

SPECIAL SECTION

FLIP TO ROOFING ELEMENTS

DECEMBER 2024
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METAL ROOFING[®] MAGAZINE

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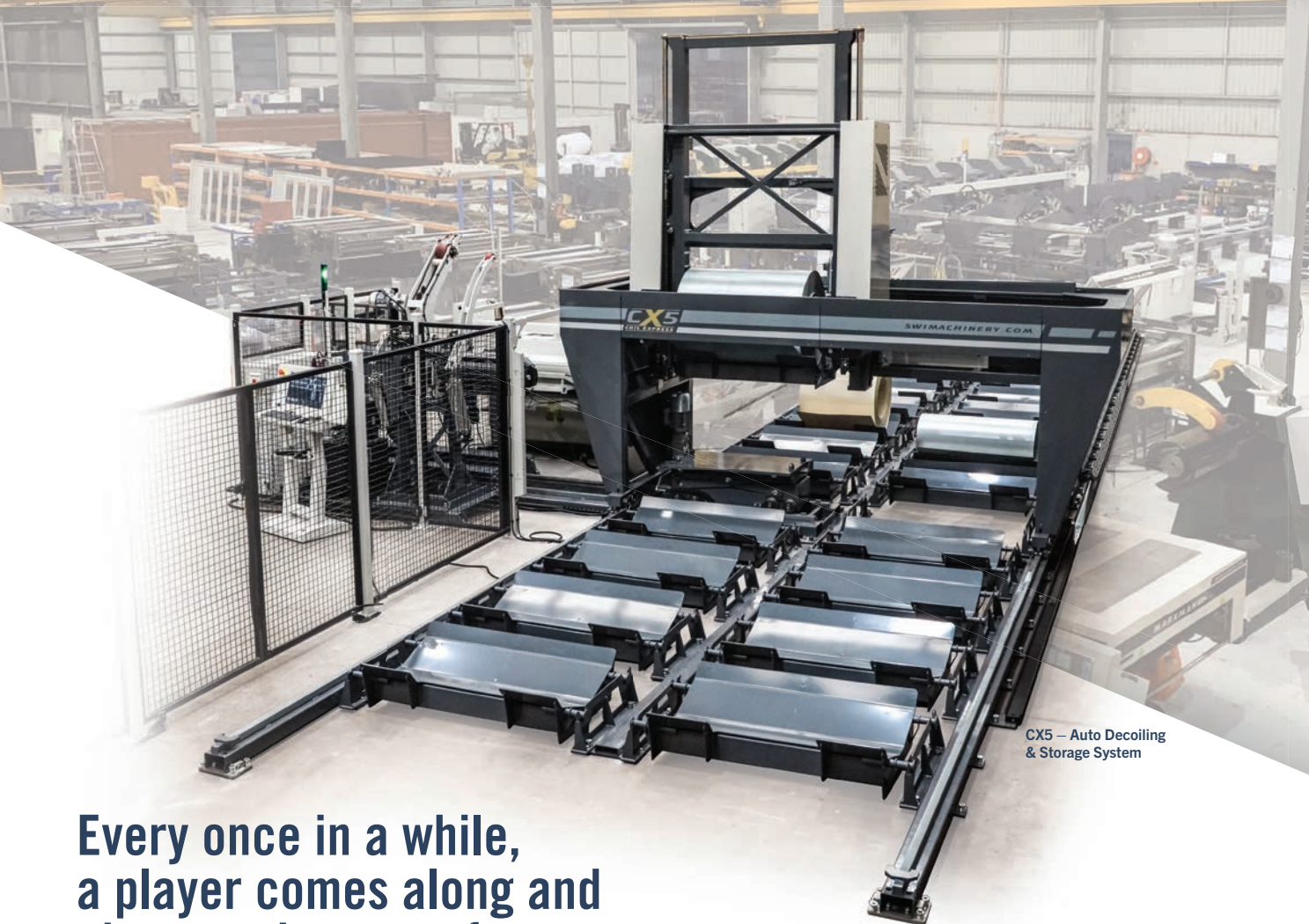
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It's OK To Just Say 'No'

I have been fortunate enough in recent weeks to deal with government and pseudo-governmental bureaucracy and intrusion.

The first was the Beneficial Owner Identification. Please remember that the BOI must be submitted prior to January 1, 2025. The website to submit this is www.fincen.gov/boi.

The other item was a Workers Compensation Audit. You can thank them for this Publisher's Letter and the reminder regarding the BOI.

During the audit they forwarded a list of "required information." On the list were two problematic items. They requested a P&L for our company and our disbursements, including those to principals. My response, quoted from my last email to them was, "I fail to see how

our P&L or our ledger/disbursements are relevant to your request. So without an explanation, I will not be supplying them."

They accepted that, and made no attempt to explain why they need what they asked for. I immediately start asking questions. The first and most aggravating question is: Who else would receive that information?

When organizations, agencies or people ask for information, please start saying no.

I went to the doctor for a knee injury. They asked about my alcohol consumption. I responded with: "Do you think I was drunk and twisted my knee falling?" They asked if I had been depressed. I responded: "Only because my knee hurts." They asked if I had guns in the

house. I responded: "Do you think I shot myself in the knee?"

The BOI is, unfortunately, unavoidable. Completely unnecessary since they have all of the information other places, but unavoidable. Much of the intrusion into our businesses, privacy and life is avoidable. We are too used to being cooperative and following directions. Where and when appropriate, please start saying, "No, that is not your business." I tend to be a smart alec, so I answer that way.

You can be polite, but ask why they need what they request. If there is push-back and they do not get the information they are seeking, maybe there will be fewer intrusions.

If it is not their business, please just say no.

— Gary Reichert, Publisher

A bit of fun ... brought to you by SWM

As we prepare this issue for the printer, the calendar is sliding into the Thanksgiving and Christmas holidays. We here at Shield Wall Media wish you all peace, blessings, and success for the rest of this year and in the coming new year.

We all work hard all year long. Once in a while we need a little break. I hope you enjoy this little WORD SEARCH puzzle we've put together. Search the grid at the right for the words listed below. You'll find the words hidden vertically, horizontally, and on the diagonal. They can also be backwards! Let us know what you think ... if you'd enjoy an occasional puzzle break in future editions, we'll "work" it in.

— Karen Knapstein, editor

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| BOOT | FASCIA | PANEL | SHINGLE | TILE |
| CAP | FASTENERS | PURLIN | SLATE | UNDERLAYMENT |
| CLOSURE | FLASHING | RIDGE VENT | SNAP Z | WATER SHIELD |
| CUPOLA | GALVANIZED | SCREWS | SNOW GUARD | WEATHERVANE |
| DOWNSPOUT | GUTTER | SEALANT | SOFFIT | ZINC |
| DRIPSTOP | INSULATION | SHAKE | SPIRE | |

CONTENTS

FEATURES

- 6: Raising The Roof**
Publish a roofing project, get a free news release
- 12: Metal and Solar**
Future-proofing metal roofs
- 16: Achieving Excellence**
With onsite roll forming
- 20: METALCON Review**
Metal shines at Atlanta event
- 24: Top Product Awards**
METALCON Product Leaders
- 26: Building Information Modeling**
An introduction to BIM
- 28: Solar & Snow Guards**
Designing to work together
- 32: Ladder Safety**
March is Ladder Safety Month
- 34: Business Profile**
Get to know McElroy Metal
- 42: Flashback 2006**
Shake facsimiles
- 49:**



DEPARTMENTS

- 3 Publisher's Message
- 8 Supplier News
- 36 Business Connections
- 40 New Products
- 46 Project of the Month
- 49 Construction Survey Insights



FEBRUARY PREVIEW

- IRE Preview ■ Zinc
- Seaming Best Practices

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ON THE COVER:

St. Peter Lutheran Church recently had a new metal shake roof installed. SHIELD WALL MEDIA PHOTO.

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INDEX OF ADVERTISERS

| Company | Page # |
|--|------------|
| AceClamp..... | 22, 41 |
| Acu-Form | 37 |
| Advanced Architectural Sheet Metal & Supply..... | 41 |
| AppliCad Software..... | 19 |
| ASC Machine Tools Inc..... | 37 |
| ASCO Machines USA..... | 36 |
| Aztec Washer Company..... | 36 |
| Cold Spring Enterprises..... | 36 |
| Daystar Systems LLC..... | 38 |
| Direct Metals Inc..... | 37 |
| Dripstop™..... | 41 |
| Dynamic Fastener..... | 7, 41 |
| Englert Inc..... | 25, 41 |
| Everlast Metals..... | 36 |
| Formwright | 13 |
| Golden Rule Fasteners..... | 37 |
| Kevmar Manufacturing..... | 37 |
| Kirsch BP/Sharkskin Roof Underlayments..... | 9 |
| Levi's Building Components..... | 41 |
| Marion Manufacturing..... | 36 |
| Metal Rollforming Systems..... | 23, 41 |
| Metaforming LLC | 27 |
| MWI Components..... | 41 |
| New Tech Machinery | 41 |
| Perma-Column LLC..... | 38 |
| Pine Hill Trailers..... | 36 |
| Planet Saver Industries / GreenPost..... | 37 |
| Raytec Manufacturing..... | 21 |
| Red Dot Products, LLC..... | 36 |
| RetroFitClip | 38 |
| rFOIL Reflective Insulation | 37 |
| Roll Former LLC..... | 30 |
| S-5!..... | 29 |
| Samco Machinery | 38 |
| Sommer USA..... | 41 |
| SpeedLap LLC..... | 36 |
| Stan Group dba: Liberty Seamless..... | 38 |
| Steel Dynamics | 17, 41 |
| SteelGrip SAMM, Inc..... | 38 |
| SWI Machinery..... | IFC, 41 |
| True Metal Supply | 41 |
| United Steel Supply..... | 11, 37, 41 |

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Gary Reichert,
Publisher, Shield Wall Media

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Inspire Your Peers, Reap The Rewards

By Karen Knapstein

In the May edition of Metal Roofing each year, we feature outstanding metal roofing projects that showcase dynamic materials installed with skill and ingenuity. This issue is entirely dedicated to highlighting striking metal roofs, inspiring our roofer-subscribers to better identify and meet market needs.

As you know, metal is well-suited for all types of roofing projects, from residential to industrial. By spotlighting the potential of metal roofing design and installation, we aim to advance the industry.

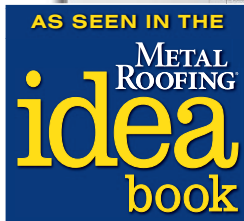
As a project participant, you'll enjoy numerous benefits. If your project is selected for publication, your business will receive free publicity in our nationally circulated magazine, dedicated exclusively to metal roofing. Even if your company operates regionally, this offers national recognition.

Additionally, you'll receive a badge that reads, "As Seen In Metal Roofing Magazine," marking your company as one of the few selected for publication. You can use this badge in your marketing materials, on social media, or wherever else you find suitable. It will help your company stand out among your peers.

New for 2025 is another valuable benefit: You'll receive a complimentary, pre-written news release announcing your company's selection and publication from the pool of national submissions. The news release will be ready to go—just send it to your local news outlets! Considering the typical cost of professional press release services, this represents significant savings.

Metal Roofing Magazine, launched in 2001, reaches over 25,000 readers in the metal roofing industry. By presenting your project as a solution to industry challenges, you'll inspire fellow roofers to enhance their performance and contribute to the growth of the industry.

Today is the day to inspire your peers by submitting a project for the Metal Roofing IDEA Book. The easiest way to contribute is by visiting <https://readmetalroofing.com/metal-roofing-project-submission-form/> (or scan the QR code). Simply fill in the required details (company and project specifics, along with a list of components and materials used) and upload clear, high-resolution images. Once submitted, you'll receive confirmation that your project details have been received. Remember: The more comprehensive your submission, the greater your chances of publication.



If your project is selected, you will be notified and given the opportunity to review the page(s) before publication. You'll also receive a high-resolution file of the pages for your marketing efforts, along with the digital badge and the pre-written news release for distribution to local news outlets.

For any questions about how to get a metal roofing project published in the Metal Roofing IDEA Book, contact editor Karen Knapstein at karen@shieldwallmedia.com or call 715-513-6767.

About Metal Roofing

Metal Roofing Magazine is a business-to-business publication exclusively serving the metal roofing industry. It covers the unique aspects of the metal roofing process, from coil and coating to manufacturing, installation, and maintenance. Metal Roofing Magazine delivers valuable insights from industry experts, the latest technical and technological advancements, and how best to apply that knowledge. It also provides information about the newest components and best practices in metal roof installation, repair, and replacement. [MR](#)



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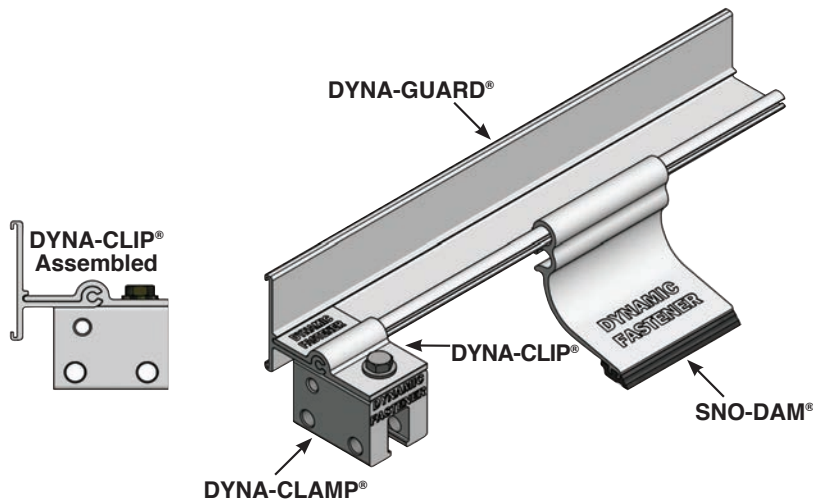
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Nucor® Corp. Expands With New Metl-Span® Facility in Utah

Metl-Span®, a Nucor® company, has opened its new insulated metal panel manufacturing facility in Brigham City, Utah. This is Metl-Span's eighth manufacturing facility in the U.S. and Canada. Renowned as North America's largest steel producer and recycler, Metl-Span's parent company, Nucor, produces steel by recycling scrap metal in electric arc furnaces to make high-quality steel products, positioning itself as a global leader in sustainable steel manufacturing.

