

# SMAC NEWS

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*This Iowa Precision Pro-Fabriduct with an Inline Plasma cutter is being installed at Hermanson.*



## BIG PURCHASES ARE ABOUT MORE THAN DOLLARS AND CENTS

Buying new equipment is fundamental to owning and operating a sheet metal and HVAC contracting business. That doesn't mean purchasing decisions are simple, however.

With much of the heavy machinery required to compete in the sheet metal and HVAC sector pricing out in the range of six to seven figures, executives in the industry emphasize that research is essential when making critical investments in the equipment that powers their businesses. Moreover, they say their purchasing decisions frequently take into account factors beyond just dollars and cents.

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## Time Does Not Stop – Even When You Want It To!

Serving as SMACNA President this year has been one of the most rewarding and enriching experiences I have had, but time flies when you are getting things done! It seems like just yesterday I was drafting my acceptance speech, and here I am today already drafting one of several farewells.

If you ask me how the year went, first I would say “it flew by.” Then I would say it was a wonderful experience to meet so many amazing contractors and their families. I would also tell you, “I feel really good about where things stand, where SMACNA is headed and what SMACNA has been able to accomplish this year.”

This past July, the SMACNA Board unanimously set in motion the development and launch of a significant, and sustained effort to raise industry awareness through a comprehensive and sustained national workforce development effort that includes a full array of marketing, PR, and industry relations efforts. Content development about the opportunities this industry offers is underway, and a web portal is being constructed. Everything should launch early in the new year.

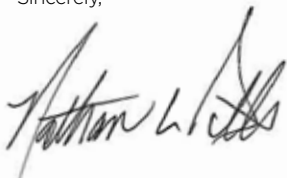
Additionally, the Board determined the role of technology innovation is so important to our contractors, that we are forming a technology task force to monitor and report on trends, advances and new technologies entering the market. In a recent KPMG survey, 70% of construction companies believe that those contractors that do not adopt digital ways of working will go out of business. Digital is only one aspect of technology in the office, the shop and in the field, but it is a critical one that can make or break a contractor’s business.

Our earlier initiative to increase engagement with members and the design community has been very successful — to the point where we are struggling to fill all the requests for educational programming and technical consultations. Because of this, SMACNA will devote more resources to expand our pool of subject matter experts championing solid engineering and design in the HVAC and sheet metal industry.

As this is my last President’s column, I want to wish everyone the best of luck in all the endeavors and to live life to the fullest! Never stop planning for the future, whether it be succession planning, technology, industry trends or manpower. I also want you to know that SMACNA is well-positioned and focused on the issues that matter. The plans are in place to protect and perfect our industry.

I also want to wish Angie Simon great success charting new territory and breaking glass ceilings as the first woman president of SMACNA, as well as being the first woman president for any national trade construction organization. There is no one more qualified to lead SMACNA through our coming transition.

Sincerely,



Nathan L. Dills  
SMACNA President



### CAPITOL HILL UPDATE

#### SMACNA Endorsed Energy Efficiency, CHP/WHP Credits; 179D Gaining Momentum

Congress is expected to begin moving tax extenders legislation in the coming weeks. SMACNA has joined with its energy efficiency allies and advanced a letter to both the House and Senate tax committee leaders. SMACNA expressed support for extending expired clean energy tax provisions to increase parity, competition and business certainty for the renewable energy, efficiency and advanced transportation industries. Providing certainty to these important energy efficiency tax incentives will maintain a diverse portfolio of energy resources, and energy tax measures should be structured such that benefits are provided to all qualifying technologies in accordance with the energy, environmental and other public benefits they generate.

SMACNA has advocated for the permanent extension of 179D as fundamental to high efficiency building investment and job creation. Unfortunately, the energy tax landscape in recent years has been uncertain at best, due

to numerous short-term extensions, expirations and retroactive extensions of credits for many initiatives. This has put significant strain on efficiency businesses, their employees and clients.

SMACNA and allies in the Clean Energy Business Network coalition urged Congress to advance the following energy-related tax measures in a tax-extend package to allow more projects to move forward, drive down costs for consumers, promote investment and create jobs:

Extend a range of energy efficiency-related tax credits, with certain updates and modifications to promote high-efficiency measures including **the \$179D Energy Efficient Commercial Building Tax Deduction (which promotes energy efficiency in commercial and multifamily buildings)**, the \$25C Nonbusiness Energy Property Credit (which incentivizes homeowners for efficiency upgrades and equipment purchases such as weatherizing or installing new windows or more efficient heating and





Large sections of phenolic duct being lifted to the roof of the downtown Chicago landmark.

## Historic Department Store Sold on Phenolic Duct's Benefits for Renovation Project

As more shoppers prefer websites to sales racks, department stores are struggling to figure out what to do with the no-longer-needed spaces many of their properties contain.

From suburban mall anchor locations, to historic downtown properties, myriad of stores are finding they don't need the furniture and bicycle assembly areas or the layaway storage their customers once demanded.

And in the case of chain flagships (built for the era when elaborate retail palaces could take up an entire city block of prime real estate and shoppers flooded downtown streets), the amount of unused space can be substantial, totaling hundreds of thousands of square feet.

After years of wondering what to do with the brick-and-mortar behemoths in their real estate portfolio, officials with the venerated department store chain Macy's think they have come up with a solution: sell some of the unused space to developers eager to put offices, fitness centers and cafes in these historic landmarks.

Such a renovation project is currently underway at the sprawling downtown Chicago Macy's store, a State Street landmark since it opened as Marshall Field's in 1909. Canadian real estate firm

Brookfield Asset Management paid \$30 million for the top seven floors of the 13-story structure in 2018. The company is spending over \$100 million to turn 650,000 square feet into office and meeting areas. The project is expected to be completed by spring 2020.

### New HVAC for an old building

As part of the project, a new HVAC system is being installed for the office floors, which will be separated from shopping areas and supported by its own elevators. SMACNA member Atomic Mechanical Services in Arlington Heights, Ill., was awarded the multimillion-dollar HVAC and sheet metal contract.

Besides an estimated 200,000 pounds of conventional sheet metal ductwork, the project makes extensive use of ThermaDuct, a prefabricated, pre-insulated duct made of a plastic or resin-like material designed for installation in either indoor or outdoor environments.

