulation."

So what?

"Well, it creates an air seal that makes the home more energy efficient."

So what?

"Which means your client stays warm in winter and cool in summer — and sees lower energy bills from day one."

Now you're onto something. Now you've taken a product detail and made it real. It's not just spray foam anymore. It's comfort. It's savings. It's peace of mind.

You can do this with just about everything you build.

- Galvalume with 40-year paint roof panels? They don't just last longer. They save homeowners from buying a new roof in 15 years.
- Post-frame columns on 8-foot centers? They don't just create strength. They give your buyer confidence in a storm.
- Metal building kits? It's not just prefab and efficient. It's "up and enclosed before the snow flies."

You don't need a sales script for this. You just need to slow down, speak plain, and connect the dots.

PRACTICAL BENEFIT-BASED LANGUAGE YOU CAN USE

Here are a few builder-friendly ways to turn features into something your customer actually cares about:

- "That gives you the freedom to …"
- "Which means you won't have to worry about …"
- "The real value in that is …"
- "That saves you time every …"
- "Here's what that does for you …"
- "Let me tell you why that matters …"

Notice how natural that sounds. That's how we talk to a neighbor over a fence, not how you pitch from a brochure. Keep it real, and they'll listen.

Let's say you're walking a property with a homeowner who's dreaming of a barndominium. You mention the clear-span construction. Don't stop there. Try this:

"The clear-span frame means we don't have to work around load-bearing walls. So when your needs change … let's say you want to turn that home office into a nursery, or blow out the back

ASTAAMERICA®
BY JANUS INTERNATIONAL

CARPORT AND SHED DOORS SHOULDN'T BE A CHORE.

YOU HAVE ENOUGH OF THOSE ALREADY.

ASTA America's roll-up carport and shed doors work just as hard as you do. Our superior quality commercial sheet doors are designed with spiral barrels for superior strength, tension holding devices, and factory lubricated springs for protection and smooth operation. **ASTA America's** roll-up doors get the job done every day, saving you money on repairs and maintenance. From smaller sheds to bigger carports, **ASTA America knows how to keep door maintenance off your to do list.**

ASTAAmerica.com

For more information on ASTA AMERICA and our Doors, scan or call **770-974-2600**.

for a bigger kitchen, it's no big deal. That flexibility is baked in from day one."

You're not just selling steel and screws. You're selling a better life with fewer limitations.

DON'T JUST PREACH IT, PROVE IT

Here's a little Randy truth: If you can't show how a feature makes life easier, better, faster, stronger, or more flexible, then it's probably just filler in your pitch.

But when you can prove that your recommendation delivers real value, now you're a trusted advisor and not just another quote in their inbox.

Try this next time you're quoting a shop building:

Instead of saying:

"This package includes R-30 ceiling insulation and R-19 wall batts …"

Try saying:

"You'll stay comfortable out here in January without running your heater nonstop. That's going to make this more than a workspace. It's going to feel like an extension of your home."

That little shift? That's the difference between a prospect nodding politely and a buyer leaning in.

THE BUILDER'S ADVANTAGE AND WHY THIS APPROACH WINS

Here's the beautiful part. When you start leading with benefits, you don't just become a better salesperson. You become the kind of builder people trust. The kind they refer. The kind they invite back when it's time to add on or build again. Because you didn't just sell them a building. You sold them more time. More comfort. More freedom. You helped them picture a life that was better because of what you built. And believe me, that sticks.

Homeowners may forget your truss spacing or the type of sheathing you used. But they'll remember how you made them feel. They'll remember how easy you made the decision. They'll remember that you helped them dream a little bigger and then made it real.

And in an industry where word-of-mouth is worth its weight in gold, that kind of memory is money in the bank.

WHAT THIS MEANS IN EVERYDAY SALES CONVERSATIONS

Let's be clear. You don't need to give up talking features. They still matter. Features are what prove you know your craft. But if that's all you're selling, you're making the customer do the heavy lifting to figure out why it matters. Shift that burden off of them. Explain what it means. Paint the picture. Connect the dots between the technical and the personal, because when you do, everything changes:

- You'll close more deals.
- You'll deal with fewer price objections.
- You'll build more loyalty.
- And you'll separate yourself from the pack of contractors just slinging quotes with no story behind them.

This doesn't require fancy words or some slick pitch. Just your real-world experience and a little empathy.

If you're building barndominiums, talk less about purlins and more about playrooms.

If you're quoting a garage, talk about having room to wrench on the weekend without juggling cars in the driveway.

If you're building an ag storage shed, talk about how it helps them work smarter when the season gets tight.

A SIMPLE TEST YOU CAN USE

Next time you're putting together a proposal — or walking a job site — try this test:

1. List out the features.
2. For each one, ask: "So what?"
3. Then write down the answer as if you were talking to your cousin over a cup of coffee.

That's your benefit.

Do this often enough and it'll become second nature. You'll start talking like someone who builds not just structures, but solutions.

A FINAL THOUGHT FROM ONE INDUSTRY LIFER TO ANOTHER

At the end of the day, our work shows up in the real lives of real people. What we build has weight, purpose, and staying power. So does how we sell it.

You don't need to be flashy. Just be clear. Be human. And always remember, people don't buy just buildings. They buy better mornings, simpler evenings, and a little less stress in between.

When you can sell that, you're not just a builder. You're THE builder they were hoping to find. And that, my friends is how you win.

Now get out there and sell the whole story, not just the parts list. You've got this. **RB**

Randy Chaffee *brings four-plus decades of experience to the post-frame and metal roofing industries. Author of #1 Amazon Best Seller "Asphalt and Algorithms," he is a board member for the Buckeye Frame Builders Association and the National Frame Builders Association. Find his podcast at facebook.com/BuildingWins or call (814) 906-0001 at 1 p.m. Eastern on Mondays to listen in.*

SUBSCRIBE NOW!

Shield Wall Media brands are dedicated to serving the information needs of construction professionals.

SCAN TO SUBSCRIBE

SUBSCRIBE ONLINE: shieldwallmedia.com/subscribe or fill out & mail form below.

Metal Roofing Magazine | Plain Builder | Metal Builder | Rural Builder | FrameBuilding News | Rollforming Magazine | Roofing Elements Magazine | BuildMyBarndo.com

FREE 3-YEAR SUBSCRIPTIONS!

1. Please check one or more boxes, sign & date:

I wish to receive: ❑ **Metal Roofing** ❑ **Plain Builder** ❑ **Metal Builder** ❑ **Rural Builder**
❑ **Frame Building News** ❑ **Rollforming** ❑ **Roofing Elements** ❑ **BuildMyBarndo.com** (digital only)

Signature (REQUIRED): _____ Date: _____

Print Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone or Email (REQUIRED): _____

❑ Check this box if you wish to receive the email newsletter associated with the magazine subscription(s) above.

I would like to receive my subscription:
❑ By Mail
❑ Digitally

SWM2025

2. Choose which title applies:
- ❑ President/Vice President
- ❑ Principle/Shareholder
- ❑ Sales Manager or Rep
- ❑ Foreman/Crew Manager
- ❑ Engineer/Architect
- ❑ Other:_____

3. Describe your business:
- ❑ Builder/Contractor
- ❑ Dealer/Distributor
- ❑ Manufacturer
- ❑ Engineer/Architect
- ❑ Other:_____

4. Please check all of the types of building or manufacturing you are involved with:

- ❑ Post Frame
- ❑ Metal Frame
- ❑ Fabric
- ❑ Agricultural
- ❑ Residential
- ❑ Commercial
- ❑ Equine
- ❑ Roofing
- ❑ Metal Roofing
- ❑ Trusses/Columns
- ❑ Foundations
- ❑ Gutters/Snow Retention
- ❑ Rollforming
- ❑ Trim & Flashings
- ❑ Insulation/ Moisture Control

SHIELD WALL MEDIA LLC

MAIL TO:
Shield Wall Media
ATTN: Barb Prill
PO Box 255, Iola, WI 54945

BY SCOTT TAPPA

Designed, built, delivered

One-stop capabilities work to builder's advantage

MARCH 2004 FLASHBACK

This article was originally published in the March 2004 edition of Rural Builder. In it, you'll learn how a Minnesota doctor's vision for a multiuse post-frame barn became an award-winning showcase for D&W Construction's design-build approach. By managing both design and construction, D&W delivered a custom, efficient, and visually striking project ahead of schedule—demonstrating how integrated design-build methods streamline communication, reduce costs, and balance aesthetics with structural integrity.

This is an example of how design-build streamlines complex projects, shortens timelines, and enhances collaboration—valuable insights for anyone planning custom agricultural, residential, or commercial construction in a fast-paced, efficiency-driven market.

Jerry McCreery asked D&W Construction to design and build a multiple-use barn based on a photo he'd seen in a magazine. The result was a showcase structure for both contractor and customer. D&W CONSTRUCTION PHOTOS

Jerry McCreery was the perfect candidate for a design-build construction project. The doctor wanted a multiple-use barn to house horses, hay, and machines, and wanted it to resemble a barn he had seen in a magazine.

Kevin McCormick was more than happy to guide him every step of the way. The sales manager for D&W Construction in Alexandria, Minn., helped McCreery with building design and several design/engineering adjustments, and shared his customer's delight when the project came in a month or two ahead of schedule.

The structure turned into one of the community's signature buildings, and a powerful, award-winning project for D&W. The end result could have been achieved using a different method of project delivery, but the design-build process brought the project to a close more quickly and efficiently.

Design-build may be generating buzz

APPLE OUTDOOR SUPPLY

With over **20 years of industry experience**, **Apple Outdoor Supply** is your premier partner for top-quality outdoor products and solutions.

www.**APPLEOUTDOORSUPPLY**.com

Our premium outdoor products—featuring **top-grade windows, doors, hardware**, and **playset accessories**—are engineered for durability and built to perform under the most demanding conditions.

Partner with us for products and service that stand the test of time.

2024 & 2025
GOLDEN KEY WINNER

RB 2025 Gold Key of Excellence Award Winner

FOR MORE INFORMATION, **SCAN** THE **QR CODE** OR **CONTACT US** AT:

PHONE: 800.704.8112 • **FAX:** 800.633.7916
EMAIL: orders@appleoutdoorsupply.com

D&W Construction designed a second floor for hay storage, as well as an opening for future installation of a lift.

in the world of large projects, where commissioning building plans from an independent architect is just as common as working with one firm for the entire job. But in the rural building world of hobby shops and suburban garages, building companies are quite often a one-stop shop for buyers.

For instance, Vince Draper of Stockade Buildings and Stockade Construction estimates 99 percent of his projects are of the design-build variety. "Very few design professionals are experts at post-frame buildings, and if we don't get involved from Day 1 and design it from the start, it gets designed to the point where they tend to bastardize post-frame," he says. "It's not conducive to building in the most efficient and cost-effective way."

Virginia builders Fuog/InterBuild work with design-build about 50 percent of the time, says sales manager David Potts. He finds customers looking for design-build services are often less decisive than ones who have commissioned an architect's plans. "I would say plans from an architect are nice, but you don't get the camaraderie you would with design-build," says Potts.

EMBRYONIC STAGES

McCreery and McCormick are neighbors on a lake in the Alexandria area, which proved to be an advantage for D&W. "He approached me with a picture of a barn in Seattle," says McCormick. "It was an old black and white picture published five years ago. He asked me if I could build that barn, and I told him we'd see what we could do with it."

Using that picture, McCormick estimated the pictured barn's dimensions, and came up with preliminary drawings for the customer. He then laid out the various building methods that could be used to build the structure: conventional framing, steel framing, post-frame, etc. McCreery chose post-frame.

McCreery was also working with a nearby lumberyard on a competing proposal, and though the yard was well-versed in post-frame building, it did not have the capability to do design work on the floor the customer requested. McCormick and his sales staff do their own design work, making changes easier.

"We feel it's best," says McCormick. "They're face-to-face with the customer, building a relationship with the customer. It's easier to have them continue through the entire process."

Things were fairly straightforward until McCreery decided he wanted to clearspan the entire lower level. D&W was able to eliminate most of the interior columns. Then there was a change to the upper level, originally designed to handle the relatively light load of McCreery's carriages. The customer wanted to put hay on the upper level, so the level was re-engineered to accommodate a 175-

What did they use?

D&W used the following suppliers on the McCreery project.

Cedar siding: Roseburg

Windows: Vinylite

Roofing: Fabral

Interior doors: Plyco

Laminated columns: Gruen-Wald

Floor: Boise Cascade

Hangers: Simpson Strong-Tie

Fasteners: Atlas, Maze, Simpson

Insulation: Guardian

Service doors: AJ Manufacturing

Cultured stone: El Dorado

Glue-laminated beams: Structural Wood Corporation

Cupolas, soffit: MWI Components

PREMIUM PRO LINK

SIDE MOUNT
GARAGE DOOR OPENER

INCLUDED ACCESSORIES

- Safety Beam Sensors
- Wireless Wall Console
- Door Lock
- CarHome Button Remote
- 3 Button Remote

DIRECT
NO MIDDLE MAN

$325 PLUS TAX

Delivered to your door or JOB site floor!

Space saving design and easy to mount.
Fits on right or left side of door.

For Sectional Residential Doors 7 ft to 14 ft Tall

WHISPER-QUIET OPERATION

NO CABLE SLACK!