"The opening of our new insulated panel facility in Utah marks a significant expansion that allows us to better reach and serve our customers in the western United States and Canada," said Thad Chapman, VP/General Manager, Nucor. "This state-of-the-art facility will greatly enhance our ability to deliver the unparalleled level of service that our customers have come to expect."

The new \$35 million, 127,000 square foot facility will produce Metl-Span's range of insulated wall and roof panels for use in various end markets including warehousing, distribution and data centers. Insulated Metal Panels (IMPs) offer a cost-effective solution for regulating indoor climate conditions, reducing energy consumption for building owners and lessees.

Designed with sustainability in mind, the new facility features cutting-edge

energy efficiency thanks to a facade of high-performance IMPs used for walls and roofs from Metl-Span. The panels achieve high insulation values with a foam system that features low global warming potential and zero ozone depletion potential.

With its headquarters in Lewisville, Texas, Nucor's insulated metal panel team can design, produce and deliver close to 100,000 tons of insulated panel products every year. They service customers across North America with a range of sustainable solutions for all their construction needs.

Malco Flip Bit Earns Pro Tool Innovation Award

Malco Tools has announced that its new 7-in-1 C-RHEX® Flip Bit has earned a 2024 Pro Tool Innovation Award (PTIA) in the "Specialty Driver Bits" category.

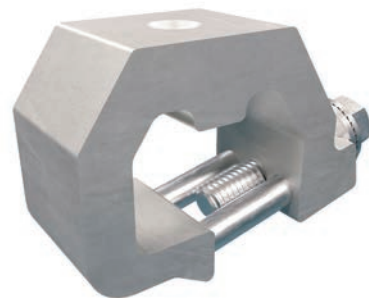
Now in its 12th year, the Pro Tool Innovation Awards evaluate hundreds of cutting-edge tools from across a wide variety of industries and manufacturers. This year, over 100 different manufacturers and brands submitted nearly 400 products in dozens of categories for a chance to take home a 2024 Pro Tool Innovation Award.

The awarded products were evaluated by a distinguished panel of judges, including contractors, construction business owners, tradespeople and media professionals. Winners stood out for

their innovative features, superior power delivery, revolutionary ergonomics, technological advancements, improvements in jobsite safety or exceptional value.

"It's an honor to earn the Pro Tool Innovation Award for our new 7-in-1 C-RHEX® Flip Bit," said Rebecca Talbot, vice president of marketing at Malco. "We designed this tool with precision and durability in mind, making Malco the top choice for superior quality and fastening performance on the job site."

"This marks our 12th year of hosting the PTIA Awards, and each year we witness an increasing level of innovation from both large and small companies," said PTIA executive director Clint DeBoer. "Every Pro Tool Innovation Award celebrates a product developed by passionate people who, like us, believe the standard we're used to is no longer good enough."



AceClamp A2-T Approved by DSA, California

AceClamp® A2-T standing seam metal roof clamp has been approved

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by California's Division of the State Architect (DSA). The Division of the State Architect provides design and construction oversight for K-12 schools, community colleges, and various other state-owned and leased facilities. The DSA requires rigorous third party testing to ensure adequate linear and vertical hold is achieved.

The AceClamp A2-T is the newest and most robust clamp offered by AceClamp. The patented push-pin design and self-locking mechanism provides a strong and reliable connection for solar attachment and snow retention needs. The A2-T clamp was designed to fit the bulb style and T panel seam.

"Providing solutions is what AceClamp does and when the California school was looking for a standing seam metal roof clamp to fit their roof seam in order to attach solar panels, AceClamp stepped up with our A2-T clamp," said Brad Wasley, Vice President of PMC Industries, Inc. the manufacturer of AceClamp. "We have a superior clamp design and great team at AceClamp and are proud to be listed with the DSA."

Central States Recognized By Certified EO

Central States, a leader in metal building components, roofing, and building systems, has announced that it has become a member of Certified Employee-Owned (Certified EO), the leading certification program for employee-owned companies in America. Central States is 100% employee-owned by its 1,400 employees. The announcement coincides with the celebration of National Employee Ownership month observed by businesses across the country every October.

"We are thrilled to be recognized by Certified EO for our commitment to fostering a culture of ownership and empowerment at Central States," Chief Financial Officer Chad Ware said. "This collaboration will help us provide invaluable resources and education to both our current and future employee-

owners, ensuring they are well-informed and engaged in our shared mission to educate and inform them no matter where they are on their journey to financial freedom."

To become a member of Certified EO, companies must pass a rigorous certification process to demonstrate that their employees own at least 30% of the business (exclusive of company founders), access to ownership is open to every employee, and the concentration of ownership is limited. These strict requirements mean that very few American companies reach that standard and a much smaller percentage are 100% employee-owned like Central States. The Certified EO program provides best practices, market insight, communication support, and a host of educational resources to the companies it certifies.

Founded by Carl Carpenter in 1988, Central States continues to build and maintain customer loyalty through their unique and focused attention to customer service, with the customer promise of "Right. On Time. Every Time." being a key corporate tenet. Central States became fully employee-owned in 2011 to provide financial freedom for the now 1,400 employee-owners across 13 locations nationwide, with two more manufacturing facilities set to open in 2025.

Hy-Brid Lifts Adds Director of Sales for Western US

Hy-Brid Lifts, an industry leader in aerial lift equipment, announces Charlie Haskin as Director of Sales covering the western United States. Haskin's responsibilities include providing customer support as well as continuing the growth and channel development of the Hy-Brid Lifts line of low-level scissor lifts.

"I'm excited to join this team and to be part of the growth for the Western Region by building upon my existing customers and boosting new relationships," Haskin said. "After visiting our manufacturing facility in Wisconsin, I'm confident in




Charlie Haskin, Hy-Brid Lifts

the quality of our equipment and solid support of our service and leadership teams. With over 20 years' experience split in equipment manufacturing sales and general rental, I understand the importance of quality and support for our customers. Along with the new product launching in 2025, I have no doubt in our success for the future."

Haskin brings 20 years of industry knowledge and experience to his new role, largely derived from his time in equipment sales, dealerships and the equipment rental industry. During his time in these sectors, he had a strong emphasis on customer relationships.

"We're thrilled to welcome Charlie to the Hy-Brid Lifts team as he takes on the western United States region. His extensive knowledge in sales and the rental industry will enhance our ability to serve our customers," said Eric Liner, CEO of Custom Equipment LLC. "Charlie Haskin is a great addition, and we're excited about the valuable contributions he will make toward our company's continued growth." **MR**

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Metal Roofing and Solar Panels



The characteristics of high-quality metal roofs make them suitable for today's long-lasting solar systems. PHOTO COURTESY OF PPG.

By PPG

Sustainability continues to shape innovation in the building and construction industries. However, true sustainability extends beyond just environmental considerations. It must also account for durability and longevity to ensure buildings stand the test of time, making the most of the precious resources dedicated to manufacturing products and building structures.

The dual objective of elevating both sustainability and endurance makes a strong case for metal roofing. Metal roofs are long-lasting solutions that are increasingly being paired with solar panels to deliver on the sustainability and energy efficiency required for modern construction and renovation jobs.

In essence, it's a perfect partnership, particularly as demand for renewable energy sources rises.

Solar roofing is not new, but it did not see mainstream adoption until around 2010. According to the Solar Energy Industries Association, solar roofing panels have seen an average annual growth rate of 25% in the last decade alone, representing a significant boom since the turn of the millennium.

Understanding the benefits of combining metal roofing

with solar panels can lead to more informed decisions and better outcomes for residential construction projects, both for installers and homeowners. And by leveraging advanced coatings technologies from industry leaders such as PPG, metal roofs can achieve even greater performance, ensuring both the roof and solar panels withstand harsh environmental conditions without compromising on aesthetics or functionality.

Traditional Asphalt vs. More Modern Metal

Industry research reveals that asphalt shingles account for roughly 75%¹ of roofing projects in the U.S. today, with metal roofing following behind at around 17%.²

Yet despite the dominance of traditional asphalt shingles, solar panels have a harmony with metal roofing that simply does not exist with their asphalt shingled counterparts.

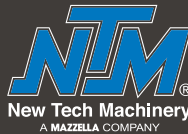
Metals roofs are designed and warranted to last more than 30 years. The same goes for solar panels. Compare that to traditional asphalt shingles on a roof, which traditionally last 15 to 20 years on average.

The discrepancy in product lifespan presents a construction challenge for homeowners with solar panels on an asphalt roof, as the lifespan of the solar panels often exceeds that of the

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shingles.

Eventually, this situation frequently necessitates the removal and reinstallation of the solar panels once the asphalt roof needs to be replaced, incurring additional costs for new roofing materials, labor, and the reinstallation of the solar panels.

Overcoming Historic Construction Challenges

The primary construction challenge when using asphalt shingles with solar panels is the need to perforate the roof to attach the steel brackets that are used to support the panels. By puncturing the building envelope, it becomes more susceptible to moisture intrusion and potential damage of the substrate and beyond. For that reason, using solar panels on an asphalt roof requires robust sealing methods to prevent leaks and maintain the roof's integrity, which can be a challenge.

Metal roofs offer a more seamless solution.

Metal roofs, especially those with standing seams, allow for the attachment of solar panels without penetrating the roof's surface. This method helps to preserve the roof's integrity and ensure a longer service life compared to asphalt shingles.

In addition, the warranties included with metal roofs and solar panels are more closely aligned. While asphalt shingles may come with a 30-year warranty, their actual service life often falls short of that. A metal roof, especially one finished with high-performance coatings, is more equipped to match the longevity of solar panels, ensuring consistent performance over time. The two materials combined offer an integrated system with expected lifespans that more closely match.

Built to Last: Coatings for Metal Roofs and Solar Panels

Coatings from industry-leading organizations like PPG are designed to enhance the lifespan, appearance and long-term performance of metal products even further.

Many solar panel manufacturers protect their products with the same coatings that PPG manufactures for use on metal roofing panels. This ensures that the aesthetics and performance of both materials remain consistent throughout the life of the roofing system, offering UV stability and long-term durability. This ensures the solar panels and the roof beneath them can withstand harsh environmental conditions without degrading in appearance or function.

PPG supplies leading solar panel manufacturers with coatings that have been tested to meet FGIA/AAMA 2605 standards, the highest architectural specifications with strict performance requirements. PPG coatings that meet this specification are 70% fluoropolymer resin-based, the very same resin system used on solar panels.

Coatings such as PPG DURANAR® liquid coatings provide excellent weather and corrosion resistance, essential for these types of roofing systems using metal materials primarily. These thermal set coatings create a plastic-like protective layer, preventing corrosion and maintaining color integrity of the metal



Contemporary coatings provide excellent weather and corrosion resistance, and also offer critical flexibility that accommodates the natural expansion and contraction of metal roofs. PHOTO COURTESY OF PPG.

substrate. The coatings are designed to not chalk or color shift, and they offer critical flexibility that accommodates the natural expansion and contraction of metal roofs without cracking or breaking. This is particularly critical in warm, sunny climates in the south and southwestern United States.

Performance from the Top Down

Choosing a metal roof for a solar panel installation offers significant advantages in terms of longevity, performance and energy efficiency compared to traditional asphalt shingles. To further bolster the roofing system, PPG's advanced coating technologies can be incorporated. They play a pivotal role in ensuring that the benefits are maximized, making these coatings the preferred choice for metal roofs supporting solar installations.

Ultimately, it is critical to mount solar panels on a foundation that will last as long as they are designed to. Metal roofs with high-performance coatings are the ideal option with long-term service that is proven. Metal panels are both flexible and modular, allowing for the integration of a portion of solar panels on the roof (with the option to add more later) or expanding to accommodate a home addition.

The construction industry is increasingly prioritizing sustainability, focusing on everything from eco-friendly materials and carbon footprint reduction to energy-efficient product lifecycles. With the rising popularity of solar panels and metal roofs, especially in residential construction, unlocking their full potential hinges on the advanced material science behind today's high-performance coatings. **MR**

¹ U.S. Roofing Market Size & Share | Industry Analysis 2024-2032 (expertmarketresearch.com)

² Metal Roofing Alliance: Residential Metal Roofing Continues to Make Strong Gains in U.S., According to Latest Industry Report

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On-Site Roll Forming

On-Site Panel Fabrication Supports Construction of Intricate Roof Designs

By Brian McLaughlin

The latest roofing trends put a spotlight on sustainability, performance and aesthetic finesse. Against this backdrop, metal roofing panels top the list of viable options. Because metal roofing panels are available in a wide range of colors, profiles and widths, they can contribute to a sought-after aesthetic while meeting the performance criteria desired for today's roofs. Their versatility in application makes them ideal for accommodating nearly any project design vision.