SMACNA has published a duct construction standard for phenolic duct since 2015.

The light weight and easy installation of the phenolic ThermaDuct, combined with low air leakage and high R values,

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cooling equipment), and the \$45L Energy Efficient Home Credit.

The "**Renewable Electricity Tax Credit Equalization Act**," which would address inequities for certain renewable energy technologies including biomass, geothermal, landfill gas, waste to energy, hydropower and marine and hydrokinetic energy. The \$45(d) and \$48 tax credits for these technologies have lapsed, while the credits for other renewable resources, such as wind and solar, received long-term tax extensions. Credits for these renewable energy technologies should be extended to provide parity for all sectors. Legislation has been introduced in the House as H.R. 4137, by Rep. Elise Stefanik (R-NY).

**S. 1409, the "Technologies for Energy Security Act," specifically Sections 3(a) and (c), as well as S. 2256, the "Tax Extenders Act of 2017,"** specifically Sections 311(a) and (c), to allow commercial geothermal to qualify for the same \$48 tax credit commercial solar can utilize. Absent this change, commercial geothermal is unable to compete on a comparable basis with commercial solar. **S. 1409 also includes waste heat to power (WHP)** while the House bill does not. S. 1409 should be the model for WHP language. The legislation has been introduced in the House as H.R. 1090.

**S. 1868, which would clarify that energy**

**storage (i.e., grid batteries, pumped hydro, compressed air/liquids, thermal storage) qualifies for a \$48 tax credit** as a stand-alone, eligible advanced energy technology. The legislation has been introduced by Sens. Dean Heller (R-NV) and Martin Heinrich (D-NM) and has been introduced in the House as H.R. 4649 by Rep. Mike Doyle (D-PA).

**Amend the Production and Investment Tax Credits (\$45 and 48) to allow for more efficient use of the credits.** Credit refundability would ensure capital availability for clean energy projects and would result in some reduction in power costs for consumers. Alternative solutions such as PTC/ITC transferability to limited entities, if properly structured, would achieve similar goals.

Tax credit transferability would allow developers to structure the financing of PTCs without relying on tax equity partnerships and their inherent tax accounting difficulties. By mitigating the additional challenges of the phase down in 2018 and 2019, project developers could continue to utilize the PTC to lower clean energy prices for consumers.

Both the House Ways and Means Committee and the Senate Finance Committee have issued reports endorsing permanence for 179D and expressing their intention to pass these measures before Congress adjourns this year.



A few of the completed booths in place at the US/Mexican border.



Installation was difficult due to the overhead canopy and raised concrete foundation.

# California Sheet Metal Takes on Challenges to Make the US-Mexico Border Booths Safer

**F**or the exterior of the booths, California Sheet Metal used quarter-inch thick, class-3 ballistic steel, specifically for bulletproof enclosures and blast-proof construction. With as many as 20 employees working on the project at one time, they formed and cut all the pieces, made the enclosure, buttoned, installed the windows (made of special glass), and made all the interior cabinets, doors and countertops. A third-party contractor installed the electronics and the operating system inside the booth.

During construction, the team faced two main challenges. The first was the size and weight of the structures — the largest booth weighed 14,600 pounds. They had to build the booths

outdoors, on a one-acre site next to their facility, then use lifts to maneuver them around.

Once the units were constructed, they were loaded onto trailers and transported approximately 30 miles to the Mexican border for installation, which also had its own challenges. Because of the canopy and the weight, they had to slide the structures into place, which required special rigging.

Another challenge was the frequent visits from US Customs, US Border Patrol and the General Services Administration (GSA). “Inspectors would constantly review the construction,” Isom said. “They were constantly making changes during the construction to accommodate ergonomics and comfort of the actual border patrol officers.”

One of these changes stemmed from the fact that Border Patrol and US Customs officials spend all day standing with guns at their sides. California Sheet Metal made steel “leaning posts” with side panels that contour to the shape of a body with a gun at its hip. Also, internal heating and cooling elements give the workers control over the temperature of their workspace.

Adding to the challenges at the project, California Sheet Metal also dealt with something unique called “runners.” According to Isom, “On a weekly basis, they would have some kind of temporary work shutdown due to somebody trying to run across the border or run back.”

California Sheet Metal has been working on this project for almost two years. Project manager Paul Lupu anticipates that the last panels connecting the booths will be installed by the end of

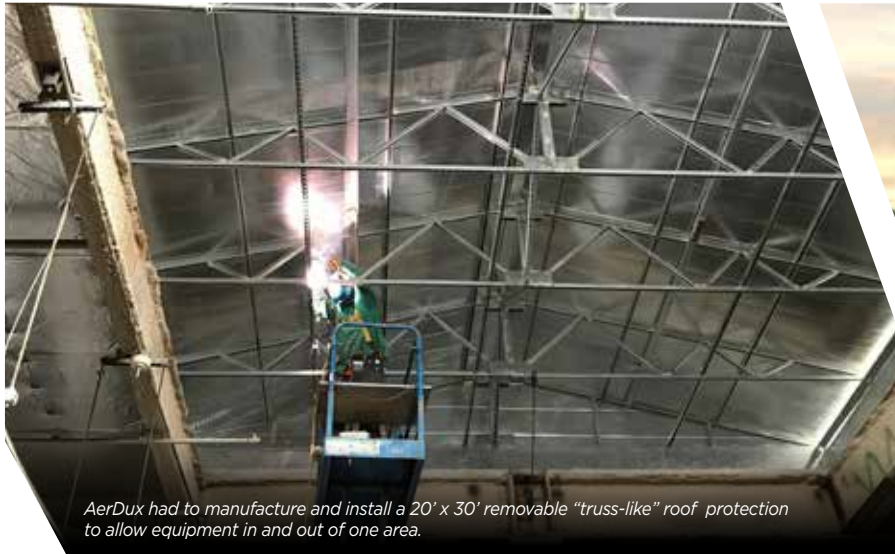
October 2019.

Though this job has had some unique challenges, Isom takes pride in the fact that this was a turnkey project. “When the booths left here, they were complete,” he said. “All electronics, all the shades on the windows — everything was basically in there when they were set onto the truck and taken down to the border.”