*MEANS **NO** SPUN CABLES! **NO** SERVICE CALLS FOR OFF TRACK DOORS.*

10 YEAR MOTOR / 5 YEAR PARTS POWER UNIT WARRANTY

The Best! Even Better! It's not made in CHINA

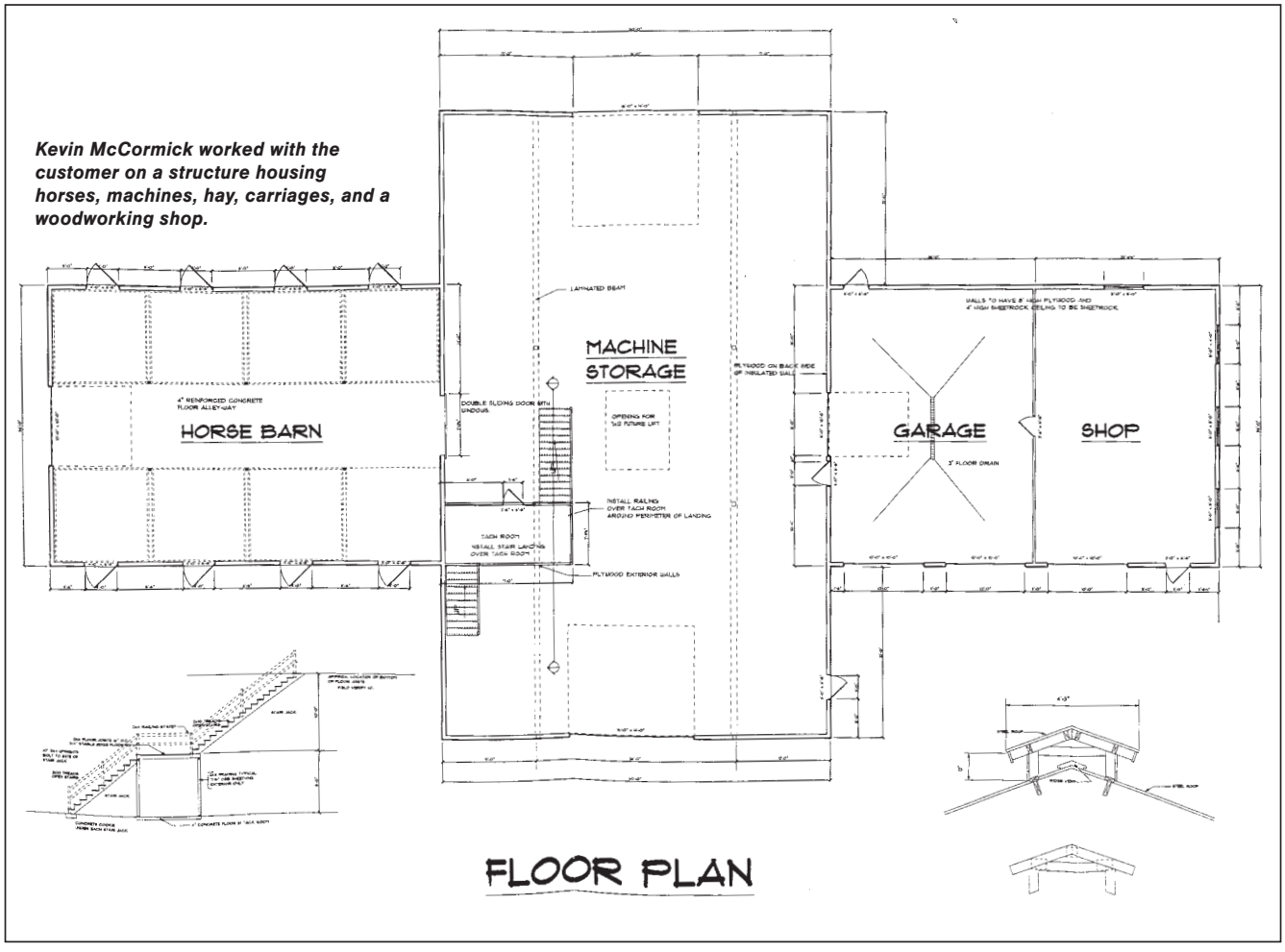
Backed, Trusted and Endorsed by

THE AMERICAN GARAGE DOOR FACTORY

ORDER ON-LINE. QUESTIONS? CALL 888-600-8852

Note: For battery back-up or California model add $25.00

WWW.PREMIUMPROPRODUCTSUSA.COM



Kevin McCormick worked with the customer on a structure housing horses, machines, hay, carriages, and a woodworking shop.

pound load. McCreery also asked for window sizes and spacing that needed modification. As the single source for design and construction, D&W was able to accommodate its customer's aesthetic requests without compromising structural integrity.

"Architects have more training on aesthetics and appearance, that's what they've gone to school for," says D&W's Todd Emmons. "But just because a building looks good does not mean that's the way you should build that building. We design for longevity and maintenance, where an architect would design strictly for aesthetics. Some type of trimwork may look good, but is it there for the long term?"

FORM AND FUNCTION

The total package element of a design-build project shouldn't be overstated. "It's huge, night and day," says D&W's Dale Wussow. "When we start with a customer, we listen very closely to what his needs are, what his cost parameters are, then we put the package together. In other (project methods), a lot of times cost gets thrown to the wayside."

While some customers looking for a building enter the process valuing both aesthetics and structural integrity, others need to learn the balance. Design-build firms like D&W are only too happy to provide the lesson.

"We educate the customer in the sales process, make him aware of the differences," says Wussow. "We can give them a vision of what a building's going to look like, but we won't cut corners on products. We have set our standards very high."

The trick for a medium-sized design-build company like D&W is conceiving custom buildings for its customers while maintaining cost-saving efficiencies. It's a fine line to walk, but D&W's close relationship with Leader Building Systems, its spin-off manufacturing arm, helps bridge the design and building processes.

"We try to think outside the box, not confine ourselves to just this building practice or just this standard," says Emmons. "Some of the larger companies

YOUR AD HERE!

TELL THEM WHERE YOU SAW THE AD!

We are featuring ONE ad for FREE in each issue.

RULES:

- 1/4 page vertical 4-color only
- Company may not have advertised in last 18 months
- All ads are subject to approval
- Space is limited

FOR A SPEC SHEET OR ANSWERS TO ANY QUESTIONS:

Email: advertising@shieldwallmedia.com • Call: 715-952-1657

Metal Roofing Magazine · Rollforming Magazine · Plain Builder · Rural Builder · Metal Builder · Roofing Elements Magazine · FrameBuilding News

had to develop standards, stick to the standards, to maintain production and cost. We're trying desperately not to fall into that hole."

D&W still takes on its share of design-bid jobs, and turns a nice profit while doing so. Wussow says the company has been successful bidding for a number of big budget commercial jobs. This project delivery method requires a different approach, removing some of the collaborative aspects.

"With a job to bid, typically the types of materials are all laid out, even sometimes down to the brand," says Emmons. "Variations aren't allowed, so we'll typically go at those differently.

"With a bid job, the fee the architect charges to meet with the customer, to create a document with specifications, adds a substantial amount to the project. If a customer can go to a contractor with design-build capability, they can do a lot of that designing in house. You can see how we can save the customer money by doing design-build."

THE BUILDING

With McCreery's design-build barn project, the customer and builder worked together to create a modern structure with an old world feel. The exterior features cedar board and batten siding, with the lower portion of the building finished in rock to provide the appearance of an old stone foundation. Wussow says D&W likes to incorporate a stone or brick wainscot into its post-frame buildings, using products like Novabrik. Overhead steel doors were covered with cedar and cross-bucked for an authentic appearance.

The building has a 50x80 center section, with two 36x50 wings. It accommodates eight horse stalls, has a machine storage area, several garage stalls, and a woodworking shop with in-floor radiant heat, as well as in-floor ducting to remove sawdust from woodworking machines.

McCreery's barn had two wings featuring cross-bucked Dutch doors.

The upper level, modified to handle 175 pounds per square foot, has access for an 8x12 elevator that will be used to lift horse carriages 18 feet. A local company is designing the lift for McCreery.

The second level, something of a rarity in post-frame buildings, has earned D&W quite a bit of notoriety. "We hadn't done much of that until this past year, and all of a sudden we're getting lots of calls for it," says McCormick. "We've been using pictures of that barn in our promotional pieces, and that's been a focal point of people calling in … we've considered taking it out. (Incorporating a second floor) is not a cheap way to build post-frame, but at least it's getting interest."

While the barn has given D&W visual ammunition for potential future customers, it has also proven the merits of design-build construction. Working with D&W designers, McCreery not only got the building he wanted, he also got it two months quicker than he expected.

"He's extremely happy with it, he gets a lot of compliments," says McCormick. "It's a showpiece in town." RB

Construction firm spawns manufacturing arm

For many years, D&W Construction was aligned with a post-frame building package company, adhering to its standards and requirements. The arrangement worked well for awhile, but four years ago, D&W decided to break its affiliation and spin off its own building manufacturing company — Leader Supply & Buildings. "We sat back and said look at the years of experience, equipment, people, resources we have," says D&W's Todd Emmons. "We decided we could do this ourselves without having to start from scratch. We quickly found out the facility we were in wasn't set up to handle production, we overmarketed ourselves, and scrambled to catch up with sales." The company has caught up quite well, and D&W has benefited from having its most important supplier located in the same building. Leader's staff has grown from one employee to 20, with plans to double in the next few years. D&W, which will celebrate its 30th anniversary next year, employs approximately 45 people. In addition to its post-frame work, the company works with Behlen metal buildings and Reward Wall Systems insulating concrete forms.

POST-FRAME ▪ RURAL ▪ PLAIN BUILDER SHOW

All Your Business-To-Business Connections Under One Roof

UPMC Arena, York Expo Center • York, PA

June 10-11, 2026

FOR EXHIBITOR INFORMATION CONTACT MISSY BEYER:

missy@shieldwallmedia.com • 715-350-6658

FAX 1-715-227-8680

www.postframebuildershow.com

PRODUCT FEATURE

BY LINDA SCHMID

Engineered Wood Components for Stronger Structures

Past, Present, and Future

Engineered wood products have become a cornerstone of rural construction, reshaping the way builders design and assemble barns, machine sheds, pole barns, and even barndominiums. While these materials are familiar today, they represent the outcome of nearly a century of innovation which strove to overcome the limits of solid-sawn lumber. Understanding where they came from, how they perform in real-world environments, and where the market is headed can help contractors, engineers, and owners make informed decisions.

A BRIEF HISTORY

Early 1900s: Rural barns were raised with heavy, solid timbers cut from local sawmills. The structures were durable but depended on large, high-quality logs that became harder to source.

1930s–40s: Plywood panels entered the scene, giving farmers a stable sheathing material for doors, walls, and interior linings.

1950s–60s: Post-frame construction and the rise of laminated posts allowed builders to assemble large, affordable sheds with smaller boards nailed or glued together. This was the beginning of the pole barn era.

1960s–70s: Glulam beams and prefabricated trusses gained traction, offering long clear spans ideal for machine storage and livestock housing.

1980s–90s: Laminated Veneer Lumber (LVL), Parallel Strand Lumber (PSL), and I-joists spread into residential construction and barndominiums, providing new ways to carry loads over large openings.

2000s–Present: Engineered posts, LVL beams, OSB sheathing, and trusses are now the standard in most rural projects.

ENGINEERED WOOD IN RURAL CONSTRUCTION TODAY

Engineered wood is used everywhere in rural construction. Ag buildings and machine sheds often have some or all of the following: laminated posts, prefabricated roof trusses, and OSB or plywood roof decks, wall sheathing, or floor systems.

Barns often have treated laminated posts or glulam columns, and possibly pre-engineered and wood-engineered trusses, and they may have glulam headers over wide doors, and OSB/plywood sheathing in certain livestock facilities.

Laminated columns. PHOTO COURTESY OF RICHLAND LAMINATED COLUMNS

Pole barns are built on posts set in the ground with wood trusses, possibly made with engineered wood such as plywood, OSB or Laminate Veneer Lumber (LVL), carrying roof loads. These remain the workhorses of rural construction.

Barndominiums combine residential comforts with rural durability. LVLs, PSLs, I-joists, and floor trusses are often used for living spaces, paired with laminated posts or glulam beams in the shop/garage portions.

COMPOSITION AND BENEFITS OF ENGINEERED COMPONENTS

Glulam, or glued laminated lumber, is made by bonding layers of kiln-dried dimensional lumber together with strong, waterproof adhesives. The process begins with stress-graded boards that are planed smooth and sorted so the strongest laminations are placed on the outside faces where tension and compression are greatest. Adhesives are applied, then the boards are stacked with grains running parallel. Straight beams are pressed flat, while curved members are bent over forms before pressing. Once the adhesive

cures under pressure, the beam is trimmed, planed, and cut to its final dimensions. Finger joints allow laminations to be spliced into beams more than 100 feet long.

Quality control is critical, with samples tested for bond strength, delamination resistance, and dimensional accuracy. Certified glulams must meet standards, ensuring predictable performance under heavy loads.

The end result is a structural member that is stronger, straighter, and more stable than solid-sawn timber, with long spans and curved profiles possible. Glulams have proven durability.

For rural construction, this means wide, open spaces in barns, machine sheds, and barndominiums can be built efficiently and reliably, using a product that turns smaller boards into one high-performance beam.

Laminated Veneer (LVL) is made by peeling thin veneers from logs, much like making plywood, but instead of cross laminating the layers, all veneers are laid with the grain running in the same direction. The veneers are dried, graded, and coated with a waterproof adhesive. They are then stacked in large billets, sometimes 4 feet wide and dozens of feet long, and pressed under heat and pressure to cure the adhesive.

RESOURCES

- **Steve Wozney, Starwood Rafters, starwoodrafters.com**
- **Ed Atwell, Richland Laminated Columns, https://richlandcolumns.com**
- **Noah Oberholtzer, Hixwood, https://hixwood.com**
- **Cory Padgett, Graber Post Buildings, www.graberpost.com**

The result is a dense, uniform material with very high strength along the grain. Because defects like knots are dispersed across many thin veneers, LVL provides consistent performance and is often stronger than solid sawn lumber of the same dimensions. It is cut into beams, headers, rim boards, and other framing components where predictable strength and long lengths are required. LVLs provide high strength for headers, girders, and ridge beams in open-concept barndos.

Parallel Strand Lumber (PSL) is manufactured from long veneer strands, typically about 8 feet in length, which are clipped from veneer sheets. These strands are dried, coated with adhesive, and then aligned parallel to each other in a large mat. The mat

is placed in a press that applies heat and pressure, bonding the strands into a dense, solid billet.

Because the strands are long and oriented in the same direction, PSL has excellent load-carrying capacity and dimensional stability. It is commonly used for heavily loaded beams, columns, and headers where strength is critical, such as in wide-span agricultural buildings or barndominiums with open interior layouts. PSL members can be produced in very large sizes, making them a reliable substitute for steel beams or glulam in certain applications. This engineered wood is used to provide strength for girders, ridge beams, and headers to support a building's open spans.

Laminated Strand Lumber (LSL) uses shorter strands than PSL, usually about 12 inches long, making it more like OSB in concept but with structural performance closer to LVL. These wood strands are dried, coated with adhesives, and oriented mainly parallel, though with less precision than PSL. The strands are formed into mats and then pressed into billets under high heat and pressure.

The resulting product is dense and strong, though not as high in strength as LVL or PSL. Its advantage lies in cost and efficient use of raw material, since smaller logs and lower-grade wood can be used. LSL is often cut into rim boards, sill plates, and studs, as well as beams in residential and light commercial applications. In rural, low-rise construction, it offers a reliable option where consistent performance is needed at a lower cost than other engineered lumber.