If you step back and think about how metal roofs are constructed, portable roll-forming machines allow roofing contractors to fabricate metal roof panels on-site. This equipment can be used to form shorter, smaller panels, which can then be used to create intricate sections of the roof. Often, these smaller panels are installed in a geometric pattern to create an eye-catching design. When you take a bird's eye view of the project, these detail-oriented sections of the roof ultimately contribute to a statement-making exterior. What's more, traditional decorative roofing elements such as cupolas, dormers, awnings and more can also be created with panels formed on a roll-forming machine.

Taking this on-site manufacturing approach saves the contractor a substantial amount of time and effort over cutting down prefabricated panels. Contractors who fabricate panels on-site can also adjust quickly and address any imperfections efficiently. This not only supports streamlined construction practices but can also contribute to increased customer satisfaction.

Bring the fabrication plant to the project site

Portable roll-forming machines are condensed versions of the equipment used at panel fabrication plants. These machines



Decorative metal roofs.
PHOTOS COURTESY OF
DREXEL METALS

manipulate a metal coil with a series of rollers into the desired panel profile. Portable roll formers often include a shear or guillotine at the end of the machine that cuts formed coil into the desired length.

Because this type of roll-forming machine can be mounted to a trailer and hauled to a jobsite and includes a decoiler and run-out table, it allows roofing contractors to form and cut panels to the exact length a project requires. The ability to fabricate panels with custom lengths helps solve challenges that can arise when intricate, decorative elements are a part of the roof design. Further, with this equipment, crews can fabricate and install simultaneously—as opposed to ordering material and waiting for its arrival. Due to the machine's size, contractors with the proper lifting equipment can hoist them to roof decks, when required, to ease installation challenges.

Portable roll-forming machines are available in gas powered or electric options. They can include multiple profile rollers and a high degree of automation. With multiple options available, roofing

contractors can invest in the equipment that best meets their business needs. Further, some metal providers offer programs that help roofing contractors invest in portable roll forming, train their crew on operation and provide proactive service plans to ensure a machine is running in its most optimal condition. These programs open the doors to the benefits of on-site fabrication to more metal roofing contractors.

On-site fabrication maximizes material usage

One of the most immediate benefits of on-site roll forming is that it allows metal roofing contractors to maximize their material investments. Because this equipment allows contractors to plan and fabricate panels to the exact length an application requires, it minimizes the need to cut and resize prefabricated panels. This is particularly beneficial on jobs that feature smaller, intricate roof sections that will contribute to the overall look of the project, or those that include more traditional decorative elements like

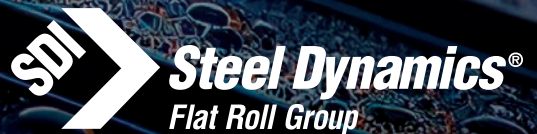
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cupolas, dormers, and awnings.

Creating any sort of ornate design element typically requires contractors to cut the roof panels to precise dimensions. This can increase wasted panel material as a poor or angled cut may require additional clipping to right the edge again. On-site fabrication allows contractors to form and cut the exact lengths they need for the intricate design elements to optimize the amount of material they use.

In terms of construction, this can reduce the bottom line in two ways. First, contractors who use on-site roll forming may not have to invest in as much material since they can maximize their yields with custom fabrication. Secondly, with less on-site waste, roofing contractors would not need to spend as much time and resources handling on-site clean-up and material disposal. Both benefits may increase profits and improve relationships with general contractors and project owners.

Portable roll-forming machines streamline construction

When contractors can form panel sizes to their exact measurements, they do not have to spend time measuring and cutting prefabricated panels. On-site roll-forming operators can program select machines to form and cut panels in batches, which increases efficiency and optimizes material use when constructing smaller sections of the roof. This capability can streamline installation through precision

construction.

Further, contractors can use on-site fabrication to quickly rectify less than perfect installation. While no roofing contractor plans for jobsite mistakes, they are a possibility—especially for non-standard roofing components. If a roofing element does not meet the quality desired, roofing contractors can fabricate and reinstall on the fly since they do not have to wait for panel shipments. In conjunction with streamlining overall construction, this ability can help roofing contractors spot and fix any mistakes prior to a final punch list. This can increase quality and customer satisfaction to solidify a metal roofing company's good reputation.



Investing in coil minimizes potential shipping damage and offers business opportunities

Portable roll forming also mitigates the potential for prefabricated panels to arrive damaged. The time lost while waiting for replacement material may delay project completion. This type of delay may lead to general contractors sacrificing the roof design element or removing a contractor from a project completely—both of which may negatively impact a contractor's bottom line. Shipping delays might also cause a domino effect that leads to lost business or dissatisfied customers in projects other than the one currently affected.

Contractors with portable roll-forming machines can invest in coil rather than panels to sidestep this issue. This allows crews to work on their own schedule. Likewise, coil is easy to store, which reduces constraints and potential missteps when planning shipments around other subcontractors.

Further, on-site fabrication can support a cut and drop business model, which lets roofing contractors form and cut roofing panels for other contractors—without having to purchase materials or install them. Instead, a contracting company only needs to provide the roll-forming equipment. With this capability, contractors can

specialize in creating panels for smaller sections of the roof or decorative elements, turning potential roofing competition into customers. This can generate income with a minimal crew and open the doors to more jobs by building a reputation for quality customizations.

Expanding what metal roofing contractors can offer

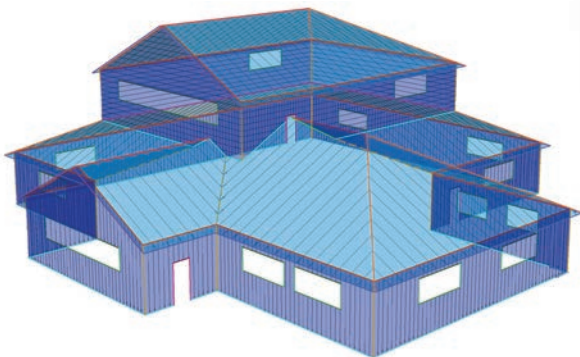
Portable roll-forming machines allow metal roofing contractors to have more control over their businesses. With this equipment, crews do not have to wait for prefabricated panels to arrive and do not have to plan, measure and cut materials. Further, these machines open potential business opportunities.

By being able to fabricate multiple profile types and panels that are the exact size needed for an application, contractors with portable roll-forming



machines have a distinct advantage when bidding on work—especially since they are able to form smaller, custom roofing elements, which contribute to the visual appeal of the building. They can also become a manufacturer to bring in more business. Both options position a roofing company to take their business to the next level. **MR**

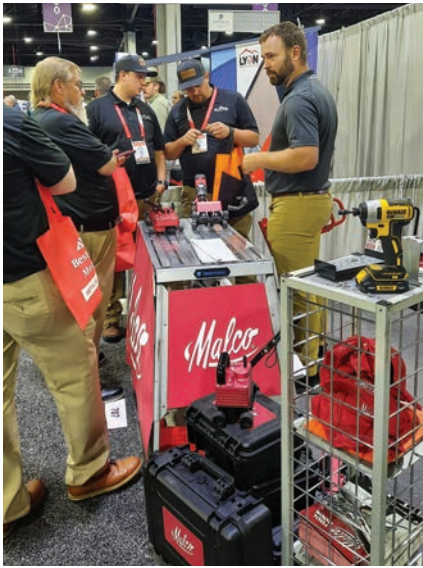
Brian McLaughlin is a graduate of Temple University and has been involved in the metal roofing industry for over 15 years. In his current role, he serves as the Director of Sales for Drexel Metals, A Carlisle Company. He has held many positions within Drexel Metals and has grown within the company and the industry as a leading expert in metal.



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METALCON 2024 Atlanta

Keynotes offer valuable insights for business and personal success



Malco Tools' Jon Olson answers METALCON attendee questions. The tool company is committed to providing metal roofers with the specialty tools that contribute to successful job completion.

Atlanta was a resounding success for METALCON attendees. With dynamic exhibits, inspiring keynotes, hands-on workshops, expanded networking and free educational sessions, the event brought together attendees from 50 countries to connect with leading industry experts.

"I came to learn about the metal building industry, and boy did I ever," said attendee James Conway of Davie, Florida. "I attended educational sessions, did a lot of networking and received a lot of on-the-spot education directly from the exhibitors — and the opening keynote was very inspiring."

Conway was referring to former National Football League Most Valuable Player and Super Bowl Champion quarterback, Joe Theismann, who opened the show with his keynote, *Game Plan for Success*. Theismann discussed the injury that abruptly ended his career and how he quickly realized the importance of



Combilift featured two equipment solutions in booth 1724. Machines are available in diesel, LPG, and electric.



ASCO Machines demonstrated a long-length bending machine.

team and leadership.

"You can't do it yourself," he said. "You need competition. It's what drives us. It's not about you: it's about the people you lead, and you can't forget that. Write down what your team wants to accomplish and your goals—personally, professionally, spiritually and financially. We have to provide the people we lead with the tools to be successful. As you lead



AkzoNobel's CERAM-A-STAR® Expressions, which mimics natural materials like wood, was a hot topic for discussion in booth 1515.

people, think of them as your crew. Every member of the team has contributed to you being there."

He continued, "Take time to congratulate yourself; be happy with you; like who you are. Enthusiasm carries us. You get excited and people around you get excited. If you don't believe in who you are, who is going to believe in you?"

Theismann talked about customer service. "Customer service is all about relationships. People don't care about how much you know until they know how much you care."

On day two, keynote speaker Dr. Anirban Basu, Chairman & CEO of Sage Policy Group, Inc., a Baltimore-based economic and policy consulting firm, presented *The Good, The Bad, & The Ugly: Financial Outlook and Trends for Metal Construction*.

"Coming into 2023, we thought a recession was inevitable," said Basu. "2022 was a terrible year. It simply has

not transpired. Consumers have gone on a spending tear and retail sales are up, but on services such as travel and concert tickets.”

“As of September 2024, there were 7.4 million job openings (288,000 available in construction) with job growth every month since December of 2020,” he said. “Certain areas of the labor market have weakened, and construction wage premiums are down compared to other jobs. Personal savings were up during the pandemic, and all those saving have now been spent. Prices are still rising.”

He cited a 23% overall inflation rate with the top three categories including energy, transportation services and tobacco and smoking products—not groceries. And credit card debt is the highest it has been since 2004 at \$1.14 trillion. “Consumers cannot keep spending as they have been,” said Basu. “Further eco-



Dr. Anirban Basu delivers “The Good, The Bad, & The Ugly: Financial Outlook and Trends for Metal Construction” to open the second day of METALCON 2024. COURTESY OF NEUBEK PHOTOGRAPHERS.

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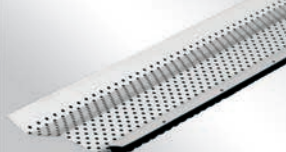
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Joe Theismann delivers the keynote address on the opening day of METALCON 2024. COURTESY OF NEUBEK PHOTOGRAPHERS.

conomic slowing is in front of us.”

Basu’s main takeaways were:

“We are a deeply indebted society currently facing high borrowing costs.

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That makes me pessimistic regarding the near-term outlook. Geopolitical and federal elections don’t help—source of additional concern distraction and risk.

Expect a slowdown next year, but baseline case no longer calls for recession.”

On the closing day of the show Dr. Melissa Furman of Career Potential, a consulting, training and coaching organization presented *Relevant Leadership: Navigate, Empower, Transform*.

“The business landscape moving forward is going to be different,” said Furman. “The workforce is aging so brace for the shift. Baby boomers currently make up 33% of the workforce so organizations are soon going to feel a leadership gap.”

She offered top 10 recommendations to stay relevant (with the top three being the most important):

- 1) Mindset is everything — Growth vs. fixed. “Train your brain that when you say something negative ‘flip it’ and say the same comment in a positive way.”
- 2) Self-awareness — Know who you are! Emotional intelligence is the ability to identify emotional information in oneself and in others, and the ability to manage emotions and focus.
- 3) Learn about others — Workers want to be respected: paid well; mentored; challenged; promoted; involved in decisions/ provide input; appreciated; trusted; empowered; and valued... “No one cares about the pizza!”
- 4) Communication — “Figure out your preferred mode of communication and make sure if you are managing a team, they know how you want to be communicated with.”
- 5) Manage burnout
- 6) Be tech savvy
- 7) Be socially responsible and trusted
- 8) Be innovative & adaptable
- 9) Develop advanced problem skills
- 10) Be data savvy — “Educate yourself on what to do with the data — ‘data will tell you any story.’”

METALCON 2024's State of the Industry Panel included (L to R) moderator Jeff Henry, Metal Construction Association (MCA); Paul Trombitas, FMI Corp.; Brian Partyka, Carlisle Construction Materials; Bob Zabcik, Z-Tech Consulting; Tom Seitz, InSeitz & Strategies; Sean McCue, Precoat Metals; and Chandler Barden, CIDAN Machinery.