It was also nice knowing that they had created a product that would work for the officers, partly due to the constant feedback during construction. “It caused some delays, but at the same time, it made us feel good because they’re getting what they need,” Isom said.



CALIFORNIA SHEET METAL  
<https://califsheetmetal.com/>



AerDux had to manufacture and install a 20' x 30' removable "truss-like" roof protection to allow equipment in and out of one area.



In all, 14 sheet metal workers and pipe fitters work 14 hours to lift a total of 27 picks for the project.

# AerDux Gives Philly's Fashion District a Major Facelift

It was a Thursday when Bob Werner got the call he'd been waiting for. The Philadelphia Streets Department had approved his application to close a portion of Market Street for the coming weekend, so AerDux could set up cranes and lift more air handling units at the Center City job site. Considering how often these street closure applications are denied, this was good news — sort of.

The problem? The closure was approved for Easter Sunday. The date was actually April 1, 2018, but this was no April fool's joke.

Werner, Project Superintendent at AerDux, Incorporated — a woman-owned SMACNA contractor based in Bellmawr, N.J., quickly got on the phone to see who would be willing to work on the holiday.

"The fact that our employees were willing to work Easter Sunday says a lot about AerDux employees," said Gina Onorato, vice president at AerDux. "We really didn't have another option. The city of Philadelphia requires approval before shutting down

Market Street — a major roadway in Philadelphia's shopping and business district. Previously denied applications were putting us at risk of being behind schedule."

Onorato was also the project manager for this job — a large HVAC retrofit for high profile commercial initiative known as the Fashion District of Philadelphia. It is being marketed as Philly's newest destination for shopping, dining, entertainment, art and culture. The project started in December 2016 and then grew extensively in scope. The difficulty planning for street closures was more of an expected annoyance.

"You apply two weeks prior to the date, and they give approval the Thursday before the lift. We applied for dates multiple times, and they either approve or deny based on whatever is going on in the city that weekend. One time we were denied because there was a marathon race in Center City. I guess there were no big Easter egg hunts planned for that Sunday."

Under the supervision of Werner, a crew of 14 sheet metal workers

and pipe fitters worked a 14-hour shift that Easter. They lifted 27 picks, the last of which was nearing the darkness of night. In an effort to streamline the process and assure items were rigged in the proper order, Werner planned and tagged each section ahead of time.

"This pre-planning was critical in getting each section up and in the building in as timely and orderly a manner as possible," Onorato explained. "The unit sections were delivered to our facility K/D (knocked down), and stored until we needed them on site. This assured that we had everything we needed at the time of the crane lift."

An additional challenge involved lifting AHUs to an inaccessible interior area. There were no roof or wall openings available. AerDux had to create a 20' x 30' removable truss-style opening in the roof where certain units were lowered into the building.

"We designed, fabricated and installed this removable section to facilitate the lift," Onorato said. "Since the building was existing, and part of the building was occu-

pled, we had to work around those tenants and structural elements."

Altogether, AerDux replaced 18 AHUs, fabricated and installed approximately 650,000 pounds of sheet metal ductwork, and replaced a number of 200 horsepower motors in existing air handling units. The AHUs, all custom built by Climate Craft, have a combined 600,000 CFM.

Another unique element for the Fashion District project was the installation of an Accurex Electrostatic Precipitator (ESP), which is designed to remove smoke, grease and odor from the kitchen exhaust system in the new food court area. According to Onorato, as air enters the ESP cell, it passes by an ionizer that positively charges the particles in the airstream. The particles are attracted to negatively charged plates like

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AERDUX  
[www.aerdux.net](http://www.aerdux.net)



Photos courtesy of Carrie Barber

# General Sheet Metal Helps to Beautify Historic Vancouver waterfront

**T**he goal was to build the Pacific Northwest's newest waterfront destination. When it was done, the new Vancouver Waterfront Park in Vancouver, Wash., succeeded in helping transform the historic city into a multi-cultural urban development, with something for everyone.

Playing a major role in this development was General Sheet Metal from Clackamas, Ore. The SMACNA member worked on two buildings in the waterfront development – one an office building and the other was mixed use as businesses (on the lower level) and apartments on the upper floors.

“Even though this project had some difficult challenges and conditions, GSM was able to get the buildings finished in time for the grand openings,” GSM project manager Carrie Barber said.

The waterfront park, which took more than a year and was completed last fall, is a 7-acre site that is part of a development aimed at reconnecting the 35 acres along the Columbia River to the city's historic core. It incorporates shops, offices, residences with public open spaces along the river's edge along with a trail to Wintler Park over five miles away.

GSM's scope in the project consisted of the fabrication and installation of a clip-and-rail furring system that was engineered at the GSM facility. Additionally, GSM fabricated, furnished and installed composite metal panels, furnished and installed Morin F-12 and N-12 metal siding with four colors, and furnished and installed AEP-Span metal roofing at canopies. The architectural metal was attached to the structure using a 10ga clip with a 16ga rail system (41,576sf

metal panel, 6,000sf composite panels, and over 38,000lf of metal flashings).

“There were many custom flashings fabricated on the wood structure to accommodate the varying substrate,” Barber said.

During the company's six-month scope on the project, there were many moving parts and logistics that presented its fair share of difficulties. Equipment and manpower were constantly coming and going – at its peak, GSM had 38 workers on site.

“The jobsite logistics on this project were very challenging due to the deadlines required by the contract,” Barber said. “At times we had multiple lifts working on both buildings in a small footprint. The picture shows four boom lifts, one scissor lift, and a crane in an area that should only have two – three lifts.”

As great as the results were, this project was not completed without its share of challenges and difficulties. From walls made out of plumb, to congested working areas, to a very tight schedule, it had its own unique challenges and levels of complexity.

“The building was a wood structure and there were walls that were out of plumb and some had a twist,” Barber said. “We had to true out these areas with our adjustable clip-and-rail system. This project was also quite congested, so there was a lot of coordination where we had to work.”



GENERAL SHEET METAL  
[www.gsmw.com](http://www.gsmw.com)  
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Photos show with and without explosion suppression.

# Vidimos working to suppress explosions in Industrial Facilities

**D**eflagration. Ignition. Detonation. Secondary explosion. These sound like words from a war zone, but they actually describe conditions that can develop inside any facility that handles combustible dust. Combustible dust disasters have led to dozens of deaths and injuries in industry and extensive property damage.