Oriented Strand Board (OSB) is made from small, thin wood strands that are dried, coated with waterproof resin, and laid in mats with alternating layers oriented perpendicular to one another. The mats are then pressed under heat and pressure to form dense, rigid panels. Because OSB uses fast-growing species and makes efficient use of smaller logs, it has become the most widely used sheathing material in modern construction. Its strength and stiffness make it suitable for roof decks, wall sheathing, and subfloors, and it is manufactured in large continuous mats, which means panels can be cut in a variety of sizes to meet jobsite needs. Both OSB and plywood panels are strong diaphragms for wind and seismic resistance, they're economical and widely available.

Plywood is produced from thin sheets of veneer made by mounting a debarked log in a lathe and spinning it against a sharp knife, peeling off a long, continuous sheet. Veneer is then cut to size, dried, and glued together with grains alternating at right angles in each successive layer. This cross-lamination gives plywood its dimensional stability and resistance to splitting, as well as its characteristic strength in both directions. Plywood has been in use since the early 20th century and remains a go-to product for builders who value its proven durability, particularly in applications exposed to repeated moisture. In rural construction, both OSB and plywood are used for sheathing barns, machine sheds, and barndominiums, with OSB often chosen for cost efficiency and plywood for its resilience under harsher conditions.

Compared to solid lumber, engineered wood offers consistent performance and design flexibility, as well as resource efficiency – all critical in today's wide-span agricultural buildings.

RESOURCE EFFICIENCY

How are engineered wood products like OSB, LVL, LSL more resource efficient than solid sawn lumber? They can be made from fast-growing trees or smaller-diameter logs that aren't suitable for large beams. Solid timbers require large, high-quality logs, which are harder to source sustainably.

Veneers, strands, and particles that would be considered mill waste in solid lumber production are turned into structural products; even lower-grade wood can be used.

STRUCTURAL EFFICIENCY

Engineered wood can increase structural efficiency as well. Knots, checks, and other natural defects are spread across many layers or strands, so they don't concentrate weakness as in solid wood.

By placing stronger laminations on the outer faces (glulam, LVL) or aligning strands with the grain (PSL, OSB), manufacturers engineer predictable strength values that can exceed those of solid-sawn lumber.

OTHER EFFICIENCIES

Products like LVL, PSL, and glulam can be made in lengths and depths that aren't available in natural timbers, allowing wider clear spans in buildings.

Every piece is uniform in dimension and performance, reducing jobsite waste and making design more reliable.

Though the per-piece cost is higher, less material is often needed to achieve the same span or strength, balancing total project cost.

Engineered wood makes better use of raw fiber, delivers predictable and often superior strength, and enables designs that would require much larger or higher-grade solid timbers. That's why it's often called a resource-efficient and structurally efficient alternative to sawn lumber.

CLIMATE TIPS

Humid/Wet Conditions:

- OSB and plywood can swell if exposed, but exterior-rated panels and PRF-bonded glulam resist moisture well.
- Treated laminated posts and barrier sleeves extend life in soil contact.

FIRE-PRONE AREAS:

- Mass timber including glulam and Cross-Laminated Timber (CLT) chars predictably, often outperforming unprotected steel.
- I-joists and trusses require gypsum or coatings for fire resistance.

• Fire-rated assemblies (ASTM E119, UL listings) allow one- to two-hour performance when detailed correctly.

HIGH WINDS & STORM ZONES:

• Prefabricated, engineered wood trusses, LVLs, and OSB/plywood shear walls perform strongly when connections are engineered for uplift and shear.

• Meeting or exceeding ASCE 7 wind load requirements is essential.

• Proper anchorage of posts and trusses is critical to prevent uplift failures.

SUPPLY CHAIN PRESSURES

Engineered wood is reliable but not immune to market shocks:

OSB is the most volatile; prices spike when mills shut down or storms hit production regions. LVL is less volatile but subject to veneer shortages and resin supply issues. Glulam is sensitive to shop capacity, custom fabrication schedules, and adhesive availability.

Many engineered wood products rely on petrochemical-derived resins (PRF, MUF, MDI). Supply disruptions in resin chemistry can ripple through to availability and pricing.

Builders increasingly specify alternatives. For example LVL can replace glulam, and plywood can replace OSB, so projects can move forward even when a single product is constrained.

LOOKING AHEAD

Several trends are shaping the future of engineered wood in rural markets:

Mass Timber Expansion: CLT and Dowel Laminated Timber (DLT) panels are likely to grow in barndominiums and agritourism structures, where exposed wood creates visual appeal.

Improved Post Systems: More and more posts with integrated barrier wraps, composite sleeves, or above-grade steel brackets will be used to address decay concerns.

Sustainable Adhesives: Bio-based resins and low-VOC formulations will likely gain traction as builders and owners look for greener options.

Hybrid Systems: Combining steel frames with engineered wood girts and sheathing may balance span efficiency with warmth and aesthetics. **RB**

BY JACOB PRATER

Features of Robotic Milking Barns

How Technology Is Transforming Dairy Work Without Replacing the Worker

Automatic feed pusher. COURTESY OF LELY JUNO.

Technology has been a boon to many different industries and, in most cases, comes with its own initial challenges. Sometimes technology replaces certain types of labor, but in an economy that serves people, there is always a place for human work. The number and types of laborers in an industry may change over time, but the need for them never disappears.

Animal husbandry — and dairying in particular — has seen significant technological innovation in the past couple of decades. With labor in short supply and good workers hard to find, some dairies have turned to robotics. As of 2023, it was estimated that between 6 and 8 percent of Wisconsin's dairies were using some form of robotic technology (mostly automated milking systems, or AMS), with adoption continuing to grow.

I remember seeing a robotic dairy for the first time when I toured one in Plover, Wisconsin, back in 2018 (I think). Currently, there are two robotic milking barns in the county where I live. The first, built in 2013, was recently purchased by the second, constructed in 2016. In speaking to the new owner of both robotic dairies, he was quite pleased with how they function and with the reduction in labor demands in what is traditionally a highly labor-intensive industry.

Even so, he noted that labor is still needed—especially a few skilled workers who can maintain the robotic systems and remain on call around the clock. My take: these systems don't really replace laborers so much as they boost their efficiency and capability. You need fewer workers, but they require different skills—much like when a framer who once used only a hammer gets

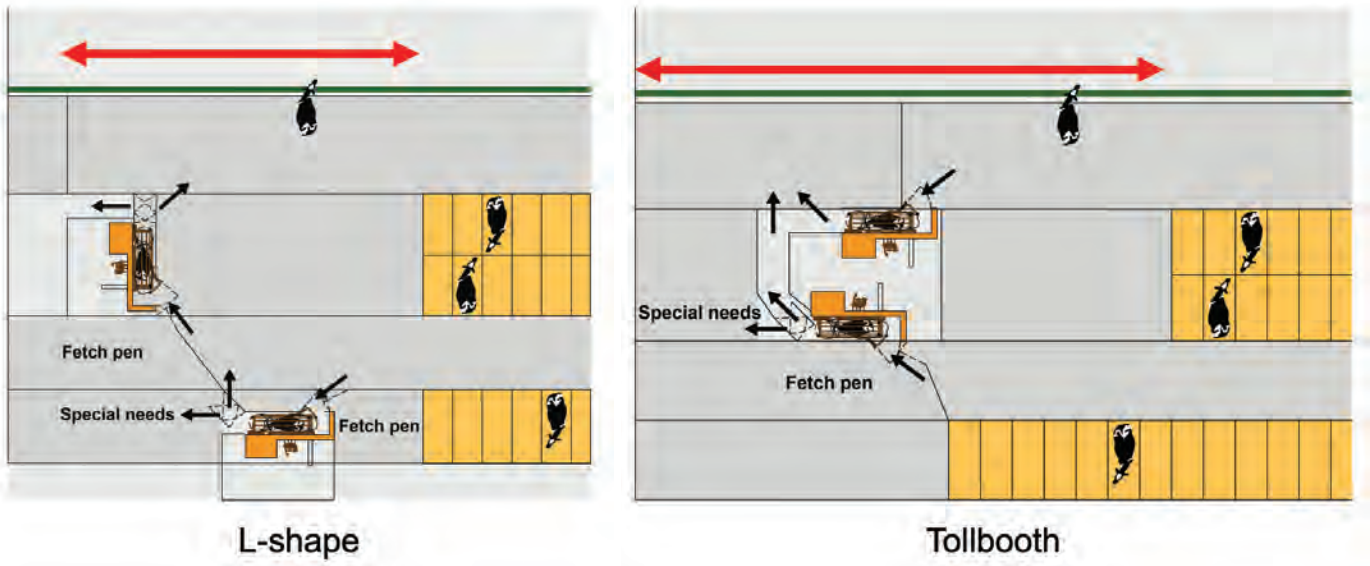


Diagram 1. COURTESY OF THE DAIRYLAND INITIATIVE.

his first nail gun. That said, some estimates suggest that a milking robot can save more than $30,000 in manual labor costs each year.

The two robotic milking barns I mentioned are set up slightly differently but share the same major features. The smaller barn uses end-to-end ventilation, while the larger is cross-ventilated. Both use active (fans) and passive (side curtains) ventilation systems, as well as robotic feeding, manure removal, and milking.

Feed is moved into the bunks by a robot that pushes it within reach of the cattle, reducing waste and keeping the area clean. Manure is removed using a chain with scrapers attached, which slowly move waste into a flushing system that carries it out of the barn. Milking, of course, is handled by a robot as well.

The major features of these barns include automated milking systems, automated feeding, automated manure removal, and automated climate control. While some of these systems have been around longer than others, the automated milking and feeding systems are relatively new technology.

There are two main approaches to AMS. One uses several machines and runs cows through in batches at designated milking times. The other allows cows to come through individually whenever they choose to be milked. The second approach may sound unusual, but it works—and studies show it can increase both milk production and quality.

A robotic milking barn, then, is mostly autonomous. Cows move at their own pace, are milked and fed automatically, and have manure removed and the barn climate controlled—all robotically. To make this possible, the building design differs from traditional milking barns, with a few key design considerations.

First, capacity is based on the number of cows each AMS can serve. While this varies by manufacturer, research from The Dairyland Initiative at UW–Madison suggests designing for about 55 cows per robot—lower than the theoretical maximum of 63 and the industry average of 60—to maintain good performance. They also recommend at least two robots per barn for redundancy.

It is essential that AMS facilities be designed for one person to move cattle easily and efficiently around the robot with the least amount of stress. COURTESY OF THE DAIRYLAND INITIATIVE.

A V-shaped scraper that folds in and runs parallel to the stalls allows for easy machine access on bedding days. COURTESY OF THE DAIRYLAND INITIATIVE.

In addition, The Dairyland Initiative suggests providing at least 24 inches of feed bunk space per cow, along with frequent feed push-ups. This feed movement can be handled by a robot, provided there's a smooth concrete surface along the feed bunks. Feed push-up areas can be central or to the side (the ones I observed were on the outside edge). Keeping feed pushed up and available at all times reduces waste and ensures cows always have access.

It's critical to have the right number of robots for your herd, and equally important that cows are willing to visit the robots voluntarily. This requires wider alleys—one to three feet wider than normal—and open space in front of the milking stations (at least 15 feet of clear alley is recommended by one major manufacturer). This area should have good traction, such as grooved concrete, but shouldn't be more comfortable than the rest of the barn—you don't want cows lounging there.

The design should minimize gates and obstacles while still allowing handlers to separate animals that need care. Common layouts include L-shaped or "tollbooth" styles. (See diagram 1.) A good location for a foot bath is right after the cow exits the robotic milker.

Chain-and-scraper manure removal works well but can be a tripping hazard, so traction is important. Again, grooved concrete is a good choice. Slatted floors with trenches can also be used to flush manure away with water.

New construction is far more suitable for robotic systems than retrofitting old barns. One of the robotic dairies in my county built its robotic barn new but also retrofitted some older barns. When retrofitting, it's important that cows can easily access the milking area—the goal is to encourage voluntary milking. The dairy operator emphasized following the manufacturer's plans and research-based layouts rather than trying to reinvent the wheel.

While the upfront cost of a robotic milking barn is high (over $200,000 per milking robot), the operator I spoke with wouldn't go back to a traditional setup. In fact, he recently acquired a second robotic operation. According to The Dairyland Initiative, in a well-designed facility, "we can expect 2.8 milkings per cow per day with less than 5% of the group needing to be fetched, and a target of over 85 lb (39 kg) of milk per cow per day for the average mature Holstein cow."

To put that in simpler terms: traditional dairies usually milk twice a day, while voluntary robotic systems average between 2.5 and 3 milkings daily, resulting in roughly 4 more pounds of milk per cow per day—all with much less manual labor.

With an estimated payback period of 4–7 years and a lifespan of 10 years or more, robotic milking systems are likely to become even more common, especially as labor shortages continue in rural areas. **RB**

Jacob Prater *is a soil scientist and associate professor in Wisconsin. His passion is natural resource management along with the wise and effective use of those resources to improve human life.*

Automatic feed pusher. COURTESY OF LELY JUNO.

AJ MANUFACTURING ROCK WOOL INSULATED PRODUCTS

AJ Manufacturing Inc. has announced the availability of a new rock wool-insulated door and wall panel for air handling unit (AHU) applications.

The rock wool panels, which are available in 2" and 4" thicknesses and a variety of widths and lengths, have a flame spread index and smoke development index of 0, with a maximum service temperature of 1200° F compared to the maximum temperature of 225° F of standard foam insulation.

Rock wool insulation brings several advantages to applications:

Superior Fire Resistance: Rock wool is made from stone and is non-combustible, capable of withstanding extremely high temperatures

Higher R Value Per Inch: Rock wool provides a higher and more stable insulating value when compared to other mass insulation like fiberglass, which helps maintain designed performance and reduces condensation.

Excellent Sound Absorption: Its dense structure effectively absorbs and reduces sound transmission

Moisture Resistance: Rock wool is naturally water resistant and won't absorb moisture, which prevents mold and mildew growth

Durability: Rock wool is known for its long lifespan and resistance to degradation

The new rock wool panels are incorporated to follow AJ's popular cakepan design using overlapping aluminum or steel sheets, with the addition of indented panel sides and side fasteners to secure the pans and keep the fasteners from protruding from the side of the panel, giving the rock wool panels the same profile as the foam-injected cakepan models.

Mirroring the cakepan models, the rock wool door panels also have viewport and testport capabilities.

www.ajdoor.com

MALCO TURBOSHEAR® ROTARY PANEL CUTTER

Malco's TurboShear® Rotary Panel Cutter (TSPC1) is the newest innovation in the pro-favorite TurboShear® line, built to handle tough jobs with confidence and deliver long-term performance without compromise.