Show attendees had the unique opportunity to network with peers and explore the latest innovations across more than 260 exhibits. The popular "Metal and Mimosas" women's event reached full capacity, uniting women in the metal construction industry, with an inspiring keynote to kick off the gathering.

Speed networking provided attendees with the chance to make more connections in one hour than at any other event, while the METALCON welcome party and The Backyard networking area proved to be major highlights, offering relaxed yet productive spaces for building relationships and sharing insights.

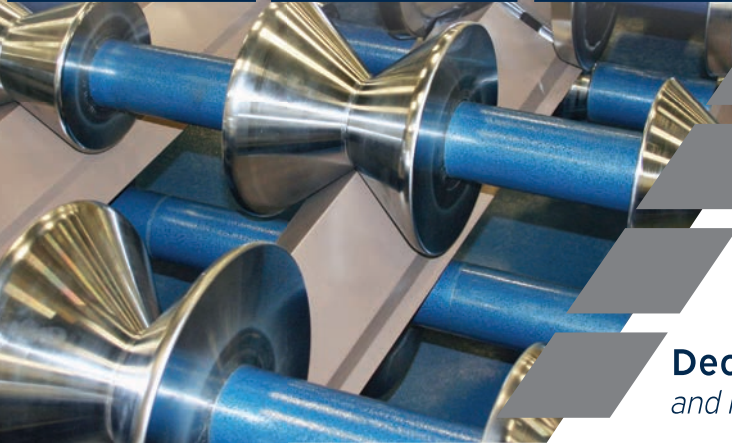
"We spoke at The Design District about



barndominiums, barndo trends and about the outreach we are looking to do with consumers," said Oliver Bell, COO of the Barndominium Company. "It was very well attended. We had architects, designers, and engineers. There is a lot of excitement in the metal world over what

is going on and the potential in the residential space. We met a lot of great people, saw a lot of new products, and got a lot of great ideas."

Next year, METALCON will take place from Oct. 21-23 at the Las Vegas Convention Center. **MR**



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METALCON Announces Top Products Award Winners

METALCON exhibitors were invited to nominate their stand-out products for the event's Top Products Award. The top three award winning products were unveiled at this year's show in Atlanta. Winners were determined via an electronic voting process, which took place before and during the event, with more than 1,100 votes from industry professionals.

The 2024 METALCON Top Products Award winners are:

FIRST PLACE: PPG

Product: PPG DuraNEXT™ Energy Curable Coil Coatings

PPG DuraNEXT™ energy curable coatings use an electron beam or ultraviolet energy to convert a liquid coating into a fully cured solid finish in seconds, without any significant loss of thickness or weight. This family of backers, primers, basecoats and topcoats represents an alternative to traditional coil coating systems.

"We are thrilled to be recognized as the number one top product in the metal construction industry," said Craig Smith, PPG Global Technical Platform Director, Coil Coatings. "Our innovative technologies boost productivity by eliminating the need for substrate heating and reducing curing time, as there's no waiting for solvents to evaporate. Additionally, our products are engineered to maintain the finish durability and aesthetic appeal of coil-coated products, offering exceptional hardness, scratch and chemical resistance, and high flexibility."

SECOND PLACE: Malco

Product: Power-Assisted Seamer/Cutter

Malco's power-assisted seamer and cutter is ideal for effortless seaming, cutting and removal of 1" or 1.5" single and/or double mechanical lock standing-seam panels efficiently. The new seamer enables the mechanical lock of standing



From left, Doug Viuhkola, Technical Service Manager, Coil PPG Industrial Coatings; Judy Geller, METALCON Vice President of Tradeshow, (presenting the awards on behalf of METALCON); Mary Syverson, Senior Marketing Manager, Malco Tools, Inc.; and Stephen Gosk, CEO, MetalForming, Inc.
COURTESY OF NEUBEK PHOTOGRAPHERS.

seam panels in less time while enhancing safety and expanding the range of compatible panel profiles. The power-assisted cutter cuts below the mechanical lock and through clips with precision, allowing for quick and safe removal of standing seam panels without damaging the cutting discs.

"Malco's power-assisted seamers and cutters are the latest innovative, high-quality additions to our metal roofing portfolio, representing the fastest seaming and cutting machines on the market," said Shane Norman, senior product manager at Malco. "We are honored to be recognized as a top product in the industry."

THIRD PLACE: MetalForming LLC

Product: Stolarczyk Coil Processing Solution

The new Stolarczyk Coil Processing Solution combines advanced technology, ease of use and robust performance in a single, comprehensive system. It features a Decoiler with 7-roll CNC straightening system and laser-hardened rolls to elimi-

nate coil set and ensure flat sheets, along with a 3-roll rotating film application for surface protection. The system's Slitting-Cutting section (ST-1250) uses large-diameter slitting knives (over 8") and a digital positioning system for precise cuts, while heavy-duty guillotine shears with 4-sided blades handle length cuts. The Stacking Table automatically lowers as stack height increases, with adjustable side and end stops for alignment. The system smoothly transitions into a high-speed Tension Stand & Recoiler at up to 150 feet per minute with easy one-person operation.

"Each year, we look forward to discovering the latest technologies and innovations presented at METALCON," said Stephen Gosk, MetalForming President & CEO. "This year, we are proud to be recognized for contributing one of the standout solutions."

To be eligible for consideration, products must have been introduced to the market after Jan. 1, 2023 and its manufacturer a participating exhibitor at METALCON 2024. **MR**

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Building Information Modeling

BIM: What It Is and Why It Matters

By Brenda Araujo, Microsoft Resources

Construction is a complex industry, and one sometimes mired in building regulations, planning permission, diagrams, blueprints, procurement documentation, accounting information and other vital data. That's where Building Information Modelling (BIM) comes in.

BIM aims to help construction stakeholders collaborate to create a project that meets all specifications and satisfies all parties.

The basics of BIM for low-rise construction

Building Information Modelling (BIM) is the art of creating a digital representation of the physical and functional characteristics of a project. It provides a shared knowledge resource for information about the project, helping support decisions taken throughout its lifecycle from inception onward.

Low-rise construction often involves residential buildings, small commercial properties, and light industrial structures. Such projects often have tight deadlines and budgets and cannot afford the overages and delays often faced by larger-scale projects. BIM provides a platform for integrating all relevant data into a single cohesive model.

Integrated design is another key concept affiliated with BIM. According to Harvard University's Energy and Facilities department, integrated design is "a holistic approach to high performance building design and construction. It relies upon every member of the project team sharing a vision of sustainability and working collaboratively to implement sustainability goals at appropriate phases during the project."

BIM and integrated design encompass

everything from architectural designs and structural engineering to mechanical, electrical, and plumbing (MEP) systems. Schematics and plans from a wide range of professionals are coordinated and combined, helping projects schedule overlapping engineering and building strands, while minimizing the critical project path. This has a knock-on effect on costs but minimizing downtime and overruns.

BIM enables better communication and collaboration among geographically dispersed teams.

In low-rise construction, the simplicity and scale of projects make them ideal for BIM implementation. Stakeholders can visualize the entire project in a 3D environment, identifying potential issues before they become costly problems.

This visual and data-rich approach ensures that all parties—from architects and engineers to contractors and clients—have a clear understanding of the project's scope, timeline, and budget.

There are publicly agreed standards for BIM, termed the National BIM Standard-United States® (NBIMS-US™). This seeks to ensure that best practices are followed, and project plans can be compared fairly, once a universal standard is implemented and applied.

How BIM can benefit rural construction projects

Rural construction projects often face unique challenges, including:

- limited access to resources
- reduced availability of skilled labor
- lack of innovative technology.

Furthermore, such projects often

receive less ongoing scrutiny than highly visible urban developments. Such projects can fall foul of unmet expectations if these are not laid down in detail before work begins. BIM practice ensures nothing vital is missed.

BIM can mitigate the above challenges by streamlining the planning and execution processes. By using BIM, project teams can coordinate more effectively, ensuring that materials and labor are used efficiently. They make sure logistical hurdles are addressed early in the planning stage, long before they engender cost implications or cause unnecessary delays.

Additionally, BIM enables better communication and collaboration among geographically dispersed teams. For rural projects, where team members might be scattered across various Counties or even States, this is invaluable. The centralized model allows everyone to access the latest information via the same online portal, reducing misunderstandings and delays.

Finally, BIM can support sustainability initiatives, which are particularly relevant in rural areas where preserving the natural environment is crucial. By optimizing design and construction processes, BIM helps reduce waste and improve energy efficiency, making rural projects more sustainable and environmentally friendly.

BIM tools and techniques for small-scale projects

Several BIM tools are specifically tailored for small-scale projects. Software such as Autodesk Revit, SketchUp, and ArchiCAD offer powerful yet accessible platforms for creating detailed building models. These tools can be used throughout the construction process, from initial design and visualization to documentation and construction

management.

For small-scale projects, BIM can simplify cost estimation and project scheduling. Tools like Navisworks and BIM 360 allow for detailed clash detection and coordination, ensuring that all systems fit together seamlessly. They reduce the risk of overruns or costly project reworking.

Incorporating techniques such as 4D scheduling (time management) and 5D cost estimation can further enhance project management. These advanced BIM capabilities provide a more comprehensive view of the project's progress and financial health, enabling better decision-making and resource allocation.

4D and 5D BIM recognizes that there are dependencies that extend beyond the availability of materials and personnel. Time windows and finance limitations play a vital role in a construction project's chances of success. Innovative BIM systems acknowledge the importance of these variables.

Training and resources for learning BIM

Learning BIM requires a combination of formal education, hands-on experience, and continuous professional development. Numerous resources are available to help individuals and teams get

up to speed with BIM technologies and practices.

Online platforms like LinkedIn Learning, Coursera, and Udemy offer courses on BIM fundamentals and specific software tools. For those seeking more structured learning, institutions like the Royal Institution of Chartered Surveyors (RICS) and the American Institute of Architects (AIA) provide certification programs and professional development courses.

Additionally, industry conferences and workshops are excellent opportunities to learn about the latest BIM trends and network with other professionals. Events like Autodesk University and the Building Innovation Conference showcase cutting-edge technologies and offer sessions led by industry experts.

The Associated General Contractors of America run a BIM education program to help construction professionals across the US learn this vital skill. The program is divided into four courses, including an introduction and modules focusing on technology, project execution and adoption/implementation.

For ongoing support, numerous online forums, and communities, such as the BIM Forum and RevitCity, provide platforms for professionals to share knowledge, ask questions, and collaborate on

projects.

BIM builds more professional construction projects and professionals

BIM changes the way low-rise construction projects are designed, managed, and executed—for the better.

By integrating all aspects of a project into a single digital model, BIM reduces errors, aids communication, and improves project outcomes.

For those in the construction industry, especially those involved in small-scale and rural projects, adopting BIM is a step toward sustainable, efficient, and successful construction. **MR**

Brenda Araujo has been with Microsol Resources since 2018 and currently holds the title of Training & Marketing Coordinator. She manages content strategy for digital marketing through social media posting and engagement, digital advertising as well as CAD/BIM training logistics in all three office locations including virtual training for the AEC community.




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Solar & Snow Retention

Mitigating Design Conflicts to Maximize Power Output and Snow Control

By Metal Construction Association

When planning a metal rooftop solar installation, extensive analysis is dedicated to the precise positioning and attachment of panels to maximize solar energy production. Simultaneously, in climates with significant snowfall, additional calculations are required for the proper sizing and placement of rooftop snow guards.

However, solar contractors often lack roofing expertise, while roofing contractors rarely specialize in solar installations. Consequently, designing and installing these two different systems to ensure they work seamlessly together can be quite challenging.

The primary conflict arises because solar contractors aim to install as much photovoltaic (PV) coverage as possible, extending from end to end and eave to ridge, maximizing the roof's surface area. This leaves little or no space for the necessary snow retention systems.

Explaining the science behind how snow retention systems work, Rob Haddock, metal roof consultant and founder of S-5! says, "There are two forces which densify a snowbank. One is the vector force, which is the snow pushing downslope parallel to the roof, and the second is the gravity load pushing straight down on the roof. These two forces amalgamate toward the eave end of the roof creating a 'densification zone' of sorts for the snowbank. This is where the snowbank has the greatest compressive strength.

"So, if you restrain the snow's lower end where it has the highest compressive strength, the job is done; you've



With an 8:12 roof pitch, the design and installation of both the solar modules and snow guard systems were effectively coordinated for this equestrian estate in Vernon, British Columbia, Canada. PHOTOS COURTESY OF S-5!



restrained the whole load. This is why a snow guard that is a few inches in height can restrain an entire blanket of snow that is many feet in depth.

"However, when PV modules are installed right down to the eave, this

crucial densification zone for snow guard placement is obstructed. Solar panel frames are not engineered to withstand lateral snow forces, making it impossible to attach snow guards directly to the solar modules.

"Ideally, the design should leave approximately 15% of the roof surface from eave to ridge for densification at the eave end clear of solar panels. The snow retention system is then installed at the downslope edge of that zone."

Opposing Systems

So, what happens if a roof is covered completely with solar panels, and the building owner faces issues with snow accumulation and rooftop avalanches affecting walkways, entryways and/or lower windows? A snow retention system

is now needed, but where does one install the system?

