

SPRING 2020

Sheet Metal Journal

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Western Washington



Tools in Trade

Product Development: Tools

MX Fuel a Game Changer

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SMACNA-Western Washington is a trade association and a Local Chapter of the Sheet Metal & Air Conditioning Contractors National Association (SMACNA), which is located in Chantilly, Virginia.

SMACNA Contractors are heating, ventilating, air conditioning (HVAC), and sheet metal experts. They are your assurance of quality in the fabrication and installation of ductwork and air handling systems.

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STATEMENT OF PURPOSE

The ultimate goal of SMACNA-Western Washington, Inc. is to achieve and maintain the following principles and programs for the sheet metal industry:

1. To establish advertising, publicity, and promotional activities that advise the public of the nature, extent, and availability of services performed by the industry.
2. To promote educational programs to formulate high quality standards of sheet metal construction.
3. To aid in the formulation of uniform sheet metal specifications and improvement of state and municipal codes.
4. To expose fraudulent or misleading advertising or representations intended to deceive the public.
5. To encourage and promote trade practices that will eliminate unfair competition or exploitation of the sheet metal industry.
6. To encourage and promote the establishment of a uniform pattern of payments by customers during the progress of jobs to avoid inequitable payment delays and economic penalties.
7. To provide a forum for the discussion of the common interests and problems of labor and industry, and to encourage and promote harmonious relations between labor and industry.
8. To encourage any proper activity that will increase the efficiency of the industry and its ability to serve the public.



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HOLD STRONG

As we navigate uncharted waters, we at the SMACNA-Western Washington office want to let our valued members know we are doing all we can to support you during this rapidly evolving situation.

We are doing our best to get COVID-19 related information out to our contractors as quickly as possible. We have developed the following link: <https://www.smacnaww.org/resources/smacna-news-feed/> on our website, which is constantly updated with the latest information about resources and regulations regarding COVID-19 in our communities and on our jobsites. Please check our news feed regularly to keep abreast of the situation.

We are committed to keeping the construction industry working and afloat during these uncertain times. Our staff is currently working from home, and I am in the office as needed taking care of association’s most urgent matters. Most importantly, we are committed to the health and safety of our members.

Because of the outbreak and the uncertain timeline around resolving the current situation, the membership events noted below in red have been postponed to a later date. All other planned events are subject to change based on the health

conditions in our state. We will keep you updated on our events as they change. These decisions are not made lightly, and we look forward to a later date when we can bring our membership, their colleagues, and their guests together for the betterment of our businesses and our industry.

An updated 2020 membership events calendar will be sent out once new event dates are finalized. We appreciate your understanding during this time, and we wish you and your families health and wellness in the months to come. ▪



By / Julie A. Muller-Neff, Esq.
Executive Vice-President, SMACNA-WW

UPCOMING SMACNA-WW EVENTS

Membership Meeting: Powers of Communication with Eric Anderton
SeaTac Marriott – **RESCHEDULED for September 10**

Labor-management Industry Night with Kevin Brown
SeaTac Hilton – **POSTONED until November 11**

Mariners Game, SMAC-YA & Membership Mixer
T-Mobile Park – **POSTPONED TBA**

Safety & Tech Conference
SeaTac Marriott – **POSTPONED TBA**

June 16
Supervisory Training: Project Communication with Kevin Dougherty
SeaTac Marriott

July 30
Annual Golf Tournament
The Golf Club at Newcastle * **New Date & Location**

August 13
Women’s Annual Luncheon with Angie Simon, SMACNA National President
Hyatt Regency, Renton

September 27-30
SMACNA National Convention
Colorado Springs, CO

October 21
Membership Oktoberfest
Lounge by Topgolf, Kirkland

December 4
Annual Holiday Gala
W Hotel, Bellevue * **New Location**

SMACNA-Western Washington Presents

LABOR-MANAGEMENT INDUSTRY NIGHT

YOU'RE INVITED

All Sheet Metal Workers
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Project Managers & Engineers
JATC Apprenticeship
Local 66 Members

PRIZES

Seahawks Tickets
Gift Cards
Electronics
and more!

GUEST SPEAKER

Kevin Brown, Keynote Leadership Speaker and Author of *The HERO Effect*®. All attendees will receive a copy of this book.

LOCAL 66

All Local 66 Members will receive a **\$100 GIFT CARD** for attending.

NOV 11

SEATAC HILTON
CHECK IN: **3 PM**

FREE ADMISSION
DINNER PROVIDED

CONNECTING IN ISOLATION

There is little one can say in a situation such as the one COVID-19 has brought to our doorstep. As print publishers we are in the business of building longevity and depth in our stories and content, and when a situation arises that changes by the hour it is impossible to keep up. The moment I write something, something else has happened. As soon as we share a piece of news, different news develops.

However, we are in a place where the world is deeply connected in its isolation, and that is the place from which the premise of this editorial arises. Our global connections fueled the movement of COVID-19, but those same connections have provided the means to share stories, hard numbers, and strategies for containment. Governments from Italy to the United States are implementing measures to fight back, and it is because of our connections we will succeed—eventually.

“Know we remain committed to our company mission to connect with and reflect the best that the construction industry in North America offers.”

In the meantime, we as publishers are working from home but keeping the light on. Our publications are moving forward as planned, and we will continue to put the same effort and care into every bit we publish so that the material brings depth and familiarity to our readers. Some have asked if our content



By / Jessica Kirby
Editor, *Sheet Metal Journal - Western Washington*

will reflect COVID-19 specific messaging and the answer is not unless that messaging is enduring. Mostly, we will continue to reflect the accomplishments and challenges of the associations we represent because in times of trouble the familiar brings comfort.

That said, our websites will be a-buzz with the latest that arises in the digital world. Keep an eye on our websites, social media, and the occasional email for the latest affecting the construction industry in the communities we serve.

And finally, know we remain committed to our company mission to connect with and reflect the best that the construction industry in North America offers, and as you continue to build the fabric of our cities, we will continue to showcase your hard work.

If you have questions, comments, or something you’d like us to share on your behalf, please don’t hesitate to reach out at jkirby@pointonemedia.com.

Be well and stay safe. ▪

Submit your news, story, or photo idea



CONTRACTORS AND SUPPLIERS

SMJ-WW is on the lookout for interesting HVAC, architectural sheet metal, testing & balancing, and industrial / specialty news and feature topics. If you have a great idea, notice an industry issue that needs addressing, or want to weigh in on a technical subject, we would love to hear from you.

We also need great pictures – current and historical – of people working in all aspects of the sheet metal industry. If you have something to share, please email it to our editor, Jessica Kirby, with a caption about what is going on in the photo.