The TurboShear® Rotary Panel Cutter features dual opposing cutting wheels, designed to self-advance the tool smoothly through metal and vinyl material, leaving a clean, precise cut and eliminating hand fatigue associated with forcing blades through metal.

The hardened high-strength alloy steel cutting discs are replaceable, and can handle a variety of materials, including 22-gauge steel, 26-gauge stainless steel, .04" aluminum and .055" (1.4mm) vinyl siding.

www.malcotools.com

WERNER® COMPACT FIBERGLASS STEP LADDER

WERNER® announces the launch of its newest innovation, the WERNER Ready Step, a lightweight and compact fiberglass step ladder built for residential trades professionals, including HVAC technicians, electricians, remodelers and contractors who demand safety, worksite durability, and tool organization in one highly efficient, professional-grade design.

Available in 4 ft. and 5.5 ft. sizes, the WERNER Ready Step is 15% lighter than standard step ladders without compromising strength or stability. With a 300 lb. load capacity and a slim 4-inch profile when closed, it is engineered for easy transport and storage in work trucks and vans, or storage in tight worksite spaces.

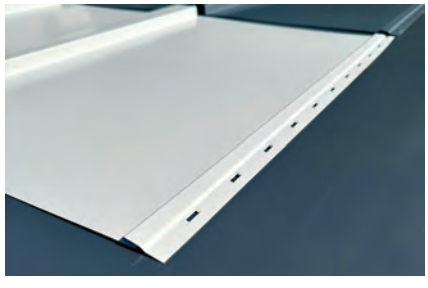
The WERNER Ready Step features

a Quick-Setup Platform, providing an extra-large, standing surface, delivering 5X (4 ft model) or 3X (5.5 ft model) the standing room of a traditional step ladder. This stable, slip-resistant surface allows users to work longer with less fatigue. And the one-handed open-and-close operation with a no-pinch design gets users to the task quickly and safely, while minimizing downtime.

The new LOCKTOP™ ladder top keeps essential tools close at hand with the ability to hold ten different tools, securely placing an impact driver, screwdrivers, tape measure, small parts, and a phone at hand while working. The new WERNER Ready Step is also LOCK-IN® accessory compatible, allowing pros to attach paint cups, job caddies and basic tools to expand storage as needed.

The ladders also feature EDGE® bracing for added rail protection and longer ladder life and they meet or exceed both ANSI and OSHA requirements.

www.wernerco.com



■ SHEET METAL SUPPLY BOARD & BATTEN ENVELOPE OPTION

Sheet Metal Supply has added a Board & Batten metal panel option to its growing envelope offering. The Board & Batten profile, fire and pest resistant, is for vertical applications. It's available in all SMS color offerings, plus copper, zinc, exotics and woodgrain finishes. SMS also has a full line of supporting trim in matching or contrasting colors to meet architectural and client demands. LTL-specific crating and a vast network of shipping options ensures quick nationwide delivery.

www.sheetmetalsupplyltd.com

■ REFRIGIWEAR® FROSTFLEX™ HEATED VEST

RefrigiWear has introduced the Frost Flex™ Heated Vest, the seventh component in the Frost Flex™ System and engineered to adapt to temperatures from 10° Fahrenheit down to -60°F. It can be worn on its own or zipped under the FrostFlex™ Insulated Jacket for extra warmth. A rechargeable battery protected by an inside pocket heats panels keeps workers warm when temperatures turn brutal. Stretchy, breathable, water-repellent and loaded with zippered pockets, this vest keeps the core comfortable and includes dedicated handwarmer pockets to keep fingers from freezing.

pro.refrigiwear.com

RB

BY RURAL BUILDER STAFF

Renting, Leasing, or Purchasing Construction Equipment

Determining Which One Is Right for Your Business

For builders, the choice between renting, leasing, and purchasing construction equipment can significantly impact both project profitability and operational efficiency. Each option offers its own advantages and limitations, and the best choice often depends on the company's size, project frequency, capital availability, and long-term plans.

A number of pros and cons affecting each option, as well as practical factors, need to be considered to make informed decisions that support business goals.

RENTING EQUIPMENT

Renting involves paying to use a piece of equipment for a short-term period — anywhere from a day to several months. Rural rental centers and national chains offer a wide variety of machines from mini excavators to skid steers.

Pros of Renting

Low Upfront Costs: No large capital investment is required; only pay for the time you use it.

Flexibility: This is ideal for one-off projects or short-term equipment needs.

No Maintenance Responsibility: The rental company handles repairs and servicing.

Access to Newer Models: Rentals often include newer equipment with the latest features.

Reduced Storage Needs: Renting eliminates the need for long-

term storage or winterization in off-seasons.

Renting a multipurpose machine allows flexibility at a reasonable cost. "For a new builder just getting their footing, renting something like a crawler-skid excavator that can perform the jobs of multiple pieces of equipment would make a lot of sense," said Peter Bigwood, general manager of Mecalac North America. "A crawler skid excavator allows them to harness the speed and agility of a compact track loader, the maneuverability and digging capabilities of a mini excavator and the reach of a telehandler all in a single machine. So, instead of renting a whole fleet of equipment, they could rent one machine that excels at many different things."

Renting a multipurpose machine allows flexibility at a reasonable cost. Instead of renting a whole fleet of equipment, a builder could rent one machine that excels at many tasks. Purchasing a multipurpose machine will cost more up front but will also give the builder more options. PHOTO COURTESY OF MECALAC NORTH AMERICA

Cons of Renting

Higher Long-Term Costs: Daily or weekly rental fees can add up quickly over repeated uses.

Limited Availability: Equipment might be booked during peak construction seasons.

Transport and Scheduling Hassles: You're dependent on the rental company's delivery schedule.

No Equity or Tax Benefit: You gain no ownership or long-term financial value from the equipment.

Financing is a broad term that encompasses both leasing and

One of the benefits of purchasing a piece of equipment is that it is then an asset with resale value. PHOTO COURTESY OF JLG INDUSTRIES

outright purchase. There's a huge demand for construction equipment financing. Given the nature of the construction industry's need for expensive equipment, which involves a large financial commitment, that's not surprising. According to the "2025 Survey of Equipment Finance Activity" released by the Equipment Leasing & Finance Association (ELFA) in August, construction is one of the top five most-financed equipment types, with the other four being transportation, agriculture, IT and related technology services, and material handling.

Ultimately, businesses have to focus on profitability. "How much profit you make depends on keeping your equipment costs affordable and predictable," said Matt Coldsmith, Senior Director, Global Customer Financial Solutions at JLG Industries. "There is no better way to preserve your cash, manage your cash flow and budget, and align your investment in equipment than to deploy an effective financing strategy. This not only helps reduce the short-term pains of starting a new customer contract; it also helps reduce costs throughout the lifecycle of the asset.

"For equipment-intensive businesses, controlling the financial impact of acquiring and maintaining the gear that's essential to nearly everything you do is a constant challenge," said Coldsmith. "On one hand, your equipment is a primary productivity and profit driver. On the other, it can be a major cause of cash flow and budget headaches. And, that's when equipment needs go as planned — which isn't exactly all of the time, right? Things rise to another level of difficulty entirely when there's an unforeseen breakdown, or a job opportunity that demands equipment you don't currently have available in your fleet. Fortunately, equipment financing is an effective way to restore balance."

LEASING EQUIPMENT

Leasing is a medium- to long-term agreement (typically 12 to 60 months) in which you make regular payments to use a machine. At the end of the lease, you may have the option to purchase the equipment at a reduced price.

Pros of Leasing

Lower Monthly Payments: Leasing is more affordable than financing a purchase outright.

Access to Modern Equipment: Leases often include newer or specialized equipment you might not be able to afford to buy.

Tax Deductions: Lease payments may be tax deductible as a business expense.

Predictable Budgeting: Fixed monthly payments help manage cash flow.

Optional Ownership: Some lease agreements offer a buyout clause at the end of the term.

Cons of Leasing

No Ownership During Lease: You can't build equity unless you purchase it later.

Early Termination Penalties: Getting out of a lease early can be costly.

Usage Restrictions: Leases may come with usage limits or maintenance clauses.

Total Cost Over Time: If you lease the same equipment for a long time, the total cost could exceed a purchase.

PURCHASING EQUIPMENT

Buying equipment outright — either with cash or through financing — means full ownership and responsibility. For essential machines used frequently, purchasing can be a long-term investment.

Pros of Purchasing

Full Ownership: Once paid off, the equipment is an asset with resale value.

No Usage Limits: You control how, when, and how much the equipment is used.

Custom Modifications Allowed: You can modify equipment to suit your specific needs.

Tax Depreciation: Purchased equipment can be depreciated over time to reduce taxable income.

Available Anytime: Purchasing eliminates scheduling conflicts and reliance on outside availability.

Cons of Purchasing

High Initial Investment: Buying machinery ties up a large amount of capital or incurs debt.

Ongoing Maintenance and Repairs: You're fully responsible for upkeep and unexpected breakdowns.

Depreciation: Equipment loses value over time, especially with hard use or model changes.

Storage and Insurance: Ownership comes with additional overhead costs.

Buying expensive equipment is a big decision that needs to be carefully considered. "Financing equipment purchases can potentially be more challenging than financing other types of purchases," said Coldsmith. "That's why you should work with a lending partner like JLG Financial that not only knows about the financing market but also about the industry you work in, as well as understands the types of equipment you need to get the work done and can design a financing program that specifically meets your needs. With the help of a trusted lender, you can use your equipment purchase to drive more profit, help you manage your fleet more efficiently and to grow your business — even in the most uncertain of market conditions."

When you're ready to make the leap into ownership, leveraging the flexibility of a multipurpose machine is, again, a great idea to help maximize value. "Purchasing a machine that performs multiple tasks well is a smart investment for builders looking to bolster their fleet," said Bigwood. "The basic purchase price may be a bit higher, but the boosted productivity will drastically increase the return on investment while operating and maintenance costs will be reduced. If a well-established builder wants to maximize their equipment's potential, a crawler skid excavator can help them get the most work out of a single machine."

John Klemp, an equipment consultant for Wisconsin-based equipment dealer Riesterer & Schnell said that when it comes time for a builder to decide when to stop renting and to lease or purchase a piece of equipment instead, "It really comes down to the hours and how much they're using it. Everything comes down to cost per hour. If you've got a 40-hour work week, how many hours do you put on that machine each week? If you're putting on 10 hours a week, you're probably using it every day." At that point, you might want to consider buying. It also comes down to accessibility. If you're missing out on jobs because the rental machine you need isn't available, that's also when you might want to start looking at a purchase.

On the surface, buying used rather than new seems less risky because of the lower initial investment and the fact that someone else has already absorbed the initial depreciation. But the long-term cost of a used machine can be much higher. "It's no secret that labor rates are going up across the country and that includes construction equipment repair," said Klemp. Buying a machine under warranty can save your business. Having a key piece of equipment out of service unexpectedly can cause a devastating expense, not only because of the cost of labor and parts, but also from lost time on the job.

According to Klemp, a good dealer will offer a service loaner when necessary. They know time is money for the builder and that being down for more than a short time can be financially detrimental. Dealers want to build a long-term relationship with their customers, and that means building trust based on reliable advice and service.

CONCLUSION

There is no one-size-fits-all solution for construction equipment acquisition. Builders must weigh project demands, financial resources, equipment availability, and long-term plans. Renting provides agility, leasing offers structure and modernity, and purchasing builds value over time.

By understanding the advantages and trade-offs of each option and aligning your strategy with your business model and workload, you can make smart choices that keep your operation efficient, profitable, and prepared for growth. **RB**

This information provided is for general informational purposes only and does not constitute business or tax advice. Please consult your business and tax advisors for guidance specific to your financial situation.

BY LINDA SCHMID

Capler Homes Loves a Challenge

From Unique Design to Longevity

ALL PHOTOS COURTESY OF CAPLER HOMES

THE BEGINNING

After college, Ben Butler took a job with 84 Lumber, running the local store. Eventually he moved on to Moores Lumber & Millwork. Working with all of these construction materials, Butler became interested in the building side of the industry; he took on a side venture building spec houses. When his employer realized he had a second job in the industry, they let him go. Butler decided that instead of looking for another job, he would focus on building. He started Capler Homes in 2003, contracting crews as the General Contractor on custom homes and learning the business as he went along.

Then 2008 hit and as the housing market came crashing down, his small business floundered and lost money, employees, just about everything. Butler didn't declare bankruptcy, instead he began talking to people at lumber stores and realtors, asking if they knew of anyone who needed anything done. He found small jobs, changing out toilets or any job he could find. It was challenging; he had

a young family, but he loved the business and persevered.

Eventually Butler was offered a big job, and he was able to hire back one of his employees. The two of them kept on working together, perfecting their craft. By 2013 or 14, the economy recovered, and Capler hired more employees and came back stronger than ever.

COMMON COMPONENTS

Many of the company's materials come from Virginia Frame Services, Weyerhauser and Buffalo Lumber. They install Andersen E-series windows, Jeldwyn Siteline windows, and standing seam metal roofs from Englert.

While they often source materials from these companies, that doesn't mean that their projects are one similar to the next. In fact, it's quite the opposite.

THE NICHE

As the company built more houses and developed their skills, they found that they like a challenge. The biggest portion of their business is in custom homes and often they include an element or elements that are out of the ordinary. They work in some affluent and artistically minded areas and their builds are often unique, reflections of them and their clients. The company has built an eclectic portfolio that includes a modern farmhouse with many traditional elements, a glamping retreat built on a rock ledge, tiny homes, a treehouse, a yurt, and even a bridge house.

The Bridge House features a concrete foundation with structural steel and infill with stick framing. It pushed the team's creativity and craftsmanship Butler said. They had never built a bridge, and suddenly they were trying to build a home into a bridge 40 feet in the air to cover a chasm in the earth, and striving to do it with minimal impact.

"The engineer tells us what we need," Butler explained, "then if we find that it's not working, we have to try to figure out how to make it work. We pool our creativity and come up with a solution and take it back to the engineer for certification before we can move on," Butler added.

The project was fun and satisfying according to Butler because it was a great challenge and they are proud of the results.

All their buildings are built for quality and longevity, and as they have done many unusual projects, they have developed a reputation for building unique custom structures which suits the Capler team fine. They are a group who is passionate about what they do, constantly pushing their boundaries, developing their craftsmanship, and fine-tuning their skills.

