

SUMMER 2018

# Sheet Metal

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

British Columbia

Journal

## PARQ Resort & Casino

### *Also in this issue*

The Business of Common Sense

Metal Theft

50 Years of Austin Sheet Metal

Publications Mail  
Agreement # 40719512



Official Journal of  
Record for SMACNA-BC



# PROMOTING GROWTH AND STABILITY IN OUR INDUSTRY

Formed in 1969, the British Columbia Sheet Metal Association (SMACNA-BC) was the first international chapter of the Sheet Metal & Air-conditioning Contractors National Association (SMACNA). Founded in 1934, SMACNA traces its history to the National Association of Sheet Metal Contractors established in 1910, and has 2,300 members worldwide.

SMACNA-BC is a member-driven association representing unionized sheet metal contractors in the Mainland of BC, and suppliers to our industry. It promotes the growth and stability of the members and industry.

## OUR MANDATE

- To improve the financial stability and business conditions of the sheet metal industry, and to develop and promote methods to improve managerial proficiency
- To improve quality, efficiency and productivity of this industry, and to implement high standards of work
- To establish and maintain high ethical standards of conduct between members of the Association, and between members and owners, architects, engineers, other contractors, and the public
- To study and help in the development and enforcement of governmental codes and regulations, and such legislation as may be necessary for the best interest of the public and the sheet metal industry
- To promote harmony in labour relations
- To exchange technical, professional, and educational information with other contractor associations in the sheet metal industry and its allied trades in Canada and other countries
- To affiliate as a Chapter with the Sheet Metal & Air-conditioning Contractors National Association, Inc.



[BC Sheet Metal Association \(SMACNA-BC\)](#)

Executive Director: Bruce Sychuk

315-15225 104th Ave. Surrey, BC. V3R 6Y8

Phone: (604) 585-4641

E-mail: [smacnabc@smacna-bc.org](mailto:smacnabc@smacna-bc.org) • [www.smacna-bc.org](http://www.smacna-bc.org)



# SHEET METAL

the insight • the information • the industry journal

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

## PUBLISHER / EDITOR

Jessica Kirby  
[jessica.kirby@pointonemedia.com](mailto:jessica.kirby@pointonemedia.com)

## CONTRIBUTORS

Nic Bittle  
Andrew Delmonico  
Norm Grusnick  
Matthew T. Potomak  
Bruce Sychuk

## COVER PHOTO

Courtesy of Apollo Sheet Metal

## ADVERTISING SALES

Lara Perraton  
877.755.2762  
[lperraton@pointonemedia.com](mailto:lperraton@pointonemedia.com)

## GRAPHIC DESIGNER

Lara Perraton  
877.755.2762  
[lperraton@pointonemedia.com](mailto:lperraton@pointonemedia.com)

## PUBLISHED QUARTERLY BY

Point One Media Inc.

*Sheet Metal Journal*

P.O. Box 11, Station A Nanaimo, BC V9R 5K4  
Toll-free: 877.755.2762  
[www.sheetmetaljournal.com](http://www.sheetmetaljournal.com)

While information contained in this publication has been compiled from sources deemed to be reliable, the publisher may not be held liable for omissions or errors.

Contents ©2018 by Point One Media Inc. All rights reserved. No part of this publication may be reproduced or duplicated without prior written permission from the publisher.

Printed in Canada.  
Postage paid at Simcoe, ON.

Return postage guaranteed. Canada Post Canadian Publications Mail Sales Product Agreement #40719512.

Return undeliverable Canadian addresses to:  
Circulation Department  
*Sheet Metal Journal*

P.O. Box 11, Station A Nanaimo, BC V9R 5K4  
email: [circulations@pointonemedia.com](mailto:circulations@pointonemedia.com)

Official Journal of Record for  
SMACNA - BC

Find *Sheet Metal Journal*  
on Twitter and Facebook



## FEATURES

### 10 THE BUSINESS OF COMMON SENSE

Nic Bittle describes four core competencies leaders can develop in gritty and productivity for generations to come.

### 12 50 YEARS OF AUSTIN SHEET METAL

Burnaby company celebrates five decades in the industry, a testament to resilience and impeccable customer service.

### 14 PARQ RESORT & CASINO

Apollo Sheet Metal completes outstanding work at one of Vancouver's most aesthetically pleasing projects.

### 17 METAL THEFT

RCMP issue warning and advice on how to identify and report metal theft.

## DEPARTMENTS

4 SMACNA-BC Update

6 Meet the Board

8 Industry News

18 Feature Focus

19 Contractors' Advice

20 Engineer's Desk

21 It's the Law

23 Advertiser Index

Next issue: Recruiting Women • Education • Project Industrial

**NEW SKIES AHEAD FOR SMACNA-BC**

I am proud to announce that SMACNA-BC will be launching a brand new, member-friendly and accessible website in September. On the new site, members will be able to access their accounts, list equipment for sale, view and post job postings, and complete online registrations and payment for all upcoming events. Watch your inbox for further information.

**Welcome New SMACNA-BC Associate Members**

**Mestek Machinery** is the industry-leading designer and manufacturer of the most complete, productive, and innovative metal forming solutions for the fabrication of HVAC sheet metal ductwork and fittings. Its family of companies – Lockformer, Engel Industries, Iowa Precision, Lion, Roto-Die, and ISM by Lockformer – has people with decades of experience addressing every facet of the HVAC duct industry. The result is combined knowledge and experience that develop cutting edge, precision technologies and automated manufacturing equipment that save sheet metal contractors and fabricators time and labour to ensure a finished duct product that reflects a reputation for quality. <http://www.mestekmachinery.com>

**Nu-West Construction Products** is about real, innovative solutions built by an entrepreneurial team of disciplined professionals dedicated to the continuous improvement of products for the construction industry.



By /Bruce Sychuk  
Executive Director, SMACNA-BC

True relationships are at Nu-West’s core and the company consistently creates and maintains them with every vendor and customer. With thousands of products on the market today, Nu-West understands the complexity the industry is faced with and knows what is important—customers' success. Nu-West offers industrial and commercial mechanical insulation, metal building and oilfield insulation, exterior insulation finish systems, concrete accessories and restoration, decorative concrete, and surface drainage solutions. Major products include duct insulation, mineral fibre boards and blankets, pipe insulation, jacketing systems, ABT surface drainage, adhesives, tapes, and fasteners, along with other related products. [www.nu-west.ca](http://www.nu-west.ca)

All SMACNA-BC Associate Members, recognize that the SMACNA-BC Associate Member Program is an important element for connecting company products, services, and people with the industry’s major specifiers, buyers, and decision-makers.

**Mark your Calendars**

**September 12: SMACNA-BC Membership Dinner Meeting**  
*Executive Plaza Hotel Metro Vancouver, Coquitlam, BC*  
Topic / Guest Speaker; TBA

**September 14: SMACNA-BC Golf Classic**  
*Northview Golf & Country Club, Surrey, BC* **SOLD OUT**  
1:00 PM Shotgun Start

**October 14 – 17: SMACNA’s 75th Annual Convention**  
*Marriott Marquis San Diego Marina, San Diego, CA*

Why not join the other 44 SMACNA-BC Members at SMACNA’s 75th Annual Convention? This is SMACNA’s premier event known for blending exceptional education with world-class networking and social events—and this year is no different as we journey to the Marriott Marquis San Diego Marina October 14-17, 2018.

The opening reception on Sunday evening takes place on the flight deck of the U.S.S. Midway Museum, one of the longest-serving and most famous aircraft carriers in U.S. Naval history. This event promises to be a breath-taking, life-long memory that you and your family won’t soon forget.

**SMART Local Union No. 280 / SMACNA-BC Partnership**

Left: Jud Martell Local Union No 280 President.  
Right: Aaron Smith of Smith Sheet Metal Works Ltd., SMACNA-BC President.

**Labour & Management**  
**“Embracing the Challenge”**  
- B. Flaherty, Cornell University, Syracuse, N.Y.

One of the highlights of this year's convention is that Craig Benson of Paramount Sheet Metal is being inducted into the SMACNA College of Fellows. If you are attending, please do not miss this very prestigious event.