Questions about how else to get involved in a future issue of *Sheet Metal Journal*? Reach out to jessica.kirby@pointonemedia.com or 250.816.3671 and get the scoop.

MEET THE BOARD – RUSS KIMBALL

Russ Kimball is beginning his second two-year term on the SMACNA-WW board. He is a member of the Residential Labor Committee and General Labor Committee, and chair of the Education Committee.

This is his first board term, but he has been a member of Education Committee for almost 20 years and has served on several national committees in a variety of issues.

Kimball is also an Everett Rotarian, Chair of the Scholarship Committee, which gives away about a quarter million dollars each year to deserving high school seniors in the Everett School District. He is part of SMACNA's Residential Peer Group, a consortium of nine companies that meets at the national convention and keeps in touch throughout the year to support one another.

Kimball owns Evergreen State Sheet Metal Inc., which includes Evergreen State Heat & AC at the Everett branch, Evergreen Eastside Heat & AC at the Bellevue branch, and Evergreen State Electrical Services at both locations. The company specializes in residential retrofit, light commercial service, maintenance, and general retrofit.

Kimball entered the sheet metal trade 21 years ago when he bought the company from a broker. "My first day on the job was my first day in the industry," he says. Over the years there have been many challenges and changes, but if there is anything he has learned it is to stay nimble and know the true value of one's business.

Success in this area means striving to understand what good looks like when it comes to employees, customers, vendors, and all other professional relationships.

"Too many folks accept poor performance and mediocrity because they do not know what good looks like," he says. "Many of them also delude themselves into thinking they understand but they really do not."

Part of this means truly understanding what a company's costs are by dividing overhead by labor hours to know the full burdened loaded costs per hour.

"Know your billable efficiency by department in which to factor your break-even labor cost," Kimball says. "Understand each department's ability to cover their share of overhead based on field labor hours worked. Understand the risk-return relationship of our industry, which is second only to the restaurant industry in terms of owner risk. Targeting 10-12% return on all jobs and departments after overhead is paid for is more than reasonable for the risk we take."



He also urges contractors to truly understand the value they bring to the customer within specific niches. Although this will be different for all companies, it should be the focal point in which to target the right customer—and to understand who is the wrong customer.

"Make sure your sales force understands this as the primary sales tool in identifying the right customers," Kimball says. "Know that the sales process is about how much information you can get rather than the amount of information you can give—and make sure your sales force knows this and practices this."

He also recommends having a robust process to schedule and track all sales leads and how those leads were obtained.

Of course, staying on top of it all means tackling some of the industry's challenges, the most important of which is outside prevailing wage and major jobs in the downtown Seattle corridor.

"We have non-union competition paying their workforce a third of what our journeymen make," Kimball says. "Evergreen State's markets are fully in these areas. To compete we need to be 'smarter than the average bear'."

This means selling value, being productive, building great skills—both in the office and in the field—targeting the right customers, and not wasting time on the wrong ones.

"It is the only way to survive," Kimball says. "This wage cost delta will only expand over time. We need to be ever smarter on how we approach business to survive."

As in all industries, technology continues to be a challenge and an opportunity. "In my sector, many of us are just now getting into electronic service dispatch," Kimball says. "Mastering this tool and ridding the office of paper will be essential for survival."

The move toward ductless from central heating and cooling is also growing. "There are still many who do not like what they

continued on page 22

57TH ANNUAL CRAB FEED A SEA-WORTHY SUCCESS

SMANCA-Western Washington’s 57th Annual Crab Feed was held Friday, February 7 at the Ocean Shores Convention Center. Over 350 people attended this annual all-you-can-eat crab feast, enjoying this year’s theme: the Seahawks. Theme celebrations included blue and green themed décor centerpieces with a Seahawks crab graphic and balloons, and all attendees received a Seahawks themed apron upon check-in and arrival.

A costume contest was held for attendees dressed up as a mermaid, a pirate, or in Seahawks gear. Winners received a \$50 Visa gift card.

Guests began filtering into the Ocean Shores Convention Center between 6:00–6:30 p.m. Before the doors opened to the ballroom, guests could play ping pong or corn hole, or take photos at a themed photo booth in the lobby area.

At 6:30 pm the ballroom opened, and Julie Muller, executive vice-president of SMACNA-WW, dressed as Ursula – Goddess of the Sea, greeted all incoming guests and invited them to take their seats inside or visit the bar for drinks.

Soon after, the convention center staff began to bring out two huge receptacles filled with crab and side dishes, including salad, corn, baked beans, and bread.

While attendees lined up for the buffet tables, the band, **Ready or Not**, took to the stage and entertained the crowd with covers of classic rock and popular mainstream hits.

Guests loaded up plates of crab and socialized among tables, topping off their tasty meals with a visit to the dessert table, which included a selection of Oreo, Boston crème, lemon, apple, chocolate, and other fabulous pie flavors.

After bellies were full, guests were free to dance to the live music or return to the lobby to take photo booth pictures, play ping pong, or challenge one another to corn hole.

The Crab Feed event concluded at 10 p.m. with guests returning to their hotels or the casino or opting to continue celebrating the night. SMACNA-WW provided a complimentary shuttle service for those staying at the local Ocean Shores Casino resort where attendees could continue their night after wrapping up festivities at the convention center. ■



Photos courtesy of First Light Photography







Tools in Trade

A partnership between Milwaukee Tool and the Local 66 JATC keeps apprentices at the top of their game and provides essential product development feedback.

By / Jessica Kirby • Photos courtesy of Local 66 JATC

When Justin Bourgault, Training Coordinator and the Western Washington Local 66 JATC, first became an instructor there more than five years ago, he reached out to a number of tool manufacturers for help with outfitting the apprenticeship program with a tool supply.

The only company who returned his call was Milwaukee Tool. “They called me back and set up a meeting within a week,” Bourgault says.

During that meeting, Bourgault and the Milwaukee Tool rep were discussing cabinet requirements for a tool set, and the rep suggested turning the cabinet fabrication into a competition. Bourgault got to work with the design phase of the cabinet.

“I have been in the sheet metal trade for 30 years and much of that time was spent doing specialty fabrication and high end residential custom work,” Bourgault says. “So, I had a real good idea where I needed to start.”

After working out most of the details, Bourgault put together the material list and started fabrication on cabinets for the DuPont and Everett training centers. He had several apprentices donate time on the project and help with the fabrication.

“The door of the cabinet slides straight up and rests above when it is open,” Bourgault says. “This requires some serious counterweight and a complex pully system because the door

weighs 120 lbs. Jeff Reinhardt, executive administrator at the JATC, and I teamed up and dialed in the rest of the details for the door system. Jeff also installed the keypad and electronic lock system for security.”