BUILDING A TEAM

There are many benefits to working in construction; you get to be outside, you work with your hands, and the pay is pretty good. Satisfaction in a job well done is high when the end result is tangible, such as a new home or vacation space.

"When you are engaged in 'out-of-the-box' custom construction, you never have to advertise for help," Butler said. "The projects we have taken on not only attract clients who want something unique, they also attract crafts people who thrive on challenge."

The team is not much concerned with

a co-worker's experience coming into the company; they train their co-workers themselves, and the group pulls together. There are no knowledge gatekeepers; they all bring each other up to the highest skill level so they end up with a team that feels like they all have years and years of experience.

CONSTRUCTION IS THE INDUSTRY TO BE IN

For 20 to 30 years people have been telling students that they should go to college to create a career. However, Butler said that the best place to be both financially and emotionally is in the construction industry. There are so many opportunities to build a career both in building and related trades.

"At the beginning you will work your butt off, but the money follows," Butler said. "If you find that you enjoy it and put the effort in, you will become very skilled, and then you will be in high demand."

Capler Homes will continue to push the limits of residential construction in their projects, working with more creative people, and persisting in their tradition of challenging themselves with unique builds Butler said. The future looks exciting! **RB**

MERRY CHRISTMAS

AND HAPPY NEW YEAR

from all of us at

Rural Builder Magazine & Shield Wall Media!

Reach Every Subscriber

in print & online of every Shield Wall Media Magazine for under $900 per month! That represents 150,000+ impressions.

FOR MORE INFO CONTACT GARY REICHERT:

gary@shieldwallmedia.com

715-952-1657

BY LINDA SCHMID

Supporters of Veterans 1st, from Schreiber Foods along with Gail and Kim Nohr (first and third from the left), on the site of the planned village.
PHOTO COURTESY OF VETERANS 1ST OF NORTHEAST WISCONSIN (NEW)

Making a Difference in the Lives of Veterans

Veterans 1st of Northeast Wisconsin (NEW)

With so much that is negative going on in the world, it is revitalizing to stop and take stock of some of the good things happening. Veterans 1st is definitely one of those good things.

The organization's mission is to help area veterans who are underserved in the Green Bay, Wisconsin, community. Many are housing insecure and struggling to keep roofs over their heads. While working at the Brown County Veterans Service Office, Gail Nohr noticed that the resources to help these veterans were insufficient to deal with the numbers who needed help. Her job was to connect veterans with the resources they needed, and sometimes the best she could do was send them to a local shelter. While it was good that they had someplace to go, Gail, a former Navy Corpsman (medical specialist) wanted an alternative for them; she wanted to send them somewhere they could have their own space and receive the other help they needed.

VETERANS 1ST GETS STARTED

Gail is a resourceful woman. She has served on the Housing and Homeless Coalition for a long time so she has connections in the community, and because of her previous employment she is a resource navigator. She is also a substance abuse counselor in training. Her partner, Kim Nohr, is a retired carpenter and homebuilder. In 2022 the two decided to create another resource to help the veterans who need it.

In the beginning the pair were fundraisers, reaching out to funders in the area, writing grant proposals, and making connections. They also put together a 15-member board comprised of

CEOs, a couple of Major Generals, a lawyer, and other concerned citizens, and these board members have strong connections in the community, too.

THE VISION

The veterans that the organization wants to help are in a variety of situations. Some struggle with PTSD (Post-Traumatic Stress Disorder), depression, or substance abuse. Some are housing insecure, some are unemployed or under-employed. Some have no family to help, in other cases the family doesn't have the resources to help. There are many different stories and situations, but they could all benefit from a helping hand.

The vision for Veterans 1st is to provide those helping hands. They are building a village comprised of 21 houses along with a Community Center complete with an office, kitchen, and meeting space. Therapy, training, and other gatherings will be held in the center.

A rendering of the planned homes for veterans.
PHOTO COURTESY OF VETERANS 1ST OF NORTHEAST WISCONSIN (NEW)

ANDREY POPOV-STOCK.ADOBE.COM

THE HOUSES

The village will be comprised of four residences for vets with nowhere to go. They will pay 30% of their income to stay in these 600 sq. ft. homes with two bedrooms for two veterans. Seventeen homes that offer below market rent are 400 sq. ft. each with one bedroom; they can accommodate a veteran and their significant other.

The idea, Gail said, is to "place people without resources in the shared transitional units where they can live for two years while they are offered wrap-around services such as group therapy, substance abuse therapy, financial help, employment counseling, and more. We will also connect them with the VA center, health clinic, and other resources – we have many resources," she added.

Hopefully a couple of years down the road, the individual will be in a better place, and will be sufficiently employed to move to one of the below-market rent homes. Veterans can live in them for up to three years, and they can stay longer if they choose to become a squad leader. Squad leaders are in charge of six homes, and when the volunteers leave, they are someone that the residents can turn to for assistance. They will attempt to keep the peace and offer advice and other help as needed. If a situation is beyond their scope, they can contact volunteers.

The houses are being built by professionals, a variety of tradesmen and contracted builders who have volunteered their work for in-kind services or reduced rates. They are putting the homes and the community center together from top to bottom. There are apprenticeships that trade unions are offering free to students. Retirees are also offering their help. All of this work is scheduled and overseen by Kim Nohr, the general contractor.

THE COMMUNITY

Most of the community is very supportive of Veterans First. There is a list of about 300 people who want to volunteer at the village in one way or another. There are many people in the community with an interest in this organization, including the waiting list of people who would like to move into the village.

Gail said the village community is not meant for people with extreme mental health issues; those people will be referred to other organizations that are better equipped to provide the needed care, such as the VA's Mental Health department or the County Mental Health Services.

GOALS

The immediate goals of Veterans 1st is to get people off the streets. Intermediate goals for clients is to get them the support they need, whether that is therapy, counseling, or assistance in finding a job. The long-term goal is to help people become employed. "The ultimate goal is to get people into meaningful work with a livable wage," Gail said.

As for the organization, what is its ultimate goal? Do they have plans to expand?

"One step at a time," Gail said. "We are hoping to open the village at the end of the year, but it is still a work in progress.

"We see a need for shelter for elderly people, so that is a possibility, but right now we are focused on helping the veterans and working towards getting them into homes." **RB**

AMERILUX ACQUIRES MACCOURT PRODUCTS, INC.

AmeriLux has announced the acquisition of MacCourt Products, Inc., which is known for durable outdoor solutions such as basement window well covers, mortar tubs, and preformed ponds.

MacCourt will join forces with Shape Products, an AmeriLux Family of Companies (AFOC) entity. Together, the organizations will combine their manufacturing expertise, product offerings, and customer service capabilities to deliver an even broader range of high-quality products to customers nationwide.

Through the acquisition, customers gain access to a wider portfolio across both brands. Furthermore, integrated operations will streamline ordering, fulfillment, and customer support.

Both organizations remain focused on delivering the quality, reliability, and value customers expect.

Kurt Voss, CEO of the AmeriLux Family of Companies, shared, "Through this acquisition, AmeriLux will maximize our ability to better serve customers in ways that support their success. The acquisition will also bring new job creation to our plant in Menomonie, Wisconsin, which remains a key focus of our organization. This is another step forward in building a sustainable enterprise."

COMBILIFT RE-QUALIFIES FOR DELOITTE BEST MANAGED COMPANIES AWARD

Combilift has once again been recognized as one of Ireland's Best Managed Companies by Deloitte, marking their 13th consecutive year receiving this accolade.

This recognition is a reflection of Combilift's consistent year-on-year growth and also highlights its ongoing commitment to innovation, operational excellence, and strategic vision. The requalification process assesses companies across four key pillars: strategy, culture & commitment, capabilities & innovation, and governance & financials. Requalifying means continuously proving their ability to lead in each of these areas in a dynamic global market.

"The renowned Deloitte international brand Best Managed Companies programme sets a high benchmark, and requalifying for the 13th time reinforces our position as a serious global business," said Martin McVicar. "While we're known for manufacturing innovative world-class material handling solutions, this recognition also speaks to how we run our business — from our lean operations and customer-focused R&D to our world-class production facility in Monaghan."

TRAC-RITE DOOR WELCOMES NORTHEAST REGIONAL SALES MANAGER

Trac-Rite Door has announced the addition of Dominic Lerro to its expanding sales team. Dominic will serve as Regional Sales Manager for the Northeast United States, supporting customers across Indiana, Ohio, West Virginia, Pennsylvania, Maryland, New Jersey, Delaware, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine.

With a strong background in storage operations and a passion for building relationships, Dominic brings both expertise and enthusiasm to his new role.

Originally from South Jersey and now based in Philadelphia, Pennsylvania, Dominic has extensive experience managing storage operations as a third-party manager, giving him a strong connection to the Northeast region. He is a proud graduate of Bloomsburg University, where he earned a Bachelor's Degree in Sales and Marketing.

Outside of work, Dominic is known for his passion for antiques, especially automotive treasures. He proudly owns a 1957 Harley Davidson and a 1927 Ford, which he occasionally takes drag racing. Collecting and restoring unique, old, and unusual items is more than a hobby—it's a way for him to preserve history and connect with others who share his enthusiasm.

"We're thrilled to welcome Dominic to the Trac-Rite team," said Kellen Anderson, Director of Sales for Trac-Rite Door. "His experience in the self-storage sector in the region, combined with his entrepreneurial spirit and passion for building meaningful customer relationships, will make him an outstanding addition to the team. Dominic's role reflects our continued investment in regional support as Trac-Rite expands its presence across the country."

ABC SUPPLY ACQUIRES ASSETS OF EXTERIOR HOME PRODUCTS, LLC

ABC Supply Co., Inc. has acquired Exterior Home Products, LLC, a family-run business located in Columbus, Mississippi. This marks ABC Supply's fourth location in Mississippi, further strengthening its presence in the region and enhancing service to contractors across Northeast Mississippi.

Founded in 2002 by Melton and Brenda Knight, Exterior Home Products has been a trusted resource for builders and contractors in the Starkville-Columbus area for more than two decades. Known for its outstanding customer service and top-tier selection of siding, windows, decking, specialty millwork and gutter products, the company has built a strong reputation rooted in relationships and reliability.

"We're thrilled to welcome Exterior Home Products to the ABC Supply family," said Scott Toumbleston, Southeast Region vice president. "They've earned the trust of their customers through years of dedication and care. We're proud to carry that legacy forward and continue building on the strong foundation they've created."

The Columbus location will continue operations as ABC Supply, with Jason Knight, son of the original owners, remaining on as branch manager. All current associates will be retained, ensuring a seamless transition and continued support for local customers.

KNAUF INSULATION EARNS ASTHMA & ALLERGY FRIENDLY® CERTIFICATION

The Asthma and Allergy Foundation of America (AAFA) and Allergy Standards Limited (ASL) announce that the Knauf Performance+® portfolio of residential and commercial insulation products have earned Asthma & Allergy Friendly® Certification.

The newly Certified Performance+® products include basement wall insulation, metal building insulation, acoustical boards, elevated temperature insulation, and other specialty fiberglass solutions. With these additions, Knauf's entire portfolio of Performance+® fiberglass insulation made with ECOSE® technology is now Asthma & Allergy Friendly® Certified.

The Asthma & Allergy Friendly® Certification Program, a collaborative initiative between ASL and AAFA, helps consumers identify products that contribute to a healthier indoor environment. Products undergo rigorous independent testing to meet scientific standards to earn the Asthma & Allergy Friendly® Certification Mark.

To earn the certification, the Knauf Performance+® Certified Asthma & Allergy Friendly® products underwent comprehensive scientific testing and demonstrated:

- Compliance with airborne dust, particle, and fiber limits following installation and room disturbance
- Resistance to fungal growth
- VOC emissions below strict criteria 24 hours and 14 days post-installation
- Absence of allergenic or sensitizing chemicals, or their concentration below levels of concern for sensitive individuals.

CENTRAL STATES OPENS NEW PLANT IN TOOELE, UTAH

Central States Inc. opened its newest manufacturing facility recently, marking a major milestone in the company's continued growth and commitment to employee ownership. The ribbon cutting ceremony, held September 18, welcomed company leaders, local and state officials, and community members to the 100,000-square-foot facility located in the Peterson Industrial Depot.

The Tooele plant is Central States' 13th manufacturing facility and its westernmost location to date. It represents a multi-million-dollar investment in the Tooele community and is projected to create more than 90 new positions.

"This facility is more than just a building—it's a symbol of our commitment to growth, innovation, and the power of employee ownership," said Jim Sliker, CEO of Central States. "We're proud to be investing in Tooele and excited to welcome new employee-owners into our family." RB

BUSINESS CONNECTIONS

Industry Steps Up To Provide Homes for Veterans

Tiny Homes Bring Healing and Hope to Military Families

A recent collaboration between American Home Shield, Operation Tiny Home, and Project Sanctuary is helping provide safe, supportive housing for military veterans and their families in Pagosa Springs, Colorado.

Through the partnership, three new tiny homes have been donated to Project Sanctuary's Tiny Homes Village, where they will serve veterans and their loved ones participating in therapeutic retreats and mental health programs. The initiative reflects a shared commitment among the organizations to support those who have served the nation by addressing one of the most fundamental needs—stable housing.

The homes were officially dedicated during a ceremony at Project Sanctuary's campus on August 20, where representatives from all three organizations highlighted how community partnerships can create meaningful change.

"Safe, dignified housing is the foundation for healing, stability, and connection," said Gabrielle Rapport, Founder and Executive Director of Operation Tiny Home. "This collaboration and the gift of these homes show what's possible when organizations come together with a shared vision to serve veterans."

Sponsors and beneficiaries at the ribbon cutting, dedication ceremony for Project Sanctuary's new Tiny Homes Village in Pagosa Springs, Colorado. PHOTO COURTESY OF AMERICAN HOME SHIELD

Project Sanctuary Founder and CEO Heather Ehle Ray said the addition of the new homes will make an immediate difference for families in their care. "The Tiny Homes for Healing initiative is more than new buildings—it's the creation of sanctuaries where military families can rest, reconnect, and rebuild," she said. "We are deeply grateful for the generosity and collaboration that made this possible."

American Home Shield's contribution is part of its ongoing efforts to support the military community and strengthen housing stability initiatives nationwide. The company also participates in programs that help service members transition into civilian careers and offers additional support for veterans through housing-related initiatives.