The National Fire Protection Association is working to change that. New standards help owners identify and correct dangerous conditions before accidents occur. While NFPA standards are voluntary, many states or municipalities adopt the NFPA codes, giving them the force of law. At the federal level, current OSHA regulations require almost all industrial plants in the United States to complete Dust Hazard Analysis before Sept. 7, 2020.

Vidimos Inc. of East Chicago, Ind. has installed explosion suppression and/or venting systems in several local plants. “The cus-

tomers most likely to be interested include those with dust collection systems, such as grain handling facilities,” says Scott Vidimos, president of Vidimos, Inc. Vidimos’s experience is consistent with the extreme risk of dust explosions in grain elevators. In the 1970’s alone, nearly 60 people in the US died in grain dust explosions. “Companies that convey their product pneumatically are also likely candidates. Some companies convey scrap thru ductwork, which raises the potential for explosions.”

Insurance agencies play a pivotal role in having systems installed. “Often, insurance companies initiate the investigation into explosion suppression systems,” Vidimos explains. “Though with current customers, Vidimos may be the first to broach the subject.” Either way, customers work with their insurance companies to ensure that systems are in place to protect people and equipment.

Vidimos partners with Fike, Inc. of Kansas City, Mo., which manufactures proprietary explo-

sion suppression systems. “Fike provides turnkey pricing which includes installation of explosion vents and suppression devices,” Vidimos says. Explosion suppression devices are bottles of various sizes containing a chemical suppressant. “They bring us into the process where we become their labor arm. There are times that the owner is a current customer, but frequently the facility is new to us.”

The geometry and location of the customer’s process dictates which system is best suited for the application. “Fike provides a list of devices along with their locations for us to price installation,” Vidimos says. “To date, most of the installations have been on a single system at a customer’s facility. A typical project would take two men about a week.”

Most of the installations Vidimos performs are on existing systems. Retrofits are the biggest share of the market because so many facilities need protection. In new installations, owners often

purchase dust collectors with built-in explosion protection devices. However, even equipment purchased with explosion protection may require skilled modification to accommodate equipment upstream or downstream.

Vidimos designs, fabricates and installs supports for suppression devices. They also fabricate welded duct for dust collectors or cyclones to enable the duct to withstand the initial impulse of an explosion. “Another challenge is to ensure that the devices are located the specified distance from the piece of equipment being protected,” Vidimos says. “We might reroute ductwork to provide the minimum number of elbows and the correct length of straight duct so the devices will operate as intended.”

Fike personnel provide installation training for the specialized equipment while Vidimos project managers are becoming more familiar with the NFPA standards which dictate the process. “Recently, two of our project managers traveled to Fike headquarters in Kansas City, Missouri for orientation and demonstrations,” says Vidimos. High quality workmanship and a commitment to training have placed Vidimos in a strong position to pursue this burgeoning market.



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OSHA REGULATIONS  
[www.osha.gov/dts/shib/shib073105.html](http://www.osha.gov/dts/shib/shib073105.html)

# BIG PURCHASES ARE ABOUT MORE THAN DOLLARS AND CENTS

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## Miles on the tires

But what prompts companies to buy new equipment in the first place?

In some cases, contractors liken purchasing decisions for sheet metal and HVAC equipment to the calculus behind buying a new car. At a certain point, pouring more money into maintenance and repairs becomes more expensive than just shelling out for a new set of wheels. The same goes for the equipment involved in contracting work.

Ventcon, a full-service sheet metal contractor based in the suburbs of Detroit, recently revamped the shop where it performs its design and fabrication. The company spent north of \$2M on new equipment for the facility. The major enhancements included replacing the coil line and replacing the plasma table with a coil fed laser cutter. Additional equipment included a waterjet cutter, spiral machines, and a vane machine, all of which Ventcon did not previously own.

“Basically, we had used the older equipment up,” says Todd Hill, president of Ventcon. “It was time to move on.”

## Boosting efficiency

Often, companies want to work smarter or to take advantage of an opportunity to expand their services, so their purchasing decisions go beyond just necessity.

“In order to stay current in our business and competitive, we’re looking for the latest and greatest technology,” says Mark Austgen, the president and CEO of California Sheet Metal, an architectural sheet metal firm that routinely buys new equipment. “You’re buying equipment for the finish and the quality that it can produce, but to stay competitive, you’re also looking for the efficiency that comes with it.”

“I’m always keeping my eyes and ears open to what the industry has to offer with changing technology,” notes Kevin Gill, president of commercial sheet metal contractor McCusker-Gill Inc. in Hingham, Mass.

McCusker-Gill relocated to a new 60,000-square-foot manufacturing facility five years ago. The move included buying the expected big-ticket items like a new coil line and a laser cutter. The company also made enhancements such as finishing its concrete floors to ensure a dust-free environment and adding a continuous automatic welder.

“These changes all make us more efficient and hopefully give us a little bit of a competitive edge against our fellow competitors,” Gill says.

Some companies are now looking to automation to boost productivity and speed. California Sheet Metal is one.

“Our customers are general contractors,” Austgen says. “They want the best quality and they want it as quick as they can get it.”

At Hermanson Company LLP, investing in automated technology has cut down on the time required to perform a number of standard assembly tasks. In the process, that equipment has freed up space in the shop for other work, according chief operating officer Troy Lowery. For example, Hermanson’s new coil line has enabled the company to automate five production process that were previously done manually.

“The longest payback that we have on the new pieces of equipment is five years,” Lowery says. “Some of them pay back within a year.”

Of course, equipment that offers a competitive edge one day frequently becomes industry standard the next. Companies that don’t invest in new gear can find themselves falling behind in those instances.

## Marketing message

Another important aspect of purchasing decisions: marketing. Executives at sheet metal and HVAC companies agree that customers appreciate the peace of mind that comes





from knowing their contractors are working with solid equipment. McCusker-Gill even offers a guided tour of its facilities to clients and prospective customers to show off the machinery.

“We try to get clients and customers into our facility as often as we can, Gill says. “It sells itself.”