Once the cabinet was hanging from the wall, Reinhardt installed the lighting and the pair hung up the tools. “As you can see in the picture, it turned out okay,” Bourgault says. “We received more tools and a sweet radio that is currently playing in my office.”

This was only the beginning of an enduring, mutually beneficial relationship between Milwaukee Tool and the JATC that was made possible by the launch of Milwaukee Tool’s Jobsite Solutions team.

Chris Howard is one of many reps across America who are part of that team, and he says one of the program’s main goals is help support local mechanical, electrical, and plumbing (MEP) training centers like the Western Washington JATC. Support comes in many forms, including tool endowments (donations), trainings, competition sponsorships, and graduation gifts.

“Justin knew the importance of having a good quality set of tools on hand to get the job done right,” Howard says. “He gave Milwaukee the opportunity to come in and help support with these tools. That way, when the apprentices go out into the field, they know exactly how to perform the job and what tools to have on hand for it.”

Having this seamless gap between the classroom and the field is imperative to the technician's success and to the company's growth.

"This has been far beyond positive for both parties," Howard says. "Within the JATC, it helps alleviate the cost of tools needed for training; it allows the students to be trained correctly on each tool; and gives the students the opportunity to use the same tools that many of the contractors buy on a daily basis for their workers. Since its doors first opened in 1924, Milwaukee Tool's passion and bloodline have always been the MEP trades."

For Milwaukee Tool, the partnership has opened doors the company never expected. At first, it gave Milwaukee Tool an avenue to give back directly to its main consumers. Secondly, it has given the company important feedback and the ability to reinvent how tools are made from the ground up.

"We now have a direct relationship with the people using our tools daily," Howard says. "We get to see what is going well, where users have trouble, and where we can continue to push the envelope of technology within tools."

One great example that Local 66 helped with was the launch of Milwaukee Tool's M12 Rivet Gun. Prior to launching this battery powered tool, the most common way to punch a rivet was with a manual hand tool. After years of performing this application, users were seeing major injuries, such as carpal tunnel syndrome, in the field.

"With help from the instructors and students, we were able to launch a battery powered solution that took the fatigue off of the user and completely eliminated the injuries caused from a manual rivet tool," Howard says. "Without the relationship with the JATC, we would've never seen this issue, and now we are able to help people across the country with this solution."

Milwaukee Tool is always looking for ways to expand and grow the relationship, and in 2019 the company partnered with the JATC and the ITI to add another layer of curriculum into the training center.

"To kick this off, ITI and several JATCs held a week-long training for the apprentices at training centers across the Northwest," Howard says. "To help support this training,

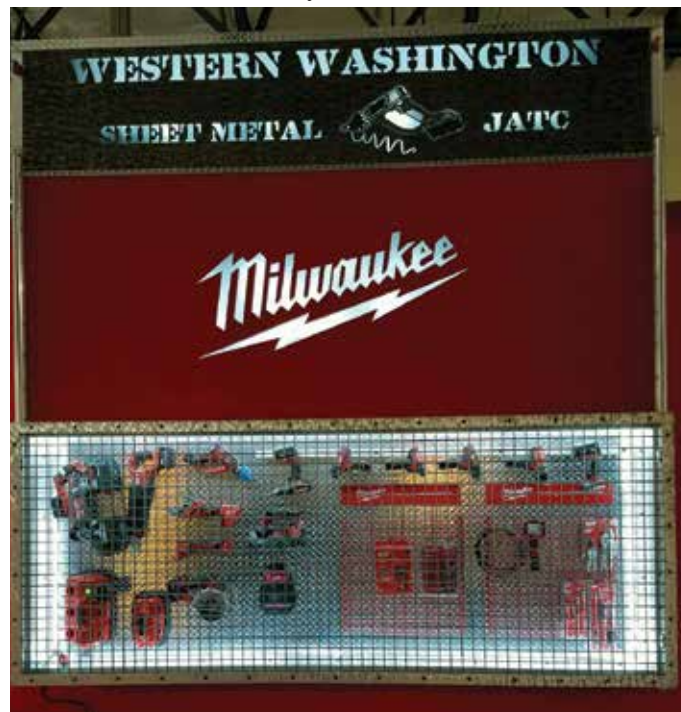
Milwaukee donated the tool lists needed for the mobile trailer that goes around to each JATC making sure tools are always available for the hands-on work."

Bourgault is grateful for the partnership and Milwaukee Tool's on-going contributions to the JATC, including the continued supply of tools, batteries, drill bits, saw blades, and other equipment. Milwaukee Tool also sends presenters and trainers who help with the JATC's OSHA training program and tool safety.

"Milwaukee Tool works with local distributors to give our union members discounts on hand tools," Bourgault says. "The partnership is good for the apprentices because they are able to train with the latest tools and equipment, and it works well for Milwaukee Tool because the apprentices normally prefer using the tools so they ask for them at work and will probably buy them for home use."

"Milwaukee has been a great partner and sponsor of the apprenticeship program, and I am personally grateful that we have such a good relationship with them," Bourgault says.

In 2020, the DuPont JATC is expanding its tool wall into the student cafeteria, and Milwaukee Tool will be partnering with that, as well. This will be a Tool of the Month wall to highlight new tool launches specifically for



the sheet metal trade.

"Education and awareness are critical pieces to the training center, and the Local 66 staff does a great job of always thinking of ways to continue to help the apprentices learn about the trade and stay up to date on current technology," Howard says.

Milwaukee has partnerships with numerous training centers across the country and will continue to support the core MEP trades in any way possible.

"What's great is not a single partnership is the same, and that keeps it fun for the Milwaukee team," Howard says. "Wherever and however we can support, we will. These partnerships are not about the cookie cutter model, but instead how Milwaukee Tool can mold to the specific training center and become woven into their daily routines." ■



From Vision to Revolution

Milwaukee Tool is Building the Future, One User at a Time

By / Jessica Kirby • Photos courtesy of Partners in Progress

At Milwaukee Tool, product development starts from the end user. The process is focused on user-based design considering the heavy-duty operator from the time they wake to the time they sleep and the effects products have on the body. The results are holistic, encompassing, and embrace the entire human experience—not as the end result, but as the place from which all innovation begins.

“We aren’t just looking at the user experience on the job site either,” says Tauhira Ali, senior manager of construction technology at Milwaukee Tool. “We have the ability to really focus in on what a tool looks like, how it is used, how it breaks, how to fix it—from cradle to grave, we develop everything from an ethnographic stand point, including physics, technical perspectives, and electronics.”

