# METAL ROOFING

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**AUGUST/SEPTEMBER 2024** Vol. 23 · No. 5

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## **Solar Opportunities Abound**

t seems "opportunity" is spelled "S-O-L-A-R," especially for metal roofing companies. Mark Gies contributes an article in this edition explaining different aspects of solar opportunities. In "Integrating Solar Into Your Metal Roofing Business," he says metal roofing contractors have a prime opportunity to integrate rooftop solar into their business models: "A golden opportunity exists for roofing contractors to take advantage of the synergies between a roof and solar by expanding their business offerings." You're already up there on the roof... why pass the torch and the revenue — to another business? If you're wondering where to even begin, Gies includes details about helpful

online resources. The article begins on page 16.

Speaking of "online"... Doing business online — whether personal or professional — is a matter of course these days. While it makes it easier than ever to connect with leads and business partners, it comes with the risk of being targeted by unscrupulous online scammers. According to the FBI's Internet Crime Complaint Center, "In 2023, the Internet Crime Complaint Center received over 880,000 complaints with potential losses exceeding \$12.5 billion. This is almost a 10% increase in complaints from 2022 and a 22% increase in losses." [Source: www.fbi. gov] On page 46, cybersecurity expert Greg Schaffer shares five common cybersecurity risks and tips for how you can prevent falling victim to them.

Looking ahead, the next edition is the METALCON preview edition of Metal Roofing. For more than 30 years, this has been a can't-miss event to connect with industry colleagues, learn about new products and business opportunities, find out what's going on in the industry, and much more. The Atlanta event in late October is shaping up to be no different. We're planning to include loads of show information in the next edition.

Until next time — be well.

Karen Knapstein, Managing Editor
karen@shieldwallmedia.com





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#### ON THE COVER:

Corrugated metal is the preferred metal roofing material in some other parts of the world. Photo courtesy of Walls Metal Roofing, Nova Scotia.

#### **CORRECTION:**

There was a content error in the Formwright Metal of Honor feature (page 14) in the April edition of Metal Roofing. Instead of "Formwright co-founder Larry Schlabach started brainstorming up a solution — custom trailers built specifically for NTM machines," it should have said: "Formwright co-owner Larry Schlabach used his existing trailer designs that he was using in his metal roofing install business, which was originally designed by Matt Borkholder in Nappanee, Indiana, to bring an enclosed trailer designed specifically for NTM machines to the market."

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Gary Reichert, Publisher, Shield Wall Media



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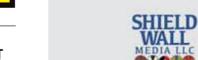
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# Kirsch Building Products

METAL OF HONOR AWARDS: 3 ■ WEBSITE: www.sharkskinroof.com ■ PHONE: 877-742-7507

#### Project: St. Peters Cathedral, Erie, PA

**Scope of works:** Slate Re-Roof, Standing Seam Copper Roof, and Gutters Replacement

Contractor: A.W. Farrell & Son, Inc. Erie, Pennsylvania Copper Roof and Gutters: Armor Fab, LLC, Erie, Pennsylvania. 30-SQ of Copper Roofing. 750' feet of gutter

Project Manager: Randy Pace

Assistant Project Manager: Tony Lazarony

**Slate Foremen:** Sean Irwin and Gary Fish, and Journeyman Paul Gibbs from Roofer's Local 210. 230-SQ of Slate

**Copper Work Foremen:** Kody Pace and Chris Hogue from Sheetmetal Local 12

In 1873 ground was broken to begin the building of the St. Peters Cathedral in Erie, Pennsylvania. A slate roof was installed on the steep pitches, along with a standing seam copper roof at lower pitches, and copper gutters set-into the stone perimeter of the roof.

Prior to the re-roof \$2 million in "gold leaf" was applied to the walls and ceilings inside the church. This meant the winter prior to the new roof installation the existing roof had to be protected. The re-roof began in the Spring of 2023, with the 150-year-old slate being removed first, as Sharkskin Ultra SA\* was installed to protect the Cathedral.

Sharkskin Ultra SA® was chosen for the re-roof of the St.





Peters Cathedral, in Erie, Pennsylvania, for its long term 50-year warranty and High-Temp rating under the new Greenstone Slate roof and Standing Seam Copper Roof. In addition, the Cathedral is approximately a little more than a mile from Lake Erie. Lake Erie is known for its strong "lake breeze" winds. The men from A.W. Farrell & Son, Inc., have experience with Sharkskin Ultra SA® and know once installed properly, it's not going to blow off.

In addition, the walking surface of the Sharkskin Ultra SA® provided the men setting the roof scaffolding, and roof jacks with a safe walking surface. The scaffolding set directly on top of the Sharkskin Ultra SA® was leak-free during the roof installation. Sharkskin Ultra SA provided leak-free protection on the entire project from start to finish, as well as providing 12-Month UV Protection.

With the top of the Cathedral steeple at 300' and the distance to the top of the gutters at 80'-100', it was important that the project ran smoothly. Every pallet of slate had to be "ring tested," which means a hammer is used to test the slate, to make

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sure there are no cracks. The slate will ping in just the right way to confirm, soundness. In addition, slate was pulled from three separate pallets onto one, to maintain even color dispersion across the roof plane, to eliminate blotches of lighter and darker slates.

The standing seam copper roof panels and copper gutters were fabricated locally by Armor Fab, LLC, owned by Robert Pace. The copper gutters were made in 20' lengths and craned up to the roof. The on-site crane was invaluable for the installation of both the Copper Sheetmetal work and slate roof installation.

Another beautiful roof installation from the men at A.W. Farrell & Son, Inc.



## 2024 Metal of Honor Awards

Companies Receive Awards At Inaugural Post-Frame Builder Show

Metal of Honor Awards during the inaugural Post-Frame Builder Show, which was held June 19-20 in Branson, Missouri. Rural Builder Gold Key of Excellence Awards were also presented.

In just a few months, you'll once again see the Metal of Honor ballot within these pages. If you believe any of your suppliers deserve to be on the ballot, and they have been in Metal Roofing Magazine within the past year, send a nomination to karen@shieldwallmedia.com, with the subject line: Metal of Honor 2025 Nomination. MR



Wayne Troyer accepts the 2024 Metal Roofing Metal of Honor for Acu-Form Equipment.



Shannon Zimmerman (left) and Bart Bishop receive the Rural Builder Gold Key of Excellence and the Metal Roofing Metal of Honor on behalf of Levi's Building Components. PHOTOS BY SHIELD WALL MEDIA STAFF.



From left to right, Chris Davies, Brett Clary, and Robert Cristman accept the Rural Builder Gold Key of Excellence Award and the Metal Roofing Metal of Honor Award on behalf of Dripstop.



From left to right, Paul Zimmerman, Daniel Zimmerman, and Noah Oberholzer accept the Rural Builder Gold Key of Excellence and the Metal Roofing Metal of Honor at the 2024 Post-Frame Builder Show.



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#### **SUPPLIER NEWS**



Leo Daniel (left) and Matt Baze accept the Metal Roofing Metal of Honor Award on behalf of East Coast Fasteners, and the Rural Builder Gold Key of Excellence Award on behalf of Plyco Corporation.



Joel McAfee accepts the Rural Builder Gold Key of Excellence and the Metal Roofing Metal of Honor awards on behalf of The Bradbury Group.



Joshua Loughman accepts the Rural Builder Gold Key Award and the Metal Roofing Metal of Honor Award on behalf of Everlast Metals and Everlast Roofing, respectively.



Jerry Martin (left) and Mark Sherman accept the Rural Builder Gold Key of Excellence Award on behalf of Frontier Metal.

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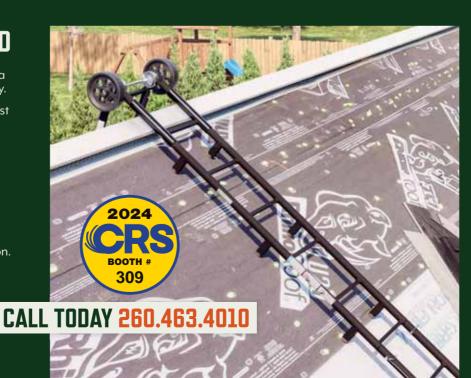
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#### **SUPPLIER NEWS**



Randy Chaffee, Source One Marketing (left) and Barry Broxterman receive the Rural Builder Gold Key of Excellence and the Metal Roofing Metal of Honor awards on behalf of MWI Components.



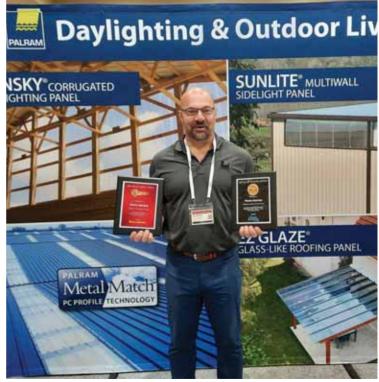
Chris Glick accepts the Rural Builder Gold Key of Excellence and the Metal Roofing Metal of Honor on behalf of Snap Z.



Sean Cook (left) and Steve Harper accept the Rural Builder Gold Key of Excellence and the Metal Roofing Metal of Honor on behalf of Triangle Fastener Corporation.



Payton Mattis (left) and Bryan Chatham accept the Metal Roofing Metal of Honor and the Rural Builder Gold Key of Excellence awards on behalf of United Steel Supply.



Chad Feazel accepts the Rural Builder Gold Key of Excellence and Metal Roofing Metal of Honor awards on behalf of Palram.

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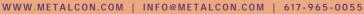


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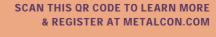














# **Golden Opportunity**

#### Integrating Solar Into Your Metal Roofing Business

By Mark Gies, S-5! Solar Expert

ince the introduction of the Inflation Reduction Act (IRA), the U.S. solar market is now poised to reach 30% of U.S. electricity generation by 2030. Along with a 10-year extension of the solar Investment Tax Credits (ITC), there are additional tax credits for qualifying solar projects, such as projects built with domestic products or in targeted economic geographic areas. These policies have already accelerated growth, triggering an avalanche of solar development throughout the United States.

From the roofing industry's point of view, a rooftop provides an ideal platform for mounting solar since it's a generally uncluttered existing space available for use in addition to its primary function of protecting its structure. Rooftop solar is good for both the environment and consumers. It reduces fossil fuel dependence, eases the strain on the electrical power grid at the sub-grid network level, increases resilience to threats like extreme weather events, and reduces the amount of land needed for clean energy.

However, rooftop solar is just beginning to scratch the surface of the available rooftops in the U.S. According to "Rooftop Solar on the Rise," a report by The Frontier Group and the Environmental America Research & Policy Center, "America could produce the equivalent of 45% of the electricity we currently use from rooftop solar, yet, in 2022, rooftop solar provided only 1.5% of America's electricity."

The report also states that small-scale solar energy, most of which is installed on rooftops, generated 61 Tera-Watt hours of electricity last year, of the possible 1,745 Tera-Watt hours considering the total rooftop space available — that's only 3.5% of the available rooftop space.

This positions the roofing industry for growth in new roofing and re-roofing projects in preparation for rooftop solar, and opportunities to partake in rooftop solar installations. A golden opportunity exists for roofing contractors to take advantage of the synergies between a roof and solar by expanding their business offerings.

## Why is this important for the metal roofing industry?

The metal roofing industry is positioned to capitalize on the growth of solar as metal roofing provides an ideal platform for mounting rooftop solar and is the only roof type with a service life (in the range of 50-70 years) that actually exceeds the service life of a solar photovoltaic (PV) system (an average of 32.5 years and growing year-over-year).

Metal roofing is the most sustainable roof type and is



Installing an S-5! PVKIT™. PHOTO COURTESY OF S-5!

conducive to lower solar installation costs, which is important to the buyer conscious of both environmental and economic energy efficiencies. Most alternative roofing types will expire long before the life of the solar PV system, leading to costly disassembly of the PV array, re-roofing and re-assembly. This takes a big bite from the expected lifetime savings of rooftop solar.

For traditional metal roofing contractors, there is a prime opportunity for them to integrate rooftop solar into their business models. Why leave it to the next crew on site? A roofing contractor can enjoy a bigger piece of the project pie by incorporating solar installations into a roofing business. In addition to increased business opportunities and potential new revenue streams, opportunities exist for roofers to gain new skills, expand their education into solar installations, increase employee retention, and improve worker satisfaction.