“One possible solution involves installing adjacent to the lowest row of solar and elevating the snow retention system above surface of the PV array,” continues Haddock. “While this might solve the snow avalanche potential, the snow guard placement will now cast a shadow on the PV modules, thereby compromising their power production.

“Another proposed solution involves removing a few PV modules to make room for snow guards. While this might seem like an easy fix, it actually creates a larger problem as solar systems are highly customized on a job-specific basis. This means that the entire electrical design, must be reconfigured to different resulting power generation values. This often requires disassembly and is cost prohibitive.

“If you start deleting modules, you have to re-jig the entire electrical system of that solar array. It’s a very major re-do.”

Optimized Design Integration

The ideal scenario is early collaboration between architects, solar design team, roofing contractors and snow retention manufacturers. “Everyone can huddle and address this issue in the pre-design stage,” Haddock advises. “This collaboration ensures that both systems are integrated seamlessly, but it seldom actually happens.”

A key advantage is the use of clamp-based snow retention devices, which attach directly to the standing seam roof without requiring roof penetrations. This protects the integrity of the roof and reduces the risk of leaks. Solar contractors perform their calculations, while roofing contractors, with input from snow retention manufacturers, calculate snow load requirements and determine optimal snow guard placement(s).

“It’s a travesty how often solar modules and snow retention systems are installed without proper engineering,” Haddock points out. “We’ve been preaching about this in both industries for over 30 years.”

The design also needs to consider the

local fire code requirements to allow space for emergency personnel to access the rooftop in case of a fire or other disaster—yet another reason to create this “solar-free” zone down at the eave.

Case in Point

Two projects that exemplify the proper integration of solar and snow retention systems are an equestrian estate in British Columbia, Canada, and a residential compound in Boulder, Colorado.

At the British Columbia estate, a 24-gauge standing seam metal roof was outfitted with 90 solar panels. The PV system was designed in conjunction with a snow retention system to manage the region’s significant snow loads. Both systems were installed without roof penetrations, preserving the roof’s integrity and preventing leaks.

“Our multipurpose barn was designed

and constructed to withstand time and elements in a challenging Western Canadian environment,” says Bruce Goode, the property owner. “The metal roof is performing exceedingly well, withstanding the heavy snow loads expected in British Columbia, and it provides an excellent platform for mounting the 90 solar panels.”

Careful planning ensured that the PV array would produce more than 30,000 kWh annually, while the snow guards provide full protection from rooftop avalanches.

At Calcaire House in Boulder, over 60 kW of solar panels were installed across multiple rooftops to meet the city’s strict energy codes. Wind loads were carefully calculated to ensure secure attachment, and snow guards were placed at the eaves. Installation began from the bottom row of panels and progressed

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The net-zero Calcaire House, located in Boulder, Colorado, features seamlessly integrated solar panels and snow retention systems. PHOTOS COURTESY OF S-51



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upwards, ensuring proper alignment and integration of both systems.

The rooftops, consisting of exposed timber, stone and steel, required careful coordination to align the solar array and snow retention systems. The PV and snow retention devices were color-matched to the black roof, providing aesthetic cohesion alongside functional performance.

Drawing insights from these two successful projects, it is essential for project teams to collaboratively plan and design both PV and snow retention systems concurrently. **MR**

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Every Step Matters

National Ladder Safety Month Coming in March



American Ladder Institute seeks to keep workers safe.

The months leading up to March and National Ladder Safety Month are critical because the milestone month does more than amplify a safety message; it also celebrates message penetration and accident reduction. The American Ladder Institute (ALI, <https://www.americanladderinstitute.org/>), the only approved developer of safety standards for the U.S. ladder industry, is the presenting sponsor of National Ladder Safety Month. ALI believes ladder accidents are preventable with thorough safety planning, training, and continuous innovation in product design. Through its advocacy for and promotion of Ladder Safety Month, people, organizations, and businesses receive and, in turn, help spread the message. Most important, more people learn about proper ladder safety.

Each year's National Ladder Safety Month has its own theme and focus areas for each week in the month. This year's theme is Every Step Matters.

Topics of weekly focus are:

Week 1: Training and Awareness

Week 2: Inspection and Maintenance

Week 3: Stabilization, Setup, and Accessories

Week 4: Safe Climbing and Positioning

The goals of National Ladder Safety Month are to raise awareness of ladder safety, decrease injuries and fatalities caused by ladder misuse, and increase the number of people certified in Ladder Safety Training.

There are so many resources available to help properly

train all tradespeople on how to use a ladder safely and effectively. ALI itself maintains three separate websites loaded with valuable information. Of particular interest should be laddersafetytraining.org. As its URL makes clear, the site is ALI's central hub for ladder safety training material of every type.

Individual users can register and deepen skills or brush up on safety. Managers and supervisors can customize curriculum for employees, create work groups, email training notices to their team members, and track who is taking their training – and how they're doing on their tests.

About the American Ladder Institute

Founded in 1947, the American Ladder Institute (ALI) is a not-for-profit trade association dedicated to promoting safe ladder use through ladder safety resources, safety training, and the development of ANSI ladder safety standards. ALI also represents the common business interests of its members, who are comprised of the leading ladder and ladder component manufacturers in the United States and Canada. National Ladder Safety Month, observed each March and spearheaded by ALI, is the only program dedicated exclusively to promoting ladder safety, at home and at work. **MR**



This ladder features the LevelSafe Pro ladder leveling system.
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Employee Owned and Continuously Improving

“It’s not just a job when you are an employee-owner!”

By Linda Schmid

McElroy Metal was founded by Thomas E. McElroy Sr. in 1963. He had served in the military, then settled down to run theaters in the Shreveport area with an uncle. He later bought a company called Pelican Supply, then sold that business and opened McElroy Metal in the same building.

His thought was that the only metal roof manufacturers were in Houston and New Orleans, which were a good distance away from Shreveport. And since local folks were paying shipping from New Orleans, he figured they could buy cheaper locally.

He started the company with two employees in Shreveport, Louisiana. They worked hard and stayed late every night to get the company going. In 1975, the company was passed on to Thomas’ son Tem’s capable hands to lead, and the company experienced great growth. In 2007 Tem passed the role of president on to his son Ian, while he became CEO.

Rolling On

Today McElroy Metal has grown into four national brands: McElroy Metal, McElroy Metal Service Centers (retail), Metal Mart for DIYers, and Monarch Metal Buildings. The company manufactures over 30 different roof and wall profiles, a full line of secondary substructural components and a cold-formed building product marketed under the name EasyFrame. Green Span Profiles is a joint venture with McElroy Metal; together they create insulated metal roof and wall panels (IMPs).

As is true in every business, the company’s vendor-partners play a significant part in their success. The company enjoys working with US Steel, Sherwin Williams, Pre-Coat, S-51, SFS Fasteners, Roof Hugger, and Tilor.

Markets and Trends

Involved in many different markets, the company’s primary customers are contractors and national distributors. They work in commercial, residential, post-frame, self-storage, and industrial sectors. They also do considerable work with architects and engineers.

Over the last 5-7 years, McElroy has also become a leader in the roof recover market. The roof recover involves installing a new metal roof over a worn-out metal roof (often after 50-60 years of service life) without removing the original roof. No tear-off means less material in the trash, no recycling fees, a safer platform for roofers to work on, and it’s less disruptive; the customer can



PHOTOS COURTESY OF MCELROY METAL

carry on with work or life without fear of water pouring into their building.

Black and white are still very popular color choices for metal roofing and siding; it’s the “go-to” color combination according to Kathi Miller, Director of Marketing and Sales Training.

“Wood grains are becoming more popular for their depth and natural look,” Miller said. “Wood grain metals now provide that aesthetic without all the maintenance of traditional wood products.”

Miller sees concealed fastener profiles gaining popularity even in commercial buildings, largely because people prefer the aesthetic.

Employee Owned Culture

The COVID-19 era intensified the already pervasive problem of finding, hiring, training, and retaining qualified employees. Miller said it is getting better now for the company, though many competitors still face this problem. Miller attributes their ability to attract and retain the talent they need largely to the fact that the

company is employee owned.

An Employee Stock Ownership Plan took effect in 2022 after three generations of operating as a family-owned business.

“The one constant trait during our 60-year history is the influence and support of employees,” said Ian McElroy. “Throughout the country, McElroy Metal is blessed to have loyal team members, including many that have dedicated decades of service to the company. As a show of appreciation, McElroy Metal team members are now employee owners of McElroy Metal.”

Miller said, “Being part of an employee-owned company makes a difference because people like having a piece of the pie. The family culture, the feeling of ownership...people are engaged, they share their ideas much more readily. They feel that their opinion matters, and they have a greater opportunity for retirement. And,” she continued, “because they like working here, they refer people who will be a good fit. We have a great reputation in the market for providing high quality products and services. People within the industry often contact us and ask if there are any openings here because they would rather work for us than their current employer.”

The company feels that their employees are the key to their success, so they offer tuition reimbursement assistance to help employees interested in pursuing education. Some have partnered with the company to achieve bachelor’s degrees; others have attained master’s degrees.

How Do You Handle Challenges?

McElroy Metal has developed a protocol for handling problems that come up. Instead of looking for the culprit or brushing it off as a fluke, they stop and think, “Wait, why did this happen?” Then they go back to the very root of the problem and work through it. This way of dealing with problems is often referred to as a continuous improvement methodology.

Initially this was a big mindset shift for McElroy, but it has done wonders for their efficiency and service. It’s also changed their entire culture as it encourages a mindset where everyone is constantly looking for ways to get better.

One of the company’s continuing challenges is pricing. “Some companies sell lower quality products, but prospective customers don’t always understand the difference in quality. For example, Kynar® and silicone modified polyester (SMP) coatings perform quite differently. Even though they look the same on day one, after just a few short years, they look vastly different because Kynar 500

products offer much greater resistance to fade and chalk,” Miller said.

Kynar’s durability is superior, but some customers may not be aware of the performance differences and make their purchase decisions solely on price. “While we spend considerable time educating buyers so they understand the differences between the two paint systems, we also choose to inventory both so we can take care of both quality and price focused customers,” said Miller.

Advice

“If you are new to the industry you need to engage, meaning show up on time, ask questions, and try to provide value,” Miller said.

“Raise your hand and take on new challenges. You need drive to be successful.”

Be people-focused on both customers and employees, but not so focused that you don’t take advantage of new trends in technology that can make business easier. The company launched a new website in the last few years that makes attracting leads and sharing information with customers much easier.

“We print very little literature these days; instead, most prospective customers start on our website so that’s where we spend a large part of our focus,” Miller said.

Market Opportunities and Challenges

“The residential metal market continues to gain momentum, taking increased market share from shingle products every year,” Miller said, “and there are more savvy customers who want roofs that will last more than the expected 12-15 year life expectancy of shingles. Cool paint finishes have become the norm with most large manufacturers. Between the natural reflectance properties of metal and these newer cool paint finishes, owners can often save 15-20% on their electric bills.”

Into the Future

The company recently introduced two new products. Designed primarily for the recover market, Trap-Tee is a symmetrical standing seam product. They also introduced their Nostalgia panel which resembles traditional board and batten style siding but with much less maintenance since it’s made from metal instead of wood. Research and development is part of the McElroy way of doing business, so there will surely be more innovation over time.

“The company plans to continue growing our footprint in the industry in the coming years,” Miller said, “whether through green growth or acquisition with a continued focus on safety.” **MR**



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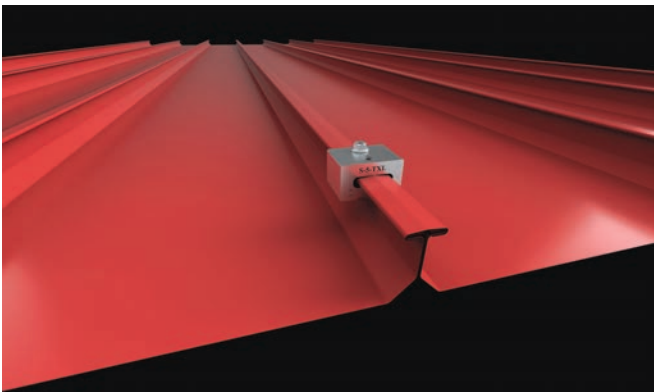


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S-5! TXL Clamp

The S-5-TXL clamp ("TXL" is for extra-large "T") is specifically designed for T-shaped standing seam metal roof profiles with a horizontal projection of up to 1.7" (43 mm), including the McElroy Metal Trap-Tee and Morin® SymmeTry®. An innovative insert makes installation a breeze anywhere along the seam.

The non-penetrating S-5-TXL clamp is designed for heavy-duty snow guard systems, as well as high-wind applications. Pair with ColorGard® for a robust snow guard system to reduce the risk of rooftop avalanches.

As with all S-5!'s standard and mini clamps, the S-5-TXL has undergone rigorous load testing, including normal-to-seam (pull-up) and parallel-to-seam (drag load). The S-5-TXL has two setscrews that will dimple the roofing material but will not penetrate it, ultimately leaving the roof's warranty intact.

www.S-5.com

Veer VShield Ultra Synthetic Underlayment

Veer Plastics Private Limited has announced the launch of its synthetic underlayment, engineered with patent-pending technology. This innovative product has achieved certification to the nail seal standard of ASTM D1970, making it one of the most reliable and high-performance underlayments on the market.

The new synthetic underlayment is designed to provide superior protection against water intrusion and environmental damage.