Ali has worked in the automotive, aerospace, robotics, and manufacturing industries. Before joining the company seven years ago, she had never found a company so people-focused while still having a hand in developing some of the world’s foremost technology. “I came for a tour of Milwaukee Tool, saw how authentic the process is, and never left,” she says.

Safety and ergonomics are the main factors driving product development. “We consider how you hold the tool and the environment you are using it in, and the tools are optimized for exactly the practical application they are intended for,” Ali says. “Everything, whether it is a plunge cutting operation or

a table saw, or whether it is weighted or used overhead, it is completely ergonomically constructed.”

Using electromyography, Milwaukee Tool researchers study the body’s reaction to each tool and identify the ways in which each muscle is affected by its use, including how they contract and when, and how the body, in general, is triggered. This allows the team to analyze wear and tear on the body and develop ways to minimize any potential damage.

“We are innovating construction processes, too,” Ali says. “Construction is more than building buildings. It is building the infrastructure of how people live, work, and thrive.

“I was talking with an estimator in Seattle and she had never been to a job site in her life. But, she took me to the window and said, ‘Look, we built this and that’. The fabric of a city is what people build. We help people create a legacy and make their lives better while doing it.”

Milwaukee Tool’s ONE-KEY™ connected platform is a prime example of how the company’s development is improving people’s lives as they work—the cloud-based technology allows users to change the mode, torque, steady-state, and slowdown feed remotely so the tool’s settings are optimized to meet the operator’s exact needs the minute it turns on. It is also used for inventory control and to track usage—ONE-KEY empowers users to record the number of

successful crimps in crimpers and schedule lights by using a mobile device.

“I was part of the development of that process and sat with a team of 60-80 people all focused on one platform,” Ali says. “It was so cohesive. We focused on analyzing the workflow.



It was never about building a better drill or how to put a hole in something, but about questioning the benefit of making that hole. It is an incredible way to look at things. You may discover that you don’t really need a hole but a different workflow all together.”

Inspiring change, honoring the construction process, and creating a better landscape for the workforce is the foundation of the company’s growth strategy. “We have profound respect for those in trades and everything we do is about respecting what they do.”

Milwaukee Tool’s facilities are in-house, which means an idea can go from vision to 3D printed prototype in 24 hours or less. “This is part of the company’s 100 year legacy,” Ali says. “We move rapidly and have dedicated teams focused on that person at the end of line. We have the best tool makers in the business, and they are willing to push themselves to move quickly and with unrivaled innovation.”

The company’s most recent release, MX Fuel (see page 14) is revolutionizing battery use and power storage, and is just the beginning when it comes to Milwaukee Tool’s future development plans.

“Milwaukee Tool is the kind of company that is launching one product while finalizing the next generation,” Ali says. “There is so much in the pipeline, and each product family has hundreds of components. Whether it’s a charger, a jacket, or a saw, everything in the platform has an ecosystem and platforms that double every couple of years. MX is just the beginning and at the cusp of where the industry will continue to move.

“It is great working with people who are literally working to build the future of America,” Ali says. ■



SMACNA members perform work in industrial, commercial, institutional, and residential markets. They specialize in heating, ventilation and air conditioning, architectural sheet metal, industrial sheet metal, kitchen equipment, specialty stainless steel work, manufacturing, siding and decking, testing and balancing, service, and energy management and maintenance.

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A Star is Born

MX Fuel is a game-changer the future of power tools

By / Jessica Kirby • Photos courtesy of Milwaukee Tool

Milwaukee Tool's MX Fuel line was released in February and will change the way the workforce thinks about and uses battery technology and power storage. The line includes the Sewer Drum Machine with Powertredz™, the Rocket™ Tower Light/Charger, a Handheld Core Drill, a Breaker, a 14-inch Cut-off Saw, the Carry-On™ Power Supply, two battery options, and an MX FUEL charger. Power tools can be used corded or handheld without sacrificing productivity or power, and the batteries are universal across the line-up.

“MX FUEL is really exciting,” says Milwaukee Tool’s Sr. Manager of Construction Technology, Tauhira Ali. “It is a platform built for light scale equipment, and we didn’t set out to replace power—we set out to address pain points on the job site.”

In lock step with Milwaukee Tool’s user-focused product development approach, the MX FUEL line was designed to address issues like noise from gas engines, exposure to fumes, vibration, and ergonomics. It includes an entirely new platform of batteries which, developed within the company’s ecosystem approach (see page 12), is an enormous advancement for the company and the industry.

For starters, the batteries are functional across the entire MX FUEL line, which means buying a new tool doesn’t require a new charging system. And the batteries stand up to the most demanding power requirements—the 14-inch cut-off saw replaces gas engines and is able to complete full 14-inch cuts, which, compared with the competition, makes it the fastest and most efficient with the best run time.

The breaker is the lightest in its class and can jackhammer two tons per charge, making it the most productive with the lowest vibration. “People can’t believe its performance because

the breaker is so light and has such low vibration for how productive it is,” Ali says.

The MX FUEL hand-held drill can core 6-inch holes in concrete. The Rocket light—a ten-foot light comparable to a highway light—casts an impressive 27,000 lumens of task or area light, is incredibly strong with a robust anchor, and negates the needs for a generator. The MX FUEL power supply produces 3600 watts of portable power, and every MX FUEL product is a part of the ONE-KEY™ platform, which delivers diagnostic and performance information in real time.

“The sewer drum machine is designed with the Powertredz™ Lift Assist system that allows users to easily transport the sewer drum machine up and down stairs and in and out of trucks,” Ali says. “The lift assist’s increase in worker mobility is incredibly powerful.”

This ability to identify the needs of the workforce and respond with brand new, user-based solutions is what sets Milwaukee Tool apart as a manufacturer.

“We never set out to say, ‘Let’s build a drum machine or strong light,’” Ali says. “These products were developed over 10,000 hours of jobsite research to understand the pain points we weren’t addressing. The MX FUEL system is so advanced that we actually had to design the manufacturing equipment to make these tools. That is how new to the world they are. We are creating the tools driven by the needs of the people who use the equipment.”

MX FUEL video: <https://p.widencdn.net/e3fmypl/Milwaukee-MX-FUEL-System>

MX FUEL website: <https://www.milwaukeetool.com/Innovations/MX-FUEL> ▪

HEADING INTO 2020, FASTEST, INC. CONTINUES TO IMPROVE ITS AWARD-WINNING ESTIMATING PROGRAMS

As we head into the next decade, technology continues to be a vital part of the construction industry. This includes all aspects of the HVAC and mechanical contracting trades and the estimating facet that goes with it. Estimating software is an important piece of many contractors' bidding strategies, and FastEST, Inc., one of the industry leaders in mechanical estimating software, continues to hone and improve upon their already reliable suite of programs: FastDUCT® for estimating HVAC ductwork and sheet metal, FastPIPE® for estimating mechanical, plumbing, and other types of piping, and FastWRAP™ for estimating mechanical insulation.