#### So, how do you get started?

Naturally, there is a learning curve to expand a team from roofing installations to solar installations. Some new skill sets



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#### **SOLAR OPPORTUNITIES**



Solar building in Kapolei, Hawaii. PHOTOS COURTESY OF S-5!

are required to break into a new industry and subsequently learn and master. Three of the key skillsets include:

- Performing the solar installation add a licensed electrician with solar experience to the team via hiring internally or outsourcing;
- Designing and engineering rooftop solar projects add a qualified solar electric designer to the team via hiring internally or outsourcing; and
- Selling solar and installation services to prospects add a solar economic and financial modeling skillset to support sales.

The team should learn about and keep abreast of the U.S. solar industry, which is rapidly changing. Solar is always evolving with newer and better products along with financial incentives, rules and regulations. It is important to be the expert on all available financial incentives to help customers make the best

decisions. It is also important to understand the best systems available, how they are installed, how to propose solar to roof installation customers, and how to close the deal.

#### **Installing Rooftop Solar**

A great way to get started on the path to installing solar is to utilize and learn from all the resources available online. One of the best clearinghouses for installing solar is the Solar Design and Installation Training site managed by the U.S. Office of Energy Efficiency and Renewable Energy. https://www.energy.gov/eere/solar/solar-design-and-installation-training

This resource identifies programs and agencies to help a company develop its team. For instance, the National American Board of Certified Energy Practitioners (NABCEP)





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#### **SOLAR OPPORTUNITIES**

is commonplace for solar installers to become certified through NABCEP's programs. Most solar installer education happens on the job, so arranging on-site staff training is extremely beneficial. If working with a particular product, often the manufacturer will offer training as well.

For details on installing solar on metal roofs, the Metal Construction Association (https://metalconstruction.org/) offers a three-part white paper series on solar PV and metal roofing. Part 1 focuses on solar/roof service life comparisons. Part 2 explains the common types of mounting systems for metal roofs, the associated risks and the pros/cons of each. Part

Solar system installed with an S-5! PVKIT™

3 digs into more detail and the critical technical factors for solar PV systems, specific to mounting on metal roofs. This is also a great place to start educating the workforce.

Within a solar installation, there are two major components: the mechanical installation and the electrical installation. Mechanical installation is the physical installation of the solar modules and the mounting system, which is the hardware that attaches or secures the modules to the roof. It is this component that is a good fit for roofing installation crews. The learning curve for a roof installer should be straightforward and relatively easy. Many of the best practices for getting up to a roof, bringing up materials, and maneuvering around the roof safely are the same as those with roof installations, and the skillset for attaching items to roofs is normally well-known by roofers. Some companies hire a seasoned solar installer to build a team or utilize an existing trained foreman. Important to note, roof-

ing installers already have the skills for the mechanical installation of solar; that is the wedge to expand their businesses into solar.

The other significant component of a solar installation is the electrical installation, which is a completely different story. This is the installation of all the wiring between modules and to the electrical equipment that converts the DC electricity to AC. There is also the installation of the inverters, then the wiring from the inverters to the interconnection through a meter to the electric grid. This work must be completed by licensed electricians and journeymen, as required by local code. There are a

few different approaches to this:

Companies that do not possess the electrical skillset and don't have licensed electricians on board may, at least initially, outsource the electrical contracting work. Some electrical contractors are happy to perform the electrical work only and not the mechanical installation. In this case, it may be prudent to hire one electric solar expert, who can effectively manage the outsourced teams and potentially perform the system design work as well (see below).

Another approach is to bring electrical expertise in-house. This can be a greater challenge but the benefits of utilizing internal staff include lower costs and having more control. The initial big lift is to hire and train staff, ensuring they possess or will obtain the applicable licensing. This is yet another opportunity to retain staff by providing opportunities for roofing installers to advance their careers through education and on-the-job training by becoming licensed electricians.

#### **Solar Project Design and Engineering**

Just like any construction project, project planning and engineering are other critical components of every solar project. These steps also require capable individuals who can use design tools and are well-versed in mechanical and electrical building code requirements. These designs are very detailed with accurately dimensioned roof layouts and solar equipment, wiring diagrams, and other code-related details.

The resulting output is a drawing set and calculation package that not only documents the design in every aspect but is also the package submitted to building officials as part of the permit application. This is similar to construction project design; engineers with construction plan set experience can adapt to solar project design. Additionally, if outsourcing the electrical installation work, hire a licensed solar electrician to manage that and find somebody who can also manage the design.

As with the electrical installation pieces, a roofing company may choose to outsource the design and engineering function,

#### **SOLAR OPPORTUNITIES**

at least to get started. Numerous companies specifically provide solar project design and engineering services. They will create entire plan sets and permit packages, and generally have licensed professionals who provide support throughout.

#### **Selling Solar**

Before any solar installer gets awarded a contract, building owners need to buy into the concept of solar on their roofs. So, it is important for a roofing company expanding into solar installations to develop the skill set necessary to sell solar and their newly expanded installation services. Staying abreast of the solar industry is particularly critical for sales staff. The more that solar expertise can be conveyed along with accurate data and financial projections, the easier it will be to close the deal.

An important step when engaging with a potential customer is to provide a solar layout on the roof and an associated financial analysis. These analyses model the cost savings and other metrics over the lifetime of the solar system, such as ROI, breakeven analysis, etc. Several software packages can carry out this work and provide a full analysis and proposal, such as

Aurora Solar, PVsyst, HelioScope and others. Along with such software, staying abreast of applicable incentives, be it federal, state or local, is critical to understanding the economics and the ability to explain them to potential customers.

In this competitive market, companies need to consider their customers' needs and what more they can do to meet their needs, including both external and internal customers (staff). Roofing companies have a unique opportunity—to expand their existing business offerings to include rooftop solar installations. It's a good fit and their staff already have many of the skills required. The challenge is to identify and close the gaps, like the electrical side of the installation processes. However, the roadmap and resources are all readily available. **MR** 

Mark Gies is Director of Strategy and Market Development at S-5! with 15+ years of solar energy industry experience ranging from product development, operations, installation, compliance, codes and standards to sales and business development. He is the vice-chair of SEIA's Mounting System Manufacturers Committee, a member of SEAOC's PV Committee, and a founding member of UL 2703's Standard Technical Panel.



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# **Tips & Tricks**

#### For Easier Soffit Installation

By Metal Roofing Staff

offit functions include ventilation, protecting the underside of the roof overhang from the elements, and guarding the structure from pests and birds that might try to enter through gaps. To serve these functions, soffits need to be installed properly. It's impossible to summarize the "right way" to install them, as locations and situations vary greatly, but here are tips that apply in nearly every situation.

#### Ventilation

Function is as important—if not more important—than aesthetics. Soffits need to function, and vented soffits are all about airflow. For a ventilation system to function properly, air intake and exhaust must be equal. Without equal or slightly greater inlet area, a ridge vent won't function properly. In some cases, a lack of

intake can lead to a vacuum in the ridge vent as air is pulled in, potentially causing water and/or snow damage. (Don't fall victim to the misconception that "more is better"; match the ventilation system to the building's needs.)

#### **Precut Panels**

One of the easiest ways to speed up the soffit installation phase is to use precut soffit panels. Ask your metal supplier if they offer precut panels; using precut panels saves a lot of manhours.

#### **The Right Tools**

Quality tools make the job easier; don't skimp on quality. It's important to use the right tools to achieve clean, precise cuts. Using the wrong cutting tools and techniques can damage the soffit panels and lead to rough edges or an uneven fit.

If cutting panels on the jobsite, pay attention to the measurements: Make sure the size isn't changing on the fascia. Failing to get an accurate measurement can lead to incorrect sizing of soffit materials, causing gaps, overlaps, or an uneven appearance. It's as important to use accurate measuring tools as it is to use accurate cutting tools. Double-check all measurements before cutting material to prevent unnecessary waste.

The most common tools used in soffit installation are hand snips, a level to keep panels straight and aligned, and a cutting table for multiple sized pieces. Blades typically have fine, carbide-tipped teeth that can handle the hardness of metal without



Vented soffit. Air inlet volume should match air exhaust volume. COURTESY OF MWI COMPONENTS.

dulling quickly. Use the correct blade: a "ferrous metal" blade for cutting steel or a "non-ferrous metal" blade for cutting aluminum. Cut panels from the back to protect the painted surface.

If working in a confined space, a jigsaw fitted with a fine metal cutting blade can be used (the blade should have at least 24 teeth per inch to ensure a smooth cut). Snips that deform the waste material will make it clear which pieces should be used and which should be discarded. Additionally, offset snips keep your hands away from the metal, making it less likely to cut yourself.

In a pinch, an angle grinder fitted with a thin cut-off wheel designed for metal can also be used for cutting soffit panels. No matter the tool, use a steady hand and consistent pressure to prevent burrs or rough edges.

#### Installation

The most common problems metal roofers encounter when installing soffits include difficulty maintaining level with the wall's Z-profile, ensuring the fascia remains level during soffit installation, and dealing with fascia that isn't level or protrudes inconsistently from the building. Misaligned panels can create an uneven and unprofessional appearance. Careful alignment and periodic visual checks throughout the installation process are essential. Ensure each soffit panel is seated properly before moving on to the next and don't over-tighten.

To prevent these issues, ensure the surface to which the soffit is attached is sound, clean, dry, and free from obstructions.

#### **CLOSER LOOK**

Improper surface preparation can lead to issues later on.

Also, failing to provide sufficient support for the soffit panels can cause sagging or detachment over time. Refer to the manufacturer's instructions to determine the proper support brackets or channels required. Use fasteners according to the manufacturer's guidelines and, if necessary, apply flexible sealants to maintain a weather-tight seal while allowing for thermal movement.

#### **Safety**

Wearing protective, cut-resistant gloves that fit well and provide good grip, in addition to safety glasses, can prevent unnecessary injuries and downtime, ultimately making the installation process easier.

In conclusion, a successful soffit installation hinges on proper ventilation, precise panel cutting, the use of quality tools, meticulous installation techniques, and strict adherence to safety protocols. By following these guidelines, you can ensure a trouble-free installation that enhances both the functionality and aesthetic appeal of any structure, while also prolonging the lifespan of the soffit system. Remember, attention to detail from start to finish will yield the best results and minimize potential issues down the road. **MR** 











Corrugated residential roof installed 75 years ago in Australia. Photo courtesy of Applicad, Australia

# **Practices In Other Parts**

#### **Roofing Down Under**

By Linda Schmid and Ray Smith, AppliCad

f you talk to people in the roofing industry, the buzz is that people are moving to metal roofing. Certainly that seems to be borne out by the statistics: According to the Dodge Report, the share of residential metal roofing in the United States has risen from 12 percent in 2019 to 17 percent in 2021, quite a change in only three years. Depending on whose statistics you go with, estimates are given that 75 to 80 percent of residences in the US currently have asphalt shingle roofs.

The story is different in some other parts of the world. In Australia, for example, metal is the most popular roofing material. According to Ray Smith, CEO of AppliCad, Australia's market is just the opposite of the U.S. with about 75% of residences installing metal roofs and over 90% of commercial buildings using metal roofing. Metal is also widely used as an option for wall cladding on residential and industrial structures too.

## Differences in the Way the Roofing Trade Developed

Smith believes there are a couple of different reasons for this, the first having to do with how the construction industry developed in both countries. European settlers brought European construction with them to Australia, according to Smith. They created open rafter roofs with battens or purlins along with clay or concrete tiles. When more accurate ways of estimating metal jobs came along, people moved to metal. In Australia, this roof type is more cost-effective, and Smith says that in most areas, Australia doesn't get such extreme snow that might make a roof deck with waterproof membrane necessary.