The last day of the conference marks the beginning of the 75th Anniversary year for SMACNA, so join us for the big celebration, which includes multi-platinum recording artist **Andy Grammer**. For registration information please email / call the SMACNA-BC office.

**November 5-7: Project Managers Institute – SMACNA-BC Contractor Members / SMACNA-BC Industry Fund Contributors only**

*Coquitlam, BC*

Experienced SMACNA contractors know that their best project managers take ownership of their projects. This concentrated two-and-a-half-day program aims to build upon existing project management skills and strengthen proficiency. This program is recommended for project managers with two to five years project management experience. Participants should have some field experience and/or a college degree.

Attendees learn to plan projects to maximize profits and customer satisfaction, develop and maintain profitable customer relationships, build and lead powerful, integrated project teams, and understand and master financial control of projects

Registration information for this program will be available late September.

**A VERY SPECIAL "MARK YOUR CALENDAR"**

**May 9-12, 2019 SMACNA-BC 50th Annual Convention**  
*Delta Hotels by Marriott Grand Okanagan Resort, Kelowna, BC*

Calling all Past-presidents, Board Members, and Committee Members. We want you to be there to celebrate SMACNA-BC's 50th Anniversary. Please contact Michelle Rodford in the SMACNA-BC office via email or phone. [smacnabc@smacna-bc.org](mailto:smacnabc@smacna-bc.org) / 604-585-4641.

**SMACNA-BC New Office – November 2018**

The SMACNA-BC Board of Directors has decided to stop leasing office space for the SMACNA-BC office and have purchased a brand new space at City Centre 2 - #705 9639 137A Street, Surrey, BC, V3T 4J1.

We have secured the design team of Wensley Architecture Ltd., Williams Engineering Canada, and Colwin Electrical Group to design the 1,440-square-foot-office space. City Centre 2 (CC2) is directly across the street from Surrey Memorial Hospital, a six-minute walk to the skytrain station, and most importantly, across the street from Starbucks.



We have an agreement with our current landlord for a month-to-month rental agreement (our lease expires August 30). With the application for permit being submitted on July 12 and the City of Surrey advising that approval for permit may take 12 to 13 weeks, we are truly optimistic of moving into the new premises by hopefully the end of November at the earliest.

The base building HVAC was performed by SMACNA-BC Member, Ridge Sheet Metal Co. I am sure because of this bit of gratis advertising, that they will be able to offer "special pricing" to complete the HVAC in our suite. ■

# Get MORE for LESS\*

## With Flat Oval Spiral Duct



- 10% less material, same pressure drop
- Requires less reinforcement
- Requires less bracing
- Less weight per foot of length
- Less leakage
- Lower duct pressure losses
- No longitudinal seam to seal
- 12" x 3" to 80" x 26"
- 24 to 18 gauge
- Available in a variety of materials

\*Compared to rectangular duct.

**Contact us today for more information**

**ECCO**™  
supply.ca

**www.eccosupply.ca**

Burnaby 604-420-4323 / 1-800-663-7684  
Langley 604-530-9755 / 1-800-881-3226  
Victoria 250-361-3395 / 1-866-361-3226  
Chilliwack 604-702-4400 / 1-877-413-3226

**Expert Service Quality Products**  
Since 1960

## MEET THE BOARD

by / Jessica Kirby  
photos courtesy of Summit Sheet Metal

**Name:** Phil McDonald, co-owner / junior partner of Summit Sheet Metal

**Company scope and specialty:** High-rise construction

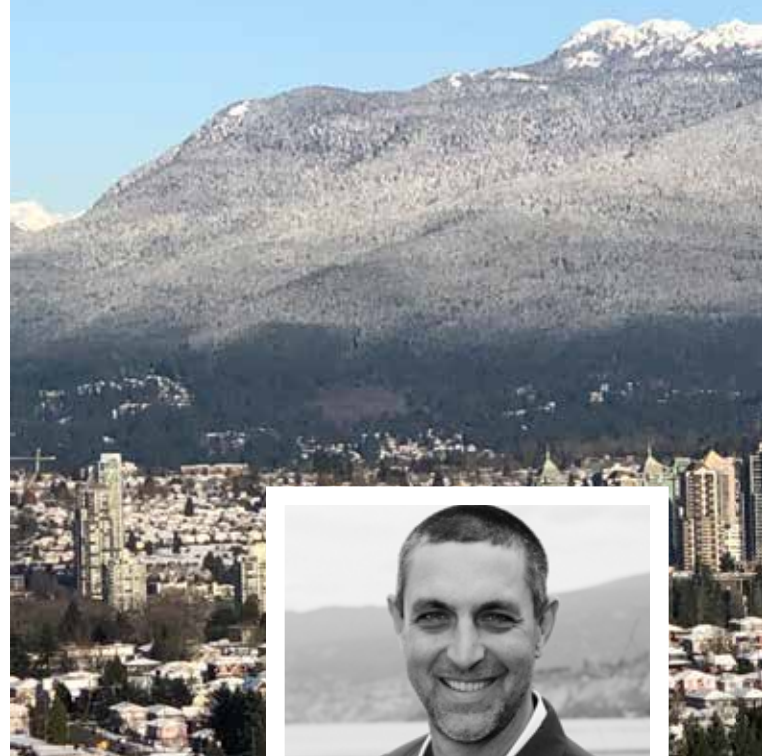
**Board position:** Director

**Length of current term:** Four-year term

Previous involvement in SMACNA-BC Board: First SMACNA-BC board term. Phil has been on the Young Executive Committee for ten years member, and on the Joint Conference Committee going on three years.

Number of years in the industry: 25 years as a career

Why did you get into this industry?: I got into sheet metal, at the time, for the money. My friends were going to university/college spending money and I wanted to take the time to make some money before deciding what I wanted to do long term. I loved it from the beginning, and after a couple of years, I decided it was going to be my career. I liked moving around and seeing what we built, knowing it isn't going to go away. I stayed in sheet metal over the years because it was never boring. It was always interesting, always something new. Something



new always came up, there were always new challenges, and I never sat stagnant.

Professional philosophy or "words to live by": "If you're not going to do it at your house, don't do it at work." Success is all about relationships and how we treat each other. We spend more time together than with our families. So we might as well work together and get 'er done.

Greatest challenge the industry has faced over the years: Low-bidding and poaching labour are the biggest challenges we face now. It is a large enough industry that we should learn to work together. There is enough work for everyone, why shoot ourselves in foot? These are your SMACNA brothers and sisters and some companies are enticing them with "grass is greener" offers. I'm trying to convince others to respect one another.

Biggest change in the industry over the years: Probably social media and how everything is at your finger tips. You are able to get answers right now, which is good because if someone needs something in a crunch you can draw a sketch or take a photo and send it it. Instant information has its downfall, too, because you don't necessarily have the time to consider all the options or do your research. You can easily get overwhelmed with information.

Biggest opportunity in the industry for the future: It's booming right now and I don't see an end to it so there is plentiful work and plentiful opportunities to work though the industry's challenges.

**Our sheet metal equipment is built TOUGH and STRONG!**

Satisfy all your BENDING, ROLLING and CRIMPING CRAVINGS for sheet metal at affordable prices.

<b>FOOT SHEAR</b> TK 1652 <b>\$3773</b>	<b>MANUAL SLIP ROLL</b> TK 2236 <b>\$1148</b>
---	--

*Stands are optional*

<b>ROLL FORMER</b> TK 24 GA PITTSBURGH <b>\$3753</b> with Power Flanger as shown TK 24 GA PITTSBURGH <b>\$3348</b> no Power Flanger	
---	--

Available at most HVAC Wholesalers and Equipment Dealers across Canada

Tel: 519.679.1415  
TF: 1.888.927.6247  
Fax: 519.642.4344

**TIN KNOCKER**  
Sheet Metal Equipment

See ALL our equipment at  
[www.theHVACWarehouse.com](http://www.theHVACWarehouse.com)

**Call for GREAT leasing rates and options!**



**British Columbia Sheet Metal Association (SMACNA-BC)**

Providing products and information related to the Sheet Metal Industry, including technical manuals and guidelines.

The unmatched technical and managerial expertise of SMACNA-BC Contractors is enhanced by the talent and skills of the workforce they employ. SMACNA-BC Contractors employ only Red Seal Certified Sheet Metal Journeymen and Registered Apprentices.

**CONTRACTOR MEMBERS**

- |                                  |   |
|----------------------------------|---|
| 101 Industries Ltd.              | Harbourview Sheet Metal Ltd.            |
| Admiral Roofing Ltd.             | Horizon Cladding Ltd.                   |
| Agvale Industries Ltd.           | Horizon Metal Systems Inc.              |
| All Valley Metals Ltd.           | KD Engineering Co.                      |
| Alliance Metal Fabricators Ltd.  | KPH - Modern Niagara                    |
| Allied Blower & Sheet Metal Ltd. | M&T Air Conditioning Ltd.               |
| Ames Metal Fabricators 82 Ltd.   | Northwest Sheet Metal Ltd.              |
| Apollo Sheet Metal Ltd.          | Pacific Rim Industrial Insulation Ltd.  |
| Austin Metal Fabricators L.P.    | Paramount Sheet Metal Ltd.              |
| Boston Sheet Metal Ltd.          | Piedmont Sheet Metal (1997) Ltd.        |
| Bry-Mac Mechanical Ltd.          | Quest Metal Works Ltd.                  |
| CC Industries Ltd.               | R.H. Jones & Son Mechanical Ltd.        |
| Cascade Metal Design Ltd.        | Ridge Sheet Metal Co.                   |
| Century Plumbing & Heating Ltd.  | Smith Sheet Metal Works Ltd.            |
| City Sheet Metal Ltd.            | Spectrum Sheet Metal Ltd.               |
| Crosstown Metal Industries Ltd.  | Summit Sheet Metal Ltd.                 |
| Downtown Custom Metal Works Ltd. | Tri-Metal Fabricators                   |
| Duncan's Ltd.                    | VETS Sheet Metal Ltd.                   |
| ECCO Supply                      | Viaduct Sheet Metal Ltd.                |
| Equity Plumbing & Heating Ltd.   | Western Mechanical Services (1977) Ltd. |
| Haakon Industries Canada Ltd.    | York Sheet Metal Ltd.                   |

**ASSOCIATE MEMBERS**

- |                                    |                                     |
|------------------------------------|-------------------------------------|
| Access Metal Products Ltd.         | ETP Energy Technology Products Ltd. |
| Air System Supplies                | (a div. of IPC, Inc.)               |
| All Therm Services Inc.            | FBM – SPI Burnaby                   |
| Aarc West HVAC Solutions Inc.      | Intercon Insurance Services Ltd.    |
| Bailey West Processing Inc.        | Manson Insulation                   |
| Brock White Construction Materials | Maxam Metal Products                |
| CapServCo - Grant Thornton         | Mestek Machinery                    |
| Crossroads C&I Distributors        | Modern Tool (BC) Ltd.               |
| DDK Ventilation Products Ltd.      | Pacaire HVAC Supplies Ltd.          |
| EH Price Vancouver                 | Progressive Air Products Ltd.       |
| EMCO (HVAC Division)               | Raven Hydronic Supply Ltd.          |
| Engineered Air                     | Samuel, Son & Co., Ltd.             |
| Envirotech Air Inc.                | Wm. P. Somerville 1996 Ltd.         |

**BC Sheet Metal Association (SMACNA-BC)**  
 Executive Director: Bruce Sychuk  
 315-15225 104<sup>th</sup> Ave. Surrey, BC V3R 6Y8  
 Phone: (604) 585-4641  
 E-mail: smacnabc@smacna-bc.org



What is SMACNA's most important role in the industry? They are definitely a way for us as competitors to become friends and see eye to eye. SMACNA also sets high standards and provides a common ground for its members. It is an important avenue for us to share labour, ideas, stories, and challenges. ■



## THERMOSET FRP DUCT CONSTRUCTION MANUAL

This authoritative manual is one that design engineers, industrial engineering departments, pollution control authorities, fiberglass manufacturers and installation contractors can rely upon for the proper selection, manufacture, and installation of FRP duct systems.

The American National Standard (ANSI/SMACNA 011-2017) contains language, tables and details for the construction of hand lay-up, spray-up, and filament-wound FRP ductwork from 30 in. wg negative pressure to 30 in.wg positive pressure. Round Ductwork sizes are expanded to include up to 96 in. diameter. For rectangular ductwork, new duct stiffener tables are added for easier selection.

Recognizing the increased popularity of FRP ductwork, this edition is expanded to include commercial/HVAC applications. Supporting this, an underground installation section is added as well as added language on testing and balancing, duct sealing, and duct leakage.

Duct hangers and support information have been expanded and organized into a separate chapter which now includes: upper attachments, hanger selection tables, channel (strut) used as trapeze, riser support details, and more.

Appendices in this edition cover extended hanger spacing, general information on safe handling of thermoset fiberglass reinforced plastic duct, and allowable FRP defects. ■

## NEW SMARTMARKET REPORT FOCUSES ON EMERGING TRENDS TO IMPROVE SAFETY

SMACNA was a research partner on a recent SmartMarket Report entitled "Safety Management in the Construction Industry 2017". Published by Dodge Data and Analytics, this new report builds on two other reports examining the positive impacts that today's policies, procedures, and technology have on safety cultures in the construction industry.

Based on two online surveys of 334 contractors and 108 architects, the 2017 report includes information on safety cultures, prevention through design, building information modeling, mobile devices, virtual reality and more. The case studies, graphs, and tables in the report present a wealth of information to help construction companies understand the pros and cons of how safety interacts with the processes and technology used throughout the construction industry today.

For further information on the report, contact Mike McCullion, SMACNA director of safety and market sectors, at 703-995-4027 or [mmccullion@smacna.org](mailto:mmccullion@smacna.org). ■

## APPRENTICE REPORT & SURVEY

This fall, Canadian Apprenticeship Forum (CAF-FCA) members will benefit from insights of a recent Apprentices in Canada ePanel survey that asked how apprentices and early-career journeypersons are impacted by digital technologies, automation and technological change.

The next ePanel survey, which will be released in September, will collect information about experiences with apprenticeship-related incentives and grants. Encourage apprentices you know to join the ePanel at [apprenticesincanada.com](http://apprenticesincanada.com). ■

## 2018 SAFETY SURVEY AVAILABLE NOW

The annual SMACNA Safety Excellence Awards Program (SSEAP) is up and ready for your participation. The program allows SMACNA to recognize members for their outstanding safety performance and collect and trend significant safety and health data. Many SMACNA members have benefited from the program by winning an award or utilizing the data generated by the program to improve safety programs and cultures.



---

<b>Business Manager &amp; F.S.T.</b>	<b>James Paquette</b>
<b>Business Representative</b>	<b>Ken Elworthy</b>
<b>Business Representative</b>	<b>Richard Mangelsdorf</b>
<b>Business Representative</b>	<b>Troy Clutchey</b>

---

**6188 Kingsway, Burnaby, BC V5J 1H5**  
**Phone 604-430-3388 or 1-800-242-8645**  
**Fax: 604-431-1864**  
**Email: [agents@smw280.org](mailto:agents@smw280.org)**



Your input is critical to the success of the program. All SMACNA members can access the 2018 annual survey here. Selecting your state or province will direct you to the appropriate survey (US or Canada). Most information needed for the surveys can be found in your company's 2017 injury and illness records.

For further information on the safety awards program, contact Mike McCullion, SMACNA director of market sectors and safety, at 703-995-4027 or mmccullion@smacna.org. ■

### SUPPORTING WOMEN IN TRADES CONFERENCE NOVEMBER 6-7, 2018

Work is well underway to organize the CAF-FCA's first-ever, Supporting Women in Trades Conference.

Please join us on November 6 & 7, 2018 at the Halifax Marriott Harbourfront hotel. We will highlight the great initiatives, programs and strategies being undertaken by leading organizations across the country to help address the challenges faced by women working in the skilled trades.

Registration is being offered at the low price of \$199 + tax. Register early at [caf-fca.org/supporting-women-in-trades/](http://caf-fca.org/supporting-women-in-trades/) as space is limited. ■

### NEW FIELD LEADER TRAINING VIDEO COACHING: BRESLIN STRATEGIES

In the construction & utility industry, a lot of responsibility falls on the shoulders of field leaders. And many times, they haven't received the support and training necessary to be professional leaders and managers, as well as being highly skilled crafts people.

A new video coaching program by Breslin Strategies is a brand new way of leading in this industry.

An on-demand video library provides leadership strategy, practical advice, and inspiring messaging to transform your field leaders. Combining cutting-edge micro-learning lessons with the flexibility of mobile technology, it meets the needs of field leaders by reaching them when and where it fits them best. And it is in their language by someone who stood in their shoes.

As a strategist, speaker, and author, Mark Breslin has addressed more than 300,000 business leaders, supervisors, and engaged employees to inspire change for workplace success. He has seen and experienced the impact of coaching our next generation of field leaders. See how becoming a professional construction leader (PCL) can up your game and increase the success of your company at [www.breslin.biz](http://www.breslin.biz). ■

*Continued on page 23*



**READING A BORROWED COPY OF SHEET METAL JOURNAL?**

**GET YOUR OWN**

**Sign up for your free subscription at**

**[www.sheetmetaljournal.com](http://www.sheetmetaljournal.com)**

**Contact our editor, Jessica Kirby, at 250.816.3671 or email [jkirby@pointonemedia.com](mailto:jkirby@pointonemedia.com) with questions or for subscription help.**



**CROSSROADS C&I**  
DISTRIBUTORS / FABRICATORS  
The Insulation Specialists™



**JM** **Linacoustic® RC**  
Johns Manville Fiber Glass Duct Liner with Reinforced Coating System

**Proven to be #1 overall in shop productivity and jobsite approval.\***

\* A competitive product comparison study conducted and overseen by FMI, a management consulting firm to the construction industry, rated Linacoustic RC #1 overall by contractors who participated in the study.

**CONTACT CROSSROADS C&I - 800 663 6595**



GREENGUARD® certification is not intended for residential environments. Instead, the certification is intended only for buildings meeting ASHRAE 62.1-2007 commercial building ventilation rates. This certification is proof that the product meets the GREENGUARD Environmental Institute's indoor air quality standards and product emission standards for VOCs.



**[crossroadsci.com](http://crossroadsci.com)**

# The Business of COMMON SENSE



© Can Stock Photo - csp22928373

By / Nic Bittle  
Photos by /

Many sheet metal contractors are asking themselves the questions: “Who will my next generation of leaders be? Who will replace those in my organization that will retire in the next four to fourteen years? What will our workforce look like in the future?”

If you have asked yourself these same questions then you are in good company. When we look at the amount of talent that is retiring in the next four to fourteen years and then take a look at the level of commitment and experience of those who are currently entering the workforce some concern is warranted.

Many of the issues I am seeing in our workforce fall under what I call The Four Core Competencies.

## COMMUNICATION

**The Shift** – How a young man or woman chooses to communicate today is completely different than those who entered in the workforce 30 years ago. Face-to-face and voice-to-voice conversations are becoming a thing of the past. (This is not a good change, by the way.) The ability of our young workforce to accept constructive criticism or deal with conflict has greatly diminished. Conversations that used to take place via phone or in person are now being replaced with text messages and an unmanageable amount of email. Information, and in many cases an unnecessary amount of information, is trying to take the place of a good old fashioned conversation.

**The Problem** – Take away one's ability to have a meaningful face-to-face conversation with another person and you will take away that person's ability to build a relationship. Most of those who prefer to text and email over having a face-to-face

conversation believe their choice is just a choice of efficiency or personal preference. There is a time a place to “deliver information” where the text and email chains are the perfect solution. Building relationships is different. Business follows relationships. Take away your ability to build a relationship with another person and consider how you that may cripple you to perform at your best. Today's leaders heavily rely on relationships to be successful, but for a large part of the next generation entering the industry this skill is becoming obsolete.

## SELF-LEADERSHIP

**The Shift** – Self-leadership is not about leading someone else; it's about leading one's self. It takes one set of skills to lead a group of men into battle or on the jobsite. It takes a completely different set of skills to show up on time, or not be on your personal cell phone all day.

**The Problem** – Many of our organizations are trying to figure out how they are going to train this next generation of leaders when they have not attempted to develop a level of self-leadership in our workforce. The cellphone issue is not a technology issue. If you have a member on one of your crews that is constantly on Facebook or texting his girlfriend this is not a technology issue. This is an integrity issue. If the cellphone was the problem then everyone with a cellphone would have the same behaviour.

## PROFESSIONALISM

**The Shift** – The construction industry already has a tough reputation in regards to professionalism. We have guys that look like they got dressed out of their glove box, and smell like they

slept under a bridge last night. When I ask about their basic appearance, behaviour, or general odor I often hear, “This is how I roll, and I do damn good work so it shouldn’t matter.”

**The Problem** – It does matter. The individual who doesn’t care about their professionalism must not realize they are representing more than just themselves. They are representing the trade, the company they work for, and their Local if they are a member. This is damaging our reputation and, in turn, our ability to be successful.

## ENTREPRENEURSHIP

**The Shift** – Entrepreneurship includes the basic knowledge around how man hours are created. We are seeing a generation entering the workforce feeling entitled and including many who do not care if the contractor is successful. Some do not understand how many dollars a contractor has to generate to replace the \$300 drill they just lost. When I ask a room full of apprentices how much money a contractor makes on a million dollar job the number one answer is one million dollars.

**The Problem** – The contractors’ margins are getting tighter. The work schedules are getting compressed. It’s the little mistakes that are adding up, and those mistakes are proving to be catastrophic. Basic business sense, and personal financial responsibility are becoming concepts of the past.

These are the four core competencies we must begin to develop in our workforce if we want to be successful in the future. Most would say the issues in the above competencies fall under the umbrella of “common sense.” Well, common sense isn’t all that common anymore.

Take a look at your organization. Once you remove those who will retire in the next four to fourteen years who will take their place, and then who will take their place? The smart contractors are working every day to develop not only tomorrows leaders, but also their crews. ■

*Nic Bittle is the founder of Work Force Pro and works with contractors that want to prepare and develop their workforce to lead with impact, act like a pro, and perform at their best on a daily basis. He does this in a variety of different ways. Through presentations and workshops, through tools that he has developed which are designed to support the learning process, and through a unique information delivery system called D.R.I.P. Information™. He is the architect of two performance improvement process curriculums, that use the D.R.I.P. Information™ process that are specifically designed to prepare and develop our current and next generation work force for the roles and responsibilities that lie ahead. Nic is author of three books, Small Business, BIG Mistakes, Perform Like the Boss!, and Good Foreman; Bad Foreman. Learn more at [www.nicbittle.com](http://www.nicbittle.com).*



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

**Cascadia Metals** offers a wide variety of metal products in both coil and flat sheet, specializing in pre-painted, galvalume, galvanized, galvalannealed, aluminized, cold rolled, and hot rolled steel.

**SPECIALISTS IN COATED & UNCOATED SHEET METAL**

We also offer aluminum, stainless steel, copper, weathering steel, and more. With our top-of-the-line slitting and cut-to-length capabilities, **Cascadia Metals** can meet the most rigorous quality and service requirements quickly, accurately, and consistently with each and every order.



# AUSTIN METAL

## 50 Years Strong

By / Jessica Kirby  
Photos submitted by / Mark Green

**In today's fluctuating construction market, burdened and uplifted by global economics, pricing swings, and varying trends in capital investment, there are few firms that can list 50 years in business on their list of accomplishments.**

But Austin Metal Fabricators LP, a Burnaby based sheet metal business, is one of them. Austin Metal provides full service fabrication and installation of HVAC sheet metal and custom fabrication and architectural metalwork throughout the Lower Mainland. The company services commercial and industrial markets for renovation and new construction and builds from engineered drawing or through design-build services.

Austin Metal has been involved in some exciting projects over the years including the Shaw Tower, Fairmont Pacific Rim, Hotel Georgia, and the Poirier Sport and Leisure Complex. Dust collection systems, lab fume hood exhaust, ship work, and prisons are on its list of industrial project types, and condos, office buildings, hospitals, universities, and other commercial jobs round out an impressive professional repertoire. The company has always been a metal fabrication shop, which means its scope of work is diverse and includes custom metal work like the Tin Soldier in New Westminster at the quay.

But longevity and success haven't come without effort and commitment. Austin Metal Fabricators was established in 1968 by Bill Gordon and Don Mueller. The shop was first located on Boundary in Burnaby, and two years later was re-located to its current location at 5414 Goring Street. As the business grew, new partners were brought into the ownership group. This provided Bill and Don with an exit plan allowing them to retire while still young and enjoy the adventures the world has to offer. The business is currently transitioning into its next stage of ownership through a staggered exit plan of existing partners.

The philosophy of the business has always been to do quality work at a fair price and provide excellent service, says Mark



Green, the firm's senior partner. Guiding the customer through making the best possible buying decision is part of Austin Metal, he says. Sometimes that means helping to select the correct fan, equipment, choosing the right material to use, or, at times, changing the design all together.

"Always look at the project as if you were spending your own money," he adds. "That is why we have so many repeat customers."

Escaping five decades without challenges is nearly impossible, but Austin Metal has demonstrated the resilience and commitment to overcome anything.

"I think finding people with the right skill set and attitude is an ongoing challenge," says Green. "Our diverse book of work requires highly skilled sheet metal workers so we spend a lot of time and money training our people."

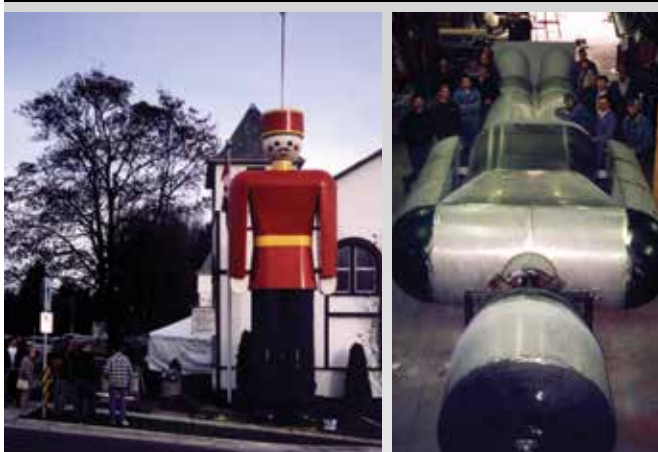
Because Austin Metal enjoys the benefit of a highly skilled work force, management is able to take advantage of the present market and choose which projects to pursue, rather than bidding every project that comes out for tender.

"I think the secret to our success is keeping the quality of our work at a high level, providing good service, and employing good people who care about what they are doing on a daily basis," he says. "It is keeping the overhead as low as possible, and diversifying into new areas of the trade."

The company has always aimed to remain current and diversify its scope as the market dictates. "It's a slow process to try new things," says Green. "Having the time to pursue new work is a challenge. You want to look after your existing good customers, do quality work all the time, and do it on time. No one wants to wait for too long."

Looking ahead to the next 20 years, Green thinks the company's biggest challenge will be skilled labour. He also sees important opportunities in HVAC construction and fabrication. ■

## World's Largest Tin Soldier



Austin Metal Fabricators constructed the iconic Tin Soldier, located in New Westminster on the quay, in 2000, as a fundraiser for the Christmas Festival of Trees. The statue is a replica of Sargeant Major Soldier, in honour of the Columbia Detachment of Royal Engineers' role in establishing New Westminster.

The Tin Soldier stands at attention at 32 feet high, on size 60 E27 boots, weighing 10,000 lb. Austin Metal budgeted 500 hours for the soldier's creation, which was an excellent approximation as the project came in at 510 and 3/4 hours. In 2002, it was distinguished by the Guinness Book of World Records as the World's Largest Tin Soldier. It has gained international attention over the years.

Within the heart of the Tin Soldier resides a time capsule that will be opened in 2025, providing a new generation of New Westminster residents with a unique taste of local history.



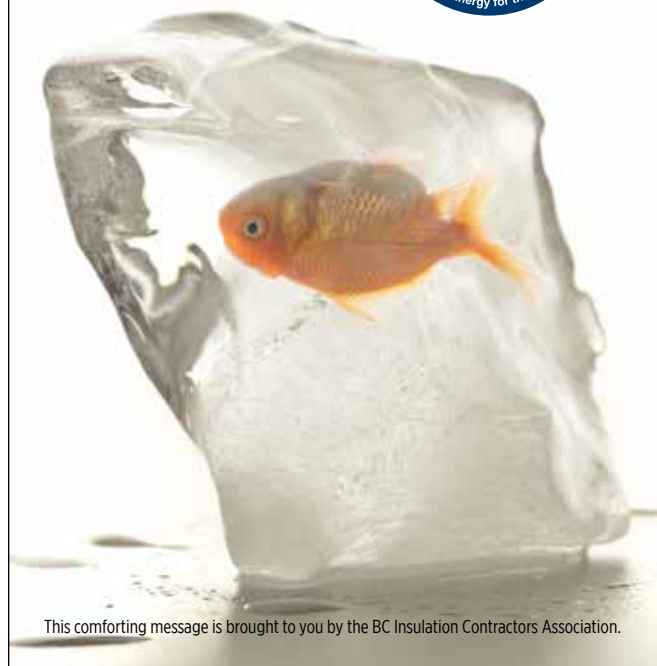
## A little off balance?

**A QAC would make everything all right.**

Only a BCICA member can deliver the **Quality Assurance Certificate** — the very best materials; purpose-trained independent inspectors; Red Seal certified installations.

For new construction or retrofits, ask for the QAC on all your mechanical insulation projects.

Find out more  
[www.bcica.org](http://www.bcica.org)  
604.438.6616  
[brian.bcica@telus.net](mailto:brian.bcica@telus.net)



This comforting message is brought to you by the BC Insulation Contractors Association.

# PARQ

## Resort & Casino

### Grand Scale Quality and Design

By / Jessica Kirby

Photography by Robert Stefanowicz

The PARQ Resort & Casino was a fast-paced challenging project for Apollo Sheet Metal that put all its resources to the test. The scope of work included HVAC for four floors of parking, 72,000 square feet of gaming areas, five restaurants, a 6,700-square-foot spa, over 60,000 square feet of meeting space, and 517 hotel rooms divided between the 17-storey Douglas and 18- and 26-storey JW Marriott towers.

Photo submitted by Apollo Sheet Metal



**Project:** PARQ Resort & Casino

**Location:** Vancouver, BC

**Architect:** IBI Architects

**Mechanical Engineer:** Integral Group

**General Contractor:** Ellis Don

**Mechanical Contractor:**

Pitt Meadows / Boradway Joint Venture

**Sheet Metal Contractor:** Apollo Sheet Metal

---

“In total, Apollo manufactured, delivered, and installed 995,000 pounds of sheet metal for the PARQ project over an 18-month period,” says project manager for Apollo Sheet Metal, Jeremy Hallman. “The flat, square footage of ductwork would fill the floor area of BC Place Stadium just over six times.”

Hallman says the schedule was always top of mind during the project. “Due to structural design, the job was late coming out of the ground, which meant a later start for the mechanical portion of work,” he says. “Revised dates were issued and everyone worked very hard to ensure that these new dates were met. When hotel rooms and functions are booked, there really was no option for failure.”

With five restaurants over six floors, the kitchen exhaust duct was some of the largest that Apollo had ever worked with. The team reached out to SMACNA’s head office in Virginia for clarification to ensure that the ductwork was built to the appropriate spec. The combination of meeting NFPA requirements while ensuring the duct was robust enough to withstand the internal and external pressures placed on it was the main challenge, but no match for Apollo’s experienced crew.

Apollo worked with CADmakers to use their detailing expertise to carefully route the four 1000 to 1250 mm kitchen exhaust runs through the roof steel while maintaining the grades for grease outlined in NFPA-96. This helped point out conflicts long before material arrived on site giving everyone time to find resolutions. The contractor also used water based duct sealers and acoustic duct insulation with high recycled content, which contributed to the project’s eventual LEED Gold certification.

Value engineering played an important role in the project’s development. Early on, Apollo reviewed washroom configurations and was able to combine exhaust runs for the shower and W/C area into a single duct. This helped reduce congestion in the ceiling and the amount of access required for each of the 517 hotel rooms.

A number of specialized products were used on the PARQ Resort and Casino that helped create a more polished finish. All washroom exhaust runs in both hotels were fitted with an Aldes MR modulo valve that automatically regulates airflows in the duct systems.

The passive control element responds to duct pressure and requires no electric or pneumatic sensors or controls. “The MR modulo compensates for changes in duct pressure caused by thermal stack effect, building pressure, dust-clogged filters, and other factors,” says Hallman. “This meant one less access door in every washroom ceiling in the hotel rooms.”

Tablets and Fieldwire software were used on the project to co-ordinate trades, share information, and manage quality control. “With everyone being on the same system the quality of info in and out was second to none,” says Hallman. “The general contractor, Ellis Don, hyperlinked SIs, changes, and shop drawings right onto the individual sheets in the drawing sets, so information was quick and accurate.”

*“In total, Apollo manufactured, delivered, and installed 995,000 pounds of sheet metal for the PARQ project over an 18-month period,” says project manager for Apollo Sheet Metal, Jeremy Hallman. “The flat, square footage of ductwork would fill the floor area of BC Place Stadium just over six times.”*

Apollo created QA/QC check sheets for each of the floors with all units listed, and dedicated tradespeople would review progress and note incomplete or deficient work. Fieldwire provided all trades with access to noted issues and backed everything up with photos to help illustrate incomplete or deficient work.

One key challenge on this project was the lack of a lay-down area when bringing material on site—always an issue when working downtown. It was important for Apollo to implement on time delivery, which was a tricky task since the team was sending a 50-foot truck and trailer to site twice a week for nearly a year.

Apollo used pre-fabricated rolling carts for nearly all deliveries to site, which meant materials could be shrink-wrapped in





the shop and delivered directly to the work areas. They also fabricated wooden crates with pallets as bases for hotel material deliveries. “We were able to drop the loads on each floor while out-riggers were still set up, but this meant we could break the pallets down to get them out through doors and back to our shop where they could be re-used,” says Hallman. “This allowed us to utilize the crane before the material hoist was extended up to the floor where work was starting for a two- to three-week head start on every floor.”

Another challenge was the RFI and change paperwork. Integral provided an engineer for a full day once per week working out of the same trailers as the mechanical team. “This allowed us to clarify issues and understand design intent, which enabled us to proceed sooner and with fewer hold-ups,” says Hallman. “In my opinion, this collaboration was key to the success of the project.”

The company experienced a major staffing change in May, 2016 just as the project was starting to move into high gear. “We had to move a full-time project manager to site to oversee the work and act as a liaison for the five foremen that we had working on site,” says Hallman. “At our peak we had a 40-person crew working six days per week.”

The job had to be split into manageable pieces of work with

individual foreman running each area. Each of the foremen brought unique skills to each of their work areas creating an effective working team.

Hallman says despite the considerable pressure the general contractor was under to keep the project moving forward, a team-focused attitude prevailed on site. “They pushed hard and held everyone to committed dates but were always willing to jump in to help remove roadblocks that would prevent you from being able to do your work,” he says.

One example of this occurred when Apollo was asked to begin installing 12-foot-wide HVAC duct mains before the shoring was removed—the shoring was on 8-foot centres, which means the request was impossible to accommodate. “Ellis Don was quick to provide solutions and remove any excuses,” says Hallman. “A path was cleared and ducts were installed sooner than normally possible.”

Esteban Kello, P.Eng, project manager with Integral Group said calling the PARQ project ‘challenging’ is putting it mildly. Having multiple stakeholders and a variety of program spaces, each with their own specific (and sometimes conflicting) requirements, resulted in a sheet metal design that was complex and immense in scope.

“Taking all of this into account, I can say it was a pleasure to work with Apollo Sheet Metal on the PARQ project,” says Kello. “They were team players, willing to work around the clock to keep the project moving forward on schedule, and open to co-operating with other trades onsite to eliminate delays.”

The fact that the sheet metal on the project ranged in size from as wide as 12 feet to as small as four inches speaks to Apollo Sheet Metal's adaptability.

“I would recommend Apollo Sheet Metal as the sheet metal trade contractor on any future project,” he says. “I’d also like to personally thank Jeremy Hallman and his team for their hard work in helping this project reach the finish line on schedule.” ■



# METAL

# THEFT

## What is Metal and Wire Theft?

Metal theft is a growing and challenging problem that tends to be underestimated. Both local and international supply and demand strongly influence wire and metal theft. Local wire and metal theft problems can be linked to international demand and high prices.

Thieves target all kinds of metals. Theft can include catalytic converters in cars, copper boat propellers, metal roof gutters, and fencing. Wire from street lamps and telephone cables are also vulnerable, as well as vacant buildings and homes under construction.

Thieves use a variety of methods to locate and steal wire and metal. Some have posed as renovation contractors while stripping copper from vacant homes. Others have been known to use resources such as Google Earth to identify large amounts of metal (such as spools of wire) stored outdoors.

Costs due to damage done by theft to commercial, residential, or City property can easily outweigh the value of the stolen items.

## How Does Metal and Wire Theft Impact You?

- 911 service disruptions
- Threats to infrastructure and public safety (hospitals, emergency response systems)
- Power outages – eg. Electricity, heating, street and traffic lights, highway advance warning signs
- Communication systems such as phone, television, and internet service outages
- Increases to service costs and added resource demands

## What to Look For

- Smell of burning rubber (indicates thieves burning insulation off stolen wire)
- People digging under roadways or underpasses for metal tubing
- Covers removed off street light poles or junction boxes

- Wires hanging out of covers or compartments
- People transporting odd or large amounts of wire or metal

## If You See Wire or Metal Being Stolen Call 911

If you witness a person loitering at a power or street light pole, even with an identifiable uniform, call the non-emergency number to request police to verify the work being done, or call the agency the employee may represent.

- ➔ Emergency 911 For crime in progress
- ➔ Crime Stoppers There are four ways to leave an anonymous tip:

Talk 1.800.222.TIPS (8477)

Type [www.solvecrime.ca](http://www.solvecrime.ca)

Text Tip Text “BCTIP” and send your tip to CRIMES (274637)

Facebook [www.facebook.com/metrovancouvercrimestoppers](http://www.facebook.com/metrovancouvercrimestoppers)

- ➔ BC Hydro Report all suspicious activity near substations, transmission lines, distribution boxes, and under bridges 1.877.311.8611

- ➔ Telus 604.310.3131 (phone line repair)

Information provided by the BC RCMP [www.bc.rcmp.ca](http://www.bc.rcmp.ca) ■



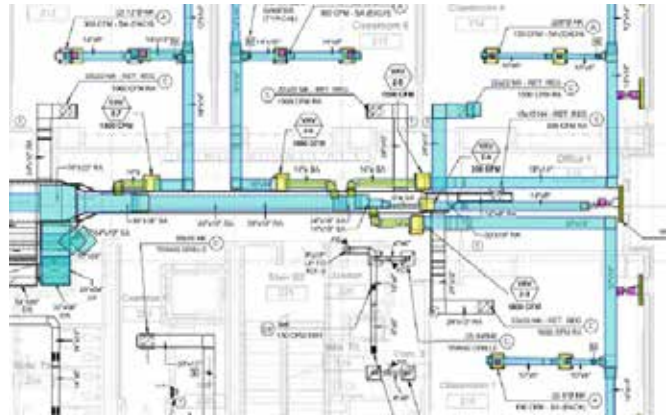
# 5 WAYS TO IMPROVE YOUR BIDDING PROCESS WITH FASTEST ESTIMATING SOFTWARE

By Mike Postiglione  
FastEST, Inc. Director of Marketing

Thousands of contractors across North America use FastEST, Inc.'s award-winning estimating software to help them bid more jobs, win more jobs, and improve their company's bottom line. Below is a list of just a few of the countless ways that estimators, project managers, and many others use the FastDUCT® program for estimating HVAC and industrial ductwork and sheet metal.

**Import of Digital Plans Directly into Programs:** Nowadays, most projects up for bid are procured via digital plan files. With FastEST's programs, users can easily import these plans for takeoff right on their computer screen, bypassing the cumbersome process of printing or checking out a set of plans to then do manual measurements and takeoff. Some customers have completely offset the cost of their estimating software, with the savings they've gained (both in time and money) in no longer having to print off plans solely for the estimating process.

**Full Database Included with Program:** FastDUCT®, along with FastEST's other programs -- FastPIPE® (for estimating



all types of piping from mechanical to plumbing to process piping and more), and FastWRAP™ (for estimating mechanical piping, ductwork, and industrial insulation) – all come fully loaded with a comprehensive database that includes material costs and labor hours for catalog items. Many competing software products require an additional third-party subscription for material pricing, or require cumbersome, upfront catalog setup, to add various materials to the program prior to using the system.

**Copy/Paste of Plan Markups:** With the on-screen takeoff process mentioned above, items like ductwork, fittings, dampers, equipment and so on can be easily highlighted and in doing so, also counted and added to a running takeoff list. These markups, as they're called within the programs, also become easily manipulated, moved, and copied and pasted. This can come in handy if, for example, you have a classroom layout of ductwork that has been taken off. If the same classroom layout is repeated five times, a user can easily select, then copy and paste those markups, saving them the time of having to individually highlight those duct layouts over and over.

**Quick and Easy Revised Calculations:** Even after a full project has been taken off, an estimator can easily adjust the material specifications for an estimate and quickly re-run a revised report. If a user took off their original estimate with shop-fabricated lined rectangular ductwork, they can simply switch out their original spec for a revised spec that calculates purchased rectangular ductwork with duct wrap. In a few seconds, they'll have an entirely revised estimate number at their fingertips.

**Unmatched Customer Support:** Though the FastEST collection of programs is designed to be reliable, accurate, and easy-to-use, they still back their software with some of the best customer support in the mechanical estimating software marketplace. Customer feedback supports this notion – some

**BID MORE.  
WIN MORE.  
EARN MORE.**

**FASTDUCT FASTPIPE FASTWRAP**  
MECHANICAL ESTIMATING SOFTWARE

Improve your estimating, and your company's bottom line, with our easy-to-learn, accurate and affordable estimating software, that comes included with a full material and labor database, and our award-winning on-screen takeoff

**FASTEST, INC.** | 800-828-7108 | [fastest-inc.com/smj](http://fastest-inc.com/smj)

*Continued on page 23*

## HONOURING THE FIELD

This article is dedicated to the men and women who work in the field. Yes, contractors in our industry take 100% of the risk, but they can do nothing alone. It takes the combined effort and integrity of the tens of thousands of dedicated craft workers who together build our communities, our states, and our nation. They deserve respect and should be honoured for their efforts every day.

It angers me that sometimes those who work in our industry do not get the recognition for the expertise they bring to their jobs—not to mention their work ethic and the sacrifices they make pulling two or even three-hour commutes each way to support their families. Success is not a cubicle and a keyboard for everyone. Our craftsmen and women create things of lasting value with their heads, hearts, and hands—and often make a very good living doing so. Some people simply can't appreciate the fact it might not fit their ideal of what "success" is today.

My dad was a union carpenter and went on to become a union contractor. My grandfather and great-grandfather were blue-collar Italians who went on to become builders in San Francisco. They all worked their asses off. Their work ethic was legendary. It was their example – not my college GPA – that made me who I have become. The roots of America were forged by working people. And construction, most interestingly, has been the economic ladder used for more than a hundred years by those who wanted a better life. First the Irish, Italians, Chinese, Eastern Europeans, and African Americans climbed that ladder. Now Mexican and Central American craftworkers are doing the same. Some were discriminated against or looked down upon at first, but they kept going, fuelled by their total commitment to their own potential, their families, and their future. They chipped away enough to create a handhold on the American Dream. They deserve honour and respect for their hard-won success against so many odds.

In today's society, young people often admire those who have made fortunes by creating ideas. Yes, we are in the "idea economy" today, and to a lot of young people it looks easy and accessible. But the world doesn't operate solely on a fast-money digital platform. Working people still form the backbone of what makes America great. I have tried hard in my parenting to pass that message on to my children. The lady at McDonald's in her paper hat; the maid at our hotel; the truck driver in that rig; the janitor at your school; the waitress at Chili's—they are not there to serve you. They are there because that is the best job they can get to take care of their families. And they may have another job on top of it. And you, I tell my children, will pay attention; you will stop



By /Mark Breslin  
Breslin Strategies, Inc.

and appreciate them. And you will not take for granted any advantage life provides for you. Working people work hard, and they will be respected for it.

Construction unions and associations have a similar philosophy. They support and serve union contractors who are committed to providing their workers what they need and deserve. Those who work for union companies receive some of the highest pay and best benefits in the nation, and they know that is something to live up to. There are cheaper ways to do contracting, but it is often on the backs of those who do the work. These contractors (many of whom carry frayed union cards in their wallets) understand their people and

*Continued on page 23*

**MEETING THE LABOUR NEEDS OF OUR INDUSTRY BY DELIVERING QUALIFIED PROFESSIONAL SHEET METAL WORKERS**

**TRAINING CENTRE SOCIETY**

The Sheet Metal Workers Training Centre Society's mission is to provide the highest quality of training and upgrading to sheet metal apprentices and journeypersons in the Province of British Columbia by delivering the highest standards of instruction and utilizing the most up-to-date teaching methods.

**For more information Tel 604.882.7680  
Fax 778.298.0656 or Email registrar@smwtcs.ca  
Check us out on the web at www.smwtcs.ca  
19077 - 95A Ave. Surrey, BC CANADA V4N 4P3**

## TEST AND BALANCE PLAN DEVELOPMENT

The demand from building owners to have contractors maintain a construction schedule is ever increasing. Building owners require a substantial construction completion date and expect the team to meet this date.

Before a building can be occupied, there are many processes throughout the course of construction that ensure the building is operating at the design intent. One of the most important is the process of total system balancing by means of testing and balancing the HVAC system.

The testing and balancing process primarily consists of testing the HVAC equipment to verify proper installation and operation, adjusting/balancing the HVAC equipment to obtain optimal system performance, and providing a detailed report of system operation compared to design. The testing and balancing report is typically reviewed by the design team and the owner. The report will document any deficiencies preventing a system from operating as designed. The HVAC system performance data documented in the report can be used to make changes to achieve the design intent of the building.

Most construction schedules incorporate all the testing and balancing in the final stages of construction. However, often there is not enough time left to do a complete system balance. Failure to complete the balancing in the scheduled time can result in the general contractor and owner being displeased. Typically, project specifications for testing and balancing require a balancing plan; however, specifications usually only cover the balancing techniques and/or testing procedures.

Specifications should call for performance of a total system balance in accordance with Testing, Adjusting, and Balancing Bureau (TABB) [www.tabbcertified.org](http://www.tabbcertified.org) and/or other certified programs. The typical balancing plan includes the following three components:

1. A list of test instruments and with that the model and application use.
2. A description of each system test procedure and list of equipment to be tested.
3. A list of subcontractors required to assist with the testing and balancing process along with expectations of each contractor. Most importantly, the expectations of the controls contractor should be listed.

All this information is helpful to the design engineer but still does little to assist the construction manager and owner. The addition of a few extra components to the balancing



by / Norm Grusnick, P. Eng.  
Commercial products manager, ECCO Supply

plan will be of great advantage to the construction schedule. These extra components include:

4. An outline of construction completeness prior to testing and balancing.
5. A realistic estimate of time required to complete the testing and balancing process.
6. A listing of the building accessibility required to thoroughly test all HVAC systems.

The balancing plan needs to describe in detail the required time to complete a total system balance. General contractors and owners typically assume that the balancing process is something that happens all at one time, and if the schedule is shortened, then the balancing company can simply put more technicians on the job. This is unrealistic and leads to problems near the conclusion of the project.

Many control systems only allow communication with a few systems at a time. Buildings with DDC systems require a great deal of the testing and balancing process to be performed through adjustments to the HVAC systems via the automation system. Network access limitations may prevent more than one operator from communicating with the control system at a time. This hinders having too many balancing technicians on site at the same time as many adjustments can only be made through a single terminal.

It is also the balancing contractor's responsibility to address any issues that prevent the system from operating at design performance. Some of these resolutions may take days or weeks and the general contractor and designer need to be aware of these possibilities and their effects on the schedule.

As well as the balancing time requirements, building accessibility during the balancing process is another extremely important matter. Total system balancing requires access to all areas of the building, and large HVAC systems may require repeated access throughout the balancing process. ■

## TRUSTEE TROUBLES – A NEWLY DEFINED DUTY TO DISCLOSE LABOUR AND MATERIAL PAYMENT BONDS

The purpose of a labour and material payment bond is to provide a form of security to labour and material suppliers on a construction project by giving them a right to claim against a surety (typically an insurance company) if they are not paid for their work by the bond's principal (such as a general contractor or subcontractor). Labour and material payment bonds are an effective means of protecting owners or general contractors from the risk of work stoppages, liens, and litigation by helping to maintain prompt payment of unpaid subcontractors and material suppliers. However, obligations placed by the Supreme Court of Canada on parties designated as trustees under a Labour and Material Payment Bond in the 2018 case of Valard Construction Ltd. v. Bird Construction Co., 2018 SCC 8, reveals a significant new source of liability for failing to disclose the existence of a labour and material payment bond where a potential claimant is “unreasonably disadvantaged” by ignorance of the bond's existence.

### THE FACTS

Bird Construction Company (“Bird”) was a general contractor for a construction project in the oilsands in Alberta. Bird entered into a subcontract with Langford Electric Ltd. (“Langford”), and required Langford to obtain a labour and material payment bond (the “L&M Bond”) naming Bird as obligee (and trustee) and Langford as Principal under the Bond. Langford, in turn, entered into a further subcontract with Valard Construction Ltd. (“Valard”). Valard was unaware of the existence of the L&M Bond. Langford began to suffer financial difficulties, and payment issues arose between Valard and Langford, of which Bird was fully aware. Langford eventually became insolvent. When Valard finally learned of the L&M Bond sometime later, it attempted to make a claim for payment from the surety, Guarantee Company of North America. However, Valard's claim was rejected as it was outside the time requirements to give notice of a claim under the L&M Bond.

Valard sued Bird for damages, arguing that Bird, as obligee/trustee under the L&M Bond, had a duty to inform Valard of the L&M Bond's existence in order to enable it to make a timely claim.

### THE DECISION

The Supreme Court of Canada held that Bird, having been designated a trustee under the L&M Bond, owed a fiduciary duty to Valard in these particular circumstances to disclose the bond's existence to potential claimants (such as Valard). By failing to do so, Bird breached its fiduciary duty and was



by / Andrew Delmonico and Matthew T. Potomak

liable to pay monies that Valard would have received from the surety had its claim been made in time.

The Supreme Court was clear that a trustee's duty does not always require full disclosure to potential claimants of a Labour and Material Payment Bond. A trustee's obligation to disclose the existence of a bond arises wherever it could be said to be to the “unreasonable disadvantage” of potential claimants not to be informed of the bond's existence. In this case, it was determined that Labour and Material Payment Bonds were not commonly used in private oilsands projects, so an unreasonable disadvantage was created by Bird's decision not to reveal the existence of the bond to potential claimants. It was found that Bird should have posted notice of the Bond in its on-site trailer in order to discharge its duty in these circumstances. The Court suggested that on different types of projects where Labour and Material Payment Bonds are standard, there may be a limited duty (or possibly no duty) to reveal the existence of the bond to potential claimants.

### LESSONS LEARNED

1. An obligee designated as a trustee in a Labour and Material Payment bond may be required to disclose the existence of the bond to potential claimants in circumstances where those potential claimants could be unreasonably disadvantaged by not being informed. If a Labour and Material Payment Bond exists on a project where such bonds are not customary, there is a greater chance of the duty of the obligee/trustee to disclose being triggered.
2. An obligee/trustee should seek legal advice if unclear about how to discharge their legal obligations in communicating the existence of a Labour and Material Payment Bond to potential claimants on a project. ■

*This article was written by Andrew D. Delmonico, and Matthew T. Potomak, Articled Student, who practice in construction law with the law firm of Kuhn LLP. This article is only intended as a guide and cannot cover every situation. It is important to get legal advice for specific situations. If you have any questions or comments about this case or other construction law matters, please contact us at 604-864-8877 (Abbotsford) or 604-684-8668 (Vancouver).*

INDUSTRY NEWS

Continued from page 9

**EXAKTIME ANNOUNCES NEW DIGITAL MEDIA SITE FOR CONSTRUCTION**

ExakTime has launched a comprehensive new digital media site for the construction industry.

FUEL is a multimedia news, education, and entertainment website for construction professionals, with content about construction-related legal, technology, health, and finance news and issues.

In addition to articles and features, FUEL's free content includes slideshows, videos, and more. The site is optimized for mobile and tablet screens as well as for desktop reading.

"We want to provide the latest and greatest information to the important people who are building our cities, towns, and roads," says ExakTime Content Supervisor Amy Bourne. FUEL publishes original reporting every week, as well as industry-related content from the Associated Press and other news outlets on a daily basis.

Readers can visit the site to view unlimited, daily-updated content or subscribe free of charge to the weekly newsletter to receive highlights of the original content they will find. FUEL can be found at [fuel.exaktime.com](http://fuel.exaktime.com). ■

FEATURE FOCUS

Continued from page 19

customer say it's the best support they've ever received with any software they've ever used. If a customer gets stuck on something in the program, they can easily call the toll-free 800 number, and rarely will they not get a live person on the other end during normal office hours.

To find out more about FastEST and their line of estimating programs, visit their website at <https://fastest-inc.com> or give them a call at 800-828-7108. ■

CONTRACTORS' ADVICE

Continued from page 19

have a kinship with them that transcends the paycheck. They understand the importance of working people, and no matter their own success, they know that without those willing and loyal craft workers, there can be no industry.

Honour the field – it's the right thing to do.

*Mark Breslin is an author, speaker, CEO and influencer at the highest levels of business in North America. His five bestselling books have sold hundreds of thousands of copies and have improved leadership, accountability, profitability, innovation and engagement for organizations and individuals. [www.breslin.biz](http://www.breslin.biz). ■*

**There's more to SMJ than just our magazine and website. Do you use Facebook? Great! LIKE our SMJ Facebook page and keep up to date with industry news. Wondering what is happening in the Western Washington sheet metal industry? Check out Sheet Metal Journal - Western Washington to get the scoop. [www.sheetmetaljournal.com/westernwashington](http://www.sheetmetaljournal.com/westernwashington)**

	advertiser	page	phone	website
<b>advertiser index</b>	BCICA	13	604.438.6616	<a href="http://www.bcica.org">www.bcica.org</a>
	Cascadia Metals	11	604.946.3890	<a href="http://www.cmetals.com">www.cmetals.com</a>
	Crossroads C&I Distributors / Fabricators	9	800.663.6595	<a href="http://www.crossroadsci.com">www.crossroadsci.com</a>
	ECCO Supply	5	604.530.9755	<a href="http://www.eccosupply.ca">www.eccosupply.ca</a>
	FastEST Inc.	18	800.828.7108	<a href="http://www.fastest-inc.com">www.fastest-inc.com</a>
	HVAC Warehouse	6	888.927.6247	<a href="http://www.thehvacwarehouse.com">www.thehvacwarehouse.com</a>
	Sheet Metal Workers Int'l Local 280	4, 8	604.430.3388	<a href="http://www.smw280.org">www.smw280.org</a>
	Sheet Metal Workers Training Centre Society	19	604.882.7680	<a href="http://www.smwtc.ca">www.smwtc.ca</a>
	SMACNA-BC	IFC, 4, 7	604.585.4641	<a href="http://www.smacna-bc.org">www.smacna-bc.org</a>
	Cover Sponsors	OBC		

it's simple.

1. know where your audience is.
2. be where your audience is.

# Sheet Metal Journal

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

British Columbia

enough said.

For details and to reserve your space today contact Lara Perraton

at 877.755.2762 • [lperraton@pointonemedia.com](mailto:lperraton@pointonemedia.com)



**ALL THERM SERVICES INC.**

LEADERSHIP THROUGH ENERGY CONSERVATION



**AIR SYSTEM  
SUPPLIES**



**apollo sheet metal ltd.**



**CASCADIA  
METALS LTD.**



**FAST EST, INC.**  
MECHANICAL ESTIMATING SOFTWARE

**NORTHWEST**  
SHEET METAL LTD.



**TRAINING  
CENTRE  
SOCIETY**