Below are just a few examples of the exciting improvements that FastEST's software development team is working on and plans to release some time in the near future

Adaptable Takeoff Interface Options

One of FastEST's most popular program features is the intuitive and easy-to-use on-screen digitizer interface. Users can import digital plans right into the software and perform takeoffs right on the computer screen. Buttons for takeoff – in the example of FastDUCT®, there's ductwork, fittings, dampers and other specialties and equipment, to name a few – are conveniently laid out along the edge of a user's screen, while the plan window is large and easy to access in the middle of the screen.

A feature currently under development will allow users to utilize a customized palette of items that can be moved to any location in the takeoff screen. This will allow for even faster and more efficient project takeoffs and also allows for further user customization.

Improved Search Functions

Also coming soon to FastEST's programs are various search bars that will be located throughout the programs. From being able to search within a company's existing estimate list to being able to search within the programs' comprehensive material and labor database (for certain items, like a particular ball valve, or a specific material), the addition of new search bars will continue to help users reach their common end-goal—completion of project estimates in a faster amount of time, while allowing for the accuracy and detail that FastEST users have come to expect.

Additions to Already Comprehensive Program Catalogs

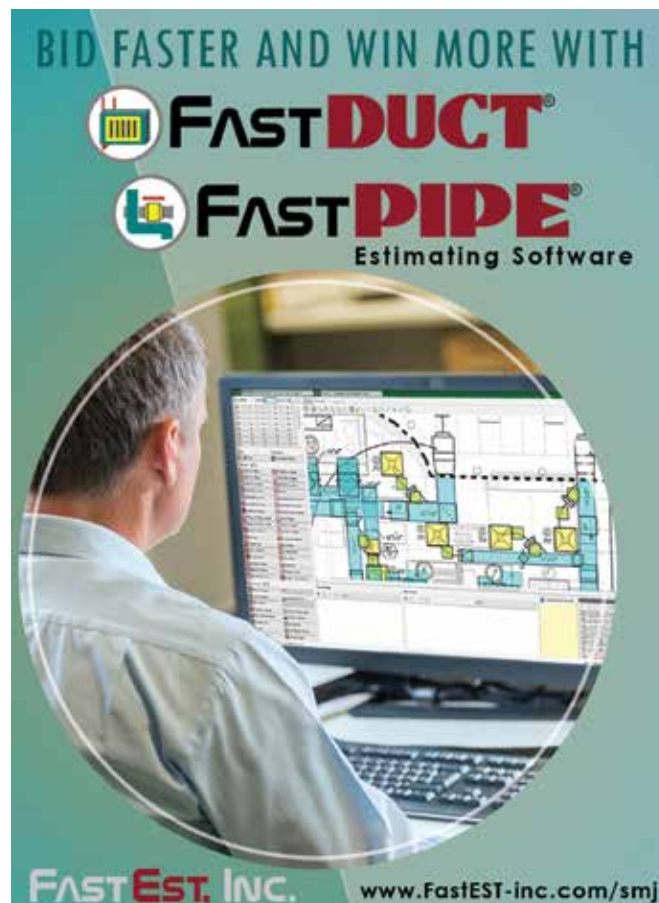
As always, FastEST is constantly trying to build upon their above-mentioned wide-ranging databases, which include several hundred thousand items between the three programs. If a new product is released into the market, FastEST will try its best to get it added to the database with labor values and material list pricing (if available) included. That way, customers can have the newest and most cutting-edge materials available at



their fingertips to include in their estimates. (One example of a recent addition to the FastPIPE® catalog is Apollo®'s Powerpress product, which is a new line of carbon steel press fittings and valves.)

FastEST offers some of the most affordable and easy-to-use mechanical, HVAC, and insulation estimating software products in the marketplace today! To find out more about FastEST, and how we've helped thousands of HVAC and mechanical

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BECOMING A PROBLEM-SOLVER

When training labor professionals in communication or business development I begin with trying to change their orientation to problem-solving. See, without even knowing it, most of them have created a handicap in their relationships with their signatory employers, who really need to be there for them when a favor is required or a testimonial provided.

The question I ask labor professionals is this: When one of your employers hears that you are on the phone calling for them what do they immediately think?

They think, here comes a problem. Why? Because that might be the only time you communicate with them. *Contractors and employers value problem solvers.* They are surrounded by trusted people who work with them every day to solve problems and create opportunity. Those who only talk to them when there is a problem are quickly thought of as “problem-bringers.” Fair or not, there is rarely a perception of a problem-based relationship bringing any value at all. Having just another problem to solve does not add anything to the success or value of the business. That is not the place any labor professional or any professional, for that matter, wants to be.

In the training program, I teach how to transform that relationship from “problem bringer” to trusted ally. Why is this important? Because in business the quality of the relationship most often determines the value of the relationship. If you want to be able to utilize powerful relationships to advance your goals you have to have something to offer in return.

There are a lot more than these three, but in service of changing labor relationships (especially for new agents or organizers), I suggest these ideas:

1. **Call two employers a week.** Five-minute call or less. Check in with them. Ask what they need. Tell them about upcoming training. Be brief, polite, and don't bring them a problem. If you talk to 100 employers a year – or some of them numerous times – they will no longer think problem when you call. They will think opportunity and partner. Ten minutes a week? Yes, everyone has that time, but most don't have the discipline.
2. **Set up a communications schedule with all your employers.** Newsletter? Email? Annual training report? Letter from



By /Mark Breslin

the business manager? Why? Because if you want your employers to remember what you did for them every three years when you are negotiating a new agreement, you better be telling them about it in between. If you don't communicate your value and achievements to those who are working with you why would you expect them to enthusiastically reward you. Most unions communicate well to everyone except their employers.

3. **Don't be a compliance-minded representative.** This is especially important for new agents.

Don't go out with your contract and your save the world attitude, or worse your half-informed view of the employer. Diplomacy and relationship-building go a long, long way in their business. I know dozens of really great agents and business managers who laugh and shake their heads remembering how lame they were their first few years trying to be important instead of being useful, professional, and outcome driven.

If you are looking to provide this kind of training to your labor professionals, email Jackie Dixon at jdixon@breslin.biz or call (925) 705-7662.