Of course, the early settlers in America were European also, and when they came, many did use the old methods, creating clay tiles or using slate, but the most plentiful resource they found was wood. With the amazing, largely untouched forests that stretched across great



Corrugated residential roofing. PHOTO COURTESY OF WALLS METAL ROOFING, NOVA SCOTIA

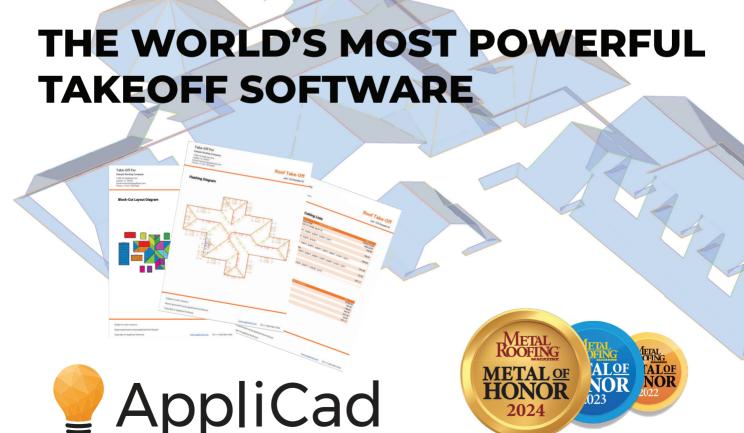
swaths of the continent, it was inevitable that wood would become a staple in American construction, and that meant many wooden shakes for roofing. Eventually, America started moving away from wooden roofs due to their

tendency to catch fire. It was also about this time that asphalt was developed as a by-product of the petroleum industry, and asphalt seemed durable, less of a fire hazard, cheap, and easy to install. Eventually asphalt shingles became the standard in the US.

Metal has always been used on Australian roofs, but until more accurate and efficient ways of estimating a job were developed, the majority of Australian roofers were working in concrete tile and clay tile 20 to 30 years ago. The combination of longevity, sustainability, and price were the compelling reasons, not to mention that with concrete and clay tiles the rafters were required to be much closer together to accommodate the load of tiles, adding to labor, resources, and of course, cost.

#### Which Roofing Is Better?

As is usual with a paradigm, each group believes their way is better. Metal roofing systems last longer than the traditional asphalt shingle system, so in the Australian viewpoint, Americans pay to have their homes re-roofed only to





Commercial roof and wall cladding in trapezoidal profile. Photo courtesy of the riverlea group, New ZEALAND

#### **Roofing In New Zealand**

Stephen Thomas, Product Development Manager of the Riverlea Group, New Zealand, said that the roofing practices in New Zealand vary from American practices, and even from Australian practices, although New Zealand and Australia are relatively close. Lightweight steel roofs are the most popular roofing because of the country's geography. Earthquakes are a concern, and most of the populated areas are located close to the coast making corrosive airborne sail a concern as well. Heavy roofing, such as concrete and clay tile is no longer as popular, and, he said, asphalt shingles are uncommon due to their reputation of having poor durability and susceptibility to New Zealand's high UV ray levels.

"Most steel roofing coil is supplied by just two companies in New Zealand, and while imported coil from Asia is often more competitive," Thomas said, "it has a relatively small market share." The local steel is made from iron-rich marine sands, strengthening the steel so that nominal G550 (550 MPa) material is often actually 650 to 750 MPa. The sole local smelter is also planning on moving

from AZ coated steel to AM coated steel, with about 3% Magnesium, which will provide greater corrosion resistance with less metallic coating. The smelter is currently working to become more environmentally friendly, partnering with the government to add an electric arc furnace so they may process more scrap steel.

A variety of roofing profiles are popular, including trapezoidal profiles. Corrugated panels are very commonly installed on residential builds, and standing seam is used mainly for residential



Corrugated Residential Roofing.
PHOTO COURTESY OF THE RIVERLEA GROUP, NEW ZEALAND

roofing. The most common coil size is a 940mm (37") coil, 27 gauge, high tensile (G550) material for residential, rural, and small commercial developments. For large commercial developments, 1219mm (48") coil in 25 gauge is by far the prevailing choice.

Dripstop and other similar products were introduced about five years ago and are becoming an accepted alternative to a separate underlayment.

There are no specific requirements to become a roofer in New Zealand, though Thomas said that many employers prefer to hire workers who have a certification or are working toward one.

come back in a dozen years or so, tear it off, and do it all over again. Australians expect their roofs to last for the lifetime of their home. Many Americans, on the other hand prefer to pay for the lowercost asphalt shingle roof, especially if they are unsure how long they will stay in their home. Curiously, you would expect that this affects the resale value, but that doesn't figure in any of the discussions that Smith has had in his travels across the US.

Australians and Americans have different aesthetic ideas about roofing as well. Americans have become attached to the look of asphalt, while, in general, Australians prefer metal roofing. Further, when Americans opt for metal, they usually choose standing seam, while Australians prefer the look of corrugated metal. A corrugated metal roof system is cost effective, in part due to the framing described above, and it's less expensive to install, largely because of labor. One corrugated panel is equal to 2 1/4 to 3 standing seam panels in width, so the installation is completed more quickly. The metal is usually 0.48 BMT steel (Base Metal Thickness), approximately 26 gauge from Bluescope Steel® with their Colorbond® paint finish system.

Many American roofers say that through-fastened metal roofing does not belong on a house because, in essence, you take a water-tight surface and punch a bunch of holes in it. Smith acknowledges that this is true, but he says that there are many examples of corrugated roofs that are still going strong after 60 to 70 years. Much of longevity, of course, has to do with the quality of the components as well as the workmanship of the roofer and the level of maintenance by the building owner.

#### **Accurate Quoting**

Smith recognizes that while there is merit in every roof system, the key is to ensure that the building owner is adequately informed and understands the limitations of each system — all roof systems will work as designed, so long as they are well-built. In considering

what roofing material to install there are three primary considerations as suggested above — the "curb-side appeal," the longevity of the materials selected, and the cost, and this should include costs relating to long-term care and maintenance if appropriate.

"A roofer getting into metal is well advised to have an accurate quoting system that creates precise cutting lists that can be checked and verified, and to order panels from a factory that specialises in making panels and trims. The vast majority of metal roofing systems in Australia, New Zealand and Africa are roll formed in a factory to very exacting standards. It is the method of accurate quoting and minimising waste that has contributed to the growth of metal roofing in Australia from about 20-25% 20 years ago to the numbers we have now."

"Indeed, even the trims are roll formed



Commercial roof in a corrugated, painted profile. PHOTO COURTESY OF APPLICAD, AUSTRALIA

increasing accuracy and reducing cost — roll formed trims (ridge and hip caps, gutters, fascia trims, etc.) are cut to length up to a maximum length at cents per foot, whereas trims made in a press-brake will be dollars per foot to fabricate. Cut-to-length trims reduce the number of joins and improve the overall

appearance of the completed job," Smith explains.

## Different Educational Requirements

Australian roofers are required to become certified "roof plumbers," which is a four-year course. In fact, everyone





Corrugated residential roofing. PHOTO COURTESY OF WALL ROOFING, NOVA SCOTIA

#### **Roofing In Nova Scotia**

Similar to roofing in the United States, metal is gaining traction in Nova Scotia. Josh Deal of Walls Metal Roofing said that in 2013 his company added metal to their residential roofing options, and they have seen it double year over year.

"Ten years ago, metal roofing was mainly an agricultural product," Deal said, "and asphalt was the main choice for residential. Now metal is more accepted."

As it is in many other geographical areas, price is the main reason that many Nova Scotians stick with asphalt roofing. Deal said that in the last few years, when he and his team have gone to home shows, they find that they can be very competitive with asphalt on larger jobs because they make the panels and trims in-house, plus their crews are highly experienced and efficient.

Perhaps that economy of scale is the reason that metal roofing is growing



Corrugated residential roofing. PHOTO COURTESY OF WALLS METAL ROOFING. NOVA SCOTIA

more quickly in the commercial and the agricultural markets, while it grows more slowly in the residential market. Deal said the region is largely filled with people of moderate income, fishermen, small farmers, and lumbermen, and they mainly live in small bungalows. Tile or resin are uncommon, though occasionally you come across a flat roof, and approximately one house in fifteen is metal-roofed. Deal said that once one person in a neighborhood gets a metal roof, you usually see a few neighbors follow suit so that there are clusters of metal roofs.

Most people live within an area that exposes their homes to high wind and salt spray, so that is usually a concern. The industry standard for metal roofing in the region is 28 gauge, but many use 26 gauge metal with an SMP paint system. Exposed fastener is more common for financial reasons; standing seam and other modern profiles cost more.

There are no certification or educational requirements for roofers. Most people learn on the job, Deal said. He doesn't see this as a problem; he said you can tell pretty early on who has potential and who is not going to make a good roofer.

involved in the building industry needs to become certified and the builder (aka a contractor in America) is responsible for the job that everyone does so he is unlikely to hire an uncertified sub-contractor.

Smith said that with traditional asphalt shingles, if a roofer runs short, he can simply go to the nearest home builders' supply store and buy a few more shingles. However, if you are working in metal, you need to be more accurate; you can't just run out and buy more. If the correct length is not supplied, you can't stretch it and such mistakes quickly become very expensive mistakes that can ruin your business for good.

There is a growing trend for roofers to overcome this problem by buying their own portable roll former and making panels on site as they go, however they must still order the correct amount of coil to complete the job. Smith questions the merit of on-site roll forming of metal roof panels for every job. Is this the most cost-effective method? He explains that you must factor the cost of an expensive machine sitting in a paddock for the duration of the job, and the wear and tear on the machine, hauling from job site to job site. Smith has several customers who recognize these issues and have their portable roll former set up in a factory where they are running multiple shifts creating roofing panels for their installers and customers. The machines never stop making panels.

The key to success with this process is accurate cutting details for panels and trims, whether you use a portable roll former or order from the shop, so we're back to the point made above about accurate quoting.

As Smith understands it, portable roll forming machines were originally developed in Germany where roofing of all types is installed by tradespeople formally trained and with years of experience to be considered a qualified roofer. In the hands of such qualified trades, the portable roll former simply made them more efficient. They already know how to install standing seam



Corrugated residential roofing installed 20 years ago. PHOTO COURTESY OF APPLICAD, AUSTRALIA

profiles and more importantly, make the roof waterproof. Simply throwing panels at a plywood deck doesn't make a roof waterproof. The 'devil is in the details,' and this has never been more appropriate as used to describe the finishing at the edges of a roof. Poor installation of the trims and edge assemblies is generally where most metal roof failures occur, regardless of the profile. So, buying a portable roll former does not actually solve any problems if it is not used by people who know what they're doing and why, Smith said.

There is no nationwide certification course required of roofers in America. The NRCA has many programs that are well recognized nationally as established "best practices," as does the MBMA and MCA, but they are not "standards" and there is no governance of adherence to best practice. Maybe the real issue, Smith said, is that local building authorities

(state or county, whoever — the AHJ — the Authority Having Jurisdiction) don't insist that the guys doing this work can demonstrate that they know what they're doing, and the poor quality of many reflects badly on the best quality of a few.

Many roofers are very experienced and can put up an exceptionally good roof, but if an asphalt roofer decides to enter the metal market without the appropriate training, will the integrity of the metal industry be maintained? Smith believes that the best way to ensure standards are maintained is to require compulsory training and nationally recognized certification as they have in Australia, New Zealand, and the UK. Having said this, one common theme in all the places Smith has visited around the world, is this: If you are the owner of a residence that has a poorly installed roof system, for whatever reason, getting things fixed is very difficult. **MR** 



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# **Metal Roofing Warranties**

What Roof Warranties Typically Offer and Cover

By McElroy Metal

nstalling a new roof is an investment, not just in terms of money but in the protection of your customers' property. It's a vital component of the property that provides protection and greatly impacts property value. With its 50-to-60-year life expectancy and warranties, metal roofing has an acknowledged advantage.

#### **Warranties for Metal Roofing**

Like other products, metal roofing warranties generally contain a list of excluded items and requirements (such as maintenance) to keep warranty coverage in force. From clearing snow, leaves, or debris from the roof to regular roof inspections, it's important to understand the requirements. The conditions generally include the kind of regular maintenance homeowners or building owners should be carrying out anyway.

Metal roofing warranties also include a length of coverage. It's pretty typical to see a 30-to-40-year coverage; however, you can also find companies touting "lifetime" coverage. Many of these so-called "lifetime" warranties are prorated extensively or contain requirements that most owners can't or won't meet. It's important that customers complete their due diligence, read warranties thoroughly, ask questions and understand the warranty.