Purchasing new equipment offers added marketing benefits when the machinery can

expand a contractor’s production capabilities, according to Hill. He says that by investing in new equipment, Ventcon has been able to bring more of the manufacturing work for projects in-house, which Hill maintains is a bonus for customers.

“We can say that we have that control” (over all aspects of manufacturing and installation), he notes.





## Hermanson Goes Lean for Shop Redesign

The concept of so-called “lean production” is far from new in corporate America. Adapted from the Japanese manufacturing sector, lean systems seek to ruthlessly eliminate waste or excess from production. That applies to labor and time in addition to the physical materials involved in production.

Based in Kent, Wash., Hermanson Company LLP has used a lean process known as value-stream mapping (VSM) to redesign the shop where it performs sheet metal construction work. In the process, the company has increased its rate of production by 25 percent, while maintaining the same number of employees as it had before the redesign.

“We’ve totally changed the flow of our shop,” says Troy Lowery, the chief operating officer at Hermanson.

### Adding value

Broadly speaking, the objective of VSM is to boost the efficiency of production by identifying the individual processes that do and do not add value to the end product or system as a whole. Once complete, organizations try to cut back on non-value-added steps and waste, such as excessive amounts of inventory and time spent waiting.

In 2017, a team of researchers from the University of Washington performed a VSM analysis of Hermanson’s modular assembly production. The process under evaluation involved working on materials at five different workstations within the company’s shop for fabrication, preassembly and delivery of HVAC, piping and plumbing systems.

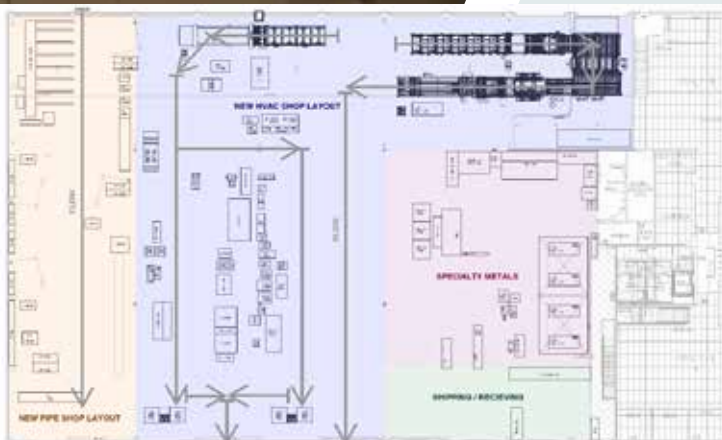
Along the way, the researchers tracked which activities added value to the finished product. For instance, when machines manipulated materials, such as bending sheet metal, it added value to the product. On the other hand, time spent transferring the materials from one station in the shop to the next did not.

### A new way of doing things

According to Lowery, the researchers’ findings opened the Hermanson management team’s eyes to the benefits of overhauling the company’s shop environment. “We were saying, ‘We’ve been doing the same thing the same way for a long time,’” he recalls.

The company began reconfiguring workflows in the shop and re-sequencing some production steps, and Lowery says the changes had a “snowball effect” in which they built on each other to become even more efficient. Hermanson invested \$3M in new equipment for the shop. Shop workers also collaborated with management on designing the new layout,

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*New Layout of Hermanson shop after value-stream mapping. To see the before picture, visit [SMACNews online](#).*

### Improving morale

The research that goes into purchasing equipment can get rigorous, especially in the case of big-ticket items.

Earlier this year, California Sheet Metal installed a new automated fiber laser in its shop in El Cajon, Calif. According to Austgen, it took about eight months to reach a decision on which laser to buy. In fact, a different model would be occupying that spot in the shop if the company had made a decision eight months earlier.

The two lasers under consideration “were both great, but for the certain type of work we do, one fit our needs just a little bit better,” Austgen says. “The one we were leaning towards halfway through the process is not what we went with.”

While Hermanson was evaluating its equip-

ment overhaul, Lowery visited eight different shops of the companies in its peer group across the country to get a feel for what kind of machinery they were using. Manufacturers accompanied him in some cases to give him better insight into how the equipment was being deployed.

Lowery estimates he visited no fewer than 14 shops during a two-year period, looking at the equipment, layouts, and workflows. The process helped Hermanson arrive a crucial determination about how to proceed.

“It was important for us to have one manufacturer, one source of accountability, one number to call for all of our equipment,” Lowery says. That helped Hermanson identify Mestek as its vendor of choice for the new machinery.

After all the time and energy devoted to research, Hill says Ventcon found that one of the

biggest benefits of the company’s new equipment was the impact on employee satisfaction around the shop.

“The new equipment is more productive, and it’s cleaner,” Hill says. “Once we moved on from our old equipment, it created a new excitement in the company.”



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[www.ventcon.com](http://www.ventcon.com)

HERMANSON COMPANY LLP  
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CALIFORNIA SHEET METAL  
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# Historic Department Store Sold on Phenolic Duct's Benefits for Renovation Project

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made it ideal for the department store project, said Kevin Ryan, the president of Sheet Metal Werks in Arlington Heights, Ill., (also a SMACNA member) which sold the Thermaduct to Atomatic.

In the case of the Macy's project, using the lighter, weather-resistant phenolic duct on the roof to tie into three energy recovery ventilators preserved valuable interior space that otherwise would have been unusable.

"(The floors) were going to be compromised for the mechanical rooms that were going to be set inside the building instead of on the roof," Ryan said.

## Making the sale

Greg Biziarek, director of project management at Atomatic Mechanical, said he was familiar with Thermaduct's benefits, but knew he had to prove them to the client, since it's still considered a newer technology. He said the ability to eliminate a large amount of ductwork from the department store's uppermost floor — allowing for clean sight lines and more space for future construction — appealed to the developers, even with the higher up-front cost of using phenolic duct.

Bziarek explained to Brookfield's representative that the top floor could be more aesthetically pleasing with the ductwork moved to the roof and out of the tenant spaces.

After Brookfield approved the idea, Atomatic worked with Ryan at Sheet Metal Werks on an extensive lift and handling plan. The work had to be done on the weekend when traffic was light, and Randolph st. could be closed. Then with the help of a crane, the large sections of phenolic duct were moved to the roof.