Key features include:

ASTM D1970 Certified: Ensures excellent nail seal performance, providing enhanced waterproofing capabilities.

Patent-Pending Technology: Developed through rigorous research and testing, offering unique benefits not available in traditional underlayments.

Durability: Engineered to withstand extreme weather conditions, ensuring long-lasting protection.

Easy Installation: Lightweight and flexible design allows for quick and straightforward application, saving time on the job site.

Veer's synthetic underlayment is ideal for both tile and metal roofing as well as any high performing roof assembly.

veerplastics.com



RefrigiWear® HiVis PolarForce® Jacket

RefrigiWear's new line of PolarForce Hi-Vis Workwear was specifically designed to enhance safety and comfort for professionals in the metal roofing industry. This collection features high-visibility jackets and insulated coveralls, crafted to provide superior visibility, warmth, and durability for workers in demanding environments. With robust materials designed for long-lasting performance, this gear is essential for those working at heights and in challenging weather conditions.

The new RefrigiWear® HiVis PolarForce® Jacket is built to keep you warm and mobile in the coldest conditions. With protection down to -40°F and over 500g of insulation, it shields from freezing temperatures, wind, and moisture. Its water-repellent, wind-tight shell blocks out the elements, while adjustable cuffs and an inner drawcord lock in warmth. Performance-Flex at the elbows allows full range of motion without losing insulation. Grip Assist on the sleeves provides a secure grip, even in subzero conditions. Multiple pockets offer convenient storage, and HiVis yellow with orange piping ensures visibility in low light.

refrigiwear.com



MR



MERRY CHRISTMAS



Happy New Year

...from all of us at
Metal Roofing Magazine & Shield Wall Media!





This article was originally published in the February/March 2006 edition of Metal Roofing Magazine.

Metal Roofing Magazine was born as a supplement to *Rural Builder* magazine in 1999. A few more supplements were published in 2000. In 2001 it was elevated to a stand-alone magazine, and today it is nearly 25 years old.

If you have a metal roofing project on a historic building, we'd love to see it, and share it with our readers!

Contact Karen Knapstein, karen@shieldwallmedia.com, forwarding all the information you have about the materials used, challenges faced, and a few hi-res photos. In the meantime, enjoy a bit of metal roofing history!

An Up-Close Look At ... Shake Facsimiles

There must be something to the look of the shake roof, because almost everyone offers a metal shake facsimile.

That's the look that is attracting the attention of homeowners, building owners, and architects who also appreciate the benefits of metal roofing. And manufacturers must be paying attention — plenty have jumped onto the shake facsimile bandwagon to arm contractors with the exact shake look they want to offer.

Wood shakes have long been an attractive and popular roofing choice, mainly in the western United States, and not surprisingly, that's where metal shake facsimiles are most popular. Wood shakes come with drawbacks such as mold, and susceptibility to wind, rain and rot, splitting, infestation, and most significantly, fire. Metal shakes, on the other hand, provide the answer to all of those shortcomings. Because of all those benefits and the aesthetics of today's modern profiles, metal shakes are opening eyes all over the country, both as aluminum and stone-coated steel.

"It's mostly seen in California, Oregon, Washington, and Texas, basically anywhere people are used to seeing wood shakes," says Tony Tiapon, western zone manager for Decra Roofing Systems, a California manufacturer of stone-coated roofing. "People want it because it's what they're used to seeing, it's what they used to see growing up. But if you look in Chicago or other parts of the Midwest, a lot of metal shake is being installed there. I think it's mainly because it's different than the asphalt roof they're used to, but it still blends into a neighborhood with all the benefits of metal."

The most common metal shake profile started as a product used as siding,

aluminum siding. It was first used as roofing more than 40 years ago. Alcoa's Aluminum Country Manor Shake, now owned by Classic Products, was the metal (aluminum) painted shake that really exposed people to how good a shake roof can look even if it's made from metal.

Today, Classic Products offers a variety of aluminum shake profiles — Wood Shake, Rustic Shake, Country Manor, Timber Creek, and the recently acquired Great American Shake. Classic's Rustic Shingle is designed to have a rugged texture and deep realistic wood grain to replicate wood shake shingles.

Todd Richards, vice president of marketing, estimates 95 percent of Classic's business is for residential projects. "Some of our larger dealers have had some success with multi-family projects and several in church buildings," he says. "We've actually done very well with churches. They like the look and they like that they don't have to worry about replacing the roof again, making that kind of investment."

Richards says Classic's products are growing in popularity throughout the nation, but typically have been easier to sell in the South, where metal has a longer and more prominent residential history. He says Texas, Louisiana, and Florida are among the more successful markets for Classic. Also doing well are dealers in Canada, Michigan, New England, and in the Mid-Atlantic states.

"Most of our dealers aren't roofers, they're remodelers," Richards says. "They're dealing with people investing in their home, doing something to maintain or increase the value. It's energy efficient with our cool roofing offerings and that's important in these very unstable times with energy costs. Plus, it really looks great."

Stonehenge Roofing Products is a relatively new manufacturer in the stone-coated roofing market, making its debut at METALCON in Las Vegas just more than a year ago. One of its original offerings is the Stonehenge Shake, made from 26-gauge Zincalume steel with a lifetime non-prorated warranty.

“Shakes are what’s driving the market right now, especially in the Southwest, Southern California, Nevada, Arizona, New Mexico, and Texas, and in the Northwest, Northern California, Oregon, and Washington,” says Tim Brown of Stonehenge. “That’s where we’re having great success. That’s where people are used to the traditional look of wood shake roofing.”

Wood shake roofing has come under heavy attack in recent years because of its obvious vulnerability to fires. In 2003, Southern California wildfires burned more than .75 million acres and burned more than 3,400 homes. (*Metal Roofing*, February-March 2004). Many of those homes had wood shake roofs, which caught fire when wind-blown sparks landed on them. Many homes with metal roofs survived because the roofing material didn’t catch fire when exposed to those wind-blown sparks.

Tiapon says for that reason in California, many counties are outlawing the installation of wood shakes. After the aforementioned 2003 wildfires, some insurance companies were canceling homeowners’ policies if their homes had wood shake roofs. “It was good for us, but it’s kind of strong-arming the homeowners,” Tiapon says. “Now it’s a re-roofing product all over California and it’s being used in all ends of the market. It’s not exclusively for high-end homes.”

Brown says success started for Stonehenge in the re-roofing market, but recently has caught on for new construction, especially in Florida. “In Florida, it’s mainly a lack of availability of other roofing products,” Brown says. “I’ve heard where some suppliers of concrete tiles are taking orders six months out. They can’t fill the orders.”

Stonehenge has manufacturing facilities on the west coast and in Maryville, Tenn. “We’re the first stone-coated manufacturer to have a plant in the East, so we can easily meet the need of our customers there,” Brown says.

Another relatively new product is the KasselWood profile from Kassel & Irons. Constructed of galvanized steel with BASF’s Ultra-Cool Kynar 500 finish, the product meets Energy Star requirements for a cool roof.

“Our shake facsimiles are commonly used in new construction and re-roof residential applications along with commercial projects that desire a nice, traditional look,” says Nick Allen of Kassel & Irons. “The popularity of metal shakes is growing throughout the country, especially in areas that have restrictions on installing wood products because of fire or maintenance concerns. Shake facsimiles are an excellent replacement for virtually every product in the marketplace because of their appealing look and meaningful warranty. And most importantly, they’re very affordable when you consider it from a life-cycle perspective.”

Stone-coated steel shakes came on the scene in the late 1980s. According to Pete Croft at Metro Roof Products, stone-coated manufacturers with roots in New Zealand offered only tile facsimiles. “There’s no cedar trees down under, so the design of



CLASSIC PRODUCTS PHOTO



DEGRA ROOFING SYSTEMS PHOTO



DURA-LOC ROOFING PHOTO



METRO ROOF PRODUCTS PHOTO

the metal shake was not even considered,” Croft says. “The demand came from California contractors who were selling across the state to homeowners who had existing wood shakes on their homes. It seemed a natural fit to sell them a wood shake look versus trying to convince them to use tile that really didn’t suit the architecture.”

Metro opened its California manufacturing plant in 1999, introducing the Settler Shake and then the Metro Pioneer shake. In 2001, the company designed the first nailable battenless shake panel, the Metro Shake II. “It had very defined wood grain patterns and deep key-ways to promote the wood shake look,” Croft says, “but its real success was that it could be installed battenless. A by-product of the Metro Shake-II battenless design was that the deep wood grain pressing shape created an extremely strong panel and



KASSEL & IRONS PHOTO

combined with the panel being very close to the roof deck once installed to make walking on the roof very easy.”

Croft says the Metro Shake II panel incorporates a built-in stagger pattern, but has two locating points so the panel can be staggered in two different areas across its full width of 50 inches of coverage. “This extra stagger locator point enables installers a little more freedom in the installation process and creates a panel that not only looks good but also was easy to install,” Croft says.

Since acquiring the MetalWorks shingles in 2004, TAMKO has seen a bigger demand for its shake profile. TAMKO’s manufacturing capabilities and distribution centers have allowed the company to meet that demand. Kay Schorzman says the Astonwood, MetalWorks’ shake facsimile, is most popular in the Southwest and Southeast regions of the country.

“Astonwood has a wood appearance, a wood grain look, stamped into the shingle,” she says. “It’s applicable in any area of the country.” Schorzman says the Astonwood is available in seven stock colors, but custom coloring is offered. She says the two shades of brown, the closest colors to the authentic look of wood shakes, are the most popular, accounting for approximately 45 percent of the Astonwood sales in 2005. In addition to offering the common metal benefits of durability, fire, wind, and impact resistance, the Astonwood is a G90 steel product with a 9 percent zinc coating. “The zinc coating is a rust preventive coating,” Schorzman says. “And the Kynar paints are the best out there for not fading and chalking.”

Al Reid of Dura-Loc Roofing says for installers of metal roofing, offering the shake facsimile is a must and for someone installing metal for the first time, working with shake facsimiles is a great way for a contractor to cut his teeth. “It’s more forgiving, it’s easier to install than the tile profiles,” he says. “The details are easier to work with.”

Reid says most Dura-Loc installers offer both shake and tile facsimiles, but “the good ones know what the customer



METALWORKS BY TAMKO PHOTO



STONEHENGE ROOFING PRODUCTS PHOTO

wants before they walk in the door.” For re-roofing, he says regional preferences influence the choices homeowners make — neighborhoods evolve from one option to another.

“For a long time, the shake profiles came in the darker colors, charcoal, slate, and brown,” Reid says. “Obviously because they looked the most like the new, medium, and older wood shakes. Today, we’re using it as a replacement for concrete tile, especially in the extreme climates where tile doesn’t hold up as well.”

Traditionally, tile roofing has been installed in brighter and lighter colors, colors that don’t replicate the look of wood shakes. Manufacturers will give the customers what they want.

Still, metal shakes are strongest where wood shakes were the traditional or

popular choice.

“The biggest market still is California,” says Pat Barton, director of marketing for Gerard Roofing Technologies. “The replacement of wooden shake roofs has been the biggest market for us. In a lot of areas, the wood shakes are failing. Our product, a lot of people like the profile, it’s similar to the wood shake. It has deep grooves and it’s walkable.”

Barton says the Gerard Canyon Shake is a 2-year-old product, but has taken off in sales because of its look and the growing metal market as well as the desire for the shake products.

Manufacturers are answering the demand for metal shake, always making it look better for the building owner or architect and making it easier to install for the contractor. **MR**

project of the month



PHOTOS BY SHIELD WALL MEDIA.

Church Opts for Metal Shake

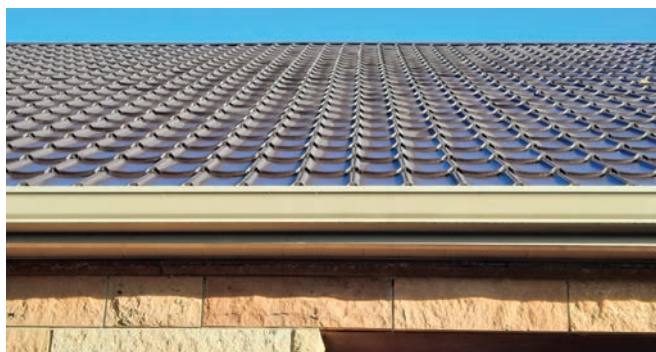
St. Peter Lutheran Church, Fennimore, Wisconsin, Chooses Long-Lasting Metal

St. Peter Lutheran Church, Fennimore, Wisconsin, was founded in 1882. When the asphalt shingle roof of the current church structure was nearing the end of its service life, the congregation opted for a long-lasting metal roof.

John Esch, Esch Repair, installed 150 squares of 16" x 32" metal shake panels from Metal Shake Roofing LLC (New Providence, Pennsylvania). The metal shakes compliment the Modern-Contemporary-styled structure, which is faced with limestone that was quarried near Mankato, Minnesota.