When dealing with a metal roof installation, generally, four different types of warranties are available.

#### **Substrate**

Some substrates, like Galvanized steel or aluminum, don't offer warranties. Others, like Galvalume® steel, can offer



Some manufacturers may state a long warranty coverage yet allow great degrees of color and chalk. PHOTO COURTESY MCELROY METAL.

a warranty of up to 45 years. That's a long time and a big difference to consider when selecting materials. Not every manufacturer covers Galvalume, so it's important to understand what you're offering to your customers.

In the case of a Galvalume product, if metal roofing panels deteriorate to the point of perforation, your customer may get relief through a warranty claim.

#### Paint/Finish

A paint or finish warranty is the second type of warranty that might apply to metal roofing product offerings. As the name implies, this warranty covers the coating on top of substrates like Galvalume, Galvanized and Aluminum.

Typical finish warranties include a length of coverage, an acceptable level of color change (referred to as fading), and paint degradation, commonly called chalking.

While reviewing finish warranties, it's obvious that you'll want to compare warranty length. Beyond the warranty length, reviewing and understanding the amount of color change allowed is critical.

Some manufacturers may lead with a big number for years of warranty coverage yet allow such great degrees of color and chalk that the product could technically be within the warranty guidelines yet appear a completely different color than when sold. Again, with the sale of any size roof, it's important to explain the warranty thoroughly so customers understand the warranty up front.

#### **Workmanship Warranties**

Along with warranties for the materials, licensed contractors typically offer a workmanship warranty. Workmanship warranties can be extensive, between five and 10 years.

The metal roofing workmanship warranty only covers the work completed by the installer, such as proper clip, fastener and trim installation for a standing seam project. If these fail, then you should repair the roof within the warranty period, usually without additional cost.

Again, there will be maintenance requirements to maintain the warranty, so explain those to the customer.

#### **Weathertightness Warranty**

Weathertightness warranties provide

a guarantee the roof won't leak for a specific period, usually around 20 years. This type of warranty is very rare for residential projects and is more often seen in high-end commercial and architectural projects.

Each manufacturer tends to offer their own program, so it's always best to chat with the top manufacturers before offering this warranty.

#### **Why Do Warranties Matter?**

A new metal roofing installation is a good value, but still a significant investment, and a warranty improves the overall value and ownership experience in several ways:

Saves customers money – A metal roof offers impressive longevity and performance, but if things do go wrong, a warranty can offer the peace of mind that things will be sorted out.

Offers customers confidence – With decades-long manufacturer warranties,

you can offer the confidence that a roof will look and perform at its best for years to come.

**Investment protection** – A roof is a big investment. Working with a reputable manufacturer and tier-one supplier offers you and your customers the best chance for success.

**Boost property value** – A longer material warranty adds value for anyone looking to sell the property.

A metal roofing warranty is essentially an extension of the installation and is as important as the choice of materials, color or anything else. It is the support that ensures customers their metal roofing ownership will be an enjoyable one. **MR** 

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## **Customer Benefits**

#### LEED Credits and Tax Rebates for Metal Roofing

By Rick Zand, New Tech Machinery

s the demand for sustainable building materials increases, the metal construction industry is perfectly situated to provide eco-friendly cool roofs and siding that may qualify consumers for tax rebates and LEED credits. While metal roofs cost roughly two to three times more than roofs with asphalt shingles, rebates and credits can help offset the higher price.

#### Why Is Metal Eco-Friendly?

Metal roofs are comprised of at least 25% recycled material and can be recycled 100% an infinite number of times. They keep indoor temperatures cooler, last longer, and require little maintenance. As discussed in a blog post [https://bit.ly/3SeDnZz] on fire resistance, they're also preferred in fire-prone areas.

On the other hand, according to the National Association of Homebuilders Research Center [www.nahb.org], 10 million tons of asphalt shingles are dumped in landfills every year.

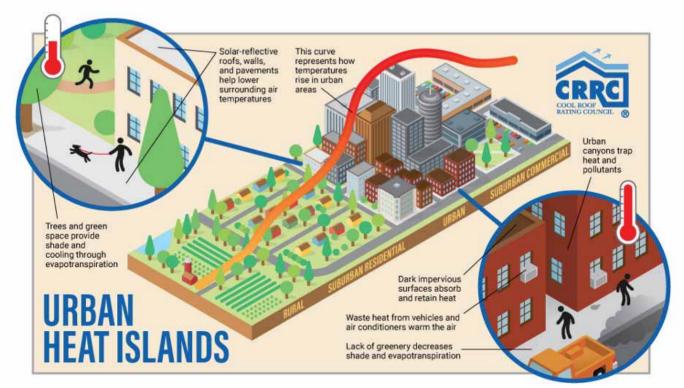
Asphalt's carbon footprint is excessive, not only in the manufacturing of this petroleum product but even in use; hot days bring out the carbon emissions from asphalt due to solar radiation.

While they are working on recycling asphalt shingles, the goal is set at only 1% by 2030. Therefore, the shingles will continue to pile up in landfills at nearly the same rate for the foreseeable future.

#### **LEED Standards**

The U.S. Green Building Council (USGBC), the governing body behind Leadership in Energy and Environmental Design (LEED) certifications, outlines the framework for LEED standards. Their goal is to encourage energy-efficient buildings that offer environmental, health, and societal benefits.

LEED v5 is the latest draft; however, it is still in progress as stakeholders provide feedback. In the interim, refer to LEED v4.1. for checking eligibility of LEED points for metal roofing and siding.



This illustration describes the factors that contribute to urban heat islands (UHI), as well as factors that help mitigate UHI. Urban heat islands occur when the temperature in urban environments is higher than surrounding areas. High surface temperatures lead to elevated air temperatures, especially at night. Heat islands increase heat-related discomfort, illness, and death. They also cause greater air conditioner use, which increases energy costs and air pollution. Urban heat has a disproportionate impact on disadvantaged communities (Hsu et al., 2021; Hoffman et al., 2020; and Wilson, 2020). IMAGE COURTESY OF COOL ROOF RATING COUNCIL (CRRC; WWW.CRRC.ORG)

#### **Contribution To LEED Points**

Check the LEED rating points for metal roofing here. LEED points can also apply to metal siding, like heat island reduction, based on the same criteria.

LEED recognizes when a building or community uses materials to maximize energy efficiency and sustainability. LEED structures may qualify for rebates and other incentives and can increase property value.

#### What's a "Heat Island"?

We've all seen images of emergency workers opening fire hydrants in inner cities so that children can cool off under the spray of water on hot summer days. The heat radiating from the streets, along with the trapped air and a lack of vegetation and green spaces, all contribute to the increase in temperature. These hot spots have become known as heat islands.

According to the Green Building Alliance (GBA; www.gba. org), heat islands occur in densely populated urban areas. Compared to surrounding areas, temperatures can rise to 5.4 degrees Fahrenheit during the day and up to 22 degrees Fahrenheit in the evenings. Indoors, the temperature also increases, as 90% of roofs in the U.S. are heat-absorbing, and most home heat enters through the roof.

#### **Cool Roofs**

Cool roofs like standing seam metal address this phenomenon due to their reflectivity, providing a cooler indoor environment. This contrasts with heat-absorbing roofing materials like asphalt shingles, which do little to reflect solar radiation and increase energy consumption. GBA reports that cool metal roofs reflect as much as 70% of solar energy away from the building, whereas materials like asphalt shingles reflect only

5% to 30% of the sun's energy, depending on the color of the shingles.

Lowering HVAC energy usage will lessen the carbon footprint by reducing the burning of fossil fuels to generate power. This means less greenhouse gas emissions and improved air quality. GBA reports that 40% less energy is used with a cool roof.

## Solar Reflectance (SR), Thermal Emittance (TE), and Solar Reflective Index (SRI)

Solar Reflectance (SR)

Solar reflectance relates to how much solar energy is reflected off the roof's surface, measured on a decimal scale between 0 and 1, where 0 is the truest black, and 1 is the truest white.

For LEED v4, solar reflectance for a low-sloped roof ( $\leq$  2:12) is greater than or equal to an initial value of 0.65. After three years, its solar reflectance is measured as greater than or equal to 0.50.

For a steep-sloped roof (>2:12), the initial solar reflectance should be greater than or equal to 0.25 and, after three years, greater than or equal to 0.15.

Heat islands occur in densely populated urban areas.

#### Thermal Emittance (TE)

A material's thermal emittance will determine how much heat it will radiate. Any surface exposed to radiant energy will increase in temperature until it reaches a point where it gives off as much heat as it receives, known as thermal equilibrium.

A high emittance surface will reach thermal equilibrium at a lower temperature. A low emittance surface will not radiate the heat as quickly. So, the higher a roof's thermal emittance, the less heat is retained within the roof, and the less heat is absorbed into the building.

# I'd absolutely recommend NTM machines to any business owner who's getting into rollforming."

— Mike Lemke

Mike Lemke, owner of Lemke Exteriors, boasts nearly three decades of experience in the metal roofing and gutter industry. With multiple NTM machines under his belt, including a WAV™ Wall Panel Machine, an SSQ II™ MultiPro Roof and Wall Panel Machine, and three Mach II™ Gutter Machines, Mike's business has flourished. Starting from a single machine operation, he now oversees a team of 25 employees and caters to high-end custom homes and commercial condos. Ready to grow your business like Mike? Contact us to learn how you can expand your operations with NTM!







#### **BUSINESS BUILDING**

Like solar reflectance, thermal emittance is measured on a scale from 0% to 1%.

#### Solar Reflective Index (SRI)

The SRI combines SR and TE to indicate a roof's overall ability to return solar energy to the atmosphere. When placed under the same conditions, roofing surfaces with a higher SRI will remain cooler than surfaces with a lower SRI. In other words, a metal roof should

measure a high SRI, while a conventional roof will rate at a low SRI.

SRI is calculated using the SR and TE, measured in values between 0 and 100. The SRO combines SR and TE into one number used to rate the material's LEED performance.

LEED requires roofing materials to have an SRI of 29 or more for steep-slope roofs and more than 78 on low-slope roofs. Manufacturers should be able to provide documentation. If not, you can have SRI testing performed in a lab [https://coolroofs.org/programs/roof-rating-program].

#### **LEED Credit Benefits**

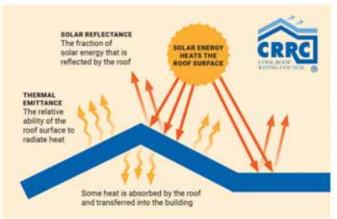
- Tax incentives—Many states offer programs to encourage energy efficiency through LEED.
- Increasing energy efficiency is good for the environment and saves your customers money on energy bills. Since metal roofs keep buildings cooler in the summer, less demand on the HVAC system means more savings.
- Increases property value A metal roof can increase a home's value by up to 6%. For example, on a \$500,000 home, that's a \$30,000 increase in value over a house with an asphalt shingle roof. A significant return on investment for your customers.

#### **Tax Credits and Rebates**

According to the National Association of Homebuilders, contractors who can show they can build homes that can

withstand the impact of environmental hazards like strong winds and wildfires have a competitive advantage, as living in an area with these hazards can increase insurance rates significantly and leave the property owner at risk of loss. Builders and contractors can use this risk as a selling point for the benefits of metal when it comes to storms, fires, and natural disasters.

This is especially true in the West,



This illustration describes the flow of radiant energy as heat between the sun, roof surface, building interior, and surroundings. The higher the thermal emittance, the more of this absorbed heat is radiated away from the roof surface. IMAGE COUNTESY OF COOL ROOF RATING COUNCIL (CRRC; WWW.CRRC.ORG)

where drought and severe heat have led to an increase in wildfires. As a result, home and business owners have become more conscious of the materials used to construct their buildings. In some high-hazard areas, insurance companies will refuse to cover homes and structures made of flammable materials such as wood siding and shingle roofs.

Further, installing environmentally friendly materials like metal roofs and siding can generate other tax credits and benefits.