Don't be the problem. Be the solution. Don't be the problem. Be a trusted ally. Don't be the problem. Be the person that has so much good will and favors owed to you that when you need what you need, you don't even have to ask. ■

Mark Breslin is an author, speaker, CEO and influencer inspiring change for workplace success across all levels of business. Mark has improved leadership, accountability, innovation, and engagement for organizations and individuals. He has spoken to more than 400,000 people and published several books on leadership and workplace culture. His new micro-learning video series, "The Professional Construction Leader", is revolutionizing construction foreman training as well as field operations, performance, and profitability. For more information on Mark go to www.breslin.biz

SAVE THE DATE

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SMACNA National Annual Convention • Colorado Springs, CO

2020 LEGISLATURE – FINISHES ON TIME AND PASSES FIRE, LIFE SAFETY LAW

Despite major closures in the Puget Sound area due to the COVID-19 virus, the Legislature concluded its work on March 12, the last scheduled day. The Legislature approved \$175 million in new funding for the state's public health systems and \$25 million in unemployment relief for businesses impacted by the virus. The Legislature has not ruled out a special session if the state needs to do more to deal with the COVID-19 epidemic.

On a more positive note, the 2020 Legislative session produced a win on SMACNA's priority bill—Fire, Life, Safety. For the most part bills that would have been detrimental did not pass and other bills were improved with amendments.

During the short 2020 session, the Legislature made adjustments to its two-year budgets. At the start of session, the state had a record amount of increased revenue, some of which was spent on homelessness and housing and on selected tax exemptions. The forecast is likely to be less positive in the future due to COVID-19 impacts.

The transportation budget adjustment was more challenging due to passage of Initiative 976 that reduced car tab and other transportation fees. This year the Legislature used unspent transportation money to shore up the hole left by I-976, but they will need a more sustained strategy in the future should the Supreme Court find the Initiative is constitutional.

SHB 2701 - Fire Life Safety

Fire Life Safety was a joint legislative effort by SMACNA and our labor partners, Sheet Metal Workers Local 66. The new law puts existing state fire code requirements on smoke and fire damper inspections and repairs into statute. It requires inspections every four years for all buildings with these types of systems and every six years for hospitals. New systems have to be inspected within 12 months of installation. The inspections have to be conducted by personnel who have completed an ANSI approved program. SMACNA training through the JACT is ANSI approved.

Deficient dampers must be repaired within 120 days. A state or local authority having jurisdiction will issue a citation if repairs are not made in that time frame, or it can extend the timeframe if circumstances warrant that. Progressive monetary penalties are issued if repairs are not made. After 240 days, building owners must participate in a mandatory four-hour training course given by the International Certification Board (ICB) or equivalent provider of fire life safety programs.

SMACNA's JACT training course on Fire Life Safety is ICB approved. Many SMACNA contractors have sent employees through the JACT training and are offering these types of inspections and repairs now. SMACNA thanks its labor



By / Kathleen Collins
SMACNA Legislative Consultant

partners, Sheet Metal Workers Local 66, for their partnership and assistance in passing this important bill that will make buildings in Washington safer for those who use them and for our fire professionals in the event of a fire.

State contracting out

State employee unions were finally successful in passing a bill that requires an analysis of costs and impacts to state workers before state work can be contracted out. HB 1521 is aimed at a broad swath of state work from landscaping and computer work to construction and covers all state agencies and universities. It puts in place a comparison process for work typically done by state employees after July, 2005. The comparison process is cumbersome and favors keeping the work in house.

Construction groups, including SMACNA, expressed opposition to the bill and some exceptions were made. Specifically, the following work will be handled using the usual bidding process and not the comparison process:

- All Department of Transportation contracts;
 - All contracts with an estimated cost of less than \$20,000;
 - Mechanical (HVAC), plumbing, and electrical contracts to install new systems or life-cycle replacement with an estimated contract performance cost of \$75,000 or more; and
 - Public work contracts with an estimated cost of contract performance that exceeds \$500,000.
- Please let SMACNA know if you encounter difficulties with this new law.

Other bills that passed

SB 5457 – Naming of subcontractors: In its initial form, this bill would have required naming all subcontractors for public works projects over \$1 million. As passed, it leaves in place the current bid listing requirements for HVAC, plumbing, and electrical contractors, including the requirement to list within one hour of submittal. SB 5457 adds a new category of subcontractor—structural steel installation, and rebar installation—to the listing statute but with a longer 48-hour listing requirement.

SB 6170 – Plumbing licensure: This bill changes the current plumbing certification law to require contractors who do

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EMPLOYERS NEED A VOICE IN LAW AND REGULATION DEVELOPMENT

Laws and regulations in Washington State are becoming more and more burdensome for employers. Efforts by the employer community to speak up for employer interests are important to ensure a business climate where businesses can thrive, provide good jobs, and be successful.

With Washington's current political leadership, business interests, and voices often are not fully considered or given the weight they deserve. Employers have the opportunity, at least with the Department of Labor and Industries, to have their voices heard at the administrative level. There are several committees and boards that employer representatives can attend or join. A few examples of those boards and committees are:

- Advisory Board of Plumbers
- Advisory Committee on Health Care Innovation and Evaluation
- Board of Boiler Rules
- Electrical Board
- Elevator Safety Advisory Committee
- Factory Assembled Structures Advisory Board
- Industrial Insurance Chiropractic Advisory Committee (IICAC)
- Industrial Insurance Medical Advisory Committee (IIMAC)
- Insolvency Trust Board
- Prevailing Wage Advisory Committee (PWAC)
- Self-Insurance Curriculum Review Committee
- Washington Apprenticeship & Training Council (WSATC)
- WISHA Advisory Committee
- Workers' Compensation Advisory Committee

If more employers sent even just one representative to attend meetings on safety/WISHA issues or workers' compensation issues, employer perspectives would get greater attention by Department of Labor and Industries leaders. Many policy issues are discussed and addressed in these meetings before rule making and new WACs or policies are drafted and proposed.

Are you wondering what's happening in the Canadian sheet metal industry?

Check out sheetmetaljournal.com to read news and articles from our BC edition of *Sheet Metal Journal*



By / Karen Forner
Founder and Partner
Employer Solutions Law

The Director of the Department of Labor and Industries Joel Sacks is a member of the Workers' Compensating Advisory Committee. He and the head of the workers' compensation section of the Department (Vickie Kennedy) attend the quarterly committee meetings. These meetings are a unique opportunity to have employer concerns heard and to get direct access to top decision makers.

The Workers' Compensation Advisory Committee (WCAC) members include representatives from business, organized labor, self-insured employers, and the Board of Industrial Insurance Appeals (BIIA). The WCAC meets at least every quarter. Meeting topics include budget issues, policy changes, new programs, insurance rates and other issues pertaining to the workers' compensation program. Meetings are typically held in L&I Tumwater headquarters, although occasionally meetings will be at the L&I Offices in Tukwila. The schedule for 2020 is March 31, 2020 - L&I Tumwater headquarters, June 24, 2020 (will be rescheduled), September 16, 2020 and December 16, 2020.