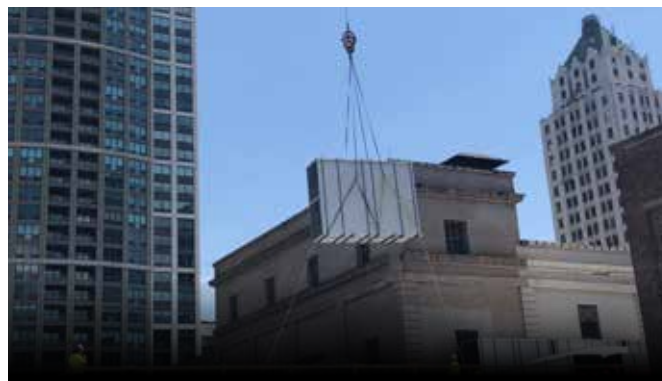
Ryan said it all went flawlessly.

"It was a beautiful Saturday morning — no wind, which is fabulous because (Thermaduct) is so light," Ryan said. He estimated

that using the phenolic duct saved 3,000 pounds per each section versus using galvanized metal ductwork.

HVAC work on the Macy's renovation is continuing. Biziarek, who has participated in a number of Thermaduct projects, said this was the largest phenolic project he had taken part in so far. Client feedback has been positive. He's a big supporter of the product, mentioning that another reason he likes phenolic duct is safety.

"As with every project safety was a big focus — limited access to equipment, working (and) staging, all on the roof," he said. "With heavier weights, there would have been far more challenges. Thermaduct eliminated some of those concerns. The product is a win for our team, too."



ATOMATIC MECHANICAL SERVICES  
<https://atomatic.com>

SHEET METAL WERKS  
<https://sheetmetalwerks.com>

# Michigan, Ohio Contractors Have a Combined 210 Years in Business



**Partlan-Labadie Sheet Metal Co.**  
In June 1889, James W. Partlan opened the J.W. Partlan Co., a plumbing and sheet metal company in Detroit.

Detroit's growing population soon led to the establishment of a separate sheet metal company — Partlan Sheet Metal Works — located just across the street from the original shop. Years later, Partlan's son, James, and

Current company president Craig Pessina has been with the company for more than 25 years, buying the business from his father, Gary, and Chuck Partlan, the fourth generation and final member of the original family still in the business. Today, he owns it with company vice president Jeff Walters. It's the only sheet metal shop Pessina has ever worked at.

"I came to work at Partlan-Labadie when I was 22 years old, right out of college" (to work as a junior estimator), Pessina said.

In his time at Partlan-Labadie, Pessina said the most dramatic change he's seen is the speed in which clients now expect work to be done, whether it's submitting bids or assembling and installing duct.

"The pace of the business is just so much faster than when I started 25 years ago," he said. "When I started in this business, to bid a \$1 million job took about 2 ½ weeks. Today, you can bid a \$1 million job in a couple of days. It's incredible."

Partlan-Labadie has been a member of SMACNA since 1964, and shop employees are members of Sheet Metal Workers union Local 80.

## Falls Metal Fabricators

About 200 miles away from Oak Park, Mich., Akron, Ohio, known as the "Rubber Capital of the World," for the many tiremakers that have called the city home. Goodyear Tire & Rubber Co., which has

helped millions of cars "meet the road," has been based in Akron for more than a century.

SMACNA member Falls Metal Fabricators and Industrial Services LLC doesn't have quite that long a history — it's "only" been around 80 years — but company officials say it has a lengthy reputation as a sheet metal contractor known for quality service and value.

"Falls' specialty is customer service," said Daniel Pugh Sr., the company's president. "Our customers come first and we do anything in our power to meet our customers' demands."

The company was founded in 1939 by Ralph Moyer as Falls Sheet Metal Works. Its client roster in those early years reflected the city's major industry as Goodyear, Bridgestone, Firestone and General tire companies were all Falls customers.

Ownership passed to Moyer's son in 1969, who ran the company until selling it to Pugh in 2014. Pugh said he has been told the Falls was one of the first union sheet metal shops in the Akron area, and it has been a SMACNA member for 50 years. Employees are members of Sheet Metal Workers Local 33



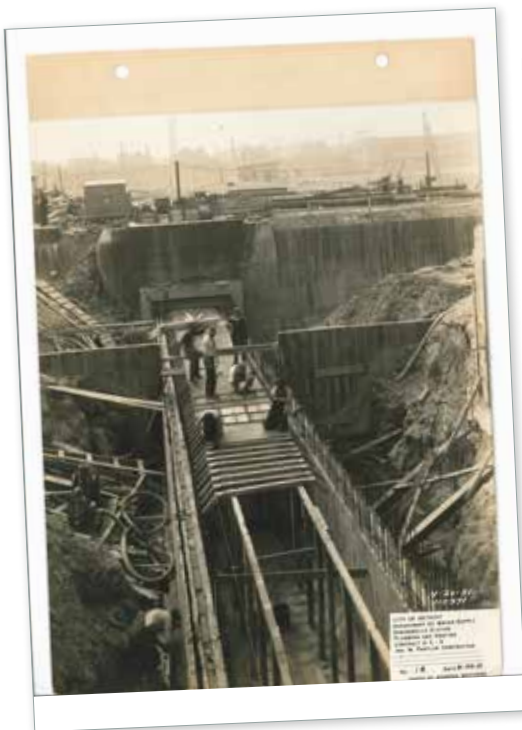
PARTLAN-LABADIE SHEET METAL CO.  
[www.partlanlabadie.com](http://www.partlanlabadie.com)

FALLS METAL FABRICATORS AND INDUSTRIAL SERVICES LLC  
[www.fmfis.com](http://www.fmfis.com)



Pugh said the name change to Falls Metal Fabricators and Industrial Services reflects the broad range of markets the company serves.

"We have learned to adapt and overcome in keeping up with the changing times," he said. "We have the capacity to produce high-quality metal products from prototype through high-volume production runs."



his brother-in-law partner Frank Labadie renamed the company Partlan-Labadie Sheet Metal Co.

And 130 years later, Partlan-Labadie is still in business, with operations in Oak Park, Mich., only 10 miles away from where it began.



## AerDux

*continued from page 5*

a magnet. These plates then remove the contaminants from the airstream, eliminating the need to change out costly filters, thereby reducing maintenance and downtime.