As part of the Inflation Reduction Act, the Biden-Harris administration allocated nearly \$9 billion to states and tribes for homeowners who make their homes more energy efficient. Grants to states and local governments that apply to efforts that meet the 2021 International Energy Conservation Code (IECC) can benefit builders and consumers. Also, home energy rebates and tax credits may be available if the home is improving its

efficiency.

HOMES Rebate Program: Provides over \$4 billion to states for homeowners who renovate their homes to be more energy efficient. Eligible homeowners can receive \$4,000 to \$8,000 in rebates.

Metal Roof Federal Tax Credit: This tax credit offers homeowners with metal roofs installed a 10% credit on the cost of the metal roof up to \$500.

Requirements:

- The metal roof must be installed on the homeowner's primary residence.
- The metal roof must meet certain energy efficiency standards that meet or exceed requirements for reflectance and emissivity.
- The roof must be installed within the tax year for which the homeowner is claiming credit.
- The homeowner must have all proper documentation for the roof, including the manufacturer's certification statement or testing results.
- The tax credit comes with certain limitations, so homeowners should consult with a tax professional to determine their eligibility and how much they can claim.

To receive the credit, complete IRS form 5695. Homeowners will need documentation. Then, they can add this to their tax return for credit.

Keep in mind that the credit only applies to certain types of metal roofs that meet the energy requirements. Shingle, tile, ceramic, and many other types of roofs are not eligible for the tax credit. **MR** 

NOTE: This article is strictly informational. Be clear with your clients that while you can talk to them about tax incentives and rebates, you cannot make guarantees or give financial advice. They need to consult with their financial advisor or tax specialist for advice specific to their situation.

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# **Seamer Insights**

#### Tips For Successful Mechanical Seaming

By Linda Schmid

#### **The Basics**

A well-executed, mechanically seamed roof can perform effectively for 60 years up to 200 years, depending on the material used. Seamer manufacturers and industry veterans shared what

they know about seaming for quality and longevity.

Depending on the roof to be installed, you may need to rent a specific seamer; some roofing seams are proprietary, making it necessary to use the seamer the panel manufacturer specifies. Naturally, if renting a machine, the owner will do the majority of the maintenance on the machine, but there are still some things you can do to improve the machine's performance.

Before you begin seaming, make sure you have peeled back the protective film used to prevent damage during the roll forming process, shipping and installation. If you do not, it may tear

during the seaming process due to the added thickness and it can get messy. Further, ensure that the panels are clean so the rollers do not pick up sand, lubricant or other debris, possibly leading to marking up or even damaging the roof panels.

The machine should be cleaned daily. If you are renting a seamer for several days, the cleaning will fall to you.

If you own your own machine, then there is more maintenance required, although it is pretty basic. Store the machines where they won't get wet; the protective rubber gaskets can rip, leaving the machine exposed. Occasional lubrication will also be required. If you are seaming a roof with a Kynar coating, be sure to use a compatible lubricant that will not mark it up.

Ensure that the bolts are tight before you start a job.

#### **Folding Issues**

When making the second fold, the inside leg needs to be short enough that it will not over-fold. In effect, the seamer needs a little space between the end of the leg and the next fold. This could happen because the panel is imperfect.

Some experts believe hand seaming at the ends or hand seaming the whole roof may resolve some folding problems. Of course, it may take 30% more labor, but it won't take as long as waiting for new panels to be delivered. However, beware that you are not

double-locking the panels you hand crimp because it will be very visible and aesthetically unpleasing.

#### **Riding Off The Seam**

If the seamer rides up off the seam, it can be the result of a build-up of mastic on the rollers. This can be prevented by clean-

ing off the mastic with denatured alcohol before beginning seaming. It could also be the result of incorrect crimping or seamer replacement. With many types of seams, hand crimping is required to get the seam started, then the seamer continues the fold. If the seam is started wrong, it will be continued wrong. If the panel is not installed in correct modulation, it will cause problems with the crimping and seaming procedure.

A little quality control can eliminate any of these causes of the ride up off the seam and it is worth taking the time to prevent. It is very difficult to fix once the seamer has "gone off the rails."



Keeping a watchful eye on the seamer will quickly catch problems that arise. PHOTO COURTESY OF DI ROOF SEAMERS.

#### **Dancing Seamers**

If the machine does not have on the correct wheels for the roofing and they are not making contact with the panel, then the seamer may "dance" from side to side. On other models, if the wheels are actually touching the pan, it could cause upward pressure and make the seamer ride off the rib. The wheels need to be riding above the pan 1/4" to 3/8".

The seamer may act this way if something interferes with the even surface of the panel. For example, Miami Dade code requires a long, heavy clip, and if you tighten the seam too much, the thickness of the panel varies and the seamer will dance trying to get past the clip. Also, you could teeter-totter the seamer if you walk on the panel you are seaming.

#### The Do's and Don'ts of Seaming

- DO check that the panels are as specified before starting.
- **DO** read the manufacturer's manual. They are usually short and will prepare you for situations that can arise.
- **DO** start slow. Watch the seam being made so you can catch any problems early on, stop the seamer, and make corrections.
- DO start loose and tighten the seamer if you experience dancing. Too loose can be adjusted by hand. Too tight can cause roof issues over time.

### **PRODUCT FEATURE**

- DO stop if there is a quality control issue, for example the panel paint is scraping off. If you keep going, hoping it will straighten out, you will only make the problem worse.
- DON'T continue hand seaming if it is scratching the finished roofing. Check the seamer to see if it has nicks or other damage. Inserting a soft, thin cloth between hand seamer and panel, depending on the seamer and the tolerances involved, could resolve the issue.
- **DO** try to fix an error in a seam with a hand seamer. DON'T resume mechanized seaming until the seam is amended.
- **DO** order an extra panel or two and start seaming on the ground or a bench to get the machine set up. You don't want to try doing it up on the roof and risk destroying the first panel.
- DON'T allow the seamer to run the seam without someone tracking it. It can run right off the roof if you aren't careful. The best way to avoid this is to tie it off with a lanyard.
- **DO** check periodically to see if the seamer is seaming as tight as it did at the beginning. Adjust if needed.
- **DO** use a 100-ft. 10 gauge electrical cord no further than 100 feet from the power source and you won't burn up the motor brushes.
  - DO watch the electrical cord to ensure that it doesn't get

#### METAL ROOFING MAGAZINE EXTENDS ITS THANKS TO THESE EXPERTS FOR SHARING THEIR EXPERTISE

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caught up on something.

- DON'T try to trouble-shoot issues on a rented seamer. The owners know the machines best, so if you run into problems, contact them. They should be able to walk you through fixing the problem, send someone out to help you, or provide a replacement machine.
- **DO** clean factory-applied roofing sealant from the rollers with a rag or fine wire brush and carburetor cleaner.
- DO consider purchasing your own seamer if you roll form and install the same type of roof over and over. Also, a seamer can be picky about such things as bolt tightening and if the same person works with the same machine all the time, they will soon learn the best way to handle the machine. MR

# **BRADBURY GROUP**





## **BRADBURY EQUIPMENT DRIVES GROWTH.**



This article was originally published in the February/March 2005 edition of Metal Roofing.

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 standalone magazine, and today it is over 20 years old.

If you have a metal roofing project on an 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!

# Landing The BIG JOBS

Selling metal roofing to homeowners associations is getting easier, some say



Homeowners associations spend a great deal of time researching their roofing options for new construction and reroofing projects, so they often discover the value of metal on their own. This association selected the Metro Shake. METRO ROOF PRODUCTS PHOTO

By Mark Ward, Sr.

elling metal roofing to individual homeowners is a fairly straightforward proposition. By the time customers call they may have already experienced a roofing problem, have the means and motivation to solve it, and are intrigued by the durability and stylishness of a metal roof to protect their home investment.

But selling to a group of homeowners, as represented by their homeowners association, is not such a simple matter and may involve months of cultivating key individuals, making presentations before committees and boards, and staking it all on an up-or-down that the metal roofer may or may not win.

Why go through all the effort? "If you can sell a homeowners association and maybe even do the first metal roof in

that community, your company will get great visibility that will probably lead to more jobs and more referrals," explains Tony Tiapon, a Corona, Calif.-based zone manager for Decra Roofing Systems.

Todd Miller, president of Classic Products confirms the public relations value of installing the first metal roof in a residential area. "Remember, chances are that most of the homes in the area represented by the association were all built around the same time that the community was built," he says. "So if one home needs a new roof, then a lot of the other homes are probably ready for re-roofing too."

Word of mouth can work for you, too. "Board members and residents of one homeowners association talk to their counterparts in other nearby associations," notes Jonathan Wilson,

marketing manager for Ram Metal Roof Mart of Placentia, Calif. "As the word gets out about metal roofing installed in one community, our company is typically getting jobs in four or five homeowners associations per year."

# **Cultivating the Association Board**

In targeting homeowners associations, metal roofing contractors can divide their prospects into three distinct markets. One opportunity is to sell metal roofing to associations that are run by volunteer boards and which seek to re-roof community-owned buildings such as clubhouses and pool facilities.

A second market can be found among associations in which common buildings are maintained by a property management firm. Finally, the market includes individual homeowners who desire metal roofing but must obtain approval from their association to modify architectural covenants that currently prohibit metal roofs.

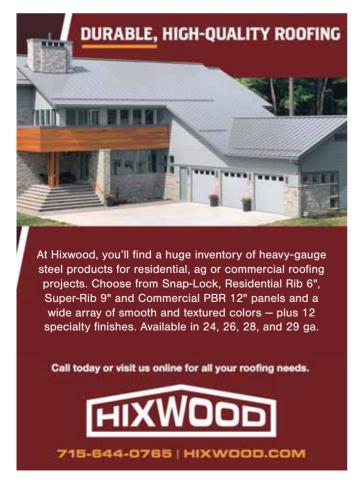
"Associations managed by boards and those run by property managers are two very different markets," says Tiapon. In selling to a board-run association, "you've got to do a lot of homework. Since board members actually live in the community, what are their roofing preferences? Has the board kept up with the current realities of the re-roofing market? Have they assessed enough dues from the homeowners to adequately fund the project?"

As such, suggests Tiapon, a sales representative must be adept at cultivating board members, eliciting the necessary information, and making polished presentations. "It can take patience," he counsels, "and may start with driving

through the community, talking to individual homeowners, and then probing and asking questions and finding out who are the key decision makers on the board. That way, when you start calling up individual board members you won't be shooting in the dark."

Tiapon believes selling starts with individual board members and building good rapport on a personal level. Here too, patience is often required as board members may change due to elections "and sometimes you might even have to start the process all over again," he says. Yet cultivating individual relationships, he points out, is the key in eventually receiving an invitation to make a presentation before the entire association board.

"You can't make a presentation unless you're invited," Tiapon says, "and association boards don't just call you up and ask for your proposal. Long before







Homeowners associations vary in size from a dozen homes to dozens of homes. They all want to protect the aesthetic integrity of the community as well as its property values. Boards need to be educated about the fact that metal can do both. METRO ROOF PRODUCTS PHOTO

anything happens, you've got to be cultivating individual members. You've got to be asking when the board meets, whether presentations are allowed and, if so, how they're made. And only then can you ask if your company can make a presentation. The process can easily take a year."

In between, Tiapon adds, contractors may have to get past a roofing committee or a roofing consultant, before they ever get to the level of the board itself. "Marketing to homeowners associations is usually something we do as a metal roofing manufacturer," he says. "At Decra, my job as a zone manager includes cultivating association projects."

Where the contractor comes into the process, he continues, "is when things start getting more serious and I'm looking at being able to make a presentation to the board. That's when I partner with a contractor, because having his expertise as the installer makes the presentation more effective." As for which contractors Tiapon seeks as partners, he says Decra and other manufacturers know which local roofers can handle association projects — which can range in value from \$15,000 to millions.

Key selling points for volunteer boards are the price, durability, and water resistance of metal roofing, Tiapon says, and board members' comfort level with the contractor and manufacturer. "Nine out of 10 times we're in a bidding situation," he explains, "and most of the

time, if roofing products seem about the same, the board goes with the lowest price. But we get the board to look at life cycle costs. Our product lasts 50 years, compared to 10 years for asphalt. And since our roofs are lightweight, you can install them over the existing roof and maintain the original R-value."