The size of the project was a challenge for the small company; however, in the end Esch and the congregation are pleased with the outcome. "I spent days on the trim

details to get everything just right," recalls Esch. Now the structure is a showpiece that will look great far into the church's future. **MR**



Esch Repair

12825 Brown School Road
Fennimore WI 53809



Project Overview

Location: Fennimore, Wisconsin

Installer: Esch Repair, Fennimore, Wisconsin

Roof Size: 150 squares

Roof Panels: Metal Shake Roofing LLC, 16" x 32", 26 ga. G50

Coating: Becker's Beckry Tex, Textured Dark Brown

Coil Supplier: Hixwood

Underlayment: Roofnado LapLock PSU HT, StormTread

Fasteners: Levi's Building Components

Trim: Platteville Metal Shop

Closure Strips: FloVent



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It's Time To Get More Data

Take The Annual CSI Survey

It is almost time for our Annual CSI Survey release. Our magazines go to the printer several weeks before they mail to you. As I write this column, the election is over and we will be sending the survey before you receive this in the mail. This URL provides access to the survey: <https://www.surveymonkey.com/r/2025CSISurvey>

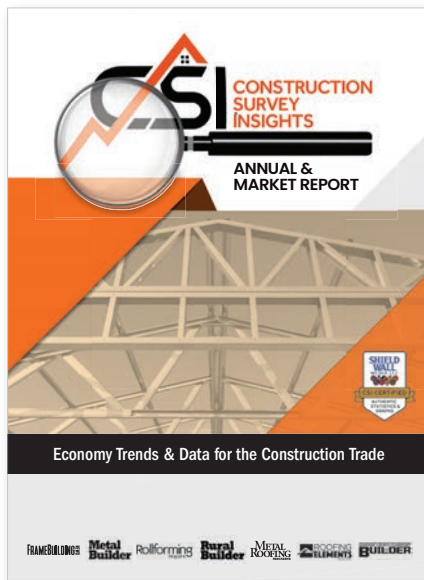
Or you can access the results through any of our magazine websites.

The intent of our survey is to gauge market sentiment for the coming year. As the choice of President will have a huge effect, we are holding off releasing the survey until after the election and the emotion returns to normal. With that in mind, we plan to release the survey the week of November 11.

Please complete and share the survey. The number of responses is critical for usable data. Most market reports are sold as proprietary and cost recipients several hundred to several thousand dollars. We are providing the CSI-Annual & Market Report to all our subscribers free of charge.

We believe data is necessary to make good business decisions. If you see value in data for our markets and use this information in any way, there are a few simple things you can do to help:

- First and foremost, take the survey. The more responses we have, the more complete the data.
- Tell people and share this information. The more people who know about this, the more people who will take the survey. The more people who take the survey, the better



18 CSI ANNUAL

SECTION 2 GENERAL CONSTRUCTION INDUSTRY DATA

Over the last few years, the construction industry has been a leading economic driver of the overall U.S. economy. Housing construction has been soaring, recuperating from the devastation of the housing recession in 2009 to 2012. Commercial construction, too, has been a force of economic improvement, providing millions of jobs and offering workers a way up to the middle class. Orders have been slower, however, and layoffs of course. Orders has dropped for example, but the retail industry has been a boon in the area of the warehouse market. Federal government infrastructure investments, as well as state and municipal budgets that were gutted by the COVID-19 pandemic have helped lift the public construction sector.

The following tables provide an overall view of the construction industry as well as some predictions for 2024.

Characteristics of General Construction
Total construction spending from 2022 through 2023 was inflated by a variety of economic factors, including:

- The global economy began to recover from the impacts of the COVID-19 pandemic. There was a surge in construction projects and risk aversion development. The surge was a heightened demand for residential housing, caused by low interest rates and changing housing preferences due to remote work trends.
- As the supply chain disruptions intensified and inflationary pressures mounted, construction costs soared, leading to project delays and cancellations. Additionally, labor shortfalls in the construction industry further compounded challenges and drove up wages, adding to the cost escalation.
- Overall, while the construction sector demonstrated resilience and adaptability during the period, navigating through unprecedented challenges, the visible economic landscape underscored the importance of agile and strategic planning for construction firms to sustain growth and profitability amidst uncertainty.

Jim Bluhm, vice president of sales and marketing, CSI name brand, Atlanta, Ga., pointed to the data specifically: "The

Table T1 - ANNUAL RATE OF TOTAL CONSTRUCTION SPENDING

| YEAR | MONTHLY SPENDING (in Millions of Dollars) | | | | | |
|------|---|-------------|-------------|-------------|-------------|-------------|
| | JAN | FEB | MAR | APR | MAY | JUN |
| 2022 | \$1,796,460 | \$1,823,728 | \$1,849,637 | \$1,882,763 | \$1,889,896 | \$1,871,884 |
| | | | | | | |
| | \$1,869,262 | \$1,847,285 | \$1,839,930 | \$1,830,477 | \$1,842,206 | \$1,840,896 |
| 2023 | | | | | | |
| | \$1,882,799 | \$1,889,562 | \$1,905,409 | \$1,907,837 | \$1,946,733 | \$1,979,271 |
| | \$1,969,005 | \$2,010,143 | \$2,072,530 | \$2,058,903 | \$2,082,763 | \$2,073,718 |

Source: U.S. Census Bureau

the quality of the data we can provide.

• If you are a dealer, distributor, or manufacturer, consider sponsoring a section. If you look at the metrics, this CSI-Annual & Market Report (and our Directory) are the most cost-effective products we have to reach our audience.

Thank you for your confidence and support as we continue to grow and support the industries we serve. **MR**

Please complete the survey at <https://www.surveymonkey.com/r/2025CSISurvey> and share it with your colleagues. A larger survey sample generates more reliable information.

SECTION 3 GENERAL CONSTRUCTION INDUSTRY DATA 19

Table T2 - ANNUAL RATE OF PRIVATE CONSTRUCTION SPENDING

| YEAR | MONTHLY SPENDING (in Millions of Dollars) | | | | | |
|------|---|-------------|-------------|-------------|-------------|-------------|
| | JAN | FEB | MAR | APR | MAY | JUN |
| 2022 | \$1,434,093 | \$1,457,624 | \$1,480,891 | \$1,503,690 | \$1,513,762 | \$1,502,210 |
| | | | | | | |
| | \$1,488,071 | \$1,499,063 | \$1,455,529 | \$1,448,835 | \$1,450,489 | \$1,448,326 |
| 2023 | | | | | | |
| | \$1,483,271 | \$1,483,539 | \$1,491,599 | \$1,490,994 | \$1,532,977 | \$1,526,503 |
| | \$1,534,485 | \$1,568,946 | \$1,566,336 | \$1,598,086 | \$1,608,894 | \$1,622,263 |

Source: U.S. Census Bureau

resilience of the construction economy continues to be a source of strength. The "Overall things seemed to be in the past year versus the turmoil that occurred in the preceding years."

Looking to 2024, the Dodge Data and Analytics forecast expects total construction to increase 2% to \$1.8 trillion, with growth slowed to just 2% in 2023, which is actually a decline of 2% when adjusted for inflation. Single-family residential construction will increase 3% and multifamily residential construction will increase 4%, according to the forecast. Commercial construction is expected to actually decline 2%, while manufacturing grows 3%.

The private construction sector grew during 2022 and 2023. Low interest rates fueled the early growth as well as the pent-up demand and government stimulus measures. The pent-up demand was a significant driver, with robust activity in both residential and non-residential sectors. The healthy in both residential and non-residential sectors. The healthy in both residential and non-residential sectors. The healthy in both residential and non-residential sectors. The healthy in both residential and non-residential sectors.

Big increases in the private sector, according to AGC, will come from hospital/health care, other healthcare (up 2%), data centers (up 20%), manufacturing (up 15%), and warehouses (up 10%).

The national assessment is supported by reports from individual markets. Total Carlson, president of J. Manu- individual markets. Total Carlson, president of J. Manu- individual markets. Total Carlson, president of J. Manu- individual markets. Total Carlson, president of J. Manu-

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CONTENTS

FEATURES

- 4** **Technical Bulletin**
Cold Weather Application of Modified Bitumen Roofing
- 6** **Complete Roofing**
Former Marine Finds Success In Roofing Business
- 9** **Western Roofing Expo**
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ON THE COVER:

RG 16 copper snow guards from Rocky Mountain Snow Guards were installed on the roofs of Royal Elk Villas, Beaver Creek, Colorado. The slate roofing is a composite from DaVinci Roofscapes. PHOTO COURTESY OF ROCKY MOUNTAIN SNOW GUARDS



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TECH BULLETIN

COLD WEATHER APPLICATION RECOMMENDATIONS FOR MODIFIED BITUMEN ROOFING

By The Asphalt Roofing Manufacturers Association (ARMA)

Editor's Note: *The Asphalt Roofing Manufacturers Association (ARMA) has prepared many technical reports to aid roofers in the proper installation of various asphalt roofing systems. ARMA [<https://www.asphaltroofing.org/>] has granted Roofing Elements Magazine permission to publish this report for the benefit of roofers.*

Overview of proper storage, handling and application methods in cold temperatures. Contains information for both torch-applied and hot asphalt-applied products.

INTRODUCTION

The application of any roofing system during cold weather poses special challenges. Specific to modified bitumen materials, these challenges can include maintaining proper sheet material, adhesive, and asphalt temperatures at the point of application. Cold temperatures may stiffen sheet materials, reduce the curing or flash-off rate of adhesives, diminish the effective bonding of self-adhesive materials, and cause

mopping asphalts to cool prematurely. By following proper procedures and exercising recommended precautions, cold weather application can progress more efficiently and effectively, yielding a high quality result.

PROTECT MATERIALS PRIOR TO APPLICATION

Protecting all roofing materials from the weather is important regardless of conditions, but extra precaution should be exercised in cold weather. Storage of roofing materials without adequate protection may affect the quality of the materials, and could also result in moisture being incorporated into the roof system. Therefore, it is essential to use proper techniques when storing and handling these roofing materials.

Modified bitumen roll goods, base sheets, and other materials become less flexible at lower temperatures. When roof systems are installed at ambient temperatures below 50°F (10°C), for best results it is recommended that all materials should be stored in a dry, heated area for a minimum of 24 hours

prior to installation. This allows the modified bitumen to remain flexible during roll out.

All adhesives and primers should be stored in accordance with the manufacturer's guidelines until just prior to use. Water-based cements and/or coating materials must be protected to prevent freezing. Remove moisture, dirt, snow, and ice from roofing asphalts before they are heated; failure to do so can lead to dangerous frothing inside hot kettles.

PLAN CAREFULLY

Acceptable weather conditions are based not only on the actual ambient temperature, but also the total combination of nature's elements (e.g. wind, humidity, dew point temperature, sun, cloud cover, shade, snow, sleet, etc.). Careful planning of work during cold weather can greatly improve the quality of the installation. Laying out the roof area and placing materials where they will be needed just prior to application will minimize problems associated with cold weather application.

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SURFACE PREPARATION

As with any climatic condition, all surfaces to which any roofing materials will be applied must be dry, smooth, and free of dirt and loose material.

APPLICATION RECOMMENDATIONS

For all cold weather applications, follow the manufacturer's installation instructions as they pertain to cold weather application and temperature limitations. Never throw or drop rolls of material. Should wrinkling of roll goods occur during installation, unroll and cut the material, typically in lengths of halves or thirds, and allow the cut pieces to relax before application. The time needed to relax may vary depending on the ambient conditions, product type, and/or material thickness.

Use the Right Materials

If different grades of materials are available for cold weather application, refer to the manufacturer's written instructions for guidance on proper product selection.

Complete Each Roof Section Daily as Specified

As the work progresses day-to-day, it is essential that each section of the roof be completed as specified. Application should be scheduled as specified so that there are no partially completed sections of the roof left exposed overnight. Additionally, "water cutoffs" should be provided at exposed edges at the close of each day. Water cutoffs should be removed prior to resuming construction of the roof assembly.

Torch Application

During membrane application, follow

the manufacturer's recommended torching practice, and industry torch application safety guidelines (e.g., Certified Roofing Torch Applicator – CERTA). Proper heating technique is required for proper adhesion of the membrane. The end and side lap areas should be given special attention, as these are the primary waterproofing junctures of the membrane.

Cold Adhesives

Cold adhesives may be utilized when installing modified bitumen systems in cold weather. Such adhesives can be utilized for all layers of modified bitumen roof membrane construction. They may contain asphalt modifiers and can be applied by squeegee, roller, brush, or spray equipment. All adhesives should be stored at a minimum temperature of 50°F (10°C), and for better results not less than 70°F (21°C). Follow the manufacturer's instructions for storage, use, and application. Cold adhesives become more viscous at lower temperatures, which may affect the application rates. If the coverage rate exceeds the manufacturer's installation instructions, reevaluate one of the following: the application method, the storage of the product, or the condition of the product.

Self-Adhesive Products

At the time of installation, the air, product, and substrate temperatures should be at or above the minimum application temperature specified by the manufacturer. While the typical minimum temperature range for application is 40-50°F (4-10°C), consult the specific manufacturer for recommendations for material storage and handling during colder weather application. Some

manufacturers offer different grades of self-adhesive products, or unique primers, based on their minimum application temperature requirements.

Hot Asphalt Applied Products

At the point of contact with the modified bitumen sheet material, the mopping asphalt should be applied at its equiviscous temperature ("EVT") or a minimum of 400°F (204°C), whichever is higher, or per manufacturer's recommendations. A sufficiently high asphalt temperature is essential for adequate adhesion of SBS modified membranes. It is important for the applicator to be aware that liquid asphalt cools quickly once applied to a roofing substrate. Components of the roofing system must be installed swiftly and "close to the mop." Be sure that all components are well embedded. Mop-leads (typically no more than five feet in front of the roll) should not exceed the manufacturer's instructions. Failure to use proper application techniques has the potential to result in poor membrane adhesion and possible system failure.