Together, these organizations demonstrate how public-private partnerships can expand access to safe, healing environments for veterans and their families—providing not only shelter, but also the opportunity to rebuild and thrive. **RB**

The Argyle, Texas, community joined Building Homes for Heroes and Hillwood Communities as they unveiled a gifted home to Army Command Sergeant Major (retired) Gretchen Evans during a patriotic unveiling ceremony. PRNEWSFOTO/BUILDING HOMES FOR HEROES

Veteran Honored with Mortgage-Free Home in Texas

On the 24th anniversary of Sept. 11, 2001, Building Homes for Heroes and Hillwood Communities unveiled a new mortgage-free house, built by Highland Homes, for an American hero, Retired Command Sgt. Maj. Gretchen Evans, and her family. The occasion was marked by a patriotic home-gifting ceremony attended by hundreds of community members, as well as high-ranking veterans' advocates and local leaders.

Command Sgt. Maj. Evans is a highly accomplished veteran with numerous honors, including the 2022 ESPN ESPY Pat Tillman Award for Service, induction into both the U.S. Army Women's Hall of Fame and the U.S. Veteran Hall of Fame. She is also a recipient of the Bronze Star, Purple Heart, and many other military awards and commendations, making her one of the most decorated women veterans in American history.

"Being given a mortgage-free home is an incredible gift, and I am truly grateful," said Command Sgt. Maj. Evans. "My family and I would like to thank our friends at Building Homes for Heroes, Hillwood Communities, and Highland Homes, who are all just as committed as I am to uplifting and supporting our country's veterans, and honoring their experiences, challenges, and victories."

In addition to Command Sgt. Maj. Evans, the speakers at the ceremony included Andy Pujol, Founder and CEO of Building Homes for Heroes; Garon Bruce, Vice President of Construction at Highland Homes; Former Undersecretary of Defense for the Middle East Simone Leeden; retired NASA astronaut and United States Navy SEAL, Chris Cassidy; and Dr. Courtney Carpenter, Superintendent of the Argyle Independent School District.

"Command Sgt. Maj. Evans exemplifies what it means to persevere and remain unbroken, no matter what obstacles she has had to overcome," said Pujol during his remarks. "She is an incredible person, and we are honored to be able to support her and her family by giving them a permanent place to call home."

The ceremony opened with a grand procession featuring local first responders, fire trucks and police vehicles, a marching band, motorcycle groups. The parade culminated in the home gifting ceremony and remarks in front of Command Sgt. Maj. Evans' new home, where a parachute team conducted a coordinated jump from the air to deliver the house's key to Command Sgt. Maj. Evans and her husband.

Other notable attendees included Hillwood Chairman Ross Perot Jr., Denton County Judge Andy Eads, and students from local Argyle Independent School District schools, who were bused in for the day's events.

"My father always said that service does not end when a soldier returns home. It is our responsibility to continue standing beside them. His commitment lives on through The Perot Companies and Hillwood," said Ross Perot, Jr., Chairman of The Perot Companies and Hillwood Companies. "It is an honor to celebrate Command Sergeant Major Gretchen Evans' service with Building Homes for Heroes, our Hillwood Communities team, and Highland Homes."

"We are honored to celebrate our 7th home built in partnership with Building Homes for Heroes and Hillwood Communities," said Aaron Graham, President of Highland Homes. "Each one represents more than just walls and a roof—it's a tribute to the resilience and sacrifice of our nation's veterans." RB

BY WICK BUILDINGS • WWW.WICKBUILDINGS.COM

PHOTOS COURTESY OF WICK BUILDINGS / WELCH BUILDINGS

Increased Efficiency

New High-Tech Calf Barn Cuts Labor in Half

Bottle-feeding dozens of calves twice a day—by hand—was consuming way too much time for this ambitious farmer. But a new building and the latest in livestock technology changed everything. A local Wick builder helped bring this cutting-edge calf barn to life.

WHAT THE OWNER WANTED

Raising nearly 80 calves is no small task. The farmer, Christina, wanted a better alternative to the inefficiencies of calf huts and bottle feeding. The time she spent managing individual feedings left little time for other farm responsibilities.

She envisioned a barn that would ease the labor load while enabling more consistent calf care. That meant a building designed to accommodate modern calf-rearing equipment—and flexible enough to evolve with future needs. Specifically, she needed a barn that would:

- Automate calf feeding and monitoring
- Improve workflow and calf access through an open, efficient layout
- Create a healthier, more comfortable environment through ventilation and smart design

Now, with the new barn built and fully operational, she has

more hours for other tasks. "I was putting in eight, nine hours just in morning and night chores. With this barn, I'm in here maybe three, four hours in the morning and maybe an hour to two hours at night."

And Christina says her increased efficiency has led to other benefits: "This barn has saved us a ton of money."

WHAT'S SPECIAL ABOUT THE PROJECT

This calf-feeding barn combines smart building design with the latest in calf-care technology. At its core is a Wick structure

designed to support more efficient routines and create a healthier, more consistent environment for young livestock.

The barn's open layout allows for easy movement and cleaning, while its curtain system—connected to a weather station—automatically adjusts based on indoor and outdoor conditions. Whether it's hot, cold, or rainy, airflow and temperature stay optimal without the need for constant adjustments from the farmer.

The calves wear RFID-enabled ear tags that work with automated feeders to help control intake and monitor feeding patterns. While the tech handles the tracking, the building provides the right environment and layout for it to operate smoothly and efficiently.

THE DETAILS:

Building: Calf Barn
Builder: Welch Buildings, Luther, Michigan
Location: Hersey, Michigan
Building Size: 70' x 88'
Wall Panels: Wick 29 ga. G-90 galvanized full-hard steel, Hunter Green
Roof Panels: Wick 29 ga. G90 galvanized full-hard steel, White
Posts, Girts, Purlins, Trusses: Machine-evaluated high-grade lumber
Coatings: Sherwin-Williams Coil Coatings
Fasteners: Wick Premium Fasteners™
Unique Features:
- Weather-responsive curtain walls
- Automated feeders

WHO HELPED BUILD IT

The project came together with the help of Nick Welch and his team at Welch Buildings. Nick, an authorized Wick builder, has a strong track record in agricultural construction. His expertise and dependable, hands-on approach made him a natural fit for this high-performance calf barn.

"Nick is fabulous. He knows his stuff. He was here on time every single day. He was phenomenal," says Christina.

And more than just managing the build, Christina says Nick made sure she and her family felt confident and informed throughout the process.

"He would explain it so that we understood what he needed from us, and when he needed it."

That clear communication and Nick's commitment to quality helped ensure the entire project was a success—from concept to completion.

THE RIGHT CHOICE

Today, this high-tech calf barn is streamlining labor and enabling the farmer to track calf health and performance more accurately from day one. And because the building is from Wick, it comes with long-term advantages built right in:

Superior lumber. To make our buildings stronger and last longer, we use only lumber that meets or exceeds machine-graded specs for all structural components, from trusses and columns to girts and purlins. In addition to the visual benefits of this cleaner lumber, it's at least 15% stronger than regular lumber—critical for demanding livestock environments.

High-performance paint. Our paint coating is backed by a 40-year warranty against chipping and cracking and comes in a spectrum of colors. Highlights of the new calf-feeding barn include hunter green for the steel walls and gable, and white for the roof.

Exceptional quality for the long haul. With a flexible layout and durable, low-maintenance materials, this barn was built not just for today's needs—but for adapting to future innovations in calf care. It reflects the reliability, smart design, and long-term value Wick Buildings is known for. RB


Metal
Builder
RURAL BUILDER
SPEC
ECT
www.metalbuildermagazine.com
WINTER 2025
SHIELD WALL MEDIA LLC
CASE STUDY
QUICK BUILD & ON BUDGET
SELLING METAL AS THE SOLUTION
UNDERSTANDING AIR LEAKAGE TESTING
GUIDANCE FOR INSULATING STEEL BUILDINGS

The New Face of Framing Efficiency

For centuries, wood was the backbone of American construction — from Native American longhouses to colonial timber homes. Wood was familiar, plentiful, and easy to use. Steel, once reserved for industrial buildings and city skyscrapers, simply didn't fit the residential mold. But times, and tools, change.

As you may already know, metal framing is stepping into the spotlight as builders and homeowners alike recognize its practical advantages. As Tom Reed of Howick Ltd. points out, a pre-fabricated metal frame for a 2,500-square-foot home can go up in just a day or two — a huge time saver for both builder and client. Metal's strength and precision bring additional benefits: no twisting, cracking, or termite damage, and far less risk of losses from fire or flood.

Builders and contractors are finding that these efficiencies translate into fewer warranty issues and happier customers. And while cost remains a common question, the price gap between wood and steel continues to narrow — especially when labor savings and reduced maintenance are factored in.

Of course, education remains key. As Sean Jones of Elite Build Company notes, transparency builds trust. When contractors present metal framing as a practical, proven option (focusing on the benefits) rather than a hard sell, customers listen.

Photo courtesy of Howick Ltd. Learn more beginning on page 8.

Metal may have once been seen as industrial or impersonal, but with today's design flexibility and clear performance advantages, it's reshaping what "home" can look like — and how efficiently it can be built.

— Karen Knapstein

Contents

On the cover: Shed framed in metal. *Courtesy of Howick Ltd.*

Worn storage facility unit on left. Renew-Rite refreshed unit on right.

TRAC-RITE LAUNCHES TURNKEY "RENEW-RITE" SELF-STORAGE RENOVATION

Trac-Rite has announced the launch of Renew-Rite, a new product and service line created in partnership with Accent Building Restoration, Inc. (ABR). This collaboration brings self-storage owners and operators a turnkey solution to repair, modernize, and revitalize aging and damaged facilities — combining Trac-Rite's industry-leading roll-up doors, hallway systems, and metal fabrication capabilities with ABR's expert renovation services in all 50 states.

Renew-Rite is designed to help owners refresh their facilities with best-in-class, 100% American-made roll-up doors and metal building components — including jambs, headers, and other commonly replaced components — while also enhancing unit size, layout efficiency, and overall curb appeal. The program offers more than just doors; it's a full-service solution to revitalize your self-storage property.

"This partnership with ABR brings together two companies that share a dedication to quality and service," said Kellen Anderson, Director of Sales for Trac-Rite. "Renew-Rite gives facility owners a streamlined way to replace outdated or damaged doors, improve security, and maximize their rentable space, and increase rental income — all backed by our reliable, 100% American-made products and ABR's trusted installation team."

Built with strength, longevity, and style in mind, Trac-Rite doors are manufactured from durable American steel and backed by an industry-leading warranty. As a 100% employee-owned company, Trac-Rite is proud to work alongside ABR to deliver long-lasting solutions that protect and elevate self-storage owners' investments.

"Having a trusted, proven door manufacturer like Trac-Rite as our partner means we can confidently deliver exceptional results to our clients," said Jon Fawcett, President at ABR. "Together, we're offering a full-service solution that doesn't just improve appearance, it adds long-term value and operational efficiency to every property."

www.tracrite.com

2024 METAL BUILDING SYSTEMS MANUAL

The Metal Building Manufacturers Association (MBMA) announces the release of the 2024 edition of the MBMA Metal Building Systems Manual. First published in 1959, this internationally recognized reference manual is a primary resource for the metal building industry and is being published in partnership with the International Accreditation Service (IAS) and International Code Council (ICC).

"For more than 65 years, the Metal Building Systems Manual has been the go-to resource in the metal building industry," noted Lee Shoemaker, Ph.D., PE, MBMA director of research and engineering. "This edition brings it up to date with the latest codes and provides even more examples and drawings to reference. With these revisions, it continues to be a must-have asset for those in our industry."

The 2024 edition of the MBMA Metal Building Systems Manual brings the publication into conformance with the 2024 Edition of the International Building Code and ASCE 7-22 Metal Building Systems Manual. It also spells out common industry practices relating to the design, manufacture, sale, and erection of metal building systems (including contract, order documents and engineer of record).

A number of other important updates have been made to the manual, including but not limited to:

All the example problems for wind and snow have been expanded and enhanced to highlight the changes in ASCE 7-22, including tornado load examples.

New appendices have been included for the following:

- Large Doors
- Bulk Grain Loads
- Steel Thickness – Inch vs. Gauge
- Hail

MBMAManual.com

MB

METAL PANELS INC. EXPANDS OPERATIONS WITH MOVE TO LARGER TULSA FACILITY

Metal Panels Inc. (MPI), a manufacturer of metal panels, trim, decking, and accessories, has announced its relocation to a newly constructed, 181,000 square foot manufacturing facility in Tulsa. This move represents a milestone in the company's growth strategy, significantly expanding its production capabilities while reinforcing its commitment to customer service and innovation.

Located just 1.5 miles north of its former site, the new facility brings all manufacturing operations under one roof, optimizing workflow, boosting efficiency, and improving inventory management. The expanded footprint allows MPI to streamline workflows, introduce new product lines, and enhance service delivery across its regional and national customer base.

"After years of planning, we're excited to offer the next generation of metal panel manufacturing to our new and loyal customers," said Mitchell Hentkowski, President of MPI. "This move is more than just an expansion — it's an investment in our customers. The additional space and well-designed layout will allow us to optimize production, reduce lead times, and deliver innovative new solutions for contractors and builders."

The advanced facility features two-lane customer pickup bays, roll formers capable of producing 23 profiles, automated bending brakes for custom trim, and three profile deck lines and a purlin line. These enhancements will support higher production volumes, consistent product quality, and faster turnaround times.

MPI's carefully planned, phased relocation ensured minimal service interruption for customers throughout the transition. The company now looks forward to leveraging its upgraded operations to better serve clients across the metal building, post-frame, storage, and residential construction sectors.

SASHA DEMYAN ELECTED TO METAL CONSTRUCTION HALL OF FAME

The Metal Building Contractors and Erectors Association (MBCEA) has announced that Sasha Demyan, MBCEA Executive Director, has been elected to the Metal Construction Hall of Fame.

"Sasha's unwavering commitment to our members and her straight-up get-it-done passion, along with the steadfast coordination of many association presidents, made her an all-in, unanimous inductee for the Hall of Fame," said Robert Tiffin, MBCEA President. "Congratulations Sasha — the gold, nay diamond, standard for our industry."

Sasha Demyan, newly elected member of the Metal Construction Hall of Fame.

The Metal Construction Hall of Fame honors people in the industry who have made significant contributions to the metal building industry and improved people's lives. Demyan took over the MBCEA in 2012 and immediately set about revitalizing the organization. Since then, the organization has grown more than 250% to over 700 members today. At the same time there has been a substantial increase in participation at the annual conference, which has become a must-attend event for anyone in the metal construction industry.

