

The Only Magazine Dedicated to the Effects of Weather and Climate on Roofing

ROOFING ELEMENTS

METAL ROOFING MAGAZINE SPECIAL SECTION

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WINTER 2024 • Vol. 4, Issue 4

**WESTERN
ROOFING EXPO
CELEBRATES
50 YEARS**

**COMPLETE
ROOFING:
FROM MILITARY
SERVICE TO
BUSINESS
SUCCESS**

**BEST PRACTICES FOR
COLD WEATHER
APPLICATION
OF MODBIT**

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Organization Celebrates 50 Years

ON THE COVER:

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



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THE ONLY PUBLICATION DEDICATED TO THE EFFECTS OF WEATHER AND CLIMATE ON ROOFING SYSTEMS.



Roofing Elements Magazine deals with the physical environment and how “Elements” like heat, moisture, wind and sun affect roofing systems.

The Elements need to be considered in every aspect from material choice and design to installation techniques. **Roofing Elements** provides industry white papers and institutional knowledge from the experts who learned their trade in the real world.

ADVERTISING: Gary Reichert, gary@shieldwallmedia.com • 715-252-6360
EDITORIAL: Karen Knapstein, karen@shieldwallmedia.com • 715-513-6767

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TECH BULLETIN

COLD WEATHER APPLICATION RECOMMENDATIONS FOR MODIFIED BITUMEN ROOFING

By The Asphalt Roofing Manufacturers Association (ARMA)

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

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

INTRODUCTION

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

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

PROTECT MATERIALS PRIOR TO APPLICATION

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

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

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

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

PLAN CAREFULLY

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

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SURFACE PREPARATION

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

APPLICATION RECOMMENDATIONS

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

Use the Right Materials

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

Complete Each Roof Section Daily as Specified

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

Torch Application

During membrane application, follow

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

Cold Adhesives

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

Self-Adhesive Products

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

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

Hot Asphalt Applied Products

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

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



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FROM SERVICE TO SUCCESS

U.S. MARINE VETERAN TRANSFORMS ADVERSITY INTO OPPORTUNITY

By Karen Knapstein

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

THE GENESIS OF COMPLETE ROOFING

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

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



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

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

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

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

THE BUSINESS CLIMATE AND INITIAL CHALLENGES

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

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

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

EVOLVING SERVICES AND STRATEGIC FOCUS

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

By narrowing their focus, Complete

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

MATERIALS MATTER

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

NAVIGATING CURRENT TRENDS

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

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

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



Chad Conley

OPPORTUNITIES ON THE HORIZON

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

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

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

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

PRO TIPS

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

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

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

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

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

OVERCOMING CHALLENGES

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

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

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

A CULTURE OF EMPOWERMENT

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



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

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

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

FUTURE VISION

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

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

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

FINAL THOUGHTS

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



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

THE ROOFING INDUSTRY HEATS UP AT LAS VEGAS EVENT

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

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

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

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



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



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

industry trends and new products.

SAVE THE DATE

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



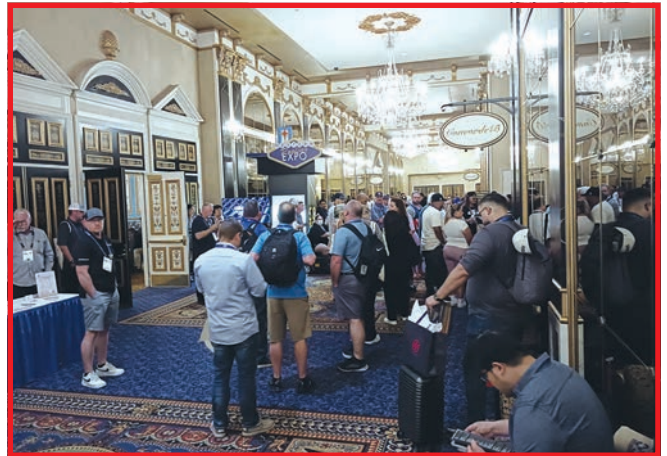
Attendees tried their hand at installing IKO asphalt shingles.



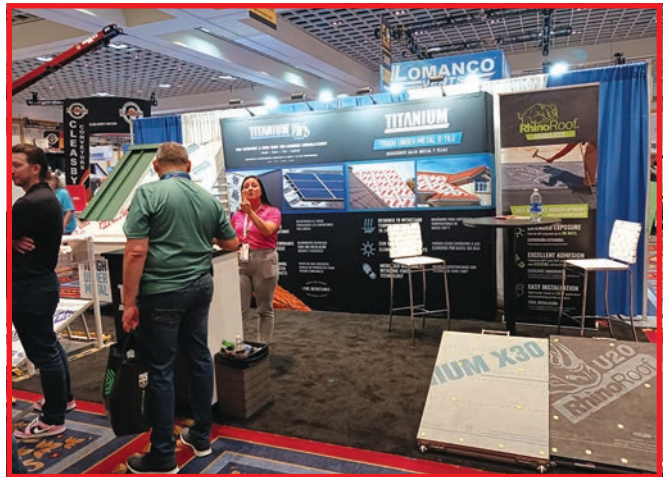
Metal Sales Manufacturing has been providing an array of metal building components since 1963.



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



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



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



There was no missing the Roofline Supply exhibit.



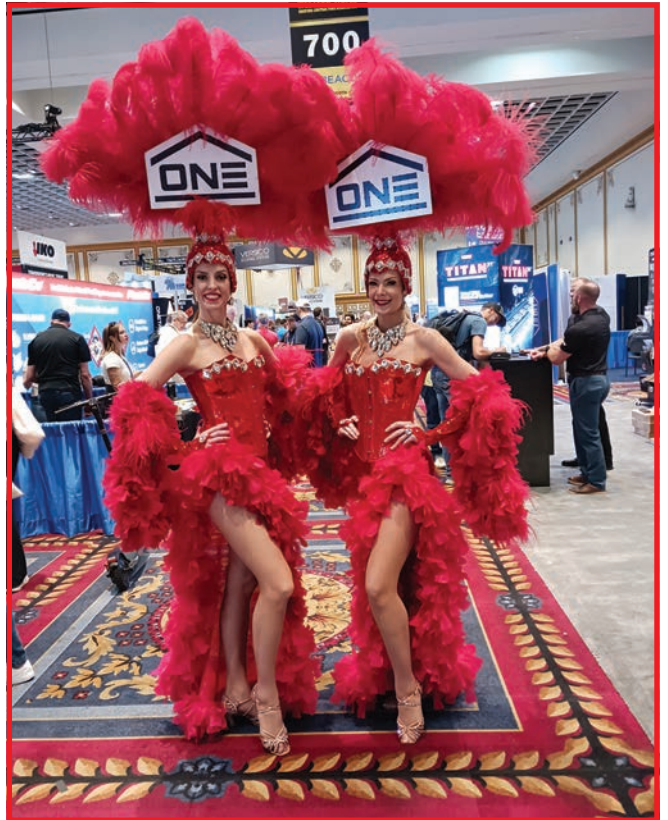
Safeguard 30 is a tar-based non-woven polyester-reinforced high-performance underlayment. Safeguard Ultra HT is Class A fire rated.



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



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



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