To work toward a more fair business climate employers can support and be actively involved in industry associations such as SMACNA, Associated General Contractors (AGC), Association of Washington Business (AWB), and other associations and industry groups who can advocate and lobby for employer interests.

With advocacy for a business climate that promotes success, employers in Washington can survive and thrive. Solid business practices, good risk management, workforce development and proactive strategies help employers become and remain profitable. ■

Karen Galipeau Forner is the founder of and partner at Employer Solutions Law (formerly K-Solutions Law) in Bellevue, Washington. Karen advises and represents employers statewide on Labor and Industries matters including workers' compensation, workplace safety (WISHA/DOSH/OSHA), wage and hour, prevailing wage, etc. and employment law issues. She is a frequent presenter and trainer at continuing legal education seminars, local and national conferences, industry groups and to employers directly.

THE FUTURE OF DUCT INSULATION AS A DESIGN ELEMENT

Insulation is one of the main elements that can help building design engineers create more efficient buildings, meet increasingly stringent energy codes, and find ways to improve sustainable building operations. The trends in building designs are constantly evolving as architects and engineers find new ways to improve building comfort, design, and efficiency.

In looking at future building trends it doesn't take long to see that energy efficiency is a prime concern today. Requirements are becoming more stringent in today's green building designs.

Presently, ASHRAE data shows that buildings account for approximately 40 percent of energy consumption. Finding ways to reduce this energy draw is the key to future global sustainability of our building stock.



Photo courtesy of Johns Manville.

This is where insulation becomes a key factor that can help building designers create more efficient buildings and meet today's more stringent codes and energy usage requirements, says insulation manufacturer Johns Manville in an article for *SNIPS* magazine. The company manufactures Microlite Black PSK, black duct wrap created specifically for aesthetic applications.

"However, as building design trends evolve and change, we are seeing an increased emphasis on utilizing spaces that have historically been tucked behind façades," says the article. "Just walk into any restaurant or coffee shop, and look up; you'll see that designers have left the ceiling exposed, ducts, pipes, and all."



By / Norm Grusnick, P.Eng

Exposed ceilings also bring new challenges. Many, ducts warm and cold, may need to be insulated to help achieve the goals of net zero design. "Also, as insulation is not typically designed to be left exposed, designers have had to decide between leaving duct systems uninsulated or choosing an insulation that does not fit into the design concept," says Johns Manville.

Painting insulation after the fact to match a motif cancels the UL 723 rating. Not insulating is not recommended as uninsulated duct runs less efficiently than insulated duct, but it also runs the risk of forming condensation on the duct surfaces. This could lead to mold and mildew growth and other issues.

In addition to providing temperature and condensation control, insulation can also be integral to controlling the acoustics of the space, which is a key component to many of the new building standards like LEED or WELL Building Standard.

"As the need to control thermal and or acoustic properties of exposed duct systems has become more pressing, the insulation industry has responded with materials that are designed with aesthetics in mind," says Johns Manville. These materials have different outward finishes.

The insulation industry now has matte finish black coated duct wrap with matching tape and white duct wrap with matching tape, manufactured by Johns Manville. This gives designers plausible options to enhance the aesthetics and viability of open exposed ceiling systems. ■

CONTRACTORS AND SUPPLIERS

SMJ-WW is on the lookout for interesting HVAC, architectural sheet metal, testing & balancing, and industrial / specialty news and feature topics. If you have a great idea, notice an industry issue that needs addressing, or want to weigh in on a technical subject, we would love to hear from you.

Reach out to jessica.kirby@pointonemedia.com or call 250.816.3671 to share your ideas.

2018 WASHINGTON STATE COMMERCIAL ENERGY CODE HIGHLIGHTS: PART 1

As you are all aware we have been building our projects based on the 2015 version of the Washington State Energy Code. As of this July, the State of Washington will be adopting the 2018 version of this code, with some jurisdictions (Seattle comes to mind) adopting this code with their own set of amendments later this year, as well. In an effort to get our SMACNA-Western Washington members up to date on the major revisions to this code, your technical and code committee members have begun reviewing the final draft of recommended changes. Our review and commentary below reflect the opinions of our committee team members, who are a mix of design professionals, contractors, and code officials. Your interpretation of these code revisions, as well as the opinion of your local code authority partners, may differ so keep this in mind as you incorporate these code changes into your projects.

Section C102 – Alternative Materials, Design, and Methods of Construction: This section, which addresses alternative materials, design, and methods of construction has been heavily revised. The new language of this section provides much more detail describing how code officials will determine equivalency, specifically, that:

“... the proposed (alternative) design is satisfactory and complies with the intent of the provisions of this code, and that the material, method, or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, and safety.”

The revision further states that if the reviewing code official does not believe that the proposed alternate approach is satisfactory the code official is obligated to “...respond in writing, stating the reasons why the alternative was not approved.”

This revised code language provides more detail on how to determine if an alternative approach is acceptable and formalizes how the code official will address proposed alternative ideas. The committee believes that this revised language is extremely important if you intend to submit alternate materials, designs, or methods of construction on your project when the 2018 code takes effect, and if you choose to do so you must provide clear, highly detailed reasoning when seeking an alternative approach on your projects.

Section C106 – Building documentation and close-out requirements: This section and its related sub-sections have been enhanced to include additional close-out documentation at the time of final inspection. Contractors will now be required to provide location and model numbers for each piece of mechanical equipment installed on their as-built drawings for



By / Peter Boileau

Chairperson, SMACNA-Western Washington Technical Committee

review by the authority having jurisdiction (AHJ). In addition, each piece of equipment installed and its associated system that requires “regular maintenance” shall now bear a label attached to that equipment that provides operations and maintenance information in the form of “...*the title or publication number for the operation and maintenance manual for that particular model and type of product.*”

The committee believes that this new requirement is promoting the use of a two-dimensional bar code or QR code provided by the equipment manufacturer to meet these requirements, and will more easily provide service personnel the specific information necessary to properly operate and maintain this equipment. It is recommended that our SMACNA members purchasing and installing equipment be sure to ask our equipment manufacturers to supply these QR codes on all new equipment purchased in the future.

Section C104 – Inspections: This section and its related subsections have been significantly rewritten with several interesting new interpretations and enhancements. Subsection C104.1, which describes the general requirements of an inspection has the added language that states, “*Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code...*” which in the committee’s mind means that if an inspector approves a non-code compliant installation that does not make it a legal installation at this location or in other areas of a project, or on future projects.