Like many of her coworkers, Onorato grew up near Philadelphia, so she remembers efforts to attract shoppers back into the heart of the city with the Gallery, built in 1977. This four-story mall was a success for many years, but began to lose customers and stores due to changing consumer tastes and some incidences of crime on and near the property. The Fashion District, which had its grand opening Sept. 19 of this year, occupies many of the old Gallery buildings — covering over three city blocks and a number of bridges taking shoppers over busy streets from one destination to another.

“I am looking forward to patronizing the area once it is complete,” Onorato said. “I believe it will be a great addition to the city and for me, is just a PATCO train ride away like I used to do with my mother back in the 1970’s.”

“We are very proud of our crew and the work performed as this was one of the largest air handling unit replacements in the region recently,” Onorato said. “It was a pleasure working for Shoemaker-Skanska Joint Venture (construction manager) and Macerich (developer) and we look forward to further opportunities like this.”

Will future opportunities mean possibly working more holidays? AerDux is ready — whatever is necessary to get the job done.



*Much work and preparation was required to stage and set up the crane on Market Street in downtown Philadelphia.*



# Mobilizing for the Future: Field Technology

In the last two years alone, 90% of the information in world history has been generated. In all aspects of our lives, technology is moving at an unprecedented pace and elevating the way we live, work, and communicate.

Technical solutions focused on the construction industry are growing at an extremely rapid pace as well. During 2018 US based construction technology startups raised \$3.1 billion dollars in over 130 major investment deals. How do you learn about new ideas, separate the buzzwords from the strategies, and use construction technology to your advantage in driving safety, productivity, and a competitive edge for your company?

In order to champion innovation and increase efficiency at your organization, the first step is to ensure that your company has a robust culture prepared to take on new challenges. As explained by Frederic Le Play, “the most important product of the mines is the miner.” No matter the complex buildings or other precious resources produced by your employees, the people themselves are the most important output of your company’s efforts. Focusing on a people-first mentality creates an environment of loyalty, creativity, and generates strategic mindshare far beyond that of a company driven by isolated visionaries.

To purposefully look at innovation, first seek to understand the needs of your workers and help to elevate solutions that eliminate their unique challenges. Working in the field presents high exposure risks for any construction company. Strong safety practices reduce these risks while increasing worker focus and quality of output.

Not every safety technology is appropriate for every corporate culture. Allowing your team to champion and test their own safety practices enables employee engagement during all levels of implementation. Special consideration should be taken to avoid fatigue and worker exposure. Your body is the most important tool that will ever be

used on the job and care should be taken to prevent injuries at all costs. Technologies empowering worker safety include the following:

- 1. Triax Technologies’ Spot-R wearables** create a live network of site awareness. This enables zone-monitoring and worker biometrics while maintaining privacy limits for active jobsites.
- 2. Construction Robotics’ Material Unit Lift Enhancer (MULE)** reduces muscular strain caused by heavy material transport. By shifting the burden of material movement to a robotic arm, workers can exercise dynamic control over site materials.
- 3. Smartvid.io** makes use of the massive amounts of progress and security data already created on a jobsite to predict safety incidents. By leveraging artificial intelligence, this software provides information to empower workers and eliminates risks long before accidents can occur.

Connected equipment improves awareness and operating functionality during all phases of new construction and site maintenance. Smart equipment provides information that extends a human worker’s ability to make informed decisions. Technological advancements in the field create opportunities for versatile, robust devices that can record operating and environmental information and enable contractors to perform tasks more quickly, safely, and efficiently. Below are some connected tool products that are advancing field productivity:

- 1. Milwaukee Tool’s ONE-KEY platform** reduces worker downtime by ensuring that contractors have the right tools for the job. Through customizable tool control, ONE-KEY drives efficiency in precise and repeatable tasks, records operation information, and provides tool diagnostics.

*continued on page 14*

## LEADERSHIP



## Courage in the Little Things

The grind of decision making can be exhausting. If you kept track of the number of decisions you make every day, you'd probably feel even more tired. We live with the knowledge that our mistakes could jeopardize the very existence of our company. That reality can cause us to grow tentative in decision-making, reluctant to upset the status quo, and slow to pull the trigger when the pressure is on. We often fail to recognize that this hesitancy might be based in fear —something few leaders are willing to confess. While many leaders would find the courage to do the right thing in a big crisis, it's often courage in the little things that we lack.

**The courage to make the hard people decisions** — It is not uncommon to see, even in great companies, a workaroud involving someone in a key role who: a) gets results, and b) inflicts plenty of relational damage along the way. That person is usually perceived as not being held to the same standards as everyone else. Leaders can send signals that contradict our stated values in those situations (i.e., that production is more valued than character). A courageous leader must occasionally make a hard call to let a high performer go in order to protect the team. A reluctance to hold relationally challenged people accountable will almost always be more costly than the decision to move on without them when other high performers decide to leave.

**The courage to say no to working with the wrong partners** — We've all had them...the owners that are hard to please, slow to pay and quick to point the finger. Trade partners who over-promise and under-deliver. A courageous leader will do a cost/benefit analysis and determine that even in a tight market, certain clients and partners are not worth the wear and tear on your people and emotions. Your team will thank you.

**The courage to see the future**

**looks much different from the past** — None of us have a crystal ball. But even when a seismic shift is underway, we see some people clinging to old habits and old ways of thinking, long after the majority has moved on. Whether it's a market that is quickly disappearing, a methodology we enjoy and don't want to change, or an aversion to technology, having the courage to make a fundamental change in the way we do business can come too late for some.

**The courage to admit our mistakes and take the blame** — Human beings have a remarkable capacity to quickly forget most of our mistakes and missteps, remembering only those times we got it right. Other people seem to remember the times we were the problem and take credit themselves for our wins! Yet when a leader owns a mistake and resists the urge to blame others, it seems to gain more good will and loyalty than just about anything else we can do.

So where does a leader in our industry find the courage for the little things as well as the big things? The key is being rock solid on our principles, our personal values. They should be crystal clear, few and non-negotiable. As an example, while everyone likes to say things like, "our people are our most important asset," anytime our behavior contradicts that cliché, we lose credibility.