Should the manufacturer and contractor be successful in winning an association job, the roofer must be adequately insured "and able to keep the board or the property manager happy," Tiapon says. "For example, you've got to keep the jobsite clean. Nothing is going to turn off an association more than a messy jobsite that's an eyesore for the community."

# Marketing To Property Managers

Selling metal roofing to professional property managers "is also manufacturer-driven," says Tiapon, "because many property management companies can be big operations that manage multiple homeowners associations. To be visible to these companies, we've got to go to the trade shows where we can meet their key people and develop relationships."

In addition to price, durability, and aesthetics, Tiapon says technical specifications "are also important to property managers, since they're professionals and know their jobs." Nevertheless, he suggests that metal roofing contractors can enter the market by calling on property managers to offer full-service installa-

tion and repairs as needed.

"Contractors can also get in touch with their manufacturers," Tiapon says, "and offer to attend trade shows and partner with the manufacturer in helping cultivate contacts." Wilson says Ram Metal Roof Mart often partners with contractors "whom we know can handle association projects, usually because they specialize in metal roofing for these kinds of jobs."

"Before a contractor typically becomes involved, a company like ours first has to go to the homeowners association and do some educating," says Wilson. A boardrun association may appoint a roofing committee that must be instructed about available products and material choices. By contrast, marketing to property management companies may require networking at national and state meetings of organizations like the Community Associations Institute.

Altogether, Wilson points out, the process may take three or even five years from the time an association thinks about re-roofing until the project is actually contracted. "The major selling points are that metal roofs have the durability to basically be a one-time expense, and that they're maintenance-free and keep their aesthetics long-term," Wilson says. "It's also important that metal roofs are lightweight and therefore within the weight parameters of the original roof."

The proliferation of roofing products over the years "has meant that some associations have been stung before with non-metal products that failed," Wilson says. Because high-quality residential metal roofing has now been on the market for more than 20 years, he says, "If a homeowners association wants a proven track record, we can provide one. We can even give a 50-year warranty."

As a result, Wilson reports an impressive rate of closing about half of the sales in which his company is invited to make a presentation. "If we don't close the sale, it's not because of the product but strictly on price," he says. "Metal roofing costs more than asphalt and is competitive with concrete tiles, and superior as a product."

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#### **Changing the Covenants**

Marketing metal roofing to homeowners associations also comes into play "when an individual homeowner in a community has contacted us, but we can't do the job until the association approves metal roofs in the first place," says Miller.

Communities whose homes need re-roofing were often built in the 1960s or '70s, Miller points out, before today's newly developed metal roofing products and finishes were on the market. "So a lot of times the issue we're facing is that the association's covenants either expressly say no metal roofs, or say that only tiles or shakes are allowed," Miller says. "And believe me, there are still a lot of communities that still have no homes with metal roofs."

Miller says the challenge is compounded by the sheer number of homeowners associations. Many communities may be comprised of a dozen homes or less. Yet associations large and small can be zealous about protecting property values and aesthetically equate metal roofing with industrial or agricultural buildings.

"The key point you need to make to an association board," Miller says, "is the fact that metal roofing products today are durable and have coatings and finishes that keep them looking good for years." Taking board members or architectural review committees out to see actual examples of attractive residential metal roofs is a powerful selling tool, he says.

Miller recalls a homeowner in upscale Hilton Head, S.C., who sought a variance in his association's architectural covenants to permit metal roofing. "So he put up a 'temporary' metal roof on his garage and then took a survey of all his neighbors," Miller says. "Everybody really loved the roof and, as a result, the board changed the covenants."

Metal roofing contractors who have been contacted by an individual homeowner already have an edge, Miller observes. "Remember, that homeowner lives in the community," he notes, "so he or she has a voice in that community and a right to be heard by the board. Also, since the homeowner is probably fed up with his existing roof, he's motivated to push for a change in the covenants."

Even so, at times homeowners and contractors must be satisfied with compromises. "The board might not give a blanket approval to metal roofing," Miller says, "and may only allow metal roofs if they simulate shakes or shingles. But at least today we have the products to do that for our customers."

Whether marketing metal roofing for association-owned buildings or individual homeowners, Tiapon says, "the hardest step is breaking into your first project. After that, it becomes easier as a contractor to sell metal roofing to homeowners associations based on your experience. Our current closing ratio is now about 90 percent, once we've been invited to make a presentation, because we've got the product and the expertise."

Miller agrees. "Selling to homeowners associations is getting easier all the time, now that metal roofing has generated some awareness in the market. Yet we're still just scratching the surface. The number of homes that need re-roofing is only going to increase with time, and there are still thousands of communities all over the country where you can be the first contractor who puts in a metal roof." MR

#### It's all in the presentation

#### Preparation is key to making the sale

In seeking an invitation to make a presentation before a homeowners association board, advises Tony Tiapon of Decra Roofing Systems, "you want to set the appointment so that you do the presentation before the entire board. And be sure to ask how much time you'll be allotted, so you can plan accordingly."

Tiapon typically spends at least three days working up an effective proposal, including handouts and a PowerPoint presentation. "Visuals are important to help show the board or the committee the features, benefits, and appearance of metal roofing products," he says.

According to experts, several basic factors should be considered when contractors are invited to make a presentation before a board or selection committee:

- A typical board or committee will range from about 5 to 12 members.
- Ask not only how much time is allotted to present your proposal, but also how much time should be allowed for questions and answers.
- Remember that presentations are different from proposals. Don't just read aloud a proposal that has been submitted in writing.
- Include a "hook" to capture the audience's attention within the first few minutes.
- If more than one person is to make the presentation perhaps the contractor and a manufacturer's representative decide what each person should do and how one presenter will pass off to the next. Get together ahead of time to strategize your approach and create a presentation agenda.
- Rehearse the presentation to ensure it does not go overtime.
- Assess the technical level and expectations of the selection committee as it relates to the method of presentation. Whether you use a flip chart, easel boards, or PowerPoint may depend on the age and backgrounds of the board members. To help decide the best way, you can simply ask key board members what method they are most comfortable with.
- PowerPoint can be graphically striking but also require room lights to be dimmed. In turn, that can cut down the amount of interaction with committee members. Using boards on an easel may seem low-tech, but such presentations allow more interaction and give committee members something tangible to touch and feel. Again, assess the age and technical comfort level of committee members.
- If the committee is especially large, distributing handouts may be cumbersome. You may need to put your presentation up on a projection screen. If the group is small, handouts would work especially well.
- The presentation should not be a rehash of your company history
- I Hearing your presentation is an opportunity for the board to size you up on a personal level. Personality matters and you need to inspire trust. Be animated, energetic, personable, and make eye contact. If more than one person is making the presentation, ensure there is no disagreement between them. Let board members know you really want their business.
- By Mark Ward, Sr.

## **BUSINESS CONNECTIONS**

















### **BUSINESS CONNECTIONS**

















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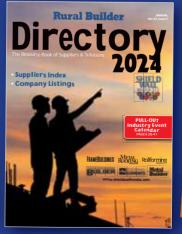
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# **Stay Ahead Of Scammers**

Cybersecurity Expert Shares Important Tips



nauthorized bank transfers. Identity theft. Fooled by deep fakes. No one is too old, too young or too poor to escape being targeted by thieves

"Cybercrime affects everyone, and the threats are constantly changing," warns trusted cybersecurity expert Greg Schaffer. "Criminals know that accessing lots of smaller accounts can add up quickly."

Surprisingly, Schaffer says cybercriminals aren't always after money. "Some do it for political gains or activism. Others just want to harass people by signing them up for multiple subscriptions or restaurant reservations. This happens all the time. They count on people just ignoring things they didn't initiate."

Schaffer is confident there's a better way to secure personal information and digital assets.

#### Most Cybercriminals Prey on Human Nature

Schaffer, a sought-after virtual chief information security officer who works with small and mid-sized businesses, is passionate about sharing advice to help people protect themselves at home and in the workplace.

"Many information security issues cross over between business and personal life. Criminals can take advantage of our natural instincts. Understanding that makes it easier to stay a few steps ahead of them."

#### How To Spot and Avoid Five Common Cybersecurity Risks and Vulnerabilities

**Risk #1: Deep fakes.** "It's become easy to fake who is seen on video calls. One businessman, thinking he was on a video call with colleagues, complied with

their request to send millions of dollars to what the businessman thought was a valid recipient. But those weren't his colleagues. They and the recipient were criminals. If something doesn't feel right, text the other person's cell phone. If they don't respond, they may not be who they say they are."

Risk #2: Phishing. "This often involves bad guys preying on another's trust. For example, someone is preparing to close on a house. The criminals hack into emails between the buyer and their banker. Then they wait. At the right moment, they may send the buyer an email, seemingly from their banker, changing the wire instructions. It could result in the buyer wiring thousands of dollars somewhere else."

He adds, "Other times, criminals rely on immediacy and urgency. For example, if they claim to be law enforcement or the IRS, don't be rushed into taking action. Always take the time to double-check if a request or situation is legitimate."

Risk #3: Generative AI, such as ChatGPT. "One of the biggest risks is entering confidential information. Generative AI can share what is uploaded with the rest of the world. A technology engineer tried to solve a problem by uploading the information into ChatGPT. The engineer got the answer, but in the process, they exposed their company's sensitive information. It's also common for people to use ChatGPT to help fix resumés. Never enter any identifying information such as a photo, address or educational background."

Risk #4: Multifactor identification fatigue. "Bad guys try to wear people down. They may bombard someone with

requests to confirm log-in attempts they didn't initiate. It's annoying! It can be tempting to confirm, just to get notifications to stop. Only now, that's given the bad guys access to their username and password. Maybe a bank account is about to be siphoned. Never accept uninitiated requests."

Risk #5: Home Wi-Fi network. Even with doors and windows locked, bad guys can enter homes through devices. "Usually, the place they enter a personal network is not what they're targeting. They may enter through something as simple as a smart TV. Once they've breached the TV, they could jump to a laptop where someone has been working on their taxes. There, they may find social security numbers and other sensitive financial information. That's a big problem! To reduce this risk, keep firewalls and laptops updated. Segment home networks: entertainment, children, home business, appliances, etc. That way, if one gets compromised, the others won't. And never share passwords across platforms."

#### If a Breach Occurs, Stop and Take a Deep Breath

"One of the worst things to do is panic," cautions Schaffer. "Not thinking clearly may increase the intensity of what's happening. Don't feel pressured into action. Call law enforcement. Enlist cybersecurity experts to help." **MR** 

Greg Schaffer is the owner and founder of vCISO Services, LLC, an information security consulting business. He also hosts a popular unscripted podcast, The Virtual CISO Moment, to discuss information security topics for small and mid-sized businesses.



# **CELEBRATING 50 YEARS OF LEADERSHIP**

AT AMERICA'S PREMIER REGIONAL ROOFING EVENT



# **Working Toward Efficiency & Prosperity**

# AppliCad Makes It Their Mission

By Linda Schmid

ay Smith has had an interesting career. He has worked with computers since 1972, starting with the Telco Research Labs. He's been involved in the industry ever since, and he's seen the development of CAD (computer aided design). He became an independent contractor designing printed circuit boards using CAD, then he began selling CAD.

Eventually he developed a routine for roofing, and as far as he is aware, his is the first company to use a 3D modeling system in CAD. "Because you are working in 3D, it is easy to check the accuracy of the simulation," Smith said. "Then every little detail will be accurate and your reports, your take-off, everything just falls into place.

When Smith showed this system to his first customer, the prospect's response was: "If you can print the report you are showing me, I'll buy 12 copies." The customer soon discovered that, due to the efficiency the software created, he only needed two copies. That was 32 years ago. Now, Smith said, over 70% of Australia's roofers use this software.

#### **Challenges Along the Way**

Every company has challenges, and one this company has run into is the difference in roofing terminology in various areas. For example, what Bostonians call a Dutch Gable is a Boston Hip in Florida. Sometimes the company finds themselves modifying software to accommodate roofers' naming conventions.

When the COVID pandemic hit, people couldn't go to trade shows, which interrupted their usual communication patterns requiring them to find other ways to stay in touch with their clients.



Ray Smith, center, Daniel and Nick Smith

Phone calls, emails, and Zoom meetings became more prevalent.