Subsection C104.2.4, which describes mechanical installations, now includes requirements that the inspector must verify that both the type and size of equipment meets code requirements, as well as verifying that the installation meets minimum fan efficiency and heat recovery performance requirements as required by code, approved plans and specifications. The committee’s opinion on this added language is that it is both burdensome and untimely for the inspector to be tasked with verifying size and performance requirements of installed equipment, as this has been the responsibility of the plan reviewer in the past. If installed equipment does not meet either sizing or performance code requirements after being installed and inspected it would be costly to modify or replace this equipment

so late in the construction schedule. Our committee believes that this section needs to be amended to require review and approval of equipment sizing and performance be completed and documented during the permit review process, followed by verification of installation of the approved equipment during the on-site inspection process.

Section C402.1 Building Envelope Requirements: The 2018 Washington State Energy Code (WSEC) now provides for a new category of building, called “low energy buildings” and described in subsection C402.1.1.1. This new subsection provides maximum heating energy limits for this type of building, as well as some descriptive language on types of buildings that might qualify for this category.

Previous codes allowed for a “semi-heated” building, and this category of construction is still allowed, as described in subsection C402.1.1.2. The semi-heated building requirements have been traditionally used in the past for construction of all-types of warehouse and manufacturing facilities and has been a popular and cost-effective alternative approach to building this type of structure. The requirements for permitting a semi-heated building are now less prescriptive than in the past, which in the committee’s mind is not a good thing and therefore advises our SMACNA partners to carefully review this new section if you will be working on this type of building under the 2018 WSEC.

Section C402.5.3 Rooms containing fuel burning appliances:

This subsection has been almost completely rewritten to describe the requirements for what we typically call “furnace and boiler rooms”. Since there is significant mechanical scope and cost associated with work in these rooms the revisions to this section describing how these rooms need to be built under the 2018 WSEC needs to be better understood.

The first part of this code subsection now states, “*Where combustion air is supplied through openings in an exterior wall to a room or space containing space conditioning fuel-burning appliances, one of the following shall apply:*”

This opening statement does not specify whether or not combustion air is directly connected to the fuel burning appliance or not, as it only references “openings in an exterior wall” as described above. This subsection provides further requirements for these rooms as follows: “The room or space containing the appliance shall be located outside of the building thermal envelope.”

This method of compliance would require that the furnace or boiler room be on the perimeter of a building and the surrounding interior walls, floor, and ceiling be constructed to meet building thermal envelope requirements, which in the committee’s experience is unusual. The more common approach would be described next: “*The room or space containing the*

appliance shall be enclosed and isolated from conditioned spaces inside the building thermal envelope. Such rooms shall comply with all of the following:”

This section describes thermal envelope and envelope opening sealing/gasketing requirements, as well as insulation requirements for pipes and ducts, including insulating all combustion air ducts in these rooms.

This subsection then deletes the previous exclusion for allowing “*direct vent appliances with both intake and exhaust pipes installed continuous to the outside*” from meeting code requirements for rooms containing fuel burning appliances. It then adds an exclusion for fireplaces and stoves, which reference installation requirements of both the International Mechanical Code (IMC) and International Building Code (IBC). Unfortunately, this rewritten section does not reference these codes for furnace or boiler installations, which, in the committee’s mind, it should. It is therefore incumbent on our SMACNA members to coordinate our IMC and IBC requirements with the new WSEC requirements for these installations.

In future articles, the committee will continue to review and provide our thoughts on the looming 2018 Washington State Commercial Energy Code requirements. As this code is currently scheduled for adoption in July of this year, and we urge our SMACNA partners to become educated in these significant code changes, so we are prepared when this new code becomes our guideline for design and construction of our work in the future, as likely no forgiveness will be granted for lack of understanding these new code requirements. ▪

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MEET THE BOARD

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feel are unsightly indoor units, but that is rapidly changing,” he adds. “Ductless will revolutionize our industry, so every company needs to get on board that train.”

SMACNA has a great deal to offer contractors as they navigate opportunities and challenges, namely labor relations and business training in equal measure.

“I hope to effectively represent the residential and light commercial sector,” Kimball says. “There are not many of us, and to survive in a largely ‘non-union world’ we need to have a robust plan to support these members—not only in Western Washington, but nationally.” ■

FEATURE FOCUS

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contractors improve their estimating process, visit our website at <https://fastest-inc.com>. You can watch videos of our latest and greatest program versions in action. You can also contact us at 800-828-7108, or e-mail us at mike@fastest-inc.com. ■

LEGISLATIVE UPDATES

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plumbing work be licensed. It retains the current plumbing certification system for employees doing plumbing work and creates a new residential service plumbing certificate. Other changes include additional penalties and enforcement, a phase in for stricter trainee ratios and clarification on requirements for plumbing work under the electrical licensing law.

SB 6239 – Apprenticeship utilization: This bill requires public works project bidder with a history of receiving monetary penalties for not achieving apprenticeship utilization goals, or who habitually utilizes the good faith effort exemption process, to submit an apprenticeship utilization plan with its bid documents.

SB 6473 – Asbestos-containing building materials: This bill prohibits asbestos-containing building materials in new construction or renovations except for residential construction.

It requires owners of manufacturing facilities to inspect their facilities every five years if the facility has asbestos-containing materials.

If you have questions about any of these bills that have passed, please contact the SMACNA offices. ■

INDUSTRY NEWS

SMACNA NATIONAL: COVID-19 INFORMATION AND UPDATES

The severe impact of COVID-19 can not be denied and is mandating changes in how we all do business in the short-term.

SMACNA remains committed to providing you with the information you need as you navigate the dynamic situations we all face.

SMACNA National staff is working remotely with a skeleton crew visiting the office as needed. Everyone has been told to be accessible between normal operating schedules (9 a.m.-5 p.m. EDT, M-F).

Emails and voicemails will be routinely checked and returned as if everyone is in the office. You should see very little difference in your day-to-day interactions with SMACNA National staff.

SMACNA will be setting up specific COVID-19 communications channels devoted to chapter executives and members. Two new communities on SMACNA Connect will enable groups to help cope with COVID-19 questions, answers, and advice.

Please follow these instructions to login and add yourself to your respective community. Please make sure your leadership team is also connected and their records are updated/added to our database. Within the next few days, SMACNA will be adding all contact emails to the appropriate corresponding groups, in the meantime, if you are in our database, you can add yourself voluntarily.

Please be assured SMACNA is open for business, talking to many members, and actively monitoring the situation. Look to the channels above for more communications in the days and weeks ahead as we keep you informed of the impact of COVID-19 on our industry. ■

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SMACNA-WW	IFC, 13	425.289.5010	www.smacnaww.org

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