Demyan was instrumental in co-locating the conference with the Metal Building Manufacturers Association (MBMA) Spring Meeting, bringing together contractors, erectors and manufacturers to better understand each other's needs and concerns and help grow the industry. She has also prioritized the development and delivery of meaningful programs focused on safety, training, and quality such as promoting the International Accreditation Service (IAS) AC478 Accreditation for Metal Building Assemblers Inspection initiative.

"It is an honor to be enshrined with the many people who helped me along the way," says Demyan. "So many of the inductees have served as mentors to me throughout my career. To be listed alongside them is truly gratifying and a testament to the confidence they have in me and our efforts to make the MBCEA the premier association for contractors and erectors."

MBMA ANNOUNCES 2024 SAFETY AWARD WINNERS

Each year the Metal Building Manufacturers Association (MBMA) honors member companies that demonstrate exceptional performance in maintaining workplace safety. These awards are given to Building Systems members as well as Associate members for their performance during the previous calendar year. Safety awards for the 2024 year were presented during the 2025 MBMA Spring Meeting held May 7-9 in Charlotte, North Carolnia.

"The MBMA Safety Award program was initiated in 2011," noted Tony Bouquot, MBMA general manager. "Since then, we have presented more than 400 awards to both Building Systems members as well as Associate members. We are proud to honor those members who have exceptional safety records as we strive to make the industry a safe place for everyone."

In 2024, Building Systems members had 45 plant facilities that participated in MBMA's OSHA Injury Statistics Program. "Effective safety initiatives have many benefits," added Bouquot, "including boosting employee morale, improving operations, and mitigating insurance risks and exposure to OSHA audits.

MBMA's awards program consists of three categories. The 2024 Superior Safety

Tony Bouquot, right, MBMA general manager, and Tim Logue, Safety Committee chair, present the 2024 MBMA Safety Awards at the 2025 Spring Meeting held in Charlotte, North Carolina.

Award was presented to five plants that achieved zero recordable cases for the entire calendar year, which is a significant accomplishment. The 12 facilities that received the 2024 Safety Performance Award achieved an incident rate equal to 50% or less than the OSHA industry average. The 2024 Associate Member Superior Safety Award went to 54 facilities that achieved zero recordable cases for the year, also a major achievement.

The following is a comprehensive list of 2024 MBMA safety award winners:

2024 Superior Safety Award: In recognition of Building Systems member manufacturing facilities with zero recordable incidents.

- Cornerstone Building Brands (Atwater, CA)
- Nucor Buildings Group (La Crosse, VA; Lathrop, CA)
- Package Steel Systems (Sutton, MA)
- Dean Steel Buildings (Thomasville, GA)

2024 Safety Performance Award: In recognition of Building Systems member manufacturing facilities having achieved an incident rate equal to 50% or less than the industry average as reported by OSHA.

- Behlen Building Systems (Columbus, NE)
- Cornerstone Building Brands (Elizabethton, TN; Houston, TX; Lexington, TN)
- Kirby Building Systems, Inc. (Portland, TN)
- Nucor Buildings Group, a Nucor Company (Brigham City, UT; Swansea, SC; Terrell, TX; Waterloo, IN)
- Red Dot Buildings (Athens, TX)
- Schulte Building Systems, Inc. (Hockley, TX)
- Whirlwind Steel Buildings (Houston, TX)

2024 Associate Member Safety Award: In recognition of Associate member facilities with zero recordable incidents.

- Bay Insulation Systems (Aurora, CO; Baton Rouge, LA; Brooklyn Heights, OH; Coppell, TX; East Granby, CT; Eastlake, OH; Easton, PA; Fridley, MN; Garner, NC; Green Bay, WI; High Point, NC; Houston, TX; Indianapolis, IN; Kansas City, MO; Norcross, GA; Orlando, FL; Pensacola, FL; Phoenix, AZ; Roanoke, VA (2 locations); San Marcos, TX (2 locations); St. Louis, MO; Sumner, WA)
- Global Building Products/Infinity UV (Elkhart, IN (2 locations)
- Metl-Span/Centria, A Nucor Company (Brigham City, UT; Frankfort, KY; Laurens, SC; North Las Vegas, NV; Waterloo, IN;)
- S-5! Attachment Solutions (Iowa Park, TX)
- Sherwin Williams Company (Pittsburgh, PA; Garland, TX)
- Silvercote A Service Partners Company (Ashland, VA; Byram, MS; Denver, CO; Duluth, GA; Greenville, SC; Houston, TX; Itasca, IL; Little Rock, AR; Marshfield, WI; Mooresville, NC; Portland, OR; Pottstown, PA; Salt Lake City, UT; Scotia, NY; Sioux Falls, SD (2 locations); Stockton, CA; Wright City, MO).

CENTRAL STATES WELCOMES NEW MANUFACTURING UNIT PRESIDENT

Central States Inc., a supplier of metal building components, roofing, and building packages, has announced Doug Watts has joined the 100% employee-owned business as Central States Manufacturing President. Watts comes to his new post with more than two decades of manufacturing and leadership experience and will oversee operations, sales, logistics, and customer service for Central States Manufacturing.

With more than 25 years of experience in the building materials and glazing systems industries, Watts brings a wealth of leadership and operational expertise to his new role as President of Central States. Most recently, he completed a 22-year tenure at Oldcastle Building Envelope. There, he held several key leadership roles, including President of Architectural Glazing Systems, where he oversaw full P&L responsibility for business units across the U.S. and Canada. Over a three-year period, he helped grow the company's revenues by 50%.

Doug Watts, new Manufacturing Unit President at Central States.

His proven track record of driving growth, operational excellence, and customer-focused innovation positions him well to lead Central States into its next chapter.

"I'm honored to step into the role of President at Central States Manufacturing," Watts said. "This company's culture of integrity, innovation, and employee-ownership is truly special. I'm excited to serve alongside our incredible team of employee-owners as we continue building on our legacy of excellence. I also want to thank Tim Ruger for his outstanding leadership over the last decade. Tim's contributions have positioned us for continued success, and I look forward to building on that foundation." **MB**

BY HANNAH DIVER

Air Leakage Testing

Why and How It's Done

Building contractors are always looking for new and improved ways to ensure the longevity of the build and increase customer satisfaction. Air leakage testing is becoming more and more popular and is even required in some states. Metal buildings in particular can offer greater difficulty due to the difference in materials used.

Air leakage testing for metal buildings was first introduced by the International Energy Conservation Code in 2012 *(NIA's Metal Building Laminator Committee)*. Since then, there have been several addenda with the most recent one being added in 2024. Overall, 35 states have adopted an edition of the IECC since 2012 *(National Association of Home Builders)*. The goal is for all 50 states, as well as the District of Columbia and Puerto Rico, to adopt an edition to help increase energy efficiency, lower energy bills, extend HVAC lifespan and increase comfort and indoor air quality.

This process of air leakage testing involves three major components: incorporating a blower door, visual inspection and infrared pictures *(NIA's Metal Building Laminator Committee)*. This should be done during or at the end of construction; before the building is inhabited. The testing company will come in to determine the square footage and whether or not the building can be tested as one entire unit or if it will need to be done in sections. After this, it will be decided how many fans and how much pressure will be used during testing.

An inspection of the building is also done to ensure there are no obvious areas where air leakage will occur. This usually includes HVAC runs, plumbing and drain pipes. Some sort of temporary seal will need to be placed over these openings, this needs to be a sealant that can stand up to the pressure changes that will occur during the testing process. For example, painter's tape will not be sufficient. If everything checks out well, all interior doors will be propped open, and all exterior windows and doors will be closed and locked *(BC Housing)*.

A blower door test works by mounting a special fan in an exterior doorway to check how air-tight a building is. All exterior doors and windows are closed, and interior doors are left open so air can move freely. The fan either pulls air out or pushes it in to create pressure, which helps pinpoint where air is leaking through cracks or gaps in the structure. INGO BARTUSSEK-STOCK.ADOBE.COM

One or multiple exterior doors — depending on building size — will be selected to be used for fan placement. The door will be sealed with a special plastic sealant that has an opening for the fan. A small tube will also be run from inside the building to the outside where it will connect with a manometer to read pressure changes *(BC Housing)*. Once everything is fully sealed, a certain amount of pressure will be released into the building using the fan(s), and pressure changes will be recorded.

Beyond that, thermal imaging is also used to check for any 'hot spots' during and after testing. Smoke testing can also be done which involves using a smoke machine inside the building while someone on the outside watches for any signs of leakage.

Once testing is completed, it will need to be determined if the building passed. In the 2012 edition of the IECC standards, there are three compliance options. The first is that material must have an air permeability of no greater than 0.004 cfm/sq. ft., the second is the assemblies of materials and components should not exceed 0.04 cfm/sq. ft., and the third option is the whole building air leakage test should not exceed 0.4 cfm/sq. ft.

If the air leakage testing does not

exceed these levels, the building passes the code and can be inhabited. If the building does not pass, it will need to be reassessed after appropriate corrections are made.

There are several potential problem areas in metal buildings. The first of these is dissimilar material surfaces which includes wall bases, windows and doors. Secondly, intersections or changes in air barrier configuration can pose a threat. Examples of these include wall to wall and wall corners. Lastly, penetrations such as HVAC, electrical, plumbing and canopy framing members can increase the chances of leakage *(Z-Tech Consulting LLC)*. Once the areas of concern are located, some type of new sealant will need to be placed to ensure the building can pass the repeat testing. *(Z-Tech Consulting LLC)*

The Metal Building Manufacturer's Association (MBMA) website, mbma.com, offers a multitude of educational and technical resources. One resource in particular, titled *Best Practices to Comply with Whole-Building Air Leakage Testing Requirements for Metal Building Systems,* goes into great detail on what a contractor can do to prevent easily avoidable issues with air leakage in metal buildings. This encompasses tips for all of the problem areas stated above as well as quality control and quality assurance.

With all of that being said, there are plenty of reasons that a contractor would want to go through air leakage testing even if it is not required in their state. After all, air leakage does not only affect whether or not a building will pass code, it also will affect the pocket book of the building owner, cause issues with internal temperature and impact air quality *(Blue Green Engineering)*. With unwanted air flow to the outside of the building, usually from poorly sealed windows or doors, heating and cooling appliances will have to work harder to maintain the desired temperatures and avoid unwanted temperature differences. This will shorten the lifespan of the equipment and cause the owner to spend more money on replacements. Cracks or air leakage areas not only let air out of the building but also let allergens and dust back in, which can increase health issues and cause additional damage to the internal equipment *(Blue Green Engineering)*.

> Air leakage testing for metal buildings was first introduced by the International Energy Conservation Code in 2012.

It should also be noted that since 2012, roughly 67% of states have adopted some form of the International Energy Conservation Code, indicating at some point your state may be added to that list. If contractors are already meeting some version of the code, even if it is not yet required, they will be prepared for it when the time comes. Not only will this be beneficial to the contractor, but will also improve client satisfaction.

Overall, the International Code Council has projected that between the years of 2010 and 2040, with the adoption of the IECC residential and commercial buildings will save roughly $126 billion in energy costs, 841 MMT of avoided carbon dioxide emissions, and 82 quads of primary energy *(International Council Code)*. According to the ICC, these amounts equate to the emissions of 177 million passenger vehicles, 245 coal power plants or 89 million homes. Although this testing adds another step to construction, it will help save a large sum of money in the long run. **MB**

Citations

BC Housing. "Whole-Building Airtightness Testing." Youtube, Google, 11 Mar. 2022,

Blue Green Engineering. "What Is Building Air Leakage and Why Does It Matter?" Blue Green Engineering, 30 May 2025, bluegreeneng.com.au/building-air-leakage-why-it-matters/.

International Council Code. "IECC Compliance." ICC, 28 Oct. 2024, www.iccsafe.org/advocacy/iecc-compliance/.

National Association of Home Builders. "Standards Codes & Nahb.Org/Codes State Adoptions of The." National Association of Home Builders, Nov. 2024, www.nahb.org/-/media/NAHB/advocacy/docs/top-priorities/codes/code-adoption/state-adoption-status-iecc-nov-2024.pdf?rev=6d9ff40d170448e0aab727d0d016a488&hash=041003E9F4973D12D7450B7821215E33.

NIA's Metal Building Laminator Committee This article was written by a task force from NIA's Metal Building Laminator Committee. The member companies that make up this committee , and NIA's Metal Building Laminator Committee. "Metal Building Insulation and Air Leakage." Insulation Outlook Magazine, 2 Oct. 2024, insulation.org/io/articles/metal-building-insulation-and-air-leakage/.

Z-Tech Consulting LLC. "MBMA Releases Best Practices Guide for Air Leakage Testing." MBMA, 12 Sept. 2023, mbma.com/news/mbma-releases-best-practices-guide-air-leakage-testing.

BY LINDA SCHMID

PHOTOS COURTESY OF HOWICK LTD

Selling Steel

Metal Building Benefits and Sales Tips

Wood has been the paradigm in building in the United States for centuries. Many Native Americans made homes using wood. Then the Pilgrims of Plymouth found it to be a remarkably plentiful resource and built their homes of timber. Through the years, wood became the most common building material.

In the 1800s, innovators developed steel for industrial buildings. Some industrial and business buildings were built from steel; especially after Chicago's Great Fire, the resource was considered a great alternative to wood although it was very expensive.

People building homes found the massive supply of lumber much more cost effective. For those who had money and wanted a different look for their homes, brick and stone filled the bill because the aesthetic steel brought was too alien from the usual residential fashion.

The Industrial Revolution brought processing improvements that made steel more affordable, yet it remained the staple of industrial construction. The traditional building methods and visuals were very ingrained in the culture, and wood was considered easier and faster to work with at the time.

Innovation and styles do change things, though. Today builders are finding metal

to be an easier material to work with and people have begun incorporating industrial design into the residential aesthetic. Further, metal buildings no longer have to have an industrial feel; there are many style options.

BUILDER – AND CUSTOMER – BENEFITS

Tom Reed is the Regional Manager at Howick Ltd., and he sees many benefits to metal framing.

"A pre-fabricated metal frame is easier to assemble than a wood frame. The metal framing for a 2,500 square foot house can be completed in 1-2 days," Reed said, "so metal framing can mean a quicker build benefitting the customer and creating efficiencies for the contractor, too."

Steel frames are resilient, durable, and fire deterrent. The fire resistance of metal framing may save the customer money on their insurance. Depending on the climate in which the customer is building, fire resistance can be very important. In other climates, customers may be glad to hear that if the neighborhood is flooded, the metal frame will stand firm. The wall sheeting may need to be replaced, but the house will remain intact and mold cannot form on steel.