But by far, the biggest challenge, according to Smith, is one that he had early on and he still deals with today. Surprisingly, it's not about getting the word out or getting people to give the software a chance. It's a problem of education; people may see the benefits of the system, but they want to use shortcuts or set it up in their own way. Educating people about why they should set up the system a certain way is the same challenge he had at his first METALCON 28 years ago Smith said.

"If people let us help them, we can improve their quality, efficiency, and the level at which they can compete," Smith said.

He tries to help prospective customers to understand that if they try to set up the system their own way, they are unlikely to get the results they are looking for. In an attempt to prevent buyers' remorse, Smith prequalifies companies for the system, trying to help them understand that setting up the system will take time,

but once it is up and running, their efficiency will more than make up for it.

"People need to plan for the different ways their employees learn, and they need to plan for the implementation of the system, the immediate costs, as well as the future benefits to productivity."

#### **Impacts**

Smith said that even today he occasionally runs into roofers who haven't seen "a proper estimating tool" and they are simply astounded when they see what AppliCad can do, especially when it inputs the cutoff list into the roll former. The software works to reduce waste, taking it from 10% to 1% or 2%. Making these kinds of impacts on a customer's business is what drives Smith and his team, keeping them excited about their work.

In order to make that kind of impact you need to find a better way to do something, and proceed to do it. The only way to accomplish that is to ask a lot of questions, Smith said.

"I believe that I am going to be a

#### **BUSINESS PROFILE**

computer expert someday," he said. "It's been fifty-two years, but if I just keep asking questions I'll get there."

When you stop asking questions, Smith said, that's when you've lost.

#### **Lessons Learned**

Not only is it important to ask questions, according to Smith it's also important to listen. "I've always been willing to listen to people who are smarter than me," he said. "I've always stopped to consider any criticism proffered."

Smith has also recognized that it is important to keep doing what you are doing, and helping people, but take care not to give away all your secrets. If you do that, you may be creating new competitors who will take shortcuts and undercut your prices. Then when people go with a cheap simulation and it doesn't work out, they mistrust everyone in the industry.

#### **Culture**

Smith describes the company culture as friendly and accommodating with a weird sense of humor thrown in.

"Work should be fun," Smith said. "If people aren't having fun, they'll look for something else," he added, "so it's important to maintain your sense of humor."

Smith believes that technological challenge is important to young people, and making a difference in others' lives is a great feeling for everyone, but is especially important to the younger generations. This is how the company attracts and retains great employees, Smith said.

He encourages employers in the industry to look for people who are detail oriented and willing to read and learn.

#### **Customer Service**

The company is customer-centric; everything is about the customer. However, Smith said that he does not subscribe to the old adage that the customer is always right. He will sometimes tell them, respectfully, that there may be a better way to do what they do.

When they make a customization to conform to a company's way of doing things, they don't just alter the program for that company. Instead, they build options into the software which anyone can use if they take the time to figure it out. "When we update software, everybody gets the update," he said.

Half of the company's customers are manufacturers and half are contractors. AppliCad can be used with any roofing material.

The company is completely remote since COVID. They were at home working for 8-10 months and they found that it worked out fine; they can help people from anywhere. That was when Smith let the lease go and the company's

headquarters became a P.O. Box.

#### In the Future

Smith hopes to see more roofers who are receptive to new ideas, and he believes that builders and roofers should be required to prove their competency and become licensed.

As for AppliCad, Smith's two sons, Nick and Daniel, are the future; they are taking on more responsibility and preparing to take the lead. The company is looking to expand into adjacent industries, projects they are not ready to reveal. They are always looking for more ways to help people improve their businesses through technology, and Smith said the future looks bright. MR



Roofs that were engineered by AppliCad. PHOTOS COURTESY OF APPLICAD



# **Create Safer Summer Jobsites**

Extreme Temperatures Can Lead to Increased Risk of Heat Illness, and Accidents

By Dan Birch, Product Category Manager, PIP®

Joe Brandel, Business Development Manager for NA Industrial Safety Market, Mips

the EU's Copernicus Climate Change Service (C3S), the global average temperature from May 2023 through April 2024 was the highest on record, 0.73°C above the 1991-2020 average¹. The risks of heat stress in the construction industry can be fatal. From 1996 through 2016, there was a total of 285 fatalities from heat-related causes in the industry, representing over a third of all U.S. occupational deaths².

Rising temperatures are dangerous for everyone, but they pose an additional risk to the construction industry, and roofers in particular, where workers are exposed to strenuous conditions outdoors. Heat stress can lead to unrelieved heat strain, the physiological response to heat stress when the body tries to increase heat loss to the environment in order to maintain a stable body temperature<sup>3</sup>. Heat strain can in turn increase the risk of heat-related illness, or HRIs, which include heat stroke, heat exhaustion, fainting, heat cramps, and heat rash.

#### The Risks for Roofing Industry

Roofers often work outdoors during the hottest times of the year, and given

1 https://climate.copernicus.eu/copernicus-global-temperature-record-streak-continues-april-2024-was-hottest-record

2 https://blogs.cdc.gov/niosh-science-blog/2020/05/21/heat-stress-construction/

3 https://blogs.cdc.gov/niosh-science-blog/2020/05/21/heat-stressconstruction/#:~:text=Construction%20 Industry%20Heat%20Stress%20 Fatalities,heat%20exposure%20on%20the%20 iob.



the nature of their work, have very few opportunities to be indoors or in the shade. Continuous heat exposure can result in workers' declining physical capabilities and mental alertness, leading to greater risk of accidents and other incidents.

#### **Steps to Protect Workers**

While there's no doubt that hotter temperatures are to be expected in the summer months, there are still several steps that can be taken to protect workers from heat stress and heat-related illnesses. Employers should encourage and ensure that workers take appropriate rest breaks to cool down and hydrate. Additionally, jobs should be scheduled for cooler parts of the day, such as early morning or later in the afternoon, as roofers are typically not able to avoid direct sun exposure. Jobs can also be scheduled for alternate days, so that workers aren't exposed to the sun or extreme temperatures for multiple days in a row. Roofers should also be encouraged to wear light-colored, loose-fitting, and breathable clothing.

Knowing the signs of heat stroke and

heat-related illnesses is critical to identify when workers are in need of medical attention. Heat stress symptoms to watch for include confusion, a throbbing headache, dizziness, nausea, a body temperature above 103°F, fainting, a rapid pulse, and dry, red, or hot skin. If any workers are experiencing these symptoms, it's best to call a first responder or get them to a hospital, and bring them to a cool, air-conditioned space if possible.

#### **Prioritizing Safe PPE Usage**

There are a number of ways in which personal protective equipment (PPE) can be used to keep workers safe and cooler during the warmer months. Evaporative cooling products, such as vests, sleeves, bandanas from PIP Global Safety, are designed to keep wearers' cool for up to eight hours. Their EZ-Cool® evaporative cooling material is a unique fabric that is designed to absorb and slowly release water through evaporation. This process is meant to "super-charge" the body's natural cooling process, thereby protecting the wearer against heat

stress. EZ-Cool® works to keep wearers cool during strenuous activity while protecting against sunburn and UV damage. Simply soak in water for 1-2 minutes, and once excess water has been squeezed out, the cooling effect lasts for 5-10 hours.

Heat exposure can impact roofers' mental alertness, which can lead to potential accidents on the job including falling, fainting, and dizziness. Injury statistics demonstrate it is more common to fall at an angle, rather than a linear fall to the head. These angled impacts expose the brain to dangerous rotational motion, which is one of the most common causes for TBIs including concussion, and can lead to life-long afflictions and even death. This makes it especially important that workers continue to prioritize safe PPE usage, including head protection equipped with systems designed to redirect dangerous rotational motion like the Mips® brain protection system

for industrial safety helmets, to help reduce risks on the job.

Rotational motion can occur when someone's head is exposed to an oblique impact, and the transfer of this rotation to the brain can lead to shearing and damage to the brain's axons<sup>4</sup>. Rotational motion consists of angular acceleration (forces) and angular velocity (energy). The Mips\* brain protection system for industrial safety helmets consists of a low friction layer mounted inside the helmet. In the event of a crash or a fall, the low friction layer is designed to move slightly inside the helmet to help redirect rotational motion away from the head.

Despite the growing concerns over

4 Gennarelli et.al. (1987). "Directional dependence of axonal brain injury due to centroidal and non-centroidal acceleration," in Proceedings of the 31st Stapp Car Crash Conference (Warrendale, PA: Society of Automotive Engineers).

rising temperatures, and the safety risks that poses to the roofing industry, there are steps that employers can take to promote job site safety. From best practices and understanding the risks to cooling technologies, roofers must keep safety from extreme heat top of mind.

Joe Brandel currently serves as Business Development Manager for North America Industrial Safety Market at Mips, a market leader in helmet-based safety. He has been in the construction and industrial safety business for over 20 years.

**Dan Birch** is the Above the Neck Category Manager for Protective Industrial Products. PIP\* excels as a champion in the construction industry by offering a comprehensive range of PPE solutions.

For more titles, check out Shield Wall Media online: www.shieldwallmedia.com

## NEWS

# Nucor® Corporation Expands with New Metl-Span® Manufacturing Facility in Utah

Metl-Span\*, a Nucor\* company, has officially 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 comprehensive 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.

#### Ambassador Supply Names Regional HR Manager

Ambassador Supply has named Michelle Brundige as the company's regional human resources manager.

Brundige's career includes over 20 years in the human resources manufacturing industry, with a proven record in leading teams to



maximize productivity, training and development. In her new role, Brundige is responsible for directing human resources functions for assigned Ambassador Supply companies, providing leadership and consultation to employees.

As Ambassador Supply continues to experience growth in the residential and commercial construction market, the company is recruiting driven professionals who thrive on thinking outside the box and have a strong understanding of the industry.

#### **Loughman Joins Everlast Roofing As Sales Manager**

Joshua Loughman has joined the Everlast Roofing team as the new Sales Manager for its Western service area. With over 19 years of experience in building material sales, including 15 years specifically in the roofing industry, Loughman brings a wealth of knowledge and expertise to the team.

His career includes notable sales and key account manager roles at Owens Corning, TAMKO Building Products, UFP Industries, and Roseburg Forest Products.

A United States Air Force veteran, Loughman was born and raised in Western Pennsylvania where he earned a Bachelor of Science in Business Administration from California University of Pennsylvania in 2004 and a Master of Business Administration from Eastern University in 2010.

In his free time, Joshua enjoys hobby

farming, fly fishing, outdoor activities, and spending quality time with his family.

# **Giardina Joins Everlast Metals As Sales Manager**

Everlast Metals has announced that Joe Giardina has joined the Everlast Metals team as the new Sales Manager. With a 15-year career in building materials

sales, Giardina brings a wealth of experience from both the residential and commercial sectors.



Beyond his professional endeavors, Joe

enjoys spending time with his growing family, engaging in sports, hitting the golf course, and occasionally indulging in video games. He appreciates life's challenges and beauty, always striving to give his best effort, guided by the belief that "nobody who ever gave their best regretted it."

# Central States Manufacturing Names Gina Devaney VP of Sales

Central States, a leader in metal building components, roofing, and building systems, has named Gina Devaney to

the role of Vice President of Sales. Devaney will focus on maintaining Central States' service culture as well as leveraging training and develop-



ment as the 100% employee-owned company continues to improve its processes, be outstanding business partners and turn customers into loyal fans.

"I am thrilled to join Central States and to play a role in fostering strong and enduring relationships with our customers," Devaney said. "Strategic growth is a vital aspect for any organization, and watching plans come to fruition is truly gratifying. I look forward to contributing to the growth and success of Central States."

Devaney brings two decades of industry experience, growing and managing relationships with key accounts. She comes to Central States after working with several national consumer brands. She has a proven record of leading high performing teams and formulating innovative plans that successfully grow customer bases and builds brand image.



# Fabral Adds Sherwin-Williams Paint System, 17 New Colors

Metal post-frame materials manufacturer Fabral Metal Wall and Roof Systems has introduced its new Sherwin-Williams® WeatherXL™ color lineup, offering a more robust finish in 21 colors for wall and roof panels.