If you haven't taken the time lately to reconsider those things you won't compromise, you may find it worthwhile. Involve others in the exercise, asking your key leaders what, based on your recent behavioral history, feels like the biggest drivers in your life. If the answer surprises you, don't shoot the messenger. Own it, apologize, and take steps to find courage for the little things.

*Ron Magnus, managing director of FMI's Center for Strategic Leadership with Ed Rowell, CSL consultant.*

## SAFETY

## 2020 Safety Champions Conference – What is Your Safety Legacy?

Sponsored by SMACNA and SMOHIT, the theme for the 2020 Safety Champions Conference asks the question; What is Your Safety Legacy? The two-day conference is March 22-24 in San Antonio and is built around fostering an interactive, hands-on networking environment where members can pose safety questions, take part in open discussions, and find answers to safety topics that concern them.

The unique agenda includes presentations on a variety of topics that attendees will find innovative including how to become a "safety influencer," the profile of a "safety champion," and technical issues such as silica, distracted driving and leading and lagging indicators.

Former Assistant

Secretary of OSHA, Dr. David Michaels is invited to present his thoughts on the "health side" of safety and health in the sheet metal and HVAC industry. The past participants have included a diverse audience from both labor and management including JATC coordinators, business managers, company owners and contractor safety representatives. The event includes the SMOHIT Safety Matters Awards during the opening reception Sunday night.

Registration is free to all Industry Fund contributing contractor representatives. Members still have time to register on the SMOHIT website at [www.smohit.org](http://www.smohit.org). For more information, contact Mike McCullion, SMACNA director of market sectors and safety ([mmcullion@smacna.org](mailto:mmcullion@smacna.org).)

## Field Technology *continued from page 10*

- 2. Verizon Connect's Telematics Platform** keeps teams safe and engaged through scheduling and logistics tracking. Workers can better understand and control their equipment through these connected devices.
- 3. Johnson Controls' Enterprise Management 2.0** platform leverages the power of connected equipment on a comprehensive analytics system for energy management, space planning, and equipment performance. By interpreting multiple sensors through precise data analytics, key decision makers can develop proactive site plans.

Digital transformation is driven by much more than startup funding and powerful technology capabilities. In an industry where each contractor has unique identity and corporate culture, innovation must start from an internal desire to improve. By exploring new solutions and engaging employees at all levels of an organization, companies can position themselves to be strong and agile for whatever the future looks like. As the world continues to evolve and be disrupted by new technologies and processes, the time is ripe to create pioneers for a sustainable future. Be brave, be curious, but above all, be advocates for your people.

*Tauhira Ali, Sr. Manager of Construction Technology / Milwaukee Tool*

**MEMBERS**

**Welcome New SMACNA Members**

|                             |                    |
|-----------------------------|--------------------|
| UFAB, LLC                   | Salt Lake City, UT |
| Dutra Sheet Metal Co., Inc. | Vineland, NJ       |

**TRADESHOW**

**SMACNA to Exhibit at AHR 2020**

The annual AHR Expo is the world's largest HVACR event, attracting the most comprehensive gathering of industry professionals from around the globe, and SMACNA will be exhibiting once again in 2020. This event promises to bring tens of thousands of attendees and exhibitors together from across the globe for three days of networking, exploring and learning about the latest innovations in our industry.

From February 3-5, 2020 SMACNA staff will be at booth #4442 to raise the visibility of association members and the benefits they bring to the industry. This well positioned, brightly designed booth promises to attract a steady crowd of visitors throughout the entirety of the expo.

SMACNA encourages members and chapter executives who are going to be attending to stop by and meet the SMACNA National staff on hand

and take a few minutes to experience firsthand the powerful search engine of the SMACNA eLibrary, view an updated version of our exciting hype video, and learn about all the resources that are currently available to our members.

As an added bonus, SMACNA National technical staff members Mark Terzigni, Director, Engineering & Technical Resources, and Pat Brooks, Senior Project Manager, will be leading three unique free educational sessions available for all AHR attendees. These sessions will cover the following topics: HVAC Air Duct Leakage, HVAC Duct Construction Standards - Metal & Flexible, and HVAC Duct Design for High Performance Air Distribution Systems. SMACNA members interested in attending the AHR Expo 2020 can learn more information by visiting [www.ahrexpo.com](http://www.ahrexpo.com).

**Shop Redesign**

*continued from page 10*

tinkering with different options to figure out which worked best. That process opened up 4,000 square feet of flexible space for one-off design and manufacturing products.

The redesign has reduced waste in the Hermanson shop by roughly 22 percent, according to Lowery. Meanwhile, he says the working environment has improved for shop employees. Not to mention, Lowery points out that the quality of Hermanson's products has gone up, too.

"I think we've got something pretty cool and pretty special in the making here," Lowery says.

**Welcome 2019 Associate Members**

**PLATINUM**



**GOLD**



**SILVER**

SMACNA welcomes new Silver Associate member Building Start



**SMACNA's Associate Member program provides an opportunity for industry suppliers to build long-lasting relationships with SMACNA members, the industry's premier contractors.**

To learn more about becoming an Associate Member, visit [smacna.org](http://smacna.org) or contact Scott Groves at [smacna@naylor.com](mailto:smacna@naylor.com).



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## SMACNA CALENDAR

### OCTOBER 2019

#### October 20-24

76th Annual Convention  
*JW Marriott, Austin, Texas*

### DECEMBER 2019

#### December 8-10

Council of Chapter Representatives  
*Scottsdale, Arizona*

### JANUARY 2020

#### January 26-28

Chapter Executive Institute  
*Colorado Springs, Colorado*

### FUTURE SMACNA CONVENTIONS

#### September 27-October 1, 2020

77th Annual Convention  
*The Broadmoor  
Colorado Springs, Colorado*

#### October 24-27, 2021

78th SMACNA Annual Convention  
*Maui, Hawaii*

#### October 23-26, 2022

79th SMACNA Annual Convention  
*Marco Island, Florida*

#### October 15-18, 2023

80th SMACNA Annual Convention  
*JW Marriott Phoenix Desert Ridge  
Resort and Spa  
Phoenix, Arizona*

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[www.smacna.org](http://www.smacna.org)

## 2019 Premier Partners



It's Our Business to Protect Yours