Another advantage that metal can claim is it is impervious to damage caused by termites and other pests. Sean Jones of Elite Build Company of Oklahoma, said that in some areas of the country, this is a huge advantage.

Other benefits? "Contractors see lower costs in warranty issues because there is no nail back-out, twisting or cracking of wood," Reed said.

Any benefit for the customer benefits the contractor as well because it makes it easier to sell and can lead to a satisfied customer.

TYPICAL CUSTOMER OBJECTIONS

Questions about price are often the concerns that builders have because they want to be competitive. The prospective client will want to know which is more expensive, wood or steel, so that is what the contractor wants to know as well.

The lumber and steel markets can be quite volatile, so the answer to that question varies depending on when it's asked. Reed said that while metal may start out at the higher price, that doesn't necessarily mean that it will be the costlier choice in the end.

"If you are using panels and pre-fabricated parts," Reed said, "a building requires less labor. Pre-engineered components can come stamped with part numbers and drawings, so they can be quickly and easily constructed."

If less labor is required, the contractor saves money and time that can be used elsewhere. Further, parts tend to be more precise and in the end, there are likely to be fewer problems and warranty claims. Therefore, the building costs the contractor less and the savings should be reflected in the estimate they provide to the customer.

Even small buildings that might seem like they may not need metal framing can benefit. A wood shed's framing that could take two hours can now be done in 20 minutes Reed said.

Another objection people use is that steel is less energy efficient because it conducts heat. For example, if steel framing butts up against metal cladding in a cold climate, you can see where the ice has melted on the outside of the house indicating the conduction going on. This can lead to condensation inside walls or attic spaces. However if cladding is installed properly with thermal breaks, there will be no problem.

PRESENTATION

Sometimes making the sale comes down to the way the information is presented. The goal is to provide an education without being condescending. One way to go about this is to present information like you are giving them an insider's tip. For example: "One thing that people often don't know about metal buildings is that they may be eligible for a discount on their homeowner's insurance due to the fire resistance of metal."

Another way to approach education is to make the customer feel that you are embarking on a journey of discovery with them. You might say something like: "Well, I hear you saying that price is of great concern to you. Let's compare metal framing and wood framing and see how it comes out."

It may come out that the wood is the cheaper material, but then you explain the savings on labor, and you reinforce it with the possible savings on insurance.

Whatever approach you take, make sure that you are not exaggerating the benefits; lack of sincerity can be felt as well as verified by a closer look at the facts.

Jones said, "Be brutally honest and transparent. Be prepared to prove what you are saying."

Proof can be established through references to information from reliable sources or testimonials, even taking them to talk to previous customers. If you are working on the commercial side, CEOs will compare notes, so having the approval to list one or two as references can help. **MB**

PHOTOS COURTESY OF HOWICK LTD

Portal Framed in 12 Hours

Smoking Joe's Honey Shed Built By Central Steel Framing

There's a rule of thumb in construction that says you can only ever have two of these three factors: a fast build, good value, and a high-quality end result.

Smoking Joe's Honey and Central Steel Framing recently worked together to break that rule. They ticked all three boxes, to create a complex, custom structure, on time and on budget.

Central Steel Framing (CSF), Howick's sister company, is based in Taupō, New Zealand. Between them, the CSF team has 60 years of experience in manufacturing and construction, so they know what makes their market tick. They use Howick machines and framing automation technology to speed up construction, reduce costs, minimise waste and create stronger, smarter built solutions.

The Howick team created X-CALIBR™, a new roll-formed structural steel technology that can replace heavy steel construction methods, to enable faster and more cost-effective framing of large portal buildings. They used this smart system, which is currently only available in New Zealand, to deliver a fully-customised solution for Smoking Joe's Honey.

Project Details:

Project Size: 650sqm / 6995sqft

Year: 2025

Location: Kuratau, Taupō, New Zealand

SMOKING JOE'S HONEY COLD STORAGE SHED

Smoking Joe's Honey is a fast-growing rural business based in Kuratau, near Taupō, New Zealand. They needed a custom, cold honey storage shed able to support a fully integrated cool store, shelving, and internal/external liners.

It was a complex project, and the client needed it done fast, with minimal site disruption. Luckily for them, that's what the CSF team does best.

KEY INSTALLATION METRICS

- Roll-formed structural steel systems
- 650sqm (6997sqft) footprint – 18m (59ft) wide x 36m (118ft) long
- 18m (59ft) clear span
- Portal frames, rafters, columns, purlins and girts installed in just one day (approx. 12 hours)

TECHNOLOGY AND WORKFLOW

The CSF team worked closely with Smoking Joe's to customise every inch of

the shed to meet their needs. From design to delivery, each step of the process was laser focused on speed, simplicity and strength.

Everything was prefabricated offsite, including cleats and drill holes. As a result, assembly onsite was fast, clean and accurate — there was no cutting, swarf, or grinding dust. And since the process was so quick, significant savings were made in onsite assembly costs.

This was despite the fact that the CSF team was working onsite with a construction crew that had never used the system. The X-CALIBR™ system features easy, clip-together assembly and pre-aligned connections, so the construction team found it easy to follow, fast to erect, and extremely precise.

Warren Farr, General Manager of Central Steel Framing, explains that this is all by design: "Everything that we've done is to minimise time onsite."

THE RESULTS: FAST ASSEMBLY AND A SMARTER BUILD

Thanks to the system's ease of assembly, Smoking Joe's shed ticked all three boxes — it was built on time, on budget and to an extremely high standard.

Wallace Steel, owner of Smoking Joe's, was buzzing when the build finished:

"X-CALIBR™ was willing to customise it to our needs, which was going to save us quite a lot in assembly costs. I'm amazed at how fast it went up actually."

The end result was a durable, high-performance structure that was tailored to the needs of a fast-growing rural business (and completed within a tight timeframe, with less waste).

YOU BUILT THAT ALREADY?

When the build was nearly finished Warren says there was very visible evidence of how good the system really is:

"Next door there was a similar shed that was started on Jan 20th and on March 12th it wasn't even close to being ready for cladding. Ours started on Feb. 20th and by March 12th the building was nearing completion, including installation of a large cool store."

"My favourite bit about visiting the site was hearing the builders say none of their shed building mates could believe that they didn't have to cut or drill anything, and that it was done so fast."

BENEFITS DELIVERED

- Very strong, lightweight construction with strength matching that of hot-rolled steel construction but without the downsides
- Custom build delivered, without a custom price
- A high level of precision in all structures thanks to Howick technology.
- Simplicity of assembly thanks to CSF's smart design and X-CALIBR™ technology
- Zero waste onsite
- Extremely fast build times, and minimal disruption to site
- Minimal labour required for assembly delivered significant cost savings. **MB**

X-CALIBR™ is a New Zealand-made roll-formed structural steel framing system developed by Howick. It offers a smarter, faster alternative to traditional steel portal framing.

Every project is custom-designed and manufactured offsite using Howick roll-forming machinery, reducing material waste and maximising build efficiency.

BY KAREN KNAPSTEIN

Chattanooga Christian School. COURTESY OF CURBED CONSTRUCTION.

Preventing Heat Conduction

Best Practices for Insulating Light-Gauge Steel Structures

Light-gauge steel framing has become a common choice in residential, commercial, and agricultural construction. Its advantages are clear: it's straight, dimensionally stable, lightweight, noncombustible, and resistant to rot, termites, and many of the problems associated with wood framing. But steel has one significant drawback when it comes to building performance—it's an excellent conductor of heat.

Because steel conducts heat far more efficiently than wood, it creates what is called thermal bridging. In simple terms, anywhere a steel member passes through the building envelope, it can carry heat in or out, bypassing the insulation you installed between studs, joists, or rafters. The result is lower effective R-values, higher energy costs, and in some climates, a greater risk of condensation problems.

> Proper detailing of air barriers, vapor retarders, and drainage planes is essential.

"When we build with steel the first thing people notice is how straight and clean the framing is," says Nolan Woody, Operating Partner at Curbed Construction. "The second thing they notice, usually after the first utility bill, is how fast heat transfers if insulation isn't handled right. Thermal bridging can cut the performance of a wall in half. If we don't plan for continuous insulation up front, the owner ends up paying the difference every month."

WHY THERMAL BRIDGING MATTERS

Most batt insulation, such as fiberglass or mineral wool, is designed and tested assuming it fills the space between framing members. In a steel wall with studs spaced

16 or 24 inches on center, however, those studs can reduce the effective R-value of the wall assembly by as much as 50% compared to its rated performance.

For example, an R-19 fiberglass batt installed between wood studs might perform close to its rated value. The same batt installed in a steel stud wall may only deliver an effective R-9 or R-10 because the steel members bypass the insulation.

THE ROLE OF CONTINUOUS INSULATION

The most effective way to deal with thermal bridging is to add continuous insulation (CI)—a layer of insulation installed on the exterior side of the framing, running uninterrupted across studs, joists, and other members.

Common materials used for CI include:

- Rigid foam boards (polyiso, XPS, EPS)

Code Reference: Insulation Requirements for Steel-Framed Assemblies

Source: *2021 International Energy Conservation Code (IECC) and ASHRAE Standard 90.1-2022*

Steel-Framed Wall Assemblies (Commercial Buildings)

Climate Zone	Minimum Required Insulation	Typical Assembly Example
3–4	R-13 cavity + R-5 continuous	R-13 batt between studs + 1” polyiso board exterior
5–6	R-13 cavity + R-7.5 continuous	R-13 batt + 1.5” polyiso
7–8	R-13 cavity + R-10 continuous	R-13 batt + 2” polyiso or mineral wool board

Code Reference:

- IECC Table C402.1.3, *Opaque Thermal Envelope Requirements by Assembly*
- ASHRAE 90.1 Table 5.5-1 through 5.5-8, *Building Envelope Requirements by Climate Zone*

Steel-Framed Roof Assemblies

Climate Zone	Minimum Required Insulation	Example
3–4	R-25 continuous above deck	Two layers of 1.5” polyiso staggered over metal deck
5–6	R-30 continuous above deck	Two layers of 2” polyiso
7–8	R-35 continuous above deck	4” total polyiso or mineral wool board system

Code Reference:

- IECC Table C402.1.3 (Roof Assemblies, Metal Building Roofs)
- ASHRAE 90.1 Section 5.5.3.1.1

Steel-Framed Floors (Over Unconditioned Spaces)

Climate Zone	Minimum Required Insulation	Example
3–4	R-19 cavity	Fiberglass batt between joists
5–8	R-30 cavity	Mineral wool batt between joists

Code Reference:

- IECC Table C402.1.3 (Floor Assemblies)

Best Practice Notes

- Continuous insulation (CI) must be *uninterrupted* across all framing members.
- Thermal breaks (e.g., isolator clips, composite spacers) may be used to reduce conductive heat paths.
- Always verify regional code amendments and energy performance targets before final design. MB

Chattanooga Christian School. COURTESY OF CURBED CONSTRUCTION.

- Mineral wool boards (rigid or semi-rigid)
- Spray-applied insulation (closed-cell spray foam, when used as a continuous layer)

By covering the steel with an uninterrupted insulating layer, thermal bridging is significantly reduced.

"Continuous insulation isn't just about meeting code," Woody explains. "It pays back in comfort and durability. If you skip it, you're basically building in a problem that will cost more over the life of the building."

COMBINING CAVITY AND CONTINUOUS INSULATION

Most builders use a hybrid approach: cavity insulation inside the steel framing combined with continuous insulation outside.

"On our mixed-use commercial PEMB projects, insulation and soundproofing needs vary from one space to another," says Woody. "The climate-controlled areas are where performance really matters, while the warehouse side can be more cost-conscious. What we've found works best is rolled batt or spray foam insulation on the metal exterior walls, and then batt insulation on the perimeter and interior walls of the conditioned space. That balance has proven to be both reliable and cost-effective."

MOISTURE AND AIR CONTROL

Because steel is such a good conductor, condensation control is crucial. Even minor air leaks can lead to moisture accumulating inside wall or roof assemblies.

"Steel is unforgiving with moisture," Woody notes. "On one job we had a few unsealed penetrations around mechanical lines and it led to condensation inside the wall cavity. Within months fasteners were corroding. Since then we make it a point to seal every joint and transition carefully."

Closed-cell spray foam can provide additional protection. "It adds R-value and helps seal where steel tends to sweat," Woody explains. "I don't treat it as the only line of defense, but in some assemblies it gives the owner peace of mind that condensation won't become a problem."

Proper detailing of air barriers, vapor retarders, and drainage planes is essential. Builders should ensure air barriers are continuous and penetrations are sealed, and vapor control layers are positioned according to the building's climate zone.

ROOF AND CEILING ASSEMBLIES

Roofs framed with light-gauge steel present similar challenges: thermal bridging and condensation.

"With steel roofs, especially low-slope systems, insulation mistakes show up quickly," says Woody. "The approach that has worked best for us is combining above-deck insulation with batts inside the structure. That gives the right performance and keeps call-backs down."

Above-deck insulation—rigid foam or mineral wool boards—is particularly effective at breaking thermal bridges and maintaining consistent surface temperatures across the roof deck.

MOISTURE MANAGEMENT FROM THE GROUND UP

"Moisture control and insulation really start in the slab," Woody adds. "Using rigid insulation and a commercial vapor barrier system helps keep moisture from escaping through the concrete and into the building."

Moisture is the long-term threat for all steel-framed assemblies. "Drainage, flashing, and site grading are just as important as the insulation itself," Woody says.

COURTESY OF CURBED CONSTRUCTION.

"In metal buildings the base plates and window details are usually what make or break the envelope."

CODE COMPLIANCE

Builders should always verify their insulation strategies meet local codes. Most reference **ASHRAE 90.1** or the **International Energy Conservation Code (IECC)**, which set minimum R-values for steel-framed assemblies.

In many climate zones, a steel-framed wall might require R-13 cavity insulation plus R-5 continuous insulation to comply. Without CI, meeting these standards is nearly impossible. Energy codes continue to tighten, so planning hybrid assemblies now helps future-proof projects.

THE BOTTOM LINE

"At the end of the day, a metal building can be every bit as comfortable and efficient as any other type of structure," Woody concludes. "You just have to respect the physics of steel, plan for thermal bridging, manage moisture, and treat insulation as an investment instead of an afterthought."

Light-gauge steel framing offers outstanding structural performance and durability. With proper insulation design—balancing cavity and continuous insulation, controlling air and moisture, and following code—builders can ensure these structures are energy-efficient, comfortable, and built to last. **MB**

COURTESY OF CURBED CONSTRUCTION.