A two-coat, silicone-modified polyester (SMP) coating, Sherwin-Williams WeatherXL delivers durability and endurance during extreme conditions, offering resistance to chalking, fading, and scratching; weatherability; color and gloss retention; and color consistency.

With the transition to WeatherXL, Fabral has curated a palette of colors suitable for a range of project segments, including residential roofing, post-frame, agriculture, and more. The collection includes four of the company's previous offerings (Dark Brown, Light Gray, Charcoal Gray, and True Black) and 17 new colors: Brite White, Polar White,

Ivory, Light Stone, Sahara Tan, Taupe, Koko Brown, Burnished Slate, Gray, Ash Gray, Pewter Gray, Rustic Red, Brite Red, Burgundy, Gallery Blue, Hunter Green, and Copper Penny.

WeatherXL is available on a range of Fabral's residential and agricultural metal panels, including the Grandrib Series, the Horizon Series, and trim and soffit panels.

# S-5! Clamps Earn Florida Product Approvals

S-5! standing seam clamps have earned Florida Product Approvals (FPA) for High Velocity and Hurricane Zone (HVHZ)—marking a significant achievement in the rigorous realm of construction product approvals and permitting processes in the U.S.

Florida's unique regulatory process is renowned for its stringent standards, particularly due to the state's susceptibility to high winds and severe weather conditions. State approval shows builders, architects, building officials and inspectors that a manufacturer's products have completed rigorous testing requirements and meet the standards specified in the Florida Building Code.

This certification marks a leadingedge milestone as the first metal roof attachment manufacturer to earn FPA for HVHZ certification. S-5! has conducted more than 5,000 individual load tests on every conceivable load direction, material type, gauge thickness and brand of roof manufacture.

"FPA has different levels of approvals, and HVHZ is the most demanding one," said Rob Haddock, CEO and founder of S-5! "We are proud of this ground-breaking milestone, validating the holding strength and quality engineering of S-5! tested and certified products."

# AkzoNobel Expanding Coil Coatings Production in North America

AkzoNobel is investing \$3.6 million at its coil and extrusion coatings manufacturing facility in Garcia, Mexico, to increase production capacity and



efficiency for its customers across North America — including Mexico and the southwest region of the U.S. This investment follows the previously announced \$70 million investments in the company's other industrial coatings manufacturing site in North America in Huron, Ohio, and its manufacturing and R&D facilities at High Point, North Carolina. These groundbreaking advancements support the company in achieving industrial excellence, enhancing product offerings and accelerating time-to-market. The investment in the Garcia site will enable the plant to increase production of coatings by approximately 35% by the third quarter of 2024.



# **Unified Steel® Stone Coated Roofing Receives VSH Rating**

Westlake Royal Building Products™ (Westlake Royal) has announced that Unified Steel® Stone Coated Roofing has received the Very Severe Hail (VSH) rating in accordance with ANSI FM4473 American National Standard for Impact Resistance Testing of Rigid Roofing Materials by Impacting with Freezer Ice Balls. The durable, lightweight roofing system, which benefits from the structural strength of steel, is the first stone

coated steel roofing product on the market in the U.S. which has obtained the VSH rating.

"The roof is often the first point of contact for the hailstorms that damage homes every year," says Steve Booz, Vice President, marketing, Westlake Royal Building Products. "Hailstorms are increasing the repair and insurance costs incurred by homeowners and, as a result, roofing materials that have been tested to the most stringent in hail resistance standards are in high demand."

In order to qualify as an FM4473 certified roofing product, steep slope roofing materials must possess adequate physical properties to demonstrate hail impact resistance as it relates to hailstorms. Minimum accepted performance is Class 2 nominal 1.5" (38.1 mm) diameter ice ball. Classifications also include Class 3 nominal, or 1.75" (44.5 mm) sized ice ball, and Class 4 nominal, or 2.0" (50.8 mm) sized ice ball. Certification for these ratings is contingent on two successful test specimens meeting the acceptable criteria to qualify for the given classification

For the Very Severe Hail (VSH) rating, 2.0" (50.8 mm) ice balls are also used, however they are weathered prior to testing. Additionally, three successful test specimens must meet the criteria. During both Class 4 and VSH testing, a 2" ice ball is shot at the test subject at different speeds, producing a set kinetic energy at impact. Class 4 shoots the ball to target a kinetic energy of 26.8-foot pounds of force, while the VSH Classification doubles that to 53-foot pounds of force. To double the force in Unified Steel's qualifying testing for VSH, the speed of the ice ball was increased from about 55 mph to approximately 110 mph.

Unified Steel has achieved both the Class 4 and VSH classifications.

# Mill Steel Welcomes New Vice President of Sales

Mill Steel Co., one of the nation's largest distributors of flat-rolled carbon steel and aluminum, has announced the appointment of Evan Keebler as Vice



President of Sales for its Construction segment.

Keebler has been immersed in construction materials since the beginning of his career. With a resume spanning over 25 years in national sales facilitation and management, he brings a deep understanding of the diverse needs of the construction market.

Before joining Mill Steel Company, Keebler served as Regional Sales Manager of the Northeast territory at Interior Supply. Prior to that, he spent 12 years at Marino\WARE, where he advanced from National Accounts Manager to Vice President of Sales.

"I've known Evan for a long time, and I'm thrilled he decided to join our team. His wealth of knowledge and innovative ideas are invaluable assets. I have no doubt he will help our Framing and Building Products teams achieve new heights," said Kip Craddick, Chief Sales Officer of Mill Steel Company.

In addition to his commercial achievements, Keebler holds a Bachelor of Arts in English and Business from Wittenberg University.

# **Drexel Metals Introduces Line Of Insulation Products**

Drexel Metals, a provider of engineered metal roof and wall systems, equipment and custom fabrication services, has added 10 new roof and wall insulation panels to its lineup of building solutions. The introduction of this product line offers architects, builders and installers an all-in-one option for metal roof and wall assemblies by tapping into the expertise within Carlisle Companies.

Drexel Metals' latest rollout includes three new roof insulation products and

seven wall insulation products. Defend-R, a line of rigid roof insulation panels, features a closed-cell polyiso foam core manufactured on- and off-line to various facer types. The Defend-R CI line consists of rigid wall insulation panels that are also composed of a closed-cell polyiso foam core manufactured to various facers types in both standard and Class A variants. These newest product lines are manufactured using NexGen Chemistry to deliver energy-efficient performance to residential and commercial projects.

The new product lineup includes: Roofing Products:

• Defend-R: a durable rigid roof insulation panel composed of a polyiso foam core manufactured on-line to fiber reinforced facers on each side (GRF). Approved for direct application to steel decks and compatible with all major roof covering systems.

Wall Products:

• Defend-R CI Coated Glass + Defend-R CI Coated Glass (Class A): a rigid insulation panel composed of a polyiso foam core combined with a premium performance coated glass facer. Offers installation flexibility with options for white or dark facers. Designed for exterior commercial wall applications to provide continuous insulation within the building envelope. Additionally, Defend-R CI Coated Glass (Class A) features a 0-25 flame spread polyiso foam core to meet ASTM E84.

In addition to the roof and wall insulation panels, coordinating accessories are also available.

# **Sheet Metal Supply Switching To Full Solar Power Operation**

Following the move into a new and energy efficient facility and investing in state-of-the-art equipment, Sheet Metal Supply (SMS) has recently flipped the switch to operating 100 percent on solar power.

Verde Solutions, a full-service energy company serving all of the United States, designed and installed a roof-mounted solar array for Sheet Metal Supply that has a power rating of 159.81 kW-DC.



Throughout its 30-year lifespan, the system is estimated to produce 5,780,505 kWh, which is the equivalent to CO<sub>2</sub> emissions from 459,865 gallons of gasoline consumed; greenhouse gases from 883 passenger vehicles driven for one year; or carbon sequestered from 68,113 tree seedings grown for 10 years.

"With our new facility and the recent purchase of new and more efficient equipment, the natural next step was to run our entire operation on solar power," says Ben Kweton, President of Sheet Metal Supply. "The transition to lowering carbon emissions and minimizing our carbon footprint was a conscious decision dedicated to investing responsibly in our future as well as the future of our customers."

The solar array was completed in February and up and running in March.

"At Verde Solutions, we are thrilled to congratulate Sheet Metal Supply and its visionary owners, the Kweton family, for their forward-thinking decision to incorporate solar power into their facility," says Chris Gersch, Founder & CEO of Verde Solutions LLC. "By powering their operations 100 percent with green, onsite-sourced solar power, SMS is not only enhancing its commitment to providing top-quality roofing products in a cost-effective and greener way, but also setting a benchmark in sustainability.

"Additionally, we extend our gratitude to ComEd and the Illinois Power Agency for their invaluable education and incentives, which have been instrumental in making solar energy adoption a viable and attractive option for businesses in Illinois. Companies like Sheet Metal Supply are building a greener, more sustainable future." **MR** 



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

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# project Distinctive Metal Roofing https://www.distinctivemetalroofing.com of the month





# Steel Shingles Top Off Showcase Residence



his western Pennsylvania residence is topped off with Kassel and Irons KasselWood steel shingles in Weathered Cedar. The homeowners were looking for permanence and aesthetics along with an installer and manufacturer who stood behind their work/product. MR

#### **Project Overview**

**Location:** Champion, Pennsylvania **Installer:** Distinctive Metal Roofing **Roof Size:** 5280 sq. ft.

Roof Panels: Kassel and Irons KaselWood,

Weathered Cedar Coating: PVDF

**Underlayment:** Titanium UDL 30 (Interwrap)

Snow Guards: Sieger

WWW.READMETALROOFING.COM 57

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# CSI: Q2 vs. Q1 2024

#### After Receiving Mixed Anecdotal Reports, Metal Roofing Survey Reflects Positive Market

Post-Frame Builder Show. One of the great things that comes out of trade shows is the opportunity to talk with builders, dealers, manufacturers and various professionals in our corner of the construction industry. One topic that always comes up is "How is the industry doing?" Is business up or down, busy or slow, and what is next?

There are a lot of factors that can affect the business climate short term, especially in an election year. The general impression gathered from show conversations was that Q2 was slower than Q1, with no specific reasons given for the decrease. The story seemed similar across the various markets we serve.

Since we are generating data for the industry this presented an excellent opportunity to validate or disprove what people were saying. We sent a survey on business climate comparing Q1 and Q2 in late June. The results were interesting

Metal Roofing is about metal roofing and includes readers who are contractors or dealer distributor or at the manufacturer stage of the construction process.

Despite what we heard at the Post-Frame Builder Show, business is reportedly good across the audience for Metal Roofing magazine. Sales in dollars were generally up for Q2 vs. Q1 2024 and for Q2 2024 vs. Q2 2023. These generally were in keeping with expectations. **MR** 

If you like the CSI columns or find the information useful, help us help you. Shield Wall media sends a State of the Industry Survey in fall and a mid-year State of the Industry Survey in Spring.

Please complete the survey and share it with your colleagues. A larger survey sample generates more reliable information.

GROSS SALES IN DOLLARS FOR Q2 2024 VS. Q1 2024								
Category	Increased > 25%	Increased < 25%	Approx. the same	Decreased < 25%	Decreased > 25%			
General Roofing	22.22%	55.56%	0%	22.22%	0%			
Metal Roofing	18.18%	45.45%	18.18%	18.18%	0%			
Other Roofing (Gutters)	20%	20%	40%	20%	0%			
Manufacturing	10%	60%	10%	20%	0%			
G	GROSS SALES IN DOLLARS FOR Q2 2024 VS. Q2 2023							
General Roofing	44.44%	22.22%	11.11%	22.22%	0%			
Metal Roofing	36.36%	27.27%	9.09%	27.27%	0%			
Other Roofing (Gutters)	20%	40%	20%	20%	0%			
Manufacturing	10%	40%	0%	50%	0%			
GROSS SALES IN DOLLARS FOR Q2 2024 VS. EXPECTATIONS?								
General Roofing	22.22%	22.22%	22.22%	33.33%	0%			
Metal Roofing	27.27%	18.18%	18.18%	36.36%	0%			
Other Roofing (Gutters)	20%	0%	40%	40%	0%			
Manufacturing	10%	10%	60%	20%	0%			

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# Rosie The Riveter says:

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