Proper insulation of all asphalt handling equipment is required to keep asphalt hot in cold weather. Equipment insulation is also essential for fuel conservation and reducing make-ready time. Use of insulated tank trucks and rooftop equipment for transporting asphalt, such as hot luggers and mop buckets, is recommended. Asphalt lines from the kettle to the roof should also be insulated, particularly when asphalt is being piped over long distances. ●



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FROM SERVICE TO SUCCESS

U.S. MARINE VETERAN TRANSFORMS ADVERSITY INTO OPPORTUNITY

By Karen Knapstein

In the heart of Canton, Georgia, a remarkable story began in October 2008 with the launch of Complete Roofing Systems, LLC, commonly known as Complete Roofing. At the helm is Chad Conley, the CEO and co-founder, whose journey from a U.S. Marine to a successful entrepreneur embodies resilience and innovation.

THE GENESIS OF COMPLETE ROOFING

Chad's journey into the roofing industry is both inspiring and unconventional. After six years of service in the U.S. Marine Corps, he received an honorable discharge in February 2008. In May of the same year, he completed his college education in project management, but was uncertain about his next steps. A casual conversation with a friend working in roofing changed everything. "I had never considered roofing before, but I was looking for something outside a traditional office job," Chad recalls.

"Although I had no prior experience in roofing and had never considered it, I trusted him and decided to give it a try. Our efforts were focused on storm-damaged roofs and as such we got the roofs paid for by insurance carriers. I quickly fell in love with the job. It combined a nice blend of strategic thinking while dealing with insurance adjusters/claims,



Jesse Huggins, Project Manager for Complete Roofing working onsite. Photos courtesy of Complete Roofing

meeting new and interesting people, and work outdoors that came with a rooftop view." However, he soon realized that the company he was working for lacked effective management.

By the late summer of 2008, amidst the backdrop of a crumbling economy, Chad and his business partner decided to venture out on their own. "Our goal was to exceed customer expectations while creating a work environment that empowered employees and encouraged inno-

vation," he explains. Thus, Complete Roofing was born, and the journey began.

THE BUSINESS CLIMATE AND INITIAL CHALLENGES

The timing of their launch couldn't have been more challenging. The fall of 2008 marked the onset of the Great Recession, with financial instability affecting countless Americans. Jobs were lost, homes were foreclosed, and major corporations were seeking federal bail-

outs. It was a daunting environment for any new business, but Chad's determination paid off. "Despite the economic climate, we grossed just under \$6 million in our first full year," he shares.

Initially, Complete Roofing offered a wide range of services, including full roof replacements on asphalt shingle, tile, metal, slate, and flat roofing systems like TPO and EPDM. They also provided gutter replacements, roof repairs, and small repainting projects. However, their primary focus remained on restoring roofs through insurance claims for storm damage, which became a defining aspect of their business model.

EVOLVING SERVICES AND STRATEGIC FOCUS

As Complete Roofing evolved, so did its services. Over the years, the company recognized the importance of focusing on its core services. "We have learned that to be the best, we must concentrate on our core services," Chad explains. This strategic shift has not only enhanced the quality of their work but also improved the overall customer experience.

By narrowing their focus, Complete

Roofing has been able to streamline operations, resulting in better quality assurance and increased profitability. "We've learned to say 'no' to certain jobs that fall outside our expertise," Chad notes. "A perfectly executed \$25,000 re-roof can easily be overshadowed by a customer's dissatisfaction with a smaller \$500 job." This philosophy—emphasizing quality over quantity—has become a cornerstone of their business.

MATERIALS MATTER

Elite Roofing Supply and Beacon Supply are Complete Roofing's main suppliers. "We are proud GAF Certified Master Elite Contractors and have been certified with them since 2009," Chad declares. "Most of the products we install are manufactured by GAF, as we believe they stand behind their products better than any other brand of shingles. This includes a range of high-quality roofing materials, such as GAF Timberline HDZ® shingles, which offer excellent durability and performance. Our partnership with these suppliers and manufacturers ensures that we consistently provide top-notch products and services to our customers."

NAVIGATING CURRENT TRENDS

Today, the roofing industry faces two significant trends: inflation and the consolidation of roofing contractors by private equity firms. Inflation has made it increasingly difficult to negotiate with insurance carriers regarding claims. Yet, Chad is optimistic about his company's position. Since we have remained focused on our core services and continuously improved our proficiency in proving insured losses, this tightening has not affected us as severely as some of our competitors."

Chad also observes the growing influence of private equity in the roofing sector. Many smaller companies are being consolidated, leading to increased competition and pricing pressure. "Most of these contractors are not direct competi-

tors to us, as they focus on 'retail roofs,' where the customers directly pay the re-roof expense," he says. "These contractors also typically offer roof repair services. However, those competing with these newly consolidated firms must be aware of this trend, as it will result in greater buying power and potential pricing pressure on the smaller companies resisting acquisition."



Chad Conley

OPPORTUNITIES ON THE HORIZON

Chad sees significant opportunities in the insurance re-roofing market. Several factors contribute to this promising outlook:

Golden Handcuffs: Many homeowners who have low-interest mortgages are reluctant to sell their homes, prompting them to invest in renovations, including roof replacements.

Fannie Mae & Freddie Mac Rule Changes: Recent regulations require mortgages backed by these entities to have full coverage insurance, including for storm-related damage. With these agencies backing over 70% of U.S. mortgages, this means many homes are now eligible for insurance coverage for roof repairs.

Tightening Insurance Carrier Standards: As insurance companies are increasingly dropping customers with

PRO TIPS

What are two things you wish you would have known when you started that would have made your job easier?

Always ask for more: More often than not, you will get what you are seeking, and sometimes more. When you do not ask, you essentially guarantee a "no."

Cash is king: Do not let your money sit in receivables a second longer than necessary. Pursue every cent diligently and without delay. Maintain more cash reserves than you think you need, as unexpected events will occur. Just like Monopoly, you are never out of the game as long as there's cash in the till.

roofs as young as 10-15 years old, homeowners are becoming more aware of the importance of filing storm-damage claims rather than maintaining older roofs.

Chad believes these trends create a favorable market for Complete Roofing's services, reminiscent of the environment in which they first launched. "It feels like history is repeating itself, providing us with opportunities similar to those we faced back in 2008," he reflects.

OVERCOMING CHALLENGES

Throughout its journey, Complete Roofing has faced many challenges, each shaping its resilience and adaptability. One significant hurdle came in 2012 with the implementation of the Dodd-Frank banking legislation, which complicated insurance claims by adding mortgage companies to insured payments. This change caused significant delays and cash flow issues, as banks took weeks to process checks.

To combat this, Chad implemented a 'paid in-full' policy, requiring customers to pay on the day of installation, regardless of whether they had received all their insurance funds. They also began accepting credit cards, negotiating favorable merchant fees to enhance cash flow.

Another major challenge arose during the COVID-19 pandemic in 2020. With door-to-door sales halted, the company needed to find new ways to generate leads. Drawing on their team's creativity, they pivoted to an old-school method of setting appointments by phone. Remarkably, they managed to match their previous door-to-door figures. "This display of true grit remains one of the best performances I have seen since we started this business," Chad recalls, proud of how the staff adapted to the crisis.

A CULTURE OF EMPOWERMENT

At Complete Roofing, the workplace atmosphere is characterized by camaraderie and support, despite the geographical distances. The administrative team



Brandon Antonini, Drone Operator for Complete Roofing, inspecting a commercial roof from the ground.

spans several states and includes a significant presence in the Philippines. "We may not spend as much time together as we'd like, but we treat each other like family," Chad shares. Team members rally around each other during challenging times, offering support and assistance.

This culture of trust and accountability is essential to Chad's leadership philosophy. Drawing from his Marine Corps background, he emphasizes the importance of empowerment. "I despise micro-management," he states. If someone needs constant supervision, they're probably not the right fit for the team. Instead, he encourages employees to achieve their objectives in their own way, promoting innovation and personal fulfillment.

FUTURE VISION

Looking ahead, Chad is excited about the future of Complete Roofing. The company is currently developing novel methods to document storm damage claims, utilizing new imaging tools that could revolutionize the industry. "We see great potential not just for growth but for

sharing our knowledge with others in the field," he remarks.

As Complete Roofing continues to build on its solid foundation, Chad remains committed to fostering a culture of empowerment and adaptability. His journey from Marine to CEO is a testament to the power of resilience and determination, and his leadership philosophy ensures that the company is well-positioned for future success.

FINAL THOUGHTS

Chad Conley's story encapsulates the spirit of entrepreneurship—embracing challenges, seizing opportunities, and fostering a culture of trust and empowerment. As Complete Roofing forges ahead, its mission remains clear: To deliver exceptional roofing solutions while supporting a dedicated team and a loyal customer base. ●



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Large crowds lined up each day waiting for the expo doors to open. Photos by Shield Wall Media

THE ROOFING INDUSTRY HEATS UP AT LAS VEGAS EVENT

The Western States Roofing Contractors Association (WSRCA) celebrated its 50th anniversary during the annual Western Roofing Expo September 30-October 1. The event marked 50 years of service to the roofing industry. Focusing on the specific needs that roofing and waterproofing contractors face in the West, the trade show featured educational sessions, networking

events, seminars, and a filled expo floor; contractors could even walk the expo floor for free. One of the fun elements of the event is the Roofing Games™. The Roofing Games, sponsored by Malarkey Roofing Products®, is a steep-slope nailing competition. Roofers compete against one another by installing a Malarkey Roofing Products® roofing systems on a small deck. Competitors are judged on accuracy, aesthetics, speed and workmanship.

The 2024 WRE was well attended by fully engaged roofing professionals. Overall, exhibitors said they were very pleased with the turnout and the worthwhile conversations they had.

One exhibitor reported he was told 4,000 attendees pre-registered for the event, and another 500 registered the opening day of the show. Those in attendance networked with peers and socialized with old friends while learning about



The Western States Roofing Contractors Association marked its 50th anniversary in 2024.



The atmosphere was festive and attendees enjoyed themselves while connecting with each other and with suppliers.

industry trends and new products.

SAVE THE DATE

Next year's Western Roofing Expo will be held again at Paris Hotel and Convention Center in Las Vegas from September 28-30, 2025. ●



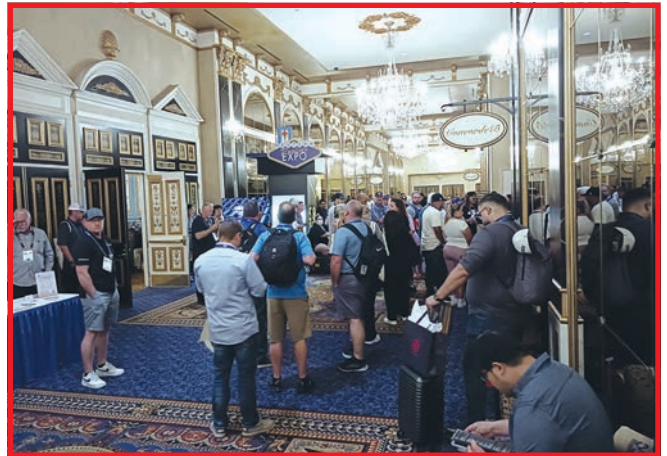
Attendees tried their hand at installing IKO asphalt shingles.



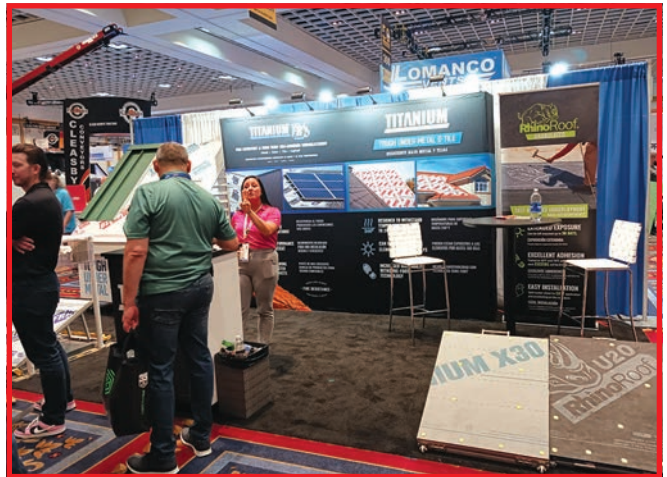
Metal Sales Manufacturing has been providing an array of metal building components since 1963.



Gutter installers have been installing E-Z Gutter Guards for more than 30 years.



Crowds await the opening of the doors to the expo hall.



High-performance underlayment and water barrier products were on display in the Titanium booth.



There was no missing the Roofline Supply exhibit.



Safeguard 30 is a tar-based non-woven polyester-reinforced high-performance underlayment. Safeguard Ultra HT is Class A fire rated.



Atlas Bolt & Screw supplies the industry with a wide selection of fasteners for metal and wood applications. The company also supplies a full line of closures, VersaVent ridge vents, tape, Atlas UltiBond sealant, flashing, and performance-building envelope solutions.



The Safety Hoist Company provides roofers, contractors, and solar installers with safe and affordable tools and equipment.



These show girls garnered attention for One Solutions, "the fastest growing roofing company in